

Composing Historical Essays: Case Studies of Students' Reasoning

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THESIS

Submitted as partial fulfillment of the requirements
for the degree of Doctor of Philosophy in Learning Sciences
in the Graduate College of the
University of Illinois at Chicago, 2021

Chicago, Illinois

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ACKNOWLEDGEMENTS

I would like to extend my gratitude to my participants and partnering teacher for their help and support in making this study possible. Additionally, I wish to extend my deepest gratitude to my dissertation chair and advisor, Susan R. Goldman, for her tireless support throughout the duration of this project and in playing a central role in shaping me as a learning scientist. I am also thankful to my entire committee— Joshua Radinsky, Donald Wink, Robert Johnston, and Anne Britt— as each of these members provided an important perspective and role in the development of this work. I also wish to recognize my mother— who was my first teacher and has modeled hard work and dedication throughout her life. Finally, I reserve my deepest thanks for my wife, Alissa, my son, Michael Ezra, and my daughter Carmella Raquel (in press)— who together have provided the inspiration, support, and motivation to see this work through. This work would not have been completed without their support.

I would also like to acknowledge Project READI, the project within which this dissertation research was situated. Project READI was supported by the Reading for Understanding (RFU) initiative of the Institute for Education Sciences, U. S. Department of Education through Grant R305F100007 to the University of Illinois at Chicago from July 1, 2010 – June 30, 2016. The opinions expressed herein are those of the author and do not represent views of the Institute or the U. S. Department of Education.

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SUMMARY

Research examining students' historical reasoning has heavily relied on evidence in the form of students' written work such as essays and short answer responses to make claims about students' ability to reason historically. Some researchers assert that the source-based history essay is an effective and useful tool for assessing students' historical thinking (Nokes & De La Paz, 2018). However, relatively little research has sought to understand the extent to which students' written essays serve as an accurate window into historical reasoning. The present study extended the current tradition of research on writing in history through an investigation of the historical reasoning that students engage in to produce a source-based historical essay to better elucidate and understand the complexities of historical reasoning in context, and to further understand the extent to which students' written essays serve as an accurate and complete account of their historical reasoning.

This study was situated within Project READI, a large-scale, design-based research project that sought to support students' disciplinary literacy and evidence-based argumentation practices in the disciplines of history, science, and literature. This study focuses on the historical reasoning processes of 8 students that were embedded within an 11th-grade Advanced Placement (AP) US History course that participated in and partnered with Project READI. This study used concurrent think-aloud protocols to investigate the historical reasoning students engaged in to produce a source-based history essay. The primary sources of data for this study were the transcribed think-aloud protocols, the corresponding video records of the sessions, students' written products, and their final essays. Content, reasoning, and structural analyses of the students' essays and of their think-alouds were conducted and then compared.

Analysis of the think-alouds revealed that participants employed a range of historical reasoning processes to complete the task; however, their essays reflected only a subset of the content and historical reasoning that was observed through the think-alouds. Participants' essays were similar to each other in terms of structure but varied in terms of the historical reasoning demonstrated and in terms of how well they incorporated the documents as evidence of their claims. The think-aloud process data revealed a more complex picture of students' historical reasoning than was inferable from their final essays. This was true for all 8 students. The composing process data demonstrated that participants consistently engaged in complex sourcing processes, used a wide range of prior historical knowledge to contextualize the documents and events, created multiple historical comparisons many of which were not included in the final essays, and engaged in a range of chronological reasoning processes. Additionally, many participants composing process data provided evidence of perspective taking, historical empathy, and corroboration of documents, although there was no evidence of these historical reasoning processes in their essays.

Across the participants, three patterns of process to product relationships emerged. First, participants routinely brought to the task relevant prior knowledge, especially for purposes of making historical comparisons to answer the prompt. However, participants routinely restricted the essay content to information that was present in the document set with which they were provided. Second, six of the eight participants engaged in some form of chronological reasoning when processing the documents. However, substantive chronological reasoning was present in only two participants' essays. Third, six of the eight participant's processes demonstrated that they corroborated information across documents, although none of the essays contained evidence of their corroboration. The study suggests that while historical essays are useful for viewing

some aspects and dimensions of students' historical reasoning, the reasoning that comes to be represented in the essay provides only traces of a fuller range of reasoning students engage in to create that essay. The findings also suggest that the discrepancies between the reasoning evident in the process versus the final essay were greatest for those whose essays were more incomplete.

INTRODUCTION

Over the last twenty years, calls for foregrounding the explicit teaching and learning of discipline-specific literacy practices have re-energized efforts to support literacy learning and content learning within each discipline and in discipline-specific ways (Moje, 2008; T. Shanahan & Shanahan, 2008). Through these efforts, the history classroom has been reimagined as a space for *doing history*— moving beyond the notion that history is a set of facts and dates to be memorized and instead, adopting the view that history is an interpretative discipline (Lee, 2005; Neumann, 2010). Research and design work using disciplinary literacy as a framework for examining writing in history classrooms has gained momentum in the last decades (e.g., De La Paz, 2005; Monte-Sano, 2010), especially in conjunction with research on Reading Like a Historian (e.g., Reisman, 2012; Wineburg, 1991, 2001) that has reshaped how educators think about reading and writing in history. These studies have focused on describing and supporting students' reading, writing and historical reasoning and have been paramount in advancing the notion that history classrooms are spaces for historical inquiry.

In this same tradition, Project READI, and more specifically the History Design Team within Project READI, undertook the work of designing for and supporting historical reasoning in the classroom. This focus on historical inquiry was accomplished through the development of learning goals that were guided by the representational forms and discourse practices of the discipline of history (Goldman et. al., 2016). This included an emphasis on the explicit teaching and learning of historical reasoning skills and a focus on historical reading and writing (Goldman et al., 2016; Shanahan et. al, 2016).

As well, there has been a growing body of research that examines writing in the discipline of history, as history is a literate discipline (van Drie, Braaksma, & van Boxtel, 2015),

historians write nearly everyday (Pojmann et al., 2016), and as reading practices are central to writing (Hayes, 1996). Writing effectively in history involves more than just knowledge of how to write; it additionally involves specialized discourse knowledge, content knowledge, and disciplinary knowledge (Greene, 1994). As historians write, they employ a variety of skills to read and reread source documents and to synthesize that information into their writing, drawing on both reading and writing skills to create and negotiate interpretations of the past (van Boxtel & van Drie, 2018; Wineburg, 1991).

Further, a growing number of studies that seek to understand students' historical reasoning and writing focus their analyses largely on one of the most readily accessible pieces of data: the products of students' writing (De La Paz, 2005; Monte-Sano, 2010; Monte-Sano & De La Paz, 2012; Young & Leinhardt, 1998). That is, the written essay can and has served as a window into students' historical thinking (De La Paz, 2005; Monte-Sano, 2010; Nokes, Dole, & Hacker, 2007; Wiley et al., 2014) and researchers have recently claimed that it is well-established that students' written products can be used to effectively assess students' historical thinking (Nokes & De La Paz, 2018).

Writing has been viewed similarly in history classrooms, as history teachers regularly evaluate the products of students' writing—viewing writing largely as a tool of assessment rather than a vehicle for historical inquiry and content learning. In actuality, when students write historically in history classrooms, they are asked to recursively read, analyze, and interpret historical sources, integrate information, and organize ideas into a final written product (Nokes & De La Paz, 2018). However, the process of writing historical essays with sources is not necessarily straightforward, natural, or simple for students. For example, in studies examining students' classroom discussions around sources in history, it is clear that students are able to

reason about sources in historical ways in classroom discussions, but it is difficult for them to represent that same historical thinking in their writing (Stoel et al., 2015).

Indeed, engaging in historical writing is a complex problem-solving activity, with the written historical essay reflecting a filtered view of the reasoning students engaged in to construct it. Researchers examining students historical reasoning and writing have begun to attend to how students think and reason historically when responding to different types of writing prompts and writing assessments (Breakstone, 2014; Monte-Sano & De La Paz, 2012). However, significantly less research has attempted to understand what historical reasoning students engage in to complete a history writing task and whether and how that reasoning comes to be represented in their essays. This study addresses these questions.

Specifically, **this study examined the historical reasoning processes students provided evidence of in the course of constructing a source-based historical essay and compared these to the historical reasoning inferable from the essays they produced.**

REVIEW OF THE LITERATURE

Calls for increased attention and scholarship to prepare students for 21st-century learning have fueled initiatives to support students' academic literacy practices within disciplines (Goldman, 2012; Moje, 2008; T. Shanahan & Shanahan, 2008). These efforts have also fueled researchers and instructional designers to examine students' literacy learning within the context of specific domains and have suggested that a focus on *disciplinary literacy* has potential to improve both content learning and literacy.

The present study was situated within the context of Project READI and READI's History Design Team which was consistent with these reform initiatives to encourage and support disciplinary literacy and discipline-based inquiry learning in the classroom (Goldman et al., 2009; Goldman et al., 2016). This approach to literacy learning asserts that each discipline contain their own set of domain-specific norms, values, and practices that are negotiated within each community of practice (Lave & Wenger, 1991; Moje, 2008), and thus, a major goal of instruction is to support students in learning to engage in these disciplinary communities in developmentally appropriate ways (Goldman et al., 2016) and to engage students in the *doing* of a discipline, in contrast to more passive modes of instruction (Goldman, 2018). In the discipline of History, this means engaging students in historical inquiry to create and defend interpretations of the past using evidence from primary and secondary sources from the historical record.

This chapter offers a review of the literature relevant to historical reasoning and provides the theoretical framework for further examining students' historical reasoning processes in the context of writing in the discipline of history. This literature review is organized into four sections. The first section discusses literature relevant to research on expertise in history and historical reasoning. The second section attends to research about students' historical reasoning.

The third section of this review examines literature related to historical writing research and goes on to discuss scholarship that examines and supports students' historical reasoning through writing. Finally, the last section of the chapter offers literature that informs the methodological approach of the present study.

Thinking and Reasoning in History

Historians move between questions about the past and evidence from the past to construct interpretations of the past (Monte-Sano, 2008; Seixas, 1993; VanSledright & Kelly, 1998, Wineburg, 1991). Historians regularly analyze, synthesize, and interpret evidence from the historical record and then use that work to support their interpretations of the past. These interpretations of the past are often articulated as written arguments that are shared within the disciplinary community. The Dutch historiographer and historian Pieter Geyl argued that history is argument without end and that a "historian's judgement...will have no finality" (Geyl, 1949, pg. 16). In addition to the tentative nature of the discipline, the evidence from the historical record that historians rely on to create their interpretations is often tentative, incomplete and inconsistent (Bain, 2006; Kuhn et al., 1994; Lee, 2005). Historians create historical meaning by drawing upon evidence from multiple sources. Due to the interpretive nature of history, historians make meaning through constructing interpretations of the past by using sources as evidence to support their arguments.

In his seminal expert-novice study examining what historians and students do as they read historical sources, Wineburg (1991) identified three historical thinking heuristics that the historians used to support their reading and understanding of history sources: *contextualization*, *sourcing*, and *corroboration*. As they thought-aloud while reading historical texts, Wineburg found that historians would *contextualize* by situating the historical sources in the time and

location of their writing, *source* by examining and questioning the author and the author's biases, and *corroborate* by drawing connections and comparisons across history sources. Sourcing, as a function of historical reasoning, refers to the process of identifying a source's author, their biases, the source's origin, the purpose for which the source was created, and when it was created. Although the experts in Wineburg's study looked at sourcing information as a first step in approaching a document, they also returned to sourcing throughout the inquiry process (Wineburg, 1991). Sourcing stands out as a foundational process for historical reasoning, as engagement in other historical reasoning processes, such as contextualization, are dependent on sourcing (Britt & Aglinskias, 2002). Sourcing includes considering the motivations of the author(s), the purposes for which the document was created, and the reliability of the source (Reisman, 2012; Wineburg, 1991). Historians contextualize when they reconstruct elements of the past by situating sources, events, and historical actors in "a spatial and temporal context" (Wineburg, 1998, pg. 322). Contextualization depends heavily on prior knowledge, which expert historians also rely on heavily to aid in the interpretation of sources. Finally, historians corroborate when they compare and contrast information and details within a source or across multiple sources (Reisman, 2012; Wineburg, 1991).

In addition to Wineburg's three heuristics of sourcing, contextualization and corroboration, research on historical thinking has explored additional facets of what historians do as they engage in disciplinary inquiry. These processes involve understanding and considering relationships among historical phenomena, such as change over time, contingency, and complexity (Andrews & Burke 2007; van Boxtel & van Drie, 2018), reasoning about causes and consequences, similarities and differences (van Boxtel & van Drie, 2018), as well as the societal systems (e.g. political, social, economic) through which history is viewed and interpreted.

Historians also attempt to understand and characterize how people in the past viewed the world by engaging in perspective taking. Historical perspective taking refers to “the ability to understand how people in the past viewed their world at various times and in various places to explain why they did what they did” (Huijgen et al., 2017, pg. 155). As well, historians engage in chronological reasoning by attending to time and ordering of historical facts, sources, historical actors, and/or events in relationship to one another (van Boxtel & van Drie, 2018), often while contextualizing and sourcing a document or event. Within van Boxtel and van Drie’s (2018) model of historical reasoning, chronology is classified as first-order knowledge— that is, knowledge of historical events, facts, concepts, and ordering— which is used to “construct temporal and causal relations” (pg. 155).

Seixas’ (1993) described six historical thinking concepts that historians draw on to interpret the past. These include establishing historical significance, use of evidence from sources, identification of continuity and change, analysis of cause and consequence, historical perspective taking, and historical empathy. Seixas (2006) argued that these concepts are not a set of skills; rather, they serve as “underlying concepts that guide and shape the practice of history” (pg. 2), whereas Wineburg’s (1991) heuristics (sourcing, corroboration, and contextualization) have long been characterized as historical thinking skills. Van Boxtel and van Drie (2018) explain that the term *historical reasoning* has been broadly conceptualized as “a subcategory of...higher-order thinking, which comprises mental activities such as conceptualizing, evaluating, and decision making,” and “...historical thinking and reasoning largely overlap, as they both aim at understanding the past” (pg. 150-154). Thus, historical thinking and reasoning are not mutually exclusive, but instead are largely dependent on one another and are intimately connected.

While various research groups differ with respect to whether they refer to historical thinking process, historical reasoning processes, reasoning skills, etc., for the purposes of this study a full range of models of historical thinking and reasoning were considered as this study sought to understand the ways in which students' historical reasoning comes to be represented in the writing process and in written products. As such, the present study uses the term *historical reasoning* and *historical reasoning processes* to refer to the skills, practices, dispositions and habits of mind that historians (and students) engage in when participating in the discipline by using sources to create interpretations of the past (Bain, 2006; Lévesque, 2008; Seixas, 1993; Seixas, 2006; Wineburg, 1991; Wineburg, 1999).

Students' Historical Reasoning

As Wineburg (1999) noted, historical thinking is not a natural act for students, and as such, a central goal of history instruction must be to support and apprentice students in engaging in the work of thinking historically. As discussed in the previous section, historians routinely employ a range of complex reasoning processes. Research into how students approach history has established that they do not spontaneously engage in these processes and require a variety of supports to “think historically” (Britt & Aglinskas, 2002; Nokes et al. 2007; Wineburg, 2002). However, outside of the highest-level history classes, such as Advanced Placement History courses, many history classes do not provide students opportunities to learn and practice historical reasoning skills (Litman et. al, 2017).

Consistent with other inquiry-based approaches to history learning and based on extant literature on expertise in history, Project READI's History Design Team developed six learning goals that were designed to support students disciplinary learning in history (Appendix A) (see Goldman et al. (2016) for derivation of the goals). These learning goals drove the instructional

design of an AP History course in which the participants in the present study were enrolled. The design was intended to introduce and deepen students' experiences in historical reasoning over the course of the academic year. Students engaged in historical reasoning by using primary and secondary historical sources to ask and answer questions about the past and construct interpretative arguments about historical events.

When sourcing, students look at the details of a source, including the type of source, authors, and time in which it was written. Contextualization involves situating a source, event, historical actor(s), or background knowledge in time and space. When historians contextualize, they draw on their deep, rich, and well-organized body of historical knowledge. Similarly, when students source, they need to draw on their prior historical knowledge while reading historical sources to help make sense of the sources and to construct interpretations of the past. Van Boxtel & van Drie (2012) demonstrated the importance of prior historical knowledge in a study that found that students who were taught historical knowledge and students who were taught a strategy for contextualization and historical knowledge performed better on post-tests than students who were only taught the strategy for contextualization. They found that students need a body of historical background knowledge to effectively engage in historical reasoning. Further, both processes of sourcing and contextualization are important for students to be able to corroborate. Students corroborate when look across and within documents to compare and contrast information and to identify and/or discuss two or more points of agreement across or within documents (Wineburg, 1991), for the purposes of increasing the reliability of a claim or historical record (Goldman et al., 2016).

In addition to the processes of sourcing, contextualization and corroboration, students can and are challenged to engage in other complex historical reasoning processes. This includes

reasoning about change over time, causes and effect relationships, historical comparisons across sources and events, and chronology. For example, research examining the study of historical time (or chronological reasoning) has suggested students are capable of engaging in effective chronological reasoning at a fairly young age (Barton, 2002; Levstik & Barton, 1996). In the UK, Dawson (2004) offered four objectives for developing chronological understanding in the middle grades: 1) understanding of the vocabulary of chronological understanding, such as vocabulary that refers to time (e.g. before, after, AD, change, period); 2) the development of a sense of period, such as ancient, middle ages, modern, medieval; 3) knowledge and understanding of a framework of past events, such as an understanding of how relationships between events contribute to an understanding of a larger event; and 4) the ability to connect the framework of past events within a wider knowledge and understanding of history. Building on these four, Haydn, Stephen, Arthur, & Hunt (2014) offered two additional dimensions of chronological thinking: 5) Developing an understanding of duration, such as overlapping eras and periods; and 6) Developing a sense of period, that includes details and characteristics contained in periods of time. While these are proposed objectives, they do offer insight into how to conceptualize the development of students' chronological reasoning.

In relation to the proposed study, it is important to note that historical reasoning processes are not easily assessed and are especially difficult to identify and accurately assess in student writing (Monte-Sano, 2010; Reisman, 2012; Seixas, 2006). In the following sections, research studies relevant to assessing and supporting historical reasoning in the context of writing are reviewed.

Writing in History

Writing is not something that occurs in a vacuum, but rather is both a situated and social practice that occurs within and across communities of practice (Lave & Wenger, 1991; Prior, 2006). Thus, the context in which any writing problem is situated informs the form, genre and style of the writing, as well as the types of thinking that accompanies it. This means that while the act of writing may share production level similarities across disciplines (for example, people generate words to write sentences about a topic to form paragraphs to form a written document), each discipline has its own set of socially negotiated genres and sets of disciplinary-specific practices required in which members of the disciplinary community are expected to engage. As historians write, they contribute to the discipline by creating written arguments that draw on the historical record to offer interpretations of the past. Successful written argumentation in history involves reading and sense-making with historical sources to construct, negotiate, revise, and defend interpretations of the past.

Although there are many genres of writing within the domain of history, writing in history generally takes an argumentative stance as their interpretations of the past are defended and are tentative in nature. While historians write to explain, to synthesize, to provide a narrative of an event, these forms all share argumentative elements of claim, evidence (support), and warrants (Mink, 1987; Toulmin, 1958, 2003). In creating written arguments in history, historians write by creating goals and recursively engaging in multiple cognitive processes. As Flower and Hayes (1981; Hayes and Flower, 1986) discovered, writing is a goal-directed activity whereby writers create a set of goals for what to say and how to say it, and these goals direct their writing process. Flower and Hayes also demonstrated that writers do not proceed through writing linearly. Rather, they provided evidence that writers participate in four major cognitive processes and do so recursively: *planning*, *translating* (or sentence generation/production), *revision*, and

monitoring. These processes do not take place sequentially, but are called upon by a writer depending on the current goals and sub-goals. In the present study, historical writing is viewed as a complex problem-solving activity in which the cognitive processes of writing (also referred to as the writing process) and historical reasoning processes are invoked concurrently. That is, writing processes are a critical and representationally appropriate mode by which disciplinary thinking and reasoning takes place.

Historians writing differs from novice historians and student writers in that historians are engaging in *knowledge transforming* and generating new knowledge while students generally tend to *knowledge tell*. Bereiter and Scardamalia (1987) distinguished between writing that reflected knowledge telling versus writing that was transformative with respect to knowledge transforming. They investigated novice writers ranging from grade three to graduate level engaged in three different types of writing situations: suspense fiction, a restaurant review, and an invented fictional genre. Through these studies they found that rather than transforming knowledge, novices or more “immature” writers converted writing into a process of telling what they knew (*knowledge telling*) whereas more expert writers were creating new ideas in their writing. In source-based writing tasks common in history, knowledge telling involves moving information gathered from a source to the essay in a “cut and paste” manner. Conversely, *knowledge transformation* involves actively interacting with text contents and creating new or novel connections. For more expert writers in their study, writing was a sophisticated problem-solving process that involved goal setting and reasoning about information contained in sources. To move students toward knowledge transformation, students must reason with the sources they read and move past general comprehension and the retelling of what they already know. In

history classrooms, this involves moving students beyond the general comprehension of historical knowledge (Monte-Sano, 2011) and beyond the scope of the textbook (Bain, 2006).

A growing body of research indicates that using argumentative writing tasks in history instruction can lead to more knowledge transformation and also lead to more causal links in essays. Voss and Wiley (1997) found that students that wrote source-based argumentative essays in history demonstrated a more complete conceptual historical understanding and recall of text content verses students that were prompted to write an expository essay. Importantly, this body of research (Voss & Wiley, 1996; Wiley & Voss, 1997) pointed to the usefulness of writing arguments from multiple sources in history. In a later study focusing on students constructing arguments from multiple sources, Wiley & Voss (1999) found that writing arguments from multiple sources led to more knowledge transformation, as opposed to students that explained, summarized, or narrated the sources.

An essential aspect of composing an argument is having knowledge of what counts as a claim in the discipline. As students become socialized into forms of writing in history classrooms, they come to an understanding of what constitutes a claim in the discipline of history. This is critical to students' successfully engaging in written argumentation as Newell et al. (2011) demonstrated that knowledge about argument and knowledge of how arguments function in a given discipline matters for students to successfully produce written arguments. Monte-Sano (2010) explored the nature of argument and evidence in history in a study of 11th grade high school students' US history essays and sought to describe the nature of students' argumentative historical writing. Results of her analysis showed five patterns of evidence use in students' writing, which became benchmarks of historical writing in students' essays and indicators of students' historical reasoning. Importantly, Monte-Sano argued that while generic

elements of argumentation were required to write historically—such as claims, support/evidence, rebuttals, warrants, data (Toulmin, 1958)—these elements did not alone account for what was required to write historically. For example, a student might demonstrate an element of argumentation and historical reasoning in writing by using a piece of evidence from a document, but then fail to consider the quality of evidence for the historical argument.

This is similar to what Bereiter and Scardamalia (1987) describe in attempting to move student writers from knowledge telling to knowledge transforming practices in writing—moving past identification and the copy-pasting of information from texts into an essay and moving students’ toward historical analysis by using historical background content knowledge and evaluating the quality of evidence selected by considering contextual and authorial factors (sourcing and contextualization). The present study sought to extend research in historical reasoning and writing by describing students’ historical writing processes in light of both the written essay and the process students engage in to complete the essay.

Examining and Supporting Historical Reasoning in Writing

There is a growing body of research in the area of understanding and describing historical reasoning in the context of writing, and particularly in the context of student writing.

VanSledright (2013) explains, “Because good writing requires a disciplined display of thinking, it holds the capacity to demonstrate understanding” (pg. 66). This body of work largely began with Greene’s (1994) study of historians and college students’ approaches to writing in history. In more recent years, research on writing in history has focused on the product of students’ writing (e.g., a completed essay) as a vehicle for examining students’ thinking in history (e.g. De La Paz, 2005; Monte-Sano, 2010; Nokes et al., 2007). Several studies have used a historical essay writing task to test the impact of various instructional strategies and scaffolds for

supporting writing history and students' historical reasoning (De La Paz, 2007; Van Drie et al., 2014; Van Drie et al., 2015; Wiley et al., 2014).

Formerly, research in history education had viewed historical writing as a “generic form of composition” (Monte-Sano, 2010, pg. 540). As well, history educators had held a narrow view of writing's role in the history classroom, often viewing it as a tool of assessment rather than as a tool for learning (Ochsner & Fowler, 2004). When done effectively, studies have demonstrated that the explicit teaching of historical writing alongside historical reasoning processes has led to deeper content learning in the history classroom (Monte-Sano, 2008; Nokes et al., 2007; Reisman, 2012). Greene (1994) examined the ways in which historians and history students approached and interpreted writings tasks in history. The study sought to describe the cognitive demands of writing in history and utilized two types of history writing prompts to do so: a problem-based task and a report writing task. Through the use of very brief think-alouds and retrospective interviews, Greene found that historians and students interpreted history writing tasks differently. Differences in discourse knowledge, prior knowledge about the topic, and specialized disciplinary knowledge distinguish the historian's approach to writing in history from a student (Goldman et. al, 2016). Importantly, Greene's work laid a foundation for the examination of writing practices in the discipline of history and pointed to the need to develop strategies for supporting students in reasoning historically.

Another closely related thread of research seeks to understand students' historical reasoning through their writing, while also attempting to understand what conditions lead to improving and scaffolding students historical reasoning. Importantly, this literature has found that differences in the historical writing *prompts* can have a significant effect on what students attend to in a given set of sources, and thus, what students end up focusing on in their essays (De

La Paz, 2007; Monte-Sano, 2010; Monte-Sano & De La Paz, 2012; Nokes & De La Paz, 2018; Van Drie et al., 2014). For instance, asking students to write a descriptive essay with sources leads to fewer learning outcomes than when asking students to produce a historical explanation (Voss & Wiley, 1996). Further, differences in history writing prompts appear to elicit differences in the type and amount historical reasoning students demonstrate in their essays (Monte-Sano & De La Paz, 2012).

In a history writing intervention study focused on 11th grade US History students' historical writing over the course of 11-weeks, Monte-Sano (2010) found that students writing quality, historical thinking, and content understanding improved when presented with argumentative writing tasks that required students to closely read sources and that explicitly asked students to consider an author's perspective. Later, in an attempt to capture students' historical reasoning in essays and measure differences in that reasoning based on variations in the type of history writing task provided, Monte-Sano and De La Paz (2012) studied the impact of four historical writing prompts by using rubrics that attempted to measure overall historical quality and historical reasoning over the course of three to four-day unit on the Cold War. They found that tasks that require sourcing, corroboration, and cause analysis rather than tasks that require historical retelling or a narrative style garner greater elicitation of historical reasoning and have a more positive impact on high school students' overall writing quality. As a result, they argued that the type and phrasing of historical writing tasks and the types of skills required for historical writing tasks need to be considered when designing writing tasks for history classrooms.

In written essays, the most visible evidence of sourcing processes is whether students directly reference a source's author, title, or speaker when writing about a source. However,

more sophisticated evidence of sourcing processes can be present in writing. For example, a student writer might recognize, address, or evaluate the trustworthiness and usefulness of a source, or refer to the specific purpose for why a source was written; however, these more sophisticated examples of sourcing processes may be more likely to surface in writing prompts that are specifically designed to elicit these processes (Monte-Sano & De La Paz, 2012).

Still other studies have offered scaffolds and approaches designed to support students' historical thinking with source-based questions, also referred to as a document-based question (or DBQ), Reisman (2012) conducted a quasi-experimental study utilizing multiple choice pre- and post-tests measures and found that strategy instruction relative to sourcing, contextualization, corroboration and close reading within the context of a 6-month intervention increased high school students' ability to closely read, historically think, and retain content. While this study demonstrated significant effects for the intervention, the study did not utilize students' writing as a means of examining students' historical thinking due to the documented challenges of capturing historical reasoning in student writing (De La Paz, 2005; Nokes et al., 2007). In fact, Reisman pointed out that De La Paz (2005) and Nokes et al. (2007) "may have missed opportunities to capture growth in student historical reasoning" because they hoped "to capture student historical reasoning in writing" (pg. 87). Hence, Reisman's use of pre- and post-test multiple choice measures of historical thinking and content knowledge. Indeed, the persistent challenge of inferring historical reasoning solely from student's written products resides in the unknown degree of discrepancy between the reasoning that happens along the way to the final argument and the reasoning present in the final argument. The relationship between the two is rarely, if ever, investigated. Nevertheless, some researchers assert that the source-based history essay is an effective way to assess students' reasoning. The present study sought to investigate

the nature of discrepancies that might exist between historical reasoning that occurs while students are composing source-based essays as compared to historical reasoning represented in the final, written essay.

The document-based historical essay is a regularly used task to assess students' historical knowledge and reasoning in classrooms and research contexts (Grant, Gradwell, & Cimbricz, 2004; Monte-Sano, 2008; Reisman, 2012; Young, & Leinhardt, 1998). Document-based questions contain series of complete or excerpted primary and/or secondary sources in conjunction with an argumentative writing prompt and are designed to elicit students' historical knowledge and reasoning. The present study uses a document-based question to examines students' historical reasoning processes during the composition process within the context of an AP US History classroom. The document-based-question task that appears on the Advanced Placement exam asks students to create an argument using information in a document set provided to them to address a question prompt. Proficient performance on this task requires students to make claims and use information from the document set as evidence in support of their claims. Document-based questions are generally viewed as developmentally appropriate forms of historical argumentation. As well, the document-based question (DBQ) is a commonly used task in assessing students' historical writing (McCarthy, Young & Leinhardt, 1998). The present study examined the process of students composing DBQ essays as well as the essays they produced.

Historical Reasoning during the Composing Process: The concurrent think-aloud approach

To examine historical reasoning, the present study used a concurrent think-aloud approach. As Flower and Hayes (1981) explained when they introduced this methodological approach, “the composition process refuses to sit still for a portrait” (pg. 368). Concurrent think-

aloud protocols ask writers to verbalize their thoughts as they write, thereby producing consciously provided data around the problem-solving strategies of completing a writing task (Smagorinsky, 1989).

Although think-aloud protocols have been frequently used in research aimed at thinking and reasoning processes engaged in during reading, their use to understand historical thinking processes during composition is less common. In research specific to the domain of historical understanding and reading, Wineburg's (1991) seminal study utilized think-alouds while students and historians read historical sources. More recently, Gottlieb & Wineburg (2012) utilized think-aloud protocols to understand how historians, clergy, and scientists engage in epistemic switching as they read and understand academic and sacred texts. As well, Wolfe & Goldman (2005) utilized think-alouds to examine students reading and processing of multiple historical texts. Other studies have utilized think-alouds to understand and explore students historical reasoning while completing or reading history assessments. Breakstone (2014) utilized think-aloud interviews to construct three cases of students as they completed historical assessment tasks to gather detailed information about the cognitive processes students engaged in to complete the assessments for the purposes of iteratively developing new history assessments. Similarly, Huijgen et al. (2017) utilized think-alouds in a mixed methods study to understand reasoning strategies students employed with an assessment tool designed to explore historical perspective taking. Thus, the use of think-aloud protocols for the purposes of understanding and describing cognitive processes in history is well-established.

There is a body of research grounded in examining and supporting historical reasoning through the lens of the writing product (eg. De La Paz, 2005; Monte-Sano, 2010; Nokes et al., 2007; Wiley et al., 2014). However, much less attention has been paid to the reasoning students

engage while writing. Writing is a recursive, problem solving activity (Bereiter & Scardamalia, 1987), and in the context of history classrooms writing is one of the ways students engage in historical reasoning. The writing of historical accounts is central to demonstrating students' historical thinking and reasoning (Greene, 1994; Monte-Sano, 2010; van Drie et al., 2014; van Boxtel & van Drie, 2018). Thus, the goal of the present study is to build on the current tradition of research in understanding students historical reasoning by examining historical reasoning during the composing process as well as in the written product.

CASE STUDIES OF STUDENTS HISTORICAL REASONING

This study sought to examine the process of students' historical reasoning during the production of document-based historical essays and the relation of those processes to the historical reasoning evident in their essays. This case study (Yin, 2006) relied on data collected as students completed a document-based history writing task and were prompted to think-aloud (Ericcson & Simon, 1980, 1993; Wineburg, 1991). As such, the primary sources of data for this study were in the form of students' written essay products and their concurrent think-aloud protocol data— e.g. video records and the transcripts generated from those video records. The prediction was that the historical reasoning identified from essays would be a subset of the historical reasoning students engaged in to generate the essay.

Charters (2003) argues for the use of case study analysis when think-alouds methods are employed, especially when "...grappling with the expository question "how does it (the target process) work?" (p. 76). As this is the essential question of this study, a case analysis approach was employed to elucidate the complexities and changes of students' historical reasoning as it made its way from the think-alouds to the product of that reasoning in their essays. Thus, the present study uses a multiple case study approach with 8 students using a prompted think-aloud procedure during a historical writing task that contains multiple sources. Since it is well established that students do not spontaneously engage in historical reasoning without instruction in historical inquiry, this study was embedded in a classroom where the goals were explicitly to teach students to engage in historical inquiry.

METHODS

Research Setting

The data utilized for this study were collected during the Spring semester of the 2015-2016 school year within an 11th grade Advanced Placement (AP) US History classroom. The high school (serving grades 9-12) in which the study was conducted served four working-class communities that border a large metropolitan city in the midwestern United States. At the time of data collection, the school served approximately 1,800 students with 42% of students classified as low income. The school served a diverse student population (50% Hispanic and 43% White) with a high number of bilingual and first-generation students both from Latin American and Eastern Europe. Across the three sections of the partnering teacher's AP US History classes surveyed for participation in this study, 8 different languages were spoken at home in addition to English.

This study took advantage of the Project READI work in history, and the partnering teacher for this study, Ms. Johnson, was a member of the READI History Design Team for the duration of the project. At the time of joining Project READI, Ms. Johnson, had 15 years of teaching experience and held a BS in secondary education (history) and Masters' Degree in Curriculum Studies at the time of study. She participated in four iterative cycles of design-based-research (Barab & Squire, 2004; Brown, 1992) that included design, implementation, reflection, and redesign followed by implementation of the new design and the subsequent phases of the cycle. This study was conducted the year following the third design cycle (2015-2016) during which Ms. Johnson taught three sections of AP US history using the READI approach. Specifically, Ms. Johnson's classes were designed around and driven by READI's History Learning Goals (Appendix A) that were intended to promote students' historical reading, reasoning and inquiry. These goals were pursued in conjunction with the demands of the AP Exam that the course was intended to prepare students to take. As such, Ms. Johnson's

instructional design was intended to support students in reading, analysis and interpretation of primary and secondary historical documents. The AP examination in US History requires that students produce a document-based essay. To prepare students for this assessment, in addition to reading and reasoning from multiple historical sources, the instructional design of the course included an emphasis on writing such essays.

In conjunction with the routine use of primary and secondary sources, students were also regularly assigned the relevant textbook chapters to read *outside* of regular class sessions. The textbook was rarely physically present in the classroom. The textbook material provided background knowledge and students regularly referenced the text and were expected to keep notes on the chapters. As well, Ms. Johnson gave the textbook a voice and perspective in the classroom by referring to it by the one of the primary authors, “Bailey.” When pulling in information from the textbook during class instruction, Ms. Johnson positioned information from the textbook as “Bailey’s argument” and reflected her epistemological orientation to history as something to be contested and argued and to support students’ understanding of differing perspectives in history.

The AP US History course curriculum includes content ranging from the Pre-Columbian America’s through the end of the Cold War, which is divided into nine (sometimes overlapping) chronological “periods” to be covered over the course of two semesters. Ms. Johnson’s instruction units were centered around multiple cycles of historical inquiry using multiple historical sources, usually with a different focal reasoning skill or READI history learning goal as being emphasized from unit to unit. As students learned new skills and deepened their understanding of history, Ms. Johnson intentionally scaffolded more complex sources as the year progressed. Also, students regularly engaged in writing historical arguments using multiple

sources. Ms. Johnson provided structured scaffolds for writing historical arguments and DBQ's during the first semester of the year, so that students could write complete arguments independently and without support by the end of the academic year.

During the initial part of the second semester, Ms. Johnson dedicated classroom instruction time to having students reading and analyzing DBQ task prompts. Thus, students first classroom task related specifically to preparing for the AP Exam DBQ involved reading multiple DBQ prompts, discussing them in small groups, and then discussing as a class what would constitute a "complex thesis" statement and suitable organizational framework based on the criteria set by the AP Board.

In the weeks leading up to the AP exam at the end of the academic year, the students begin a review of each chronological period, in addition to completing multiple "practice DBQ's" to prepare for the exam. This study took place at the beginning of this review period, which allowed data to be collected around a practice DBQ task that Ms. Johnson implemented across all three class sections of AP US History as part of her planned instruction. This history writing task is described in detail in the description of the materials below.

After student's practiced analyzing the prompt portion of the DBQ, Ms. Johnson then shifted some of her instructional time around historical writing toward helping students demonstrate "extended analysis" in their DBQ essays, based on the criteria set by the AP Board. To prepare students for extended analysis, Ms. Johnson encouraged students to utilize an acronym that she introduced early in the school year and regularly referred to when students analyzed primary sources in class. This acronym (POV CAP) referred to "Point of View, Context, Audience, Purpose," and was utilized to help students engage in a variety of sourcing processes for a provided historical document. For each document students interacted with, they

were encouraged to consider the author of the source and their point of view, the context the source was situated in, the intended audience for the source, and the purpose of the source. Students were also encouraged to make their thinking visible through the making of annotations anytime they were engaging with historical sources.

Finally, instructional time eventually shifted to having students compose entire DBQ's in preparation for the May examination. The emphasis on reading, reasoning and writing like a historian made this AP course a good site for exploring the main question this study sought to address— namely whether the essay provided a complete and accurate picture of students' historical reasoning.

Researcher Positionality

As a Graduate Research Assistant on Project READI and an active participant on the History Design Team, I worked extensively within Ms. Johnson's classrooms across most of the design iterations. This work involved regular data collection activities, frequent curricular consulting and debriefing meetings with Ms. Johnson after observations, and regular History Design Team meetings off site. At the time of study in Spring of 2016, students were accustomed to seeing me as an occasional participant observer in the classroom— totaling to around 8 visits during the academic year prior to the start of the current study in the Spring. My research activities in those classes prior to data collection primarily involved field notes, occasional video recordings of a class session, and occasional audio recordings of small group interactions across the academic year.

Research Procedures

Overview

This section of the chapter explains the research procedures for this study, including a description of the participants, task materials, and the specific procedures used during data collection.

Participants

Three sections of Ms. Johnson's 11th grade AP US History class were identified for the study and all sections were open enrollment. Due to the non-selective, open enrollment status of AP courses at the school, all students entering their junior year that had successfully passed 10th grade history were eligible to enroll in the course.

Of the three sections of Ms. Johnson's AP US History courses, one section was identified as the focal class. While additional demographic and written essay data were collected from all consented students across the three sections (N=39), one section of AP US History was identified as the focal class from which the think-aloud participants were recruited. This was intended to minimize disruptions across classes and to more easily schedule and facilitate training for the identified think-aloud participants. Of the three sections, the largest section and the section with the greatest number of consented students was selected as the focal section to increase the likelihood of identifying an adequate number of think-aloud participants.

Of the 23 students in the selected section of Ms. Johnson's class, 19 consented to participate in the study and all were offered the opportunity to volunteer as a participant in the think-aloud interview condition. Of the 19 consented students, 10 volunteered to participate in the think-aloud interview. From the 10 students that volunteered to participate in the think-aloud, 8 completed the study. One student withdrew because of scheduling conflicts, and one student began the think-aloud interview but was unable to complete it due to time constraints unrelated to the study.

All think-aloud participants were between the ages of 16 and 17 years old at the time of study. Table I provides the self-reported demographic information for each of the eight think-aloud participants using their assigned pseudonyms. The teacher provided an estimated reading skill level (high, average, low) relative to grade level for each student. Finally, the ratio of females to males in the think-aloud sample is reflective of the composition of Ms. Johnson's AP US History classes overall.

Table I

Overview of Participants

| Name | Gender | Ethnicity | Additional Languages | Reading Skill |
|-------------|---------------|------------------|-----------------------------|----------------------|
| Rachel | Female | Caucasian | | High |
| Jay | Male | Caucasian | | Average |
| Hannah | Female | Caucasian | Polish | Average |
| Grace | Female | Caucasian | Polish | High |
| Mary | Female | Caucasian | Polish | Average |
| Anci | Female | Asian | | High |
| Randall | Male | Caucasian | Ukrainian | High |
| Hailey | Female | Asian | Tagalog | Average |

Materials

The DBQ Task. Participants completed a DBQ task that Ms. Johnson had identified as one that her classes would work on during the review period for the AP exam (first couple of weeks in April, 2016). The task was a practice DBQ prompt and document set designed by the

College Board to help students prepare for the May administration of the AP Exam. The historical time period was the early colonial period of United States.

The task page included a bulleted list of expectations for the essay that are standard to every AP DBQ task (Appendix B). This list included instructions to include a complex thesis statement, advance a cohesive argument, utilize evidence from the documents to support the argument, show evidence of sourcing by explaining the significance of the author's point of view, purpose, context, or audience for at least four documents, contextualize the argument, draw in prior background knowledge, and synthesize by connecting their argument to either 1) "a development in a different historical period, situation, era, or geographic area," or 2) "a course theme and/or approach to history that is not the focus of the essay (such as political, economic, social, cultural, or intellectual history)" (Appendix B). At the time of data collection, students were highly familiar with the task expectations and only one participant took the time to read through these instructions during the task.

Following the list of instructions and expectations for the essay, the specific prompt stated:

Compare and contrast the development of two distinct English colonial societies in the New England and Chesapeake regions prior to 1700, analyzing the reasons for similarities and differences in the development of English colonial societies in these regions.

As noted earlier, a historical writing task can be expected to draw on a range of reasoning skills; different tasks could then elicit different subsets of historical reasoning processes from students (Monte-Sano & De La Paz, 2012). This particular DBQ asks students to draw on their historical reasoning skills to explain similarities and differences in the development of two English

colonies and explicitly prompts students to engage in historical comparison to explain the reasons why the two regions developed in similar and different ways. To do so, students need to identify similarities and differences among the colonies with respect to events, historical actors, colonial development, societal systems, or periods using information in the DBQ document set in conjunction with their prior knowledge of the historical period. Making sense of the document set involves invoking generic reading processes in conjunction with historical reasoning processes (e.g., sourcing, contextualization, and corroboration processes; cause effect reasoning; and temporal sequencing).

The document set for this DBQ prompt included historical artifacts germane to the development of the New England and Virginia (Chesapeake) Colony colonies and provided opportunities to examine multiple perspectives (historical perspective taking) on the colonies' development. All seven documents were primary sources. Table II provides an overview of each source in the document set and its relevance to the task.

Table II

Overview of Sources

| Source Title/Description | Summary | Task Relevance |
|---|---|---|
| Document 1: John Winthrop's sermon: <i>A Model of Christian Charity</i> , 1630 | A sermon to the Puritans en route to New England that explains the values of living in the Puritan settlement. | <ul style="list-style-type: none"> Explains motives and values of Puritan settlement Highlights religious focus Establishes Winthrop as a leader of Puritans Compares/Contrasts with Source 5 |
| Document 2: Articles of Agreement, written and signed by eight Puritan men, Springfield, Massachusetts, 1636. | A document to the Puritan settlers in Springfield, Massachusetts describing the principles of how the town should be organized. | <ul style="list-style-type: none"> Describes principles of a Puritan village including religious focus and social egalitarianism. Corroborates with Source 1 |

| | | |
|---|--|--|
| Document 3: List of Emigrants Bound for New England, 1635 | A record/account of the emigrants heading to New England in 1635 with ages and relationship. | <ul style="list-style-type: none"> • Highlights types of settlers organized by families. • Highlights a number of women coming to New England. • Provides opportunity to contextualize around the Great Migration, the Protestant Reformation, Separatist Movement • Contrasts with Source 4 |
| Document 4: List of Emigrants Bound for Virginia, 1635 | A record/account of the emigrants heading to Virginia in 1635 with names and ages of emigrants. | <ul style="list-style-type: none"> • Highlights types of settlers organized by families. • Preponderance of single, adult male settlers • Contextualize about joint-stock companies & the Virginia Company. • Contrasts with Source 3 |
| Document 5: John Smith's Account of Life in Virginia, 1624 | The personal account of John Smith justifying his leadership and condemning the behavior of earlier colonists. | <ul style="list-style-type: none"> • Justifies Smith's leadership • Discusses struggles of early settlement attempts • Establishes Smith as a leader in Virginia • Speaks to motivations of settlers in Virginia • Contextualize around the social turmoil in England, joint-stock companies, & the Virginia Company. • Compares/Contrasts with Source 1 |
| Document 6: Declaration by Virginia Governor Berkeley, 1673 | A declaration to royal officers in England seeking military support for the Virginia colony. | <ul style="list-style-type: none"> • Highlights struggle turmoil in Virginia, struggle with Native Americans. • Political turmoil in colony. • Contextualize around turmoil in Virginia, struggle with Native Americans. |
| Document 7: Manifesto by Nathaniel Bacon, 1676 | A document intended for public viewing by Bacon defending his actions and opposition to colonial policies. | <ul style="list-style-type: none"> • Details social inequalities in colony, contrasts with New England. • Contextualize around turmoil in Virginia, struggle with Native Americans. |

| | | |
|--|--|---|
| | | <ul style="list-style-type: none"> • Speaks to motivations of settlers in Virginia |
|--|--|---|

Of the seven documents in the set, Documents 1, 2, and 3 provide information about the New England colony's development; Documents 4 through 7 refer to the Virginia (Chesapeake) Colony's development. Additionally, the documents complement and corroborate each other in ways that provide additional opportunities for students to engage in historical reasoning. For example, Document 1 and Document 5 are each written by the leaders of each colony, John Winthrop and John Smith, respectively. This provides students an opportunity to draw historical comparisons between the two leaders across the colonies. Similarly, Documents 3 and 4 are both lists of passengers bound for each respective colony, providing students the opportunity to compare and make inferences about the types of settlers in each region.

Prior to data collection, the DBQ task and think-aloud procedures used in the study were piloted with two 11th grade AP US History students unassociated with the school or Project READI. Changes to the initial research procedures were made based on what was learned during the piloting process. Specifically, students in the pilot did not verbalize their thinking as much as expected despite them having begun reviewing for the AP exam at their own schools and having familiarity with the colonial time period. As a result, three changes to the procedures for the study were made. First, a post-think-aloud interview question was developed to provide participants an opportunity to speak further about their thinking after they had completed the essay. Second, in consultation with Ms. Johnson, all students in her classes read the document set in class. Thus, the participants in this study were re-presented with the document set when they did the think-aloud and essay generation tasks. Third, a more extensive think-aloud training was utilized.

Procedures & Data Collection

Data collection took place within a two-week timeframe in early April of 2016 at the beginning of the review month in preparation for the AP exam. This window of time was utilized for data collection as Ms. Johnson selected a practice DBQ task for students to complete across two class periods to support students' preparation for the written portion of the AP exam. This practice DBQ was divided into a reading session (day 1) and a writing session (day 2). Distributed materials (the DBQ sources and task prompt) were collected at the end of each class session, and students were given new copies of the task materials for the second day. Table III provides an overview of data collection activities.

Table III

Data Collection Overview

| Timeframe | Activities | Description |
|-----------|---|--|
| Day 1 | In class DBQ reading session | All students provided DBQ task documents to read independently. |
| Day 2 | In class DBQ reading and writing session for class members not participating in the think-aloud | Non-focal participants independently complete DBQ task in class. |
| | Think-aloud training session with participants | Ten participants went to the library where think-aloud training was conducted. |
| Days 3-10 | Single day think-aloud sessions for each of the 9 participants. | Think-aloud sessions conducted with focal participants individually. |

Day one: Whole class DBQ document reading. All students in the class read the DBQ task instructions, including the prompt, and the document set. They read independently and were instructed to not begin their essays but to read and annotate the documents. At the end of this first session, all DBQ task materials were collected by Ms. Johnson and the researcher.

Day two: Think-aloud training for study participants. The 10 students who had consented to participate in the think-aloud session went with the researcher to an area of the library where the think-aloud training was conducted. The remaining students stayed in their classroom and Ms. Johnson provided them with new copies of the DBQ task materials and instructed them to complete the essay task.

Participants in the think-aloud training were given an opportunity to practice thinking-aloud with a sample set of historical documents and a task prompt from the Civil Rights Movement. The students had recently completed a unit on the Civil Rights movement, and as such, the context was familiar to students as they practiced thinking-aloud.

During this group training session, the researcher modeled thinking-aloud while reading and writing. The researcher first modeled how to read a section of a text aloud and then talk aloud about it. The first modeled example used an excerpt of Martin Luther King's *Letter from Birmingham Jail*, and the researcher modeled reading the citation information for the text and then demonstrated sourcing and contextualization processes for the participants by modeling talking-aloud about who the author was, why the letter may have been written, and to whom Dr. King may have been writing. The second modeled example demonstrated thinking-aloud while composing based on information in the *Letter from Birmingham Jail*.

The participants were then organized into pairs to have an opportunity to practice thinking-aloud in front a tape recorder and with another person present. Each pair was provided a tape recorder and then provided opportunities to take turns thinking-aloud while reading the documents to compose a written response to the task prompt. After each participant had the opportunity read-aloud and/or write-aloud, the group as a whole discussed what was easy or difficult about thinking-aloud so that the researcher could get a sense of their comfort level with

the demands of thinking-aloud while engaged in reading and composing their responses. Toward the end of the 45-minute think-aloud training session, the researcher provided participants an opportunity to ask questions. The detailed think-aloud training procedures and script are contained in Appendix C.

Day 3 – 10: Think-aloud sessions. Each participant met with the researcher individually to read and complete their essay response to the DBQ prompt. These sessions were held after regular school hours in a conference room nearby to Ms. Johnson’s classroom. Sessions were video recorded with two video cameras. The first camera was positioned next to the researcher to ensure the student’s face and upper body was in frame and the second camera was positioned above the table to capture each student’s writing and reading activities, including any annotations that they made on the documents. Individual sessions ranged in length from 54 minutes to 105 minutes.

Instructions. At the beginning of the session, the researcher instructed the students to “say out loud everything [they] are thinking the entire time— from when [they] receive the DBQ prompt and document set to the time [they] finish writing your essay” (The instructions are provided in Appendix D). Participants were asked to “say what you’re thinking about at the end of every sentence” and were reminded to be sure to say aloud what they are reading or writing. Participants were given a brief opportunity to practice thinking-aloud with one of the documents from the training session. Finally, students were provided the DBQ task documents: DBQ task instructions and prompt, the document set, and lined paper on which to write their essays. Throughout the session, the researcher prompted participants to continue verbalizing their thinking if a pause of more than 5 seconds occurred, using two forms of prompt: “continue thinking aloud” or “what are you thinking?”. Across the 8 participants, there were 28 instances in

of researcher prompts. Of these 28 instances, 26 occurred when participants were actively planning or composing text for their essays whereas only 2 occurred when they were reading the documents.

Post-task interview. When students indicated they were finished with writing the DBQ, the researcher asked each of them two post-task questions to which they responded orally: “How do you think you did overall on the task?” and “ Did you include everything you wanted to in your essay?” (Appendix D).

Analytic Approach

The primary sources of data for this study were the 8 think-aloud participants’ video recorded protocol sessions and the corresponding transcripts, the post-task interview question transcripts, the participants’ completed essays, and the researcher’s field notes taken during the composing session. Additional sources of data were used to clarify and further understand the nature of students’ historical reasoning; these sources were: the participants’ annotations on the task instructions and document set, and the history of revisions that had occurred during the composing process. This section of the chapter describes the specific analytic strategies employed across multiple phases of analysis.

Transcription

Digital scans of participant’s written data were generated, and transcripts of student’s written essays were generated using Microsoft Word. Essays were transcribed verbatim, and all errors (including spelling, grammar and formatting) were maintained in the transcribed essays. Participant’s video recorded think-aloud sessions were transcribed using the transcription software *InqScribe*.

Parsing of Protocol Data

Following transcription, protocol transcripts were systematically parsed into comments (Chi et al., 1994). For the purposes of this study, three criteria were utilized to signal the beginning of a new comment in the think-aloud protocols: 1) a speech burst immediately following the reading of a document or a speech burst following the composition of a sentence in the essay text, 2) the reading of a document or composing-aloud following a speech event, or 3) a transition to a new reading or writing practice or task while thinking-aloud such as moving from reading a selection of text to composing their essay. These different types of comment criteria are illustrated through a segment of one participant's transcript. This transcript is representative of a pattern of reading and thinking aloud present in all of the participants: *read-aloud*, *talk-aloud*, *return to reading* at the point where they had stopped. Jay began reading Document 1 and then verbalized his thinking and then resumed reading in the same text:

Jay Reading: Document One. Source, John Winthrop. (Criteria 2)

Jay Thinking-Aloud: I know... yeah, it says it right there. (Criteria 1)

Jay Reading: John Winthrop is the Puritan governor of the Massachusetts Bay Colony, a model of Christian charity, written on board the Arabella, on the Atlantic Ocean in 1630. (Criteria 2)

Jay Thinking-Aloud: So this was before they landed down in, the New England region. So, so, I know that he's addressing, like the, the settlers that came with him on the ship (Jay TAP, 5-8). (Criteria 1)

Similarly, an alternating pattern was also representative when they were engaged in composing text: *compose-aloud*, *talk-aloud about what was composed*, *return to composing*. However, comments made during composition tended to be longer than those made during reading as participants often composed-aloud in larger sections and their think-aloud often reflected

possibilities students were considering and their thinking about these possibilities. Another excerpt from Jay exemplifies this tendency:

Jay Thinking-Aloud: And, I could probably work in a quote from document 1 here.

Where I say, so right around this, picking out which area is best, best works with what I'm trying to do with. Which is, give an example of what, of how their community were compelled to stick together and succeed. (Criteria 1)

Jay Writing: I could say, John Winthrop, the leader of the Puritans before landing, before landing down, addressed his fellow settlers saying, we must consider, we must consider that we shall be, as a city on a hill. By this he means, it is their duty to stick together and thrive so as to show their religious experiment could work. Another... (Criteria 2)

Jay Thinking-Aloud: ...and this is where I might work in document 2 to add to the argument that they were compelled to stick together (Jay TAP 65-68). (Criteria 1).

To establish reliability, a second rater processed a 25% sample of the raw think-aloud transcripts (2 of the 8 transcripts) and parsed them using the parameters described above. Interrater reliability of 98% was established and disagreements were resolved through discussion.

Qualitative data analysis software (MAXQDA) was used to parse the raw transcripts into comments to allow for multiple video records and participants' written artifacts to be simultaneously displayed to further confirm when they were writing and verbalizing. This level of parsing proved to be an adequate grain size for identifying student's moves throughout the task, identifying instances of students' historical reasoning, and describing their reading and writing activities.

Table IV provides an overview of the protocol data and parsed comments by participant to contextualize the think-aloud protocol data set. A total of 1683 comments were parsed across the 8 participants, excluding the post-task interview responses and prompts by the researcher to continue thinking-aloud. The total number of comments per participant think-aloud ranged from 290-118. Comments in which participants were thinking aloud ranged from 160-57, and comments in which participants were reading or composing-aloud ranged from 156-59.

Table IV

Protocol Data Overview

| Participant | Time on Task (H:MM:SS) | Total Comments | Think-Aloud Comments | Reading or Composing Comments |
|--------------------|-------------------------------|-----------------------|-----------------------------|--------------------------------------|
| Rachel | 1:45:50 | 255 | 141 | 114 |
| Jay | 0:59:43 | 118 | 57 | 61 |
| Hannah | 1:21:29 | 222 | 114 | 108 |
| Grace | 1:23:22 | 290 | 134 | 156 |
| Mary | 0:54:15 | 124 | 65 | 59 |
| Anci | 1:20:46 | 287 | 160 | 127 |
| Randall | 1:09:13 | 215 | 121 | 94 |
| Hailey | 1:06:42 | 172 | 95 | 77 |

Data Analysis

Data analysis was conducted in three phases: initial and descriptive coding, case analysis, and cross-case analysis. The major features of each phase are described in Table V.

The first phase of analysis was aimed at describing how the participants traversed the DBQ problem space and drew on the Flower and Hayes (1987) method of analyzing and describing the composing process. The structural analysis ala Flower and Hayes was augmented with an analysis of the documents that students used and a content analysis of the claim's participants made in the essays. Phase two examined and characterized the historical reasoning

that could be inferred from the completed essay, independent of the process of composing it. The reasoning inferable from think-aloud comments made during the composing process was compiled separately during this phase. For each case, a comparative analysis of the reasoning inferable from the process versus the essay product was then conducted. Finally, phase three was a cross-case analysis with respect to similarities and differences in the historical reasoning in the essays as compared to the historical reasoning that was reflected in the process of producing the essay.

Table V

Phases of analysis by data source

| | Data Source | |
|--|---|--|
| | Process Data | Essay Data |
| Phase 1: Initial & Descriptive Coding | Structural analysis: coding for reading & writing activities Document use analysis Initial coding for historical reasoning processes Content analysis | Coding of argument structure Coding of essay features Document use analysis Initial coding for historical reasoning processes |
| Phase 2: Case Development & Analysis | Revised coding for historical reasoning processes Detailed analytical memoing and case development by participant. Comparative analysis of each case's process data vs. essay | |
| Phase 3: Cross-Case Analysis | Cross-case analysis: Cross-participant analysis and synthesis of emergent patterns of students' historical reasoning during the task | |

Phase one: Initial and descriptive coding. The first phase of analysis involved reading and re-reading the parsed think-aloud transcripts alongside the corresponding video data and reading each participant's essay multiple times to familiarize the researcher to the data. Collected data was imported to and coded using qualitative data analysis software (MAXQDA). This phase sought to understand student's traversal of the problem space of writing a DBQ by identifying salient reading and writing activities in the process data and the structure of participants' essay

data. Table VI displays the reading, writing, and document coding structure applied to the process data.

Essays were coded for their argument structure based on Toulmin's (1958) model of argumentation which identified claims, evidence, and reasoning within the essays. As well, essay structure and features such as introduction, conclusion, and participants' thesis statement(s) were coded using explicit cues in the text (e.g.: paragraphing, "In conclusion...").

This phase also facilitated an initial coding (Charmaz, 2006) for evidence of historical reasoning processes in both sources of data and was used to identify emergent instances of historical reasoning. This initial coding was informed by a range of literature on historical reasoning (De La Paz et al., 2012; Seixas, 1993; van Drie & van Boxtel, 2007 & 2018; Wineburg, 1991) and the types of reasoning processes discussed above that were expected to be visible based on the task prompt.

Table VI

Phase One Coding for Think-Aloud Data

| Code | Sub-Code(s) | Description |
|-------------------------------------|-----------------------------------|---|
| Category: Reading Activities | | |
| Reading | Reading Prompt | Participant reads the task prompt. |
| | Reading Document | Participant reads the document. |
| | Reading Essay | Participant reads their essay, post-production. |
| Category: Writing Activities | | |
| Writing | Production: Writing Text of Essay | Participant's comment is speaking aloud their essay as they write; video and essay data confirm and corroborate activity. |
| | Prewriting | Participant's comment refers to planning the essay's content, organizing their writing, or development of a thesis; video data and/or annotations confirm and corroborate activity. |
| | Revision/Editing | Participant's comment involves verbalizing making a change to the essay. |
| Document Codes | | |

| | | |
|----------|---------------------|--|
| Document | 1, 2, 3, 4, 5, 6, 7 | Participant's comment refers to an activity with any document of the text set. |
|----------|---------------------|--|

Phase two: Historical reasoning coding and case development. Following the first phase of analysis, the coding categories for historical reasoning that were initially created and coded in phase one were iteratively refined. Reliability of the refined historical reasoning codes was established through an interrater reviewer that coded a 20% sampling of the data set. This reviewer reached a 91% agreement on the sample, and disagreements were resolved through discussion. The remaining transcripts were coded by the author. Multiple historical reasoning process codes were defined and applied independently to both the process data and the essays (Appendix E), including sourcing, contextualization, corroboration processes; chronology and periodization; use of historical frameworks, historical comparison, and historical perspective taking. Codes were applied at the level of the parsed think-aloud comment in the process data and at the sentence level in the essay data. As historical reasoning processes are often co-occurring and not mutually exclusive processes, multiple codes were applied to the same comment or sentence. For example, as Jay read the sourcing information for the first document, he engaged in chronological reasoning to aid in his sourcing of the document:

Jay reading: John Winthrop is the Puritan governor of the Massachusetts Bay Colony, a model of Christian charity, written on board the Arabella, on the Atlantic Ocean in 1630.

Jay thinking-aloud: So this was before they landed down in, the New England region.

So, so, I know that he's addressing, like the, the settlers that came with him on the ship.

(Jay TAP 7-8)

It also became evident during the initial phase of analysis that students were bringing substantial background knowledge of the historical period to the task. This led to a detailed documentation

and analysis of the historical background knowledge students raised during the process of completing the task and in the essay. This was conducted by identifying comments in the think-alouds and statements in the essays that referred to information now contained in the DBQ task documents. As well, a decision was made to employ the use of detailed analytical memos that aimed to capture the qualitative nature of what was happening in order to better understand the students' historical reasoning during the composing process and the thinking and reasoning that could be inferred from the essay.

Thus, detailed analytic memos were constructed for each of the eight participants. This was done by reviewing the video records, previously coded think-aloud transcripts, and corresponding essays for the purposes of building an in-depth portrait of each of the participants (Creswell, 2007). Additional sources of data were also consulted, including the researcher's field notes, students' annotated task documents, and the secondary video data. These memos documented and traced each participant's detailed path through the composing process, their use of the documents, how background knowledge was used, and provided a detailed description of the historical reasoning processes each participant engaged in to complete the essay. The memos also documented tensions or conundrums that arose for students as they attempted to produce their document-based essays. These detailed case memos served as an analytical tool to conduct a comparative analysis of the reasoning inferable from the composing process versus the essay product.

Phase three: Cross-case analysis. The development of the case memos for each participant helped facilitate a reassembling of the data (Yin, 2011) and surfaced emergent patterns across the eight cases. This led to a cross-case analysis that sought to determine whether these patterns of differences in historical reasoning from the composing process to the essay

were salient across the participants. A matrix was developed to determine if these emergent patterns were consistent, whether there were multiple examples of these patterns across participants. A search for negative evidence (Miles & Huberman, 1994) of these patterns was also conducted. Finally, descriptions of these patterns were generated to provide detailed characterizations of the data (Erlandson et al., 1993; Lincoln & Guba, 1985). These patterns are described in part three of the following chapter.

Reliability and Trustworthiness of Data

Multiple measures were taken to ensure the reliability and trustworthiness in this study. First, by design and to support the ecological validity of the study, the historical writing task employed was a task Ms. Johnson had already identified for use in class during the AP review period leading to the exam in May.

Additionally, the rich, thick descriptions of the cases were generated and described in detail during the second phase of analysis to provide enhanced reliability of the study (Erlandson et al., 1993; Lincoln & Guba, 1985) and the conclusions drawn from each case and the cross-case findings were verified by checking for representativeness and looking for negative evidence within the data sources (Miles & Huberman, 1994). This study utilized multiple data sources to triangulate emergent findings across the three phases of analysis. In addition to the think-aloud transcripts, participant essays, multiple video feeds of the think-alouds, and researcher field notes were regularly referenced to provide corroborating evidence and increase the dependability of what was being observed in the transcripts.

FINDINGS

The main research question of this study concerned the historical reasoning processes students showed evidence of while they were in the process of writing versus those that could be inferred from the product of that writing. The writing process included reading and working with a set of documents to address a DBQ prompt about a historical event, in this case to compare and contrast the development of two English colonial societies in the New England and Chesapeake regions, analyzing the reasons for similarities and differences in their development. Individual participants served as the unit of analysis, and the findings are reported in three major sections: 1) Essay structure, content, and historical reasoning; 2) Writing process structure, content, and historical reasoning; and 3) patterns regarding differences in historical reasoning evident in the writing process compared to the essay across the participants.

Participant Essays: Structure and Historical Reasoning Processes

Successful participant essays were expected to contain a multi-faceted thesis statement, present a cohesive historical argument by integrating evidence from the documents to warrant and explain the claims advanced, show evidence of sourcing by explaining the significance of the author's point of view, purpose, context, or audience for at least four of the documents, contextualize the argument, draw in prior background knowledge, and synthesize by connecting their argument to a broader historical time period, event, or pattern. At the time of study, participants were highly familiar with the expectations for this type of task based on the parameters set by the College Board and the cooperating teacher's classroom instruction.

In general, participants' essays were very similar in terms of structure, the claims they made, and the parts of the documents they used to support their claims. Conversely, participants'

essays differed with respect to the historical reasoning processes that could be inferred and the way they were employed in the essays.

Structure. Table VII provides an overview of the structural components of participants' essays. All participants advanced a thesis statement (a central claim) and used the provided document set to produce a multi-paragraph essay that attempted to directly address the prompt. Each of the participants' essays included an introductory paragraph that contained some form of thesis statement and all essays included some sort of concluding paragraph. Some participants' thesis statements stood alone as the introduction paragraph of their essay. Similarly, some participants' conclusions were a single sentence that restated the thesis or summarized their argument. Each of the essays contained at least two paragraphs outside of the introduction and conclusion so that all participants' essays were 4 to 5 paragraphs in length. Essays contained an average of 543 words (range: 285 to 754) and contained an average of 25 sentences (range: 11 to 35).

Table VII

Structural Overview of Essay Data

| | Rachel | Jay | Hannah | Grace | Anci | Mary | Randall | Hailey | Mean (SD) |
|----------------------|---------------|------------|---------------|--------------|-------------|-------------|----------------|---------------|----------------------|
| Number of Paragraphs | 4 | 5 | 4 | 5 | 5 | 5 | 4 | 4 | 4.5 (.5) |
| Number of Sentences | 29 | 32 | 27 | 35 | 29 | 18 | 20 | 11 | 25 (7.54) |
| Number of Words | 741 | 662 | 588 | 754 | 574 | 357 | 385 | 285 | 543 (168) |

Beyond the structural similarities, participant's essays were also similar in terms of the thesis/claims and sub-claims that were advanced and which documents and which parts of documents were incorporated into the essays.

Thesis/Claims. Each of the participant’s introductory paragraphs advanced a thesis statement that contained one or more claims about the differences between the two colonies per the prompt’s instructions. As well, these statements all restated portions of the task prompt, although participants varied with respect to which portions of the prompt they restated. For example, some participants choose to restate the phrase “...two distinct English colonial societies” while others included the specific time frame of the task “Prior to 1700...”

Table VIII provides an overview of participants’ thesis statements regarding differences between the two colonial societies. Claims were made about differences in three societal systems (social, political, economic), colonists’ motivations for migrating, and geography/geographic conditions. Social dimensions of society and the colonists’ differing motivations for migrating were cited by 7 of the 8 participants.

Table VIII

Participants’ Thesis Statements

| Category. | Social | Economic | Political | Migration | Geographic |
|--------------------|--------|----------|-----------|-----------|------------|
| Participant | | | | | |
| Rachel | | 1 | | 1 | |
| Jay | 1 | | | 1 | 1 |
| Hannah | 1 | | 1 | 1 | |
| Grace | 1 | 1 | 1 | 1 | |
| Anci | 1 | | | 1 | 1 |
| Mary | 1 | 1 | 1 | 1 | |
| Randall | 1 | 1 | | | |
| Hailey | 1 | | 1 | 1 | |

All participants stated multiple differences. For example, Grace’s thesis statement is typical of how multiple claims were expressed:

Prior to 1700, the New England and Chesapeake regions developed into two very different [sic] societies with little similarities because of the differing motivations for migrating, the leadership of the regions, and the economies formed. (Grace Essay, Paragraph 1).

After citing a portion of the prompt to situate her thesis in the time period, Grace provided three claims regarding how the societies differed: the colonists' motivation for migrating, their political system (leadership), and the economy.

Participants also tended to rely on similar sections of the documents as evidence for these claims. These similarities are illustrated for two claims advanced by most of the participants: reasons for migration and the social characteristics of settlers.

Reasons for migration. All eight of the participants advanced highly similar claims about the settlers' differing reasons for migrating, making the historical comparison that settlers to New England were religiously focused while those settling in the Chesapeake were motivated by money and/or self-interest. Seven of the eight participants used the Winthrop document (Document 1) to support the claim that the New England settlers had religious motives for migrating to the New World and six of the eight participants cited John Smith (Document 5) to support the Chesapeake portion of the comparison. The remaining participant asserted the claim but did not cite any document evidence.

Social characteristics of settlers. Six of the eight participants advanced a form of the claim that the two colonies developed into different societies because of differing characteristics among the settlers arriving to each colony. All six of these participants utilized the same two documents for that claim, namely the passenger lists for each ship (Documents 3 and 4).

Historical Reasoning in Essays. All participants' essays contained evidence of multiple historical reasoning processes, although they ranged in levels of sophistication and complexity. That is, for the most part it was possible to infer at least one instance of a number of historical reasoning processes (e.g., sourcing, contextualizing, use of societal framework) in the essays. However, the degree to which the processes were employed and how they were integrated to form a coherent historical argument differed among the participants.

Three of the participants (Rachel, Jay, and Hannah) successfully integrated the document information they used as evidence and augmented the document information with background knowledge as they did so. These integrations explained and warranted the information as evidence for the claim. The remaining participants' essays less consistently used the document information as evidence and often did not provide explanations that warranted the document information as evidence. Among the five, two clusters were identified, one of three students (Grace, Mary, and Anci) with Hailey and Randall constituting the third cluster. Grace, Mary and Anci's essays inconsistently incorporated document information as evidence for claims, tended not to provide additional explanation or warrants for those claims, and contained historical inaccuracies. Hailey and Randall advanced claims in their essays, but did so without including any specific information from the document and instead only provided a citation (e.g., "...[The] Virginia colonists were highly motivated by wealth. (Doc 5)" (Randall Essay, Paragraph 3, Sentence 4). The following sections provide more in-depth analyses of the historical reasoning that could be inferred from the essays of students within each cluster.

Rachel, Jay, and Hannah. Rachel, Jay, and Hannah all utilized the information in the documents as evidence for their claims, and routinely included reasoning that explained why the evidence supported the claims. In warranting the evidence they drew on a variety of historical

thinking processes, especially perspective taking, periodization, and recognition of and references to broader historical patterns to which the focal historical event could be connected. Nevertheless, the three students' essays illustrate different overall arguments, as illustrated by considering each of the three cases.

Rachel's essay. Rachel's essay was the longest one produced by any of the participants. In the essay, Rachel consistently demonstrated sourcing processes and contextualized the documents with background knowledge and document information, especially with respect to broader historical patterns and periods. As well, Rachel engaged in perspective taking, provided a detailed analysis of a document's intended audience, and engaged in periodization.

For example, in her second paragraph Rachel demonstrated her background knowledge of the period and a traditional historical framework that historians use to describe this period of exploration: People explore for one of three reasons: God, gold, and glory. She used this as a frame for her subsequent claim that the Puritans based their society on religion, and they were fleeing persecution. She used information in the Winthrop document (Document 1) as evidence for her claim, writing that Winthrop was aware that "...the Puritan's were fearful of what awaited them in the New World..." This statement also indicates attention to author's purpose and perspective on the intended audience, which was the Puritan's that traveled with Winthrop aboard the ship *Arabella*. As well, this information contextualized the document chronologically, i.e., prior to the landing in New England.

Rachel then transitioned to the second half of her historical comparison and employed an economic framework to claim that the Jamestown colony settled for gold. She provided background knowledge as to the initial intentions of the settlers— to find gold. She used the John Smith document (Document 5) to explain that some migrants attempted to return to England

after having no success in finding gold. She then drew on her knowledge of the period to further contextualize and elaborate the evidence that the settlers to the Chesapeake were not settling permanently but were there for gold and profit.

Rachel contextualized these two colonies with respect to a broader historical pattern of travel to the “New World” and exploration. Based on her prior knowledge of the motivations of Spanish and French explorers, Rachel wrote:

Seeing as the main incentives to settle were God, gold, and glory, one can connect the Massachusetts Bay colony’s settlement to the French settlement of new France in the early 1500’s and the Jamestown settlement to the Spanish search for gold through the explorers of Coronado and Ponce De Leon in the early 1500’s. (Rachel Essay, Paragraph 2, Sentence 8).

The comparison of motivations provides an opportunity for Rachel to validate her inferences by showing that they are consistent with differences noted for other settlements and explorations.

In her essay, Rachel also drew upon two geographic and economy frameworks to argue that the different climates and geographies of the two settlements influenced the economies that emerged in each colony. Rachel relied exclusively on her background knowledge to argue that New England was cold and had rocky soil, which led them to plant corn and build ships. In contrast, Chesapeake had a hot climate suitable for tobacco. The claim about the Chesapeake was further elaborated with additional background knowledge that explained that John Rolfe made the tobacco growing process profitable. She also referred back to period of the Great Migration to explain the cause and effect relationship that occurred when tobacco became profitable and the colonists began expanding on Native American land. Rachel then concluded her essay with an additional historical comparison based on her background knowledge that both colonies

struggled with Native Americans and she specifically cited by name the two conflicts that each respective colony engaged in—the Pequot War in New England and Powhatan’s War in the Virginia Colony.

Overall, Rachel’s essay demonstrated a range of historical reasoning as she employed her knowledge of societal, geographic and economic systems, drew evidence from the documents, and provided explanatory warrants for that evidence. Rachel’s essay is characterized by her extensive and successful integration of background knowledge, as well as an ability to engage in complex sourcing, perspective taking, and periodization. Finally, Rachel’s essay showed that she could recognize historical patterns across frameworks when she connected the reasons for settlement of New England and Chesapeake to the motivations of the French and the Spanish.

Jay’s essay. Jay’s essay is similar to Rachel’s essay, as both Rachel and Jay consistently provided warrants for their historical claims in the form of explanations for why information from the documents was evidence. Jay demonstrated a range of historical reasoning in his essay by employing his knowledge of social and religious systems and frameworks in service of his overall thesis that differences in the settlers’ characteristics and motivations for migrating in conjunction with the geographic differences between the regions in which they settled resulted in the colonies developing different social systems. Jay consistently integrated information from multiple documents as evidence and contextualized the documents based on his prior knowledge. His reasoning incorporated social, economic, and religious systems to establish warrants that legitimized information from the documents as evidence for specific claims.

For example, Jay drew on information from John Winthrop (Document 1) and the Articles of Agreement (Document 2) as evidence for the claim that the New England colony was

organized around religious aims and that these aims united them as a community and provided them with a sense of mission:

John Winthrop, the leader of the puritans, before landing down addressed his fellow settlers saying “we must consider that we shall be as a city on a hill.” (Doc1). By this he means it is their duty to stick together and thrive so as to show their religious experiment could work. Another example of this can be seen in the articles of Agreement. One of the points was “that everyone shall have a share of the meadow or planting ground.” (Doc2). This emphasizes their social unity and sense of mission (Jay Essay, Paragraph 2, Sentences 2-6).

Jay used information from two documents to support the claim and he warranted these claims with evidence from the documents. He contrasted this with the economic motivation of the settlers of the Chesapeake colony who were “primarily focused on wealth” and incorporated information from the John Smith document in the form of a quotation (“The worst among us were the gold seekers who, with their golden promises, made all men their slaves” (Document 5) to emphasize “the disunity and selfish nature” of the settlers to the Chesapeake (Jay Essay, Paragraph 3, Sentence 3). He elaborated on this document information with background knowledge that the Chesapeake settlers migrated with the Virginia Company “in search of profit and land” (Jay Essay, Paragraph 2, Sentence 4). Jay’s essay also posited that the unity/disunity contrast between the colonies was causally related to the characteristics of the settlers and differences in the “family systems” present in each colony, basing this reasoning on the information in the two ships’ lists of emigrants to each colony (Documents 3 and 4). These lists indicated that New England settlers arrived as families, while Chesapeake settlers arrived alone as “single young men with a noticeable lack of women” (Jay Essay, Paragraph 4, Sentence 4).

Finally, as he concluded the essay, Jay anticipated a cause-effect connection to a future event demonstrating his understanding of larger historical patterns: “This religious fervor juxtaposed against the profit driven Chesapeake region would result in tensions over the use of slavery for the plantations in the South in the future” (Jay Essay, Paragraph 5, Sentence 4).

Hannah’s essay. Hannah’s essay is similar to Rachel and Jay’s essays in that she successfully advanced multiple claims and consistently used the documents as evidence, as well as attempted to provide reasoning that warranted the document information as evidence. She also employed background knowledge to contextualize and provide support for her claims, and demonstrated her understanding of social, religious and political frameworks.

For example, Hannah employed her understanding of social, political and religious frameworks as well her ability to contextualize in her third paragraph in which she argued that the two colonies were different in terms of “the way the government was established” (Hannah Essay, Paragraph 3, Sentence 1). She drew on background knowledge to argue that church membership was essential for holding authority in New England’s society and included a quote from the Articles of Agreement (Document 2) that indicated one of the agreements among the Puritans was to find a minister to join in church covenant with.

Hannah then offered the other part of her historical comparison. In doing so, she used background knowledge to contextualize and combined economic and political frameworks to claim that the government in the Chesapeake had “many ties” to the English crown. She then offered a causal explanation by indicating the ties to England “...maybe [sic] due to the economic trade that they had with the crown” (Hannah Essay, Paragraph 3, Sentence 5). Hannah then supported the claim by drawing on information from Governor Berkeley (Document 6) and Nathaniel Bacon (Document 7) by citing sourcing details about the author of the document

(“Virginia Royal Governor Berkely [sic] and his counsel”) and pointed to the audience of the source “your majesty” to serve as evidence. Hannah then used information from the Nathaniel Bacon document to show that Bacon also discussed ties to the crown when he wrote: “Indians are “invaders of his majestys’ [sic] right”” (Hannah Essay, Paragraph 3, Sentence 7).

Grace, Anci, and Mary’s essays. While Rachel, Jay, and Hannah’s essays all demonstrated consistent use of document information as evidence and advanced accurate historical comparisons, Grace, Anci, and Mary’s essays inconsistently used the documents as evidence, and although their essays reflect evidence of historical reasoning processes, each of their essays either contained historical inaccuracies or inaccurately used document information. However, similar to Rachel, Jay and Hannah, these participants drew on knowledge of societal systems and frameworks to organize their claims, and they largely sourced the documents in accurate ways. Grace’s essay also demonstrated her ability to contextualize by including document information about the authors’ purposes for writing the document, thereby situating the documents in her argument. Anci relied heavily on her historical background knowledge in the essay which she used to build a narrative around each colony and the documents, whereas Mary’s essay indicates that she drew on her background knowledge to serve as evidence for some of her claims rather than relying on evidence from the documents.

Grace’s essay. Grace’s essay included information from multiple documents and used one of them, the John Winthrop (Document 1), multiple times to provide evidence for her claims in the essay. In doing so, she drew on her knowledge of organizing frameworks and consistently demonstrated her ability to source and contextualize through her inclusion of information about the authors’ purposes for writing the document; however, some of Grace’s claims were

unsupported by document evidence in the essay, despite opportunities for document information to be used.

For example, Grace made use of religious and economic frameworks to argue that the two groups of settlers had different reasons for migrating. Grace utilized a quotation from John Winthrop (Document 1) to support the claim that the Puritan's wanted to be a model that would "bind together all members of the society" (Grace Essay, Paragraph 2, Sentence 3). She provided explanation for this claim by using background knowledge to indicate the Puritans were "forced to move out of the England because they were persecuted for their religious beliefs" (Grace Essay, Paragraph 2, Sentence 4). This explanation is somewhat inaccurate in that the Puritans, although persecuted for their beliefs, left willingly. Grace used accurate background knowledge to advance the historical comparison that New England was "focused on lumber and ship building" while "tobacco and...cash crops" shaped the economy of the Chesapeake (Grace Essay, Paragraph 4, Sentence 2-3).

Grace also included inferences made from document information which argued that the characteristics of the settlers to each region were different but made the error of not citing the documents to support the claim:

Because they were persecuted as a whole and wanted to create a new society whole families [sic] came together to New England. This was very different from the Chesapeake regions where mostly young men migrated to the colony. (Grace Essay, Paragraph 2, Sentences 5-6).

Although she did not cite the Ships' Lists (Documents 3 and 4), references to "families" and "young men" are both inferences based on these lists. Grace repeated this mistake later in her essay when she argued that men came seeking gold in the Chesapeake which led to less unity

than in the New England colony. Similar to the previous comparison, this claim appeared to be inferred from information in the John Smith document (Document 5), but Grace included no reference or indicator pointing to the document.

In summary, although Grace's essay demonstrated use of background knowledge to contextualize events and situate documents, some sourcing of documents, and of economic, political and religious frameworks to organize her argument, her essay also contained multiple instances where document information could have supported her claims but was not included in the essay.

Anci's essay. Anci's essay is unique in that she appeared to use her background knowledge to frame the essay and then incorporated the documents into a narrative of each colony. She utilized multiple historical frameworks to organize her claims, contextualized, and sourced documents accurately. However, she also made historically inaccurate claims that were not supported by information in the document set.

Anci employed a range of background knowledge to advance and support her claims. For example, Anci began her second paragraph by describing the climate and geographic features of New England, noting that the fertile land and availability of trees in New England allowed for shipbuilding. This information is not traceable to any of the documents in the set. Nor is her general statement that "There were animals around and people were able to have jobs" (Anci Essay, Paragraph 2, Sentence 2). Anci also indicated that in New England "the community was built around the church, which was in the center along with the school" (Anci Essay, Paragraph 2, Sentence 4). The source of this configural information is unclear, although Anci used the Winthrop document (Document 1) to suggest that the centrality of the church in relation to the rest of the settlement "[fulfilled]... Winthrop's vision of "city upon a hill." This section of

Anci's essay illustrates her tendency to construct her argument from information she already knew and then "plug in" document-based information even if it did not clearly fit with her claim. She continued this pattern throughout the essay. For example, she later argued that life was not as well established in the Chesapeake due to swampy geographic conditions. She then referred to John Smith (Document 5) writing that "mosquitos that carried malaria" which killed settlers resulting from "harsh weather conditions (doc 5)" (Anci Essay, Paragraph 2, Sentence 8). While the claim contains accurate background knowledge that settlers did die of malaria, this is not what is supported by information in the John Smith document. Rather, the Smith document states that the "bitter cold frost" led to the death of more than half the settlers.

Similarly, Anci later advanced multiple, but inaccurate historical claims based on information from the documents. For example, she included information about Berkeley, perhaps in an attempt to ensure the Berkeley document (Document 6) appeared in the essay. She wrote:

Chesapeake settlers maintained a way of life by searching for gold. They had a sense of community and had a Governor, Berkely [sic], to maintain everything. Berekely [sic] still answered to higher power, but also had authority. They had indentured servants who fought against the Dutch and Indians on its borders to protect families and society. (Doc 6). (Anci Essay, Paragraph 4, Sentences 1-4).

Although referencing Berkeley, Anci first included an inference from John Smith (Document 5) who spoke about the settlers intense search for gold early in their settlement. She then worked in references to Berkeley in any way she could alongside the inferences she made about the document—e.g. Berkeley answered to a higher power. She also referenced the struggle with the Dutch and Indians, events mentioned by Berkeley in the document; however, she demonstrated a

limited ability to contextualize and abstract the referenced events into the larger historical context.

Anci's essay indicates that although Ancie is able to source, contextualize with background knowledge, and advance accurate historical comparisons about the colonies, the inconsistencies, inaccuracies, and structure of her essay suggest she had a more limited understanding of the documents and events of the period as well as a more limited understanding of how to use documents as evidence to argue.

Mary's Essay. Mary, much like Ancie and Grace, relied on the knowledge she brought to the task more than on the information in the documents provided with the DBQ prompt. That is, Mary used multiple societal frameworks to organize her essay and demonstrated some sourcing. However, she used background knowledge as the evidence for her claims more so than information from the documents. When she did cite documents, they did not necessarily support the claims and Mary's inferences from the document information reflected incorrect understanding of the document.

For example, Mary used her knowledge of political frameworks to argue that New England was a more "grouped government," as indicated by the fact that they held town hall meetings. In the same paragraph, she cited evidence from the Articles of Agreement (Document 2) to support that claim but gave that document greater historical significance than it merited, indicating that it was "a main piece written" that provided "rules" for the Puritans to live by (Mary Essay, Paragraph 3, Sentence 3). She contrasted this political structure to that of Chesapeake, claiming that it was not inclusive because of "turning away from" indentured servants. While the claim is accurate in that indentured servants were not given the same political

rights as other colonists, Mary then cited Nathaniel Bacon (Document 7) but did not include document information or evidence to support the claim:

In contrary [sic], the Chesapeake's region political groups did not tend to include all people of society, turning away from the indentured servants. (Doc. 7) (Mary Essay, Paragraph 3, Sentence 4).

Mary also combined economic and social frameworks to advance a claim that both the economic and social values were different in the two regions. However, the evidence offered in support of this claim consisted of background knowledge in combination with faulty comprehension and application of information in the document set. Using background knowledge to make the economic comparison, Mary wrote that New England turned to “industrial and manufacturing” while the Chesapeake grew tobacco with indentured servants. For the social comparison, Mary incorrectly attributed both Ships’ Lists (Document 3 and 4) to the New England colony:

In an overall view of the New England society, it Included (sic) mostly young men and families (Doc 3 & 4).” Their viewpoints, socially, were around spreading the Puritan religious views, “city on a hill.” (Mary Essay, Paragraph 4, Sentences 4-5).

She ended the paragraph with the comparative claim that settlers to New England were focused on religion while the Chesapeake were focused on “economic goals, gold, and tobacco (Doc 5).” However, tobacco was never mentioned in Document 5. The misattribution of tobacco to Document 5 persisted in Mary’s use of it in comparing the settlers’ motivations. She claimed that Chesapeake settlers were economically motivated: "With a main focus in tobacco, with a motive for gold, having their goal prosper with money, as stated by Captain John Smith. (Doc 5)" (Mary Essay, Paragraph 2, Sentence 6). However, John Smith does not discuss or refer to tobacco.

Overall, Mary's essay demonstrates her ability to contextualize and use societal frameworks to organize her argument; however, her inconsistent use of the documents as evidence suggests that she has procedural knowledge of what to do (e.g. source documents, use information from documents as evidence), but she still needs to acquire skills that would enable her to accurately comprehend and represent the information in the documents and keep it differentiated from what she already knows about that time period.

Hailey and Randall. Finally, Hailey and Randall both integrated multiple document references into the essay; however, they often only provided citations or references to the documents but did not include any specific information from the document. For example, Randall wrote: "However, Virginia colonists were highly motivated by wealth. (Doc 5)" (Randall Essay, Paragraph 3, Sentence 4). This statement makes a claim and points to a document, but the information from the document that supports the claim is not included in the essay. Instead, Randall often relied on background knowledge to support his claims. Both Hailey and Randall's essays reflected more limited historical reasoning than other participants' essays.

Hailey's essay. Hailey's essay inconsistently provided information from the documents as evidence of the claims she advanced in the essay. These claims were historically accurate and could have been supported by document information, but were not with few exceptions. Thus, Hailey's essay advanced comparative claims, provided some evidence of sourcing and the use of societal frameworks to advance historical claims. However, documents were incorporated into the essay as citations with almost no inclusion of document information.

One exception does show that Hailey has some knowledge of how to incorporate document information as evidence. In this case, Hailey used societal and religious systems to compare the characteristics of the settlers of each colony, incorporating information from the two

Ships' lists (Document 3 and Document 4) as evidence to argue that settlers to New England were organized by families, while settlers to Virginia were young men:

...it is evident in John Porter's list of immigrants bound to New England (source 3), that those who moved to the New England colonies were mainly composed of families. While in the ship list of immigrants bound for Virginia (Source 4), it is evident that most of the immigrants who moved to Virginia were young, single men who often intermarried with Native Americans. (Hailey Essay, Paragraph 2, Sentences 2-3).

This case also demonstrates sourcing (e.g., attribution to author). As well, Hailey relied on background knowledge to elaborate her claim about differences (e.g., young men traveling to Virginia "often intermarried with Native Americans)."

Conversely, other claims Hailey included in her essay offered no support from information in the documents, and in fact, there were examples where she contradicted rather than supported some of her claims. For example, Hailey claimed that the political structures in the two colonies were *similar* but then offered a *contrasting* historical comparison between the two colonies. Specifically, she indicated that those in Virginia were self-interested (Document 5) while those in New England were motivated to "better the village as a whole" (Document 1). As well, Hailey attributed these comparative claims to Documents 5 and 1 rather than using information from these documents to support the claim. That is, Hailey included her inferences from those documents but failed to connect the inferences to the relevant portions of the cited documents or to the sourcing attributes of the documents. Similarly, with respect to her claim of differing motives of the settlers of the two colonies, she claimed that the selfish nature of the settlers to Virginia led to growing wealth gaps, an inference supportable by content in Documents 5, 6, and 7, but no such support was provided.

Randall's essay. Similar to Hailey, Randall inconsistently used document information as evidence for many of the claims he advanced. Rather, he relied heavily on background knowledge to support his claims regarding social and economic systems of the two colonies. Also, his essay provided evidence of sourcing processes for only one of the four documents he cited in the essay.

In one of the more fully developed claims, Randall did use sourcing information in conjunction with background knowledge to claim that the colonies differed in terms of family structure and religiosity. He wrote that the Puritans migrated to establish religious freedom from the Church of England. The background information regarding the Church of England contextualized the claim that the Puritans based society on religion and unity. He incorporated author perspective as evidence for this claim:

John Winthrop demonstrated this in the Model of Christian Charity as he described the New England colony a “city upon a hill.” (Doc 1) He sees the New England colony as a model that all people gaze upon. (P9- Essay, Pos. 2)

In these sentences, information from the Winthrop document (Document 1) and the author’s point of view are incorporated as evidence and explanation in support of the claim.

However, the remaining claims advanced in the essay were supported by background knowledge and citations using document numbers but did not include document information. For example, to support the claim that the colonies differed in “family structure,” Randall points to the Ships’ Lists documents but offered no information from the documents:

The New England immigrants consisted of mostly families, whereas the Virginia colonists were mostly men (Doc 3, and Doc 4). (Randall Essay, Paragraph 2, Sentence 8).

A similar pattern occurred with a subsequent claim about differences in the economies of the two colonies. Randall relied on background knowledge about New England's relying on shipbuilding and fishing, while Virginia utilized indentured servants and slaves and moved into tobacco farming. He included in his essay a statement referencing the John Smith document ("However, Virginia colonists were highly motivated by wealth. (Doc 5)") but did not explain how this statement and tobacco farming were related.

In summary, the analyses of the individual participant essays showed a range of sophistication and historical reasoning processes. Three of the eight essays showed students' effective use of information from the documents and their background knowledge to support their claims and provide evidence of multiple historical reasoning processes. For the other five, the essays show that students had an understanding of the task expectations, but struggled to consistently use the documents as evidence for their claims and tended to rely on their background knowledge instead of using information from the documents. These essays also contained historical inaccuracies or errors and suggest that these participants had a limited understanding of the documents and time period.

Participants' Composing Processes: Structure and Content/Reasoning

Structure. In producing the essays, all participants followed the same broad approach and sequence to complete the task. Appendix E provides an overview of each of the participants' paths through the DBQ task problem space. In general, participants began by reading the prompt, reading and annotating the documents, engaging in some form of prewriting, and then composing their essay. However, some participants' paths through the task were more iterative than others and varied in terms of when and how much they engaged in prewriting and whether and how often they returned to re-read and review the document set while composing the essay.

Three of the eight participants engaged in varying degrees of prewriting activities at the beginning of the task after reading the prompt and *prior to* reading the documents. For example, prior to reading the documents, Hannah created a t-chart with each colony representing a column of the chart. She then listed prior historical knowledge about the two colonies in the chart. Most participants' prewriting activities occurred after reading the document set prior to writing the essay and largely focused on organizing and drafting a thesis prior to composing their introductions. As well, all of the participants referred to the documents while composing the essay, and some participants re-read entire documents they initially struggled to understand to determine how they might incorporate them into the essay.

Historical reasoning – content and historical reasoning. As predicted, all participants' process data revealed a more complex picture of their historical reasoning than was evident in their essays. The process data demonstrate that participants regularly engaged in complex sourcing processes, used a wide range of prior historical knowledge to contextualize the documents and events, created multiple historical comparisons that were not included in the essay, and engaged in a range of chronological reasoning processes. Additionally, multiple participants' process data revealed that they engaged in perspective taking, historical empathy, and corroboration of information across documents although these processes were not inferable from their corresponding essays. Two of the cases (Hannah and Grace) were similar with respect to several of the differences in historical reasoning for which there was evidence in the think-aloud process data as compared to the essay data. Both of these participants engaged in chronological reasoning and advanced historical comparisons that surfaced during the process but that were not present in the essays. As well, Mary and Anci's cases were similar in that they both demonstrated more complex sourcing and perspective taking during the process than was

evident in their essays. In the following sections, each participant's process is described with particular emphasis on the salient historical reasoning that was not inferable from the essays.

Rachel's composing process. As compared to the essay, Rachel's think-aloud provided a more complete picture of the historical reasoning that Rachel's essay demonstrated. Specifically, Rachel's think-aloud highlighted her ability to use her chronological reasoning throughout the task for multiple purposes, corroborate across multiple documents, and demonstrated a wider range of background knowledge than was present in the essay. Rachel's think-aloud also underscored her understanding of the task expectations, her intentionality around analyzing each of the documents using heuristics that had been introduced and practiced during classroom instruction. In her words "...like, have a conversation with the sources, instead of just relying on them" (Rachel TAP 9).

As well, prior to drafting the essay, Rachel engaged in extensive planning and outlined her entire essay, including the articulation of *how* certain documents supported the claims she advanced in the essay. However, the evidence presented for claims in the essay sometimes lacked explanation or warrants, despite having articulated this reasoning during her planning. For example, Rachel's essay cited and referenced the Ship's List for New England (Document 3) and the Articles of Agreement (Document 2) to support her claims that New England was "more family based" and that they "all agreed to share in the work" (Rachel essay, paragraph 3, sentences 4-5). Both of these claims include inferences made from the documents and did not include explanation or direct information from the documents to support the claim. However, Rachel's process data show that she articulated a broader understanding and analysis of those documents. After reading the Ship's List for New England and noting there were families traveling, Rachel said:

So they're basically having like, a variety of people coming to New England, so, maybe I can connect that to the religion because city on a hill, so. They're going to be a unified community so, I remember that their town structure was like, had like the towns hall, all the houses in the middle of the town with like the family farms, like, spreading out from there, so.

So they're like family farms, so everybody works and has their part to do in the community, contributing to like, the unity that they have.

Hm, like maybe connect that to document 2, that everyone has like their own kind of land, a share of the meadow and planting ground, so maybe I can quote that, we'll see what kind of analysis I could do with that. Context... so maybe I can connect it with purpose. So that could be connected to the city on a hill because he's saying that they're going to be a unified community and, six years later when they make a set of laws it shows that everyone's going to have to contribute to that community (Rachel TAP 68-70).

Rachel's process data went well beyond what was in the essay in that she connected the religious emphasis to the unity and geographic layout of the community, in addition to corroborating information across the documents.

Rachel's chronological reasoning. Although Rachel's essay shows traces of chronological reasoning, it masked the extent of that reasoning. Rachel's think-aloud demonstrates how she employed chronological reasoning throughout the task for a variety of purposes, including engaging to corroborate information across documents. For example, after reading the prompt, Rachel sought to make sense of what the task was asking her to do and she

attended to the specific time period in the prompt. Before diving into reading the document set, she drafted a tentative thesis statement using the language of the prompt:

So my thesis would be, despite the, settlement of the New England and Chesapeake Regions of the same Englishmen after the 1700s the two societies branched out from each other (Rachel TAP 12).

In the drafted thesis, she noted that the colonies branched out “after the 1700’s” which sits outside the time period the prompt is addressing. Then, Rachel looked back at the prompt and noticed her error:

And I'm going to rely more on the differences than similarities because... hold on. Because I can connect more to differences because they end up being vastly different at the end of the 1700's than at the beginning, er, the beginning of the 1600's. So yeah, okay. (Rachel TAP 14).

Here Rachel engaged in periodization as she attended more closely to the time period listed in the prompt and corrected herself by revising the drafted thesis statement. Thus, Rachel made an early demarcation of the time period in which the prompt is situated prior to reading the documents.

Later, while reading the Winthrop document (Document 1), Rachel temporally sequenced the Winthrop document relative to the landing, stating that it was written “on the boat prior to their landing...”. She reiterated this chronology while reading a portion of the text:

So he's saying like, they should stay unified as one, despite what might happen with all the struggles they might go through in the New World cuz they still haven't gotten off the boat (Rachel TAP 30).

Thus, Rachel made an inference about Winthrop’s perspective by engaging a chronological detail about the document— that the settlers are still on the boat— and draws on that information as she made sense of the document. As compared to her essay, Rachel alluded to the idea that the Puritans are still on the boat when she wrote by explaining the Puritans were “...fearful of what awaited them in the New World...” (Rachel Essay, Paragraph 2, Sentence 5).

As Rachel progressed through the documents, she attended to the sequencing of them based on their date. Rachel approached the “Ship’s List” of emigrants heading to New England and noticed the year of the document’s origin in relation to other significant events of the period:

Rachel reading-aloud: So, source is John Porter, Deputy Clerk, Ship’s List of Emigrants Bound for New England from Weymouth, the 20th of March, 1635.

Rachel thinking-aloud: So I'm thinking about the Great Migration that took place in, around that time period. (Rachel TAP 56-57).

Rachel drew on her background knowledge about a related significant event in U.S. history by recalling the Great Migration— a term referring to the pattern of large numbers of Puritans leaving England between 1620 and 1640 to escape religious persecution and settling in the Americas, largely in the New England colony. This is an example of Rachel’s chronological reasoning and periodization as she referred to a discrete unit of time, the Great Migration, and contextualized the event “around that time period” referring to the 1635 date mentioned in the sourcing information of the document. Rachel’s essay showed more limited traces of this reasoning in her essay, stating that the Ship’s List was written “during this time:”

During the Great Migration, the majority of people settling in VA weren’t settling permanently for gold but for profit. As seen in the ship’s list of settlers coming to VA

during this time (Doc. 4), more middle-aged men were arriving to make their own profit.

(Rachel Essay, Paragraph 2, Sentences 10-11).

Rachel's think-aloud shows that Rachel continued to engage in contextualization and chronological reasoning as she read Document 4, the Ship's List Bound for Virginia, and she again drew on her prior knowledge to engage in chronological reasoning as she contextualized the document in relation to the Great Migration:

...after scanning the lists of the people that are coming to Virginia, I can see that it's mostly men, with, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 women, who are younger, a lot younger than the men. So then most of the men are like middle aged or older, so I know that Jamestown, they settled in 1607, so this is around the time of the Great Migration because this is 1635 (Rachel TAP 75).

In addition to noting that there were a large number of men headed for Virginia in contrast to the large number of families bound for New England, Rachel recalled that Jamestown (within the Virginia colony and Chesapeake region) was settled in 1607, earlier than the beginning of the Great Migration period. Later, Rachel continued the pattern of attending to chronology as she tracked the timing of emigrants' migration while reading John Smith's account of how the settlers struggled early on in Virginia (Document 5):

So, I can see that um, in the Virginia colony they had hard lives because they weren't exactly used to that kind of climate and they didn't, they weren't really there to settle but they had to end up staying. So I'm going to make a note of that.

And it was hard for them to adjust to that climate, and I see they didn't really mention any women there, so this was 1624, so I can connect that to 1635 document where more women were coming (Rachel TAP 95-96).

In this example, Rachel's chronological reasoning is employed in service of corroborating information across documents based on the change over time between 1624 when there was no mention of women in Smith's account of Virginia versus the Ship's List in 1635 that documents a few women on the Ship bound for Virginia. Rachel demonstrated her ability to track and attend to the development of the colony over time based on the provided documents as well as reconcile information about women across the document.

Thus, Rachel engaged in chronological reasoning and periodization throughout the duration of the task. These processes were in service and relationship to contextualizing a major event during the time period—the Great Migration—that the task is situated within as well as to corroborate information across multiple documents. Both Rachel's essay and think-aloud demonstrated a sophisticated and deeper level of chronological reasoning than the other participants, and it is likely a result of her rich background knowledge and an understanding of how to use that background knowledge to contextualize the two colonies in relationship to events happening during and around the time period; however, Rachel's think-aloud revealed more chronological reasoning than was evident in the essay, as well as additional processes, such as corroboration, that was not evident in the essay.

In addition to Rachel's corroboration reported above, Rachel also corroborated details across three documents—John Winthrop (Document 1), the Articles of Agreement (Document 2), and the Ship's List for New England (Document 3) that did not appear in her essay.

While reading through the Ship's List for New England (Document 3) and making note of the variety of occupations listed next to the names of emigrants, Rachel draws a connection between that variety and John Winthrop's goal of unity and the vision of being a city upon a hill:

So they're basically having like, a variety of people coming to New England, so, maybe I can connect that to the religion because city on a hill, so. They're going to be a unified community so, I remember that their town structure was like, had like the towns all, all the houses in the middle of the town with like the family farms, like, spreading out from there... So they're like family farms, so everybody works and has their part to do in the community, contributing to like, the unity that they have (Rachel TAP 68-69).

She then considered how this unity contributed to the Articles of Agreement. Rachel explained:

Hm, like maybe connect that to document 2, that everyone has like their own kind of land, a share of the meadow and planting ground, so maybe I can quote that, we'll see what kind of analysis I could do with that. Context... so maybe I can connect it with purpose. So that could be connected to the city on a hill because he's saying that they're going to be a unified community and, six years later when they make a set of laws it shows that everyone's going to have to contribute to that community. (Rachel TAP 70).

Rachel drew on her understanding of the task to provide “analysis” of the document, and in doing so, she corroborated information and built connections across the three documents.

Rachel’s cause-effect connections with background knowledge. Rachel also drew upon a wider range of background knowledge relevant to her argument to make connections during the task that she did not include in the essay. While preparing to write her essay, Rachel recalled background about tobacco and its cause-effect relationship with the development of plantations, indentured servants, slavery and then discussed that information in relationship to a comparable historical system:

I think I'm remembering what I was going to write there. I think I was going mention like, since...the development of English colonial societies... I think I was going to

mention like because they relied so much on tobacco and they were there for profit, I was going to mention like the plantations and like how that, because they focused more on planting tobacco that they like developed into a profit-based society, and they kind of like led to indentured servants, and later led to slavery maybe, and then like, I was going to relate to, back to period one when I mention the Spanish I was going to mention the encomienda, I think. I don't think I'm going to do that, it's going to kind of confuse it (Rachel TAP 157).

This excerpt illustrates the richness of Rachel's background knowledge and the connections she made among the related systems and events in history; however, rather than proceed with including this information in her essay, Rachel explained that she thought it might "confuse" her essay.

Jay's composing process. In comparison to the essay, Jay's process data offers a more complete and complex view of his historical reasoning, including evidence of corroboration with multiple documents, more complex sourcing, chronology and perspective taking. Jay's process also illustrates that although he had more background knowledge to include—and specifically, background knowledge that would support his claims around economic and political systems and frameworks, he did not see relevant connections in the documents that would have "allowed" him to integrate that background knowledge. Thus, from the purview of the essay data, Jay did not discuss economic or political frameworks despite having demonstrated in the process data that he had background knowledge relevant to those systems and frameworks. Jay's think-aloud presented a more complex relationship among the systems, frameworks and comparisons than he included in his essay.

Jay's corroboration. Jay engaged in corroboration at multiple points in the process of constructing the essay, none of which appeared in his essay. First, he corroborated information contained in Winthrop (Document 1) with the Articles of Agreement (Document 2). While reading the Winthrop Document, Jay recognized a pattern in Winthrop's language choices and Winthrop's emphasis on unity:

Jay Thinking-Aloud: [Winthrop] uses the word together a lot, and like I said, he's kinda emphasizing the, the unity that the settlers must have in order to survive and thrive in this new environment... (Jay TAP 12).

As Jay finished reading the document, he summarized his understanding of the Document and reiterated that "...there's a very strong religious focus in this group of settlers..." (Jay TAP 14). Jay then moved on to read the Articles of Agreement (Document 2), and as he read the document, he corroborated the religious emphasis of the settlers to establish that there was a theme or pattern of unity in the New England colony:

Jay Reading: We whose names are underwritten, being by God's providence,

Jay Thinking-Aloud: There's God again, the religious emphasis that they have

Jay Reading: engaged together to...

Jay Thinking-Aloud: and then, there's together again, the unity theme again. (Jay TAP 17-21)

Jay attended to textual details from the document to reaffirm the religious emphasis and the "theme" of unity in New England. Jay then continued to corroborate the unity theme as read the Ship's List for New England (Document 3). While reading the document, Jay noted that one of the men on the manifest was a minister: "so there's the religious focus again, so I'm going to write religion..." (Jay TAP 29).

Similarly, as Jay read the documents associated with the Chesapeake, he also recognized a pattern across the documents related to the Chesapeake that was relevant to his historical comparison. As he read John Smith (Document 5), he noted that in contrast to the religious and community focus of New England, the Smith document indicated there was profit-seeking, self-interest, and fighting in the Chesapeake. Later as he read Governor Berkeley (Document 6), Jay corroborated this by noting “disloyalty and again...disunity” as themes for the Chesapeake.

Jay reconsidered historical frameworks. Jay also considered more societal systems frameworks during the composing process than were present in his essay. Jay’s process data illustrate the dissonance between the organizational frameworks he intended to employ to frame his essay and the frameworks that he saw the documents supporting. After reading the document set, Jay engaged in prewriting and drafted his thesis statement. He considered how he might organize his essay and draft his thesis:

So, to think of a thesis. So, going back into the documents, I notice that a lot of them have to do with the social life. A little bit had to do with political in the beginning, talking about how they're all going to come together as one, in unity under God, in the New England region. There's no real talk about the economy. It was more focused on most of it was the social differences between the colonies... (Jay TAP 52).

As he began planning, Jay invoked knowledge of social, political and economic frameworks to begin framing the organization of his essay, but noted the documents largely focused on social aspects, “a little bit” for political, and “...no real talk about the economy.”

As he began writing the main text of his essay, Jay indicated that he would “start off with political” and write his first body paragraph (Jay TAP 63). After composing the paragraph and reviewing what he wrote, Jay decided to adjust the focus of the paragraph: “I think I'm going to

turn this, instead of focusing on political, I'm going to turn this, the first paragraph, into the social, of the, of the New England regions" (Jay TAP 72). Jay decided to focus the paragraph on "social" dimensions after noticing that the paragraph actually contained information related to societal and religious aspects of New England instead of his original plan to write about political differences among the colonies.

After finishing the second body paragraph arguing social differences in the Chesapeake, Jay decided that the document set as a whole did not support the economic and political differences among the colonies about which he had prior background knowledge. He explained:

Jay thinking-aloud: I'm thinking that I could. I'm thinking that there's not as many documents to support the economical and political aspects. So I'm thinking that maybe, I'm considering whether or not I should break them off into their own paragraphs, because then they'd be significantly smaller than the social one that I'm doing right now. But, hmm...

Jay thinking-aloud: So I'm thinking about revising my thesis as a whole to reflect that. So instead of saying, the distinct political, social, and economic systems, I could just say, distinct societies. And that's kind of what it explicitly mentions in the, in the question itself, so I feel like I'm reaching too broad when I, when I'm trying to fit in the political and economic systems (Jay TAP 84-85).

Jay noted that the documents support the social differences more than the "economical and political aspects," and reconsidered his decision to write one large paragraph about social differences. Jay used his understanding of the documents, his understanding of what is valued in DBQ tasks, and his understanding of criteria for specific historical frameworks to revise his plan for the essay and restrain his argument as he felt he was "reaching too broad..." Shortly

thereafter, Jay explained, "...I feel like I could probably knock out most of these documents just talking about social influences" and proceeded to narrow the focus of the essay to societal aspects and differences in characteristics among the settlers (Jay TAP 86).

Jay's excluded comparisons. As a result of the organizational changes to the essay based on the assertion that the documents did not support economic or political comparisons, Jay did not incorporate comparisons between the colonies that were based in his background knowledge. For example, after finishing the paragraph focused on the social details of the New England colony, Jay considered what he should write about next and whether he should start a new paragraph or continue writing about social differences in the Chesapeake region. He expressed plans to compare the political structures of the colonies to argue that Virginia had the House of Burgesses while New England held town hall meetings:

I'm trying to think of how I could break this into, because I know, I know how the political. I might save it for another paragraph, to talk about the political aspects, cuz I could right now talk about the town meetings and the congressional aspects, but I feel like it'd be better organized if I save it, or when I talk about the politics. So, I'm just going to break this off... (Jay TAP 76).

Soon after, Jay revised and broadened his thesis statement as discussed in the previous section because he indicated that the documents did not support writing about the political and economic differences and did not include this comparison as part of his essay.

In the end, Jay's essay focused on the social differences between the colonies and their differing motives for emigration. Jay also excluded background knowledge about tobacco that would come to form the base of Virginia's economy:

...when I first saw [the documents] I kind of thought it would talk about more about the economic and the political aspects... which I was kinda planning to talk about the House of Burgesses, and the stuff like that, and kind of the stuff that I remember from class... like Tobacco Plantation, I think and to talk about that much... so it kinda threw me for a loop when most of the documents were just about, you know, like the societal kind of aspects, like the family life and the interactions. (Jay Post-TAP Interview).

Jay wanted to include his existing background knowledge about political and economic differences between the colonies, namely Virginia's legislative body, the House of Burgesses, and the role of tobacco in the Virginia colony; however, Jay was unable to successfully connect that background knowledge to any of the documents.

Hannah's composing process. Hannah's composing process data illustrate her chronological reasoning in service of sourcing the documents, as well as additional historical comparisons from background knowledge that were not included in the essay.

Hannah's corroboration and chronological reasoning. Hannah engaged in corroborating information and chronological reasoning by attending to the specific date of each document and tracking them in relation to each other (across documents) and other historical events. For example, the first evidence of Hannah's chronological reasoning occurred as she read the sourcing information for John Winthrop (Document 1):

Hannah reading: A Model of Christian clarity, Christian Charity, written on board the Arabella on the Atlantic Ocean, 1630.

Hannah thinking-aloud: So that was after they settled the... (Hannah TAP 10-11).

Although she trailed off and continued reading, video data indicate that she circled the date “1630” as she read it and was likely noting that 1630 is *after* the Jamestown settlement was established.

As Hannah approached each new document in the set, she took note of the date in relationship to the previous document. For example, as she approached the Articles of Agreement (Document 2), Hannah sourced the document by attending to the title and date:

Hannah reading: Source: Articles of Agreement, written and signed by eight Puritan men

Hannah thinking-aloud: Oh, this was uh, this was like their, not their government, but it what they followed.

Hannah reading: Springfield, Massachusetts, 1936.

Hannah thinking-aloud: It's a little bit after the first document. (Hannah TAP 34-37). Here Hannah noted the date of the Articles after John Winthrop (Document 1) was written.

Similarly, as Hannah transitioned to the documents related to the Virginia colony, she noted that the Ship's List for Virginia (Document 4) was written around the same time as the Ship's List for New England (Document 3):

Hannah reading: Document 4, source, Ship's List of Emigrants Bound for Virginia prior to July, 1635.

Hannah thinking-aloud: So it is kinda the same year as document 3, but for Virginia, so that's Chesapeake and this is also going to be society. (Hannah TAP 55-56).

In addition to recognizing that the documents' dates were proximal to each other, Hannah also indicated that the document would fit into “society,” referring to the social category of her

organizational framework. As well, Hannah approached Governor Berkeley (Document 6), noted the date “1673” and indicated “...it’s a while after...” (Hannah TAP 74-75).

Although Hannah attended to the chronological ordering of the documents throughout the task, she did not connect that chronological ordering to the broader processes involved in advancing her argument or completing the task. As a result, no evidence of chronological reasoning was present in Hannah’s essay.

The final evidence of Hannah’s chronological reasoning surfaced as she composed the introduction to her essay:

Hannah thinking-aloud:...I could start with, saying some background about maybe...not Christopher Columbus. It's 1607 when they started coming in more and more. I could talk... [inaudible] prior to 1700. Um, okay.

Hannah writing: In the years prior, prior to 1700s...

Hannah thinking-aloud: it was 16th when they started coming, 1607, um (Hannah 117-119).

Hannah thinking-aloud: And the thesis, I think I could talk about more things before that. Uh, this movement started around 1607 with the period, no because then I'm talking about comparing and contrasting them already (Hannah TAP 123).

Hannah attempted to contextualize her introduction to the essay within the time period identified in the prompt and demonstrated periodization by marking the time period as a movement that started “around 1607.” As well, Hannah drafted language for the introduction to her essay and briefly considered including details about events prior to 1607 by “...[talking] about more things before that.” However, Hannah indicated that if she did “talk about more things before that” she would be “comparing and contrasting [the colonies] already.” In other words, Hannah noted that

it would be inappropriate to offer historical comparisons in the introduction to her essay, and in the end, she decided to write her thesis and let it stand alone as the introductory paragraph of her essay.

Hannah's comparisons. Prior to reading the documents, Hannah created a t-chart to organize her prior knowledge and her annotations for what she would learn from the documents. She began filling in the chart with a range of background knowledge about the colonies:

Maybe I can start the chart about them. New England, and then the Chesapeake.

Chesapeake was the swampy. Swamp and because of that, um, they did tobacco, and then tobacco was a land, labor. Land and Labor intensified, so there they used a lot of slavery too, I remember that (Hannah TAP 6).

Hannah noted relevant background knowledge details about the time period and the development of the colonies. Specifically, Virginia had swampy geographic conditions, they grew tobacco which was land and labor intensive, and as a result, they “used a lot of slavery.” Although she discussed this background knowledge and drew comparisons with this background knowledge during the task, these comparisons were not included in the essay because of a lack of document support and because it did not fit into the organizational framework she initially laid out.

For example, throughout her reading of the documents and essay planning, Hannah made connections between her background knowledge and the documents to contextualize them and build historical comparisons. As she read John Smith (Document 5), Hannah made a connection with her background knowledge about tobacco in Virginia with document information:

Hannah reading: *yet that did not repine but fas, fas, fasted, lest we should incur the censure of being factious and seditious persons. Our ordinary food was but meal and water so that this... ordinary food.*

Hannah thinking-aloud: It was not a lot to start with in Virginia, it was basically tobacco was the entire economy.

Hannah reading: *...relieved our wants, whereby with the extremity of the bitter cold frost.*

Hannah thinking-aloud: I remembered that the Indians helped them in the first few winters because they weren't really used to that, especially in the land that was there (Hannah TAP 64-67).

Hannah recalled her background knowledge about tobacco being central to the economy of Virginia while reading the document and correctly indicated that tobacco formed the economic cornerstone of Virginia.

Similarly, while reading the Governor Berkeley document (Document 6) which contained a plea to the King of England for help to combat the Indians, Hannah continued to recall details about Virginia and their relationship with the Indians. She summarized her understanding of the document and how she might use it as she finished reading:

Okay, well this is basically talking about how the Indians, the fight with the Indians and how the men had to go, and there's everything like that and that could be political, cuz even though it wasn't the wars, it was still leaving the... it could be social too because it was tensions, tensions with Indians, it could also be social...political. Cuz the royal governor (Hannah TAP 88).

In this excerpt, Hannah considered how she might fit the document into the organizational framework of her essay— social, political, or economic. She signaled that Governor Berkeley (Document 6) “could be social because...tensions with Indians,” or “could also be social...political.”

Later, Hannah transitioned to planning and writing her thesis. As she decided whether her essay should have more focus on differences or similarities between the colonies, Hannah reviewed her two-column chart as she considered the available document information that could serve as evidence:

Hannah: I could say that it was, it was more different than similar, than... it was different in the ways of why they came to the America's, because they came for religious reasons to get away from the King, not the king, but um, and then they came for economic reasons, so that could be the motives. Motives, and then, that's one point of comparison, could be the government, how their government was, or economic maybe because they have a lot of economic, talking about the tobacco, but they don't really talk about it in the documents.

Hannah: Umm. Let's see, the government, the articles, New England had a lot of government, and here, for Virginia, Royal Governor, they, royal Governor Berkeley and his council. I could talk about how they both had problems with Indians. That's something they, that they have in common, but I can't really get anything from New England from the documents, so that how they had problems with the Indians. Cuz it doesn't really talk about that, so if I write about the New England I don't have anything to take from the documents...

Hannah: Okay so, although they were coming from the same place, these distinct English colonial societies in the New England and Chesapeake regions had, were, more, were more different in the areas of their motives and government and societies, but then they have some similarity, similarity between them right here. Except for the problem

with the Indians but I can't take anything from the documents. Tensions with Indians (Hannah TAP 127-133).

Although Hannah clearly indicated that both colonies had problems with the Indians and had document evidence from John Smith (Document 5) to support part of the comparison, she recognized that she "...[doesn't] have anything to take from the documents" for New England. Similarly, Hannah also suggested that she had "a lot of economic" because her knowledge about tobacco being central to the economy of the Chesapeake, but again she noted that "...they don't really talk about it in the documents." Hannah was faced with the challenge of organizing her essay based on her understanding of the documents and her background knowledge. The tension between her existing background knowledge and her understanding of the documents was clear as she reviewed the documents and considered the evidence for the organizational framing of her essay. Thus, Hannah's process data showed a number of historical comparisons that were excluded from the essay because she "...didn't want to add that and not have any information from the sources" (Hannah TAP 236).

Grace's composing process. Grace's case was similar to Hannah's case, in that Grace also demonstrated a range of reasoning not present in her essay, especially her contextualization, chronological reasoning, and a form of corroboration wherein she situated each document in relation to each other. However, Grace also consistently drew on background knowledge to make connections with the documents and build historical comparisons for her argument. Grace's process was characterized by her knowledge of the task expectations and the use of heuristics that had been taught in class to analyze the documents.

Grace's chronological reasoning. Grace demonstrated chronological reasoning throughout her reading of the documents and as she wrote her essay; however, there is no basis

in the essay for concluding that Grace engaged in chronological reasoning. For example, as she began reading the Articles of Agreement (Document 2), Grace engaged in a form of corroboration in service to her chronological reasoning by noting the date “1636” in comparison to the date of John Winthrop (Document 1):

Grace reading: Document 2, Articles of Agreement, written and signed by eight Puritan men, Springfield, Massachusetts, 1636.

Grace thinking-aloud: So this was 6 years after they came (Grace TAP 22-23).

Similarly, as Grace approached the Ship’s List for New England (Document 3), she noted: “... this is after their first settlement was made” (Grace TAP 38).

Then, as Grace read the final document by Nathaniel Bacon (Document 7), she engaged in corroboration and chronology to support her contextualization and sourcing:

Grace thinking-aloud: The last source is Nathaniel Bacon. He led the Bacon's rebellion.

Grace reading: rebellious volunteer militia in Virginia, “Manifesto,” in 19, 6. in 1676.

Grace thinking-aloud: Which was three years after Berkeley needed help for the wars with the Indians (Grace TAP 64-66).

As Grace engaged in sourcing with the provided information about Bacon, she considered the date of the document in relation to the document she previously read and the events referred to within the previous document (the conflicts with the Native Americans in the Chesapeake).

Grace’s comparison. Grace also created a historical comparison with background knowledge that she chose not to include in the essay. As she read Nathaniel Bacon (Document 7), Grace referenced Governor Berkeley (Document 6) and compared her understanding of what the documents suggested about Virginia with her background knowledge about New England’s conflict with Native Americans:

Grace thinking-aloud: The leaders [of Virginia] aren't doing anything about the enemies, about the Indians, and kind of, putting them before the loyal subjects [Grace laughs].

Grace thinking-aloud: I'm trying to see the connect between what they can do in Virginia, because the New England also had problems with the Indians, but, like in King Philips War they kind of bound together and fought them all together...not just, the authority leaders (Grace TAP 78-79).

Here Grace demonstrated a complex understanding of the Bacon and Berkeley documents, noting the tension among the settlers of Virginia and Berkeley by noting the leadership of Virginia at the time (Berkeley) was not “doing anything” about the Native Americans. She then drew a comparison with her background knowledge about King Philips War in New England to indicate those in New England were “bound together” in their fight against Native Americans.

Shortly thereafter, Grace utilized Nathaniel Bacon (Document 7) for a different purpose: So I think the beginning part is more important, because unlike in New England, they were not really created in, not creating community, and kind of just letting the richer man get what they needed instead of disbursing it throughout (Grace TAP 89).

Perhaps unaware she could use the document more than once or for multiple purposes, Grace ultimately decided to focus her use of Bacon (Document 7) to discuss the “unfair distribution of wealth” in Virginia, rather than discuss the comparison regarding the struggle with Native Americans (Grace Essay, Paragraph 4, Sentences 8-10).

Mary’s composing process. Mary’s process data revealed a richer understanding of the documents than is shown in the essay as she made complex inferences from multiple documents

that aided her in developing claims for her essay; however, these inferences were not included in the essay.

Sourcing and perspective taking. Mary’s process data demonstrated her ability to engage in perspective taking in service of sourcing a document and make complex inferences from those documents to generate historical comparisons.

For example, when she approached Winthrop (Document 1), Mary talked-aloud how she noticed Winthrop’s choice of language and attended to the motives behind what he wrote. She engaged in perspective taking in service of sourcing and interpreting the document:

I just noticed that he constantly mentions we, as a sense of connecting himself to his audience, so I'm thinking his audience are the people who are also on board with him on the Arabella. That's his main audience, so he's talking...he [is] connecting himself to his audience to like, get like a closer feel to them. Signifying that they have to be together as one man and staying unified and he's telling them that they have to go together, they have to delight in each other, make others' conditions their own, so, rejoice together, like unify, that's his main thing in this whole speech....err, writing (Mary TAP 10).

As Mary sourced and made sense of the document, she made inferences about the intended audience in addition to attending to Winthrop’s perspective and the use of the word “we.” She then used it to provide analysis as to what Winthrop’s purposes were for writing. Then, Mary summarized her thoughts on the section of text by indicating “his main thing in the whole speech” was to “unify.” As Mary finished reading and prepared to move to the next document, she also summarized what she thought Winthrop was communicating in the document by voicing: “I feel like this whole document is basically him stating like, we have to stay together,

we have to be that city upon a hill...” (Mary TAP 15). Her essay correctly sourced Winthrop and utilized the “city upon a hill” quotation to emphasize the Puritan’s unity and religious focus:

The main religious concept stemmed from the Puritan's beliefs on a "city upon a hill". As written by John Winthrop, the main focus for the society was to stay unified, be connected as one distinct society. This society would be a model for "a city upon a hill" (Doc. 1) (Mary Essay, Paragraph 2, Sentences 2-4).

Although Mary’s process data show that she engaged in historical perspective taking by considering the audience’s perspective on Winthrop, this insight was not considered further for inclusion in the essay; rather, Mary’s interaction with the document became transactional, focusing on what she could take from the documents as she transitioned from reading and analyzing the documents to planning and prewriting for the essay.

Similarly, Mary’s process data also indicates that she correctly sourced and made inferences from both the Ship’s List for New England (Document 3) and the Ship’s List for Virginia (Document 4). As she read the Ship’s List for New England, she correctly inferred that “it all consists of families, not really of people going by themselves to emigrate...” Later, as she read the Ship’s List for Virginia (Document 4), Mary correctly identified the emigrants on the list were headed to Virginia and that they were mostly men:

So I'm looking at these names and what I notice right here it says women, and there's like a small list of women compared to the list of all the men here. So, what I tell from this document is most of the people that are going, are going to Virginia, uh, they're mostly men and also as I look at the age I see 14, 17, 19, 20's, but mostly like early 20's... (Mary TAP 35).

Despite making correct inferences about both documents during the process, Mary's essay does not reflect her understanding of the documents:

In an overall view on the New England society, it Included [sic] mostly young men and families (Doc 3 & 4) (Mary Essay, Paragraph 4, Sentence 4).

As Mary attempted to write about the social dimensions in the New England colony, she incorrectly cited both documents as being related to New England and indicated those going to New England were mostly young men. In sum, Mary's composing process data indicate her ability to engage in complex sourcing and perspective taking, in addition to her ability to correctly source documents that was not adequately reflected in her essay.

Anci's composing process. Anci's process data highlighted her ability to engage in perspective taking and contextualization to source and understand the documents, as well as chronology to corroborate a detail in a document. Her process also illustrates how she drew on background knowledge and her understanding of the documents to identify evidence for the multiple comparisons. However, these comparisons did not translate clearly into her essay and as such, she did not consistently use the documents as evidence for her claims in the essay.

Anci's sourcing and perspective taking. Anci's interaction with Winthrop (Document 1) illustrates how she understood the document and generated a historical comparison with it; however, in her essay, she did not utilize the document in the same way. As Anci began reading Winthrop (Document 1), she recognized the historical significance of John Winthrop in the context of their migration which was not mentioned in the essay:

So this is probably when they were going to go settle somewhere else, and John Winthrop, I'm just going to highlight his name because he's one of the figures from this

time period, one of the important ones, and he was basically kind of like the founder of the New England region (Anci TAP 9).

She then drew on her background knowledge to contextualize the Puritan's motivations for migrating to the New England colony and advanced a comparison between the colonies:

Anci: So, when we learned about this time period, we learned that New England was basically settled because of religion and the Puritans left England because of persecution and they seek to find a new land where they can practice their own religion.

Anci: So, he says *God Almighty* once. And just skimming through this, he says it multiple times, but he says that, they all work together, well um, a significant difference would be the, between the Chesapeake and the New England would be that the Chesapeake had different motives of settling (Anci TAP 11).

Anci asserted that the colonies had different motivations for settlement, in addition to citing background knowledge to contextualize why the Puritans left England. Anci further demonstrated her ability to engage in perspective taking and recognized a pattern in Winthrop's language:

He keeps saying we. So, I'm just guessing that he, he wants them all to be together because he doesn't want them to feel left alone when they settle and he doesn't want anyone to feel like they're mightier or higher than anyone.

[Anci reads next paragraph]

Again, he says we, he says together, he says our, multiple times. And he calls it our community for the people, not just his, so he's not saying that he's just the leader, but he does believe that, he wants, religious leaders to keep the community intact (Anci TAP 16, 18).

Here Anci engaged in perspective taking as she attended to Winthrop's language choices to makes inferences about Winthrop and the New England community. She noticed Winthrop's repetition of language around unity and togetherness. However, Anci's claim with Winthrop (Document 1) differed in the essay and did not represent the reasoning she did with the document during the task. Anci utilized the Winthrop document to claim: "The community was built around the church, which was in the center along with the school, fulfilling John Winthrop's vision of "city upon a hill" (doc. 1)" (Anci Essay, Paragraph 2, Sentence 4).

Anci's chronological reasoning in service to corroborating. While Anci was composing her fourth paragraph and emphasizing the role of religious leaders in New England's formation, she referred back to both John Winthrop (Document 1) and the Articles of Agreement (Document 2). In doing so, Anci considers a contrasting detail between John Winthrop's perspective and the chronological proximity to when the communities expanded further in the Articles of Agreement (Document 1):

Well, John Winthrop said, they should all close its community, more or less. And they're all equal. But then three years later, or six years later actually, the Articles of Agreement was written and signed by 8 Puritan men (Anci TAP 264).

Here Anci's think-aloud reveals that she corroborated the chronological proximity between the two documents by noting that while Winthrop wanted a fairly [closed] community, six years later the colony is expanding. Instead of further considering this, Anci decides she can use the Articles of Agreement to advance a different claim.

While Anci's case illustrates that she was able to engage in sourcing, corroboration, chronological reasoning, perspective taking, and interpretation of a document, her essay

demonstrated a narrow, essentialized version of her thinking and does not accurately reflect the historical reasoning she engaged in as demonstrated in the think-aloud.

Hailey's composing process. Hailey's process data demonstrates her ability to engage in a range of historical reasoning processes, including sourcing processes, contextualization of events and documents, elements of chronological reasoning and periodization, and corroboration. As well, Hailey's composing process included mention of multiple historical comparisons that were not present in the essay. Importantly, Hailey's essay only drew on a limited number of documents, and largely cited them instead of using information from the documents as evidence for claims. However, her process data show some in-depth consideration of information within the documents and her efforts to bring that information and knowledge into the essay failed. Hailey's case is unique in that she limited her essay, sometimes due to her uncertainty about documents and background knowledge, despite making relevant comparisons throughout the think-aloud.

Hailey's comparison about self-government. Hailey's process data illustrate that she planned to write about how both colonies were politically similar in that they both were in support of self-government; however, she ultimately did not include evidence for this comparison in her essay. In her thesis statement, Hailey offered the claim that the two colonies "had a singular political structure" (Hailey Essay, Paragraph 1). As she began to write her essay, she considered what she would write about first and noted that both colonies were in support of self-government:

Hm, I think I'm going to begin by saying how in the New England colonies they were guided with the, they were motivated by the idea of being, they were guided with the idea of living as models so that they could be a city on a hill, while the Virginia colony were

guided by... they didn't really have anything to like build, city on a hill. They were kind of like all for the self-government theme. So how would I say that? (Hailey TAP 66).

However, before proceeding to write, she reconsidered her approach:

I think it would easier to just... I think I'm going to start by saying how the immigrants come to New England were families while those who were going to Virginia were single young men, so that I can build up on that and say how these people wanted to live on the idea of being a village on a city on a hill, while these people were all for self-government (Hailey TAP 69).

Hailey indicated it would be easier to begin with a comparison of the differing types of settlers (families to New England and single, young men to Virginia) and then planned to “build up” to the idea of Winthrop’s *city upon a hill* and that “[both colonies] were kind of like all for the self-government theme” (Hailey TAP 66). However, this claim never appeared in Hailey’s essay.

Hailey’s political structures comparison. Hailey’s process data also provide evidence of additional historical comparisons she intended to include in her essay but did not. Hailey’s comparisons about the differences in the political structures in each colony highlights the tension between her understanding of the demands of the task, and the recall and application of historical background knowledge in service to her historical reasoning. That is, Hailey recalled relevant background knowledge while re-reading a document, and she used that information to create and draft a historical comparison between the colonies. However, the resulting comparison was not included in the final essay because Hailey struggled to connect that background knowledge to the documents and then expressed uncertainty about the comparison.

After beginning the third paragraph of her essay by explaining Winthrop wanted the colonists to live as a “closely ‘knit together’ village,” Hailey returned to Berkeley (Document 6)

to read and consider how she might proceed with the rest of the paragraph and draw a comparison to Virginia. Hailey struggled to make sense of the Berkeley document during her initial reading and revisited it to re-read and consider how she might incorporate it into her essay. After re-reading the first section of the document, Hailey remarked, “Ok so, this is the council. This is the House of Burgesses...” (Hailey TAP 114) referring to the title of the document that indicated it was from Berkeley and his counsel. Hailey recalled useful and correct background knowledge that Virginia had a representative body called the House of Burgesses (the elected portion of Virginia’s legislature). However, she applied this background knowledge incorrectly in thinking that the *audience* of the document was the House of Burgesses, leading to further confusion as she continued re-reading:

This is going against the House of Burgesses. House of Burgesses. So are they trying to rebel against the council? Is that what they’re saying? (Hailey TAP 121).

Hailey confused the King’s council (the correct audience of the document) with the House of Burgesses, and then takes an authentic historical inquiry stance toward the document by questioning her emerging understanding of the document.

Hailey then moved back to Nathaniel Bacon (Document 7). As she returned to the document, she explained:

Okay, so they had a rebellion. So the Virginia colony had a rebellion while the...New England Colonies, the New England colonies probably had a rebellion. I just can’t think of it. They had like, the Salem Witch Trials and stuff like that.

Hailey: So, I think I'm not, I don't think I'm going to use this document, because I don’t want to misinterpret it. So I’m just going to leave that... I already have six documents already... (Hailey TAP 128-129).

Hailey tried to recall background knowledge about the conflicts that occurred in New England. She recalled the Salem Witch Trials in an attempt to create a historical comparison with Bacon's Rebellion in Virginia. However, she decided against including the Bacon document to avoid misinterpretation. After finishing the draft of the third paragraph as it appeared in the final essay, Hailey revisited her struggle with Documents 6 and 7:

Yeah, well the New England and Chesapeake regions... I'm trying to think of a way to kind of incorporate, incorporate Bacon's rebellion into this, but I don't know how to, because I can't figure out what document six is trying to say, so I think that I'm just going to say that (Hailey TAP 149).

Shortly after, Hailey moved to a blank sheet of paper to write. She then wrote and talked-aloud:

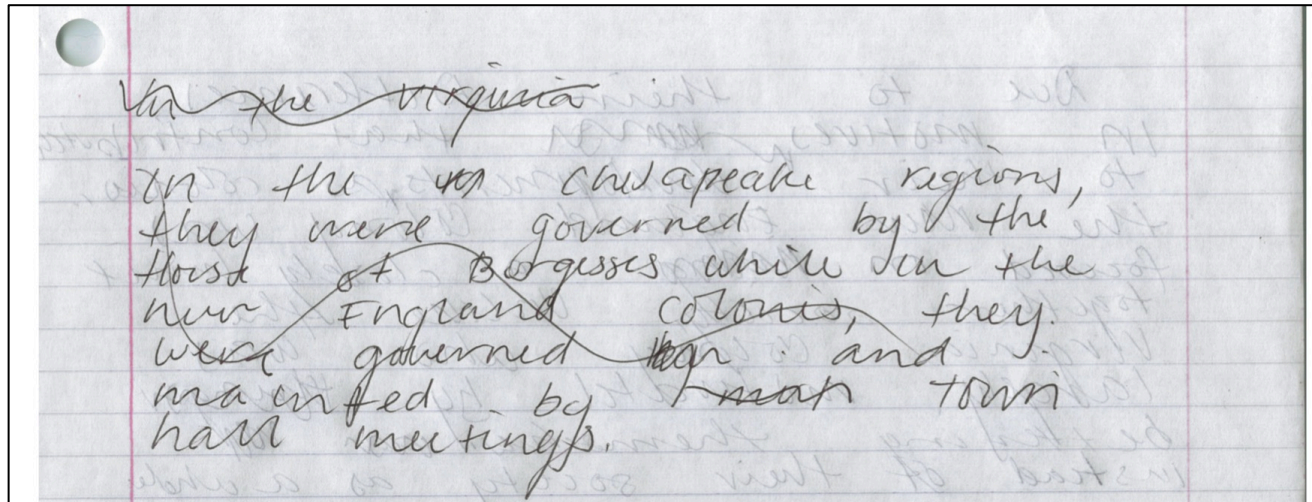
Hailey thinking-aloud: Okay, the Virginia House of Burgesses.

Hailey writing and thinking-aloud: In the Virginia, in the Virginia, in the Chesapeake regions, Chesapeake regions, they were, governed by the House of Burgesses while in the New England, England colonies they were, umm... guided, governed by, not town hall meetings, they were maintained, governed and maintained, because they had like the closely knit together thing, that they had to, governed and maintained by multiple town hall meetings. Town hall meetings (Hailey TAP 166).

Hailey drafted an explanation that would have made the initial, contradicting claim in the paragraph correct. Figure I (below) displays the text Hailey drafted. She correctly asserted that those in the Chesapeake were governed by the House of Burgesses and those in New England were governed and maintained by town hall meetings.

Figure I

Hailey's deleted draft text



However, Hailey struggled to determine where in the essay she might include that text. She looked back to the written draft of her essay and said, “Okay, so how am I going put that into, can I do that earlier for somewhere.” Then, Hailey returned to the documents and began to flip through them. She returned to Governor Berkeley (Document 6) and briefly considered using it to support the claim she has just drafted:

Hailey: Okay. Maybe I can use, this one. No. There isn't really anything in here that says anything about the House of Burgesses, and I want to put that in here because it's part of my thesis, but I kind of already have something close to here, because the City on a hill.

So I think I'm just gunna go onto my conclusion. (Hailey TAP 168-169).

Although Hailey drafted an astute historical comparison between the colonies using the Berkeley document and background knowledge, this excerpt illustrates that she struggled to identify where she might include it in her essay and what document she could cite to support it. Hailey indicated that she could not find document evidence to support the comparison and instead abandoned it by scratching out the drafted text and moved on to writing the conclusion. Thus, Hailey's

relevant background knowledge was recalled while reading the documents, used to create an accurate historical comparison between the colonies, and despite taking the time to draft the text, Hailey decided not to include the comparison because the documents did not appear to support it.

Hailey's chronological reasoning. Hailey also demonstrated her ability to engage in chronological reasoning and periodization at two different points during the composing process but neither of these were evident in the essay. First, after Hailey read the prompt, she immediately began to contextualize the period in which the prompt is situated and drew upon her background knowledge to recall events within that period:

So when I look at the date I think of how it says prior to 1700s, so that's period two, so that's 1607 to 1754, it begins. I think the second question is asking me to focus on the time periods of 1607 from the founding of Jamestown, up until the French and Indian War. Indian War (Hailey TAP 2).

Hailey first recognized that the task is confined to “prior to 1700” and situated that within “period two,” which refers to the classroom curriculum that breaks American History into nine periods. She then used her background knowledge to situate the task between two relevant historical events.

Finally, while reading Nathaniel Bacon (Document 7), Hailey drew on her background knowledge and recognized that the year the document was written was the same year he led the Bacon's Rebellion, 1676. After reading the document, she engaged in chronological reasoning to make a relevant historical comparison to a conflict in New England around the same time:

I know that the New England had like some sort of rebellion around this time too. I think it was like from 1630 to 40; yeah because then... the New England had like a rebellion, I think it was the Powhatan War or something like that, I'm not too sure (Hailey TAP 54).

Although Hailey showed some tentativeness around her knowledge about the Powhatan War, she demonstrated an understanding of a sense of period and the relevant historical events contained within that period. Importantly, the essay did not include any reference to this comparison, evidence of her chronological reasoning, nor include any reference to Nathaniel Bacon (Document 7).

Randall's composing process. Randall's process data also contained a range of reasoning that was not present in the essay, including historical comparisons between the colonies as well as perspective taking as he attempted to understand the emphasis of particular documents and the perspective of a document's author. Although Randall did not consistently use the documents as evidence for his claims in his essay, his process data highlighted how he both understood the purpose of those documents and that he was using information in the documents as evidence for the comparative claims he made in the essay. Indeed, Randall described his struggle to "find the words" as he wrote the essay (Randall TAP 182), suggesting that the production of written text was limiting his efforts to demonstrate his historical thinking.

Randall creates a comparison with document evidence. In his essay, Randall argued that New England's economy focused on shipbuilding and fishing, while the "...Virginia colonists were highly motivated by wealth. (Doc 5)" (Randall Essay, Paragraph 3, Sentence 4). Thus, his essay pointed the reader to John Smith (Document 5) but did not utilize it as evidence of his claim or explicate why the document supported the comparison. Randall's composing process data illustrate his thinking about Smith (Document 5) and how he utilized his background knowledge about the Virginia colony to support his sensemaking with the document:

Randall reading: *Our ordinary food was but meal and water so that this little relieved our wants, whereby with the extremity of the bitter cold frost*

Randall thinking-aloud: Okay, so that remind, that reminded me that the Virginia, the people coming into the Virginia colony were, cold frost, they were freezing during the winters, and they barely had any food and water. And that, they had to, the Indians had to help them in that case, but then later on that, it didn't turn out that well with the Powhatan war, Anglo-Powhatan War.

Randall reading: *More than half of us died.*

Randall thinking-aloud: I remembered that.

Randall reading: *The worst among us were the golden promises made all their slaves in hope of recompenses. There was no talk but dig gold, wash gold, refine gold, load gold.*

Randall thinking-aloud: That kind of, reinforces, what I remember, which was that they were motivated by wealth. (Randall TAP 52-57).

Randall recalled background knowledge about the Powhatan War and the living conditions in Virginia, and as he continued reading, he identified document information that supported his historical comparison that Virginia colonists were motivated by wealth. This illustrates that although Randall's essay did not include explanation or support as to how John Smith (Document 5) served as evidence of the claim he advanced, Randall's process data demonstrated that he indeed made the connection between the Smith document and how it could be utilized for the claim he ultimately advanced in the essay.

Perspective taking with Berkeley. Randall also demonstrated perspective during composition, but did not include this in his essay. Randall attempted to understand Governor Berkeley's argument and perspective (Document 6) although he expressed some tentativeness around his inferences:

Randall reading: For by our nearest computation we leave at our backs as many servants besides Negroes as there are freemen to defend the shores and all our frontiers against the Indians.

Randall thinking-aloud: So he is, I think what he's trying to say is that, there are not enough men to defend, or he is, he is angry that he has to rely on many servants to defend their backs. I'm not sure though. (Randall TAP 67-68).

As Randall attempted to understand the document and what Berkeley was “trying to say,” he engaged in perspective taking by noting that Berkeley is “angry” about the lack of support from England. Later, while advancing the economic claim that New England did not use slaves while Virginia did, Randall demonstrated historical empathy as he expressed “hope” that the Puritans rejected slavery as a labor option as a result of their morality:

Randall thinking-aloud: I don't remember if, just that, if it was because of their morals that they didn't accept slavery. I just know that, in Virginia, that slavery was widely accepted and actually it guided, or did it guide? I guess it guided the economy forward. I'm not sure if the Puritans just didn't accept slavery because of their morals, but I hope that's what it was. (Randall TAP 166).

Importantly, Randall included some of the ideas that surfaced while reading Berkeley (Document 6) in his essay but did not reference or use the document as evidence of his claim. After claiming that Puritan’s morals influenced their economy, Randall argued that the Virginia colonists were “highly motivated by wealth” (Randall essay, Paragraph 3, Sentence 4) and that:

This, along with the population consisting mostly of slaves and indentured servants, led to the different economic structure in Virginia, involving slaves and indentured servants

for labor and tobacco farming for their main source of economic prosperity. (Randall Essay, Paragraph 3, Sentences 4-5).

Randall's essay included information from his background knowledge that surfaced while reading Berkeley (Document 6), but Randall did not connect this knowledge to document evidence.

Randall's comparison. Despite recalling new background knowledge that conflicted with what he had already written in the essay, Randall proceeded to complete the essay instead of revising what he wrote. In recalling this information, he identified a point of similarity among the colonies, but did not include it in the essay. In his essay, Randall claimed without document evidence that:

[The Virginia settlers] had to accept help from the Indians in order to survive in the beginning, which differed from the New England colonists who didn't struggle as much because of the family life (Randall Essay, Paragraph 4, Sentence 7).

However, after drafted this claim into the essay, Randall reconsidered what he wrote as he recalled additional background knowledge:

Oh, now I'm second guessing myself. If that was actually New England colony. It wasn't he, King Phillips War, that was, that was the New England Colonies. So it wasn't. That could have been a similarity probably for both. Both colonies...were kinda similar in that way with the Indians. I didn't think of that earlier. (Randall TAP 198).

Randall recalled background knowledge about King Phillips War which suggested that New England also struggled with Native Americans. Randall recognized this as a similarity among the colonies that he could have offered as a comparison in his essay; yet, instead of proceeding with

revising his claim or finding document evidence to support that claim, Randall expressed frustration, noted that he did not use the documents well, and decided to write his conclusion.

Cross-case patterns of historical reasoning processes in relation to the written product

Across cases, three patterns of historical reasoning were consistently visible in the composing process but were not inferable from the essays. These are:

1. Exclusion and deletion of historical comparisons and background knowledge. All participants routinely brought to the task relevant prior knowledge, especially for purposes of making historical comparisons. However, they often restricted the essay content to information that was present in the document set with which they were provided. This pattern illustrates how participants constructed comparisons to answer the prompt by using their understanding and analysis of the provided documents and their existing background knowledge.

2. Chronological reasoning processes. Although the writing task prompt did not specifically prompt chronological reasoning processes, six of the eight participants engaged in some form of chronological reasoning during the composing process. However, evidence of any substantive chronological reasoning was present in only two participants' essays.

3. Corroboration processes. Six of the eight participants demonstrated strong evidence of corroboration during the composing process. However, participants essays did not show evidence of corroboration processes.

Each of these is described and illustrated in the balance of this chapter.

Exclusion of comparisons and background knowledge

Although all participants constructed and included multiple historical comparisons in their essays by using the documents and their background knowledge to address the prompt, most participants voiced additional task-relevant historical comparisons and background knowledge that were not included in the final essays. Participants routinely restricted the essay content to information that was present in the document set.

The excluded historical comparisons were largely dependent on prior knowledge that participants brought to the task rather than on information in the document set. Their comments about why they were not going to include these comparisons in their essays reflected their interpretation of the DBQ task as privileging information in the document set.

Of the five participants' composing processes that revealed historical comparisons were excluded from the essay, three participants made comments that indicated exclusion due to lack of evidence or support from the information in the document set. For example, Jay left out comparisons based on background knowledge about the political and economic differences between the colonies, namely Virginia's legislative body, the House of Burgesses, and the role of Tobacco in the Virginia colony. Despite having voiced comparisons with this background information while composing the essay, Jay was unable to successfully connect that information to any of the documents and he decided to narrow the focus of his thesis statement. Having done so, he struggled to find a space within his organizing framework for that information. During his post-task think-aloud, Jay indicated he was "thrown for a loop" when he saw that the documents did not support writing about political and economic dimensions (Jay Post-task Interview).

Similarly, Hailey recalled information about the House of Burgesses from background knowledge as well, and then drafted a comparison with that information for the essay. Nevertheless, when Hailey realized that the documents did not contain information to support

this comparative claim she decided to leave it out and moved on to writing her conclusion (Hailey TAP 169).

Hannah also decided to exclude relevant comparisons and background knowledge from her essay, and she clearly expressed the reason why during her post-task interview. Although she discussed these comparisons and background knowledge at multiple points during the composing process, she indicated that lack of document support was the reason:

Well I wanted to talk about how they both had problems with Indians but in the documents it didn't really want to talk about that. And I didn't know if that's something I should bring in because I couldn't back it with information from the sources, so I didn't put that down. (Hannah Post-task Interview).

Hannah expressed uncertainty around whether she should include her comparison based on her understanding of the DBQ task constraints as it was based on her background knowledge and was not able to be backed with document information.

Grace also drew the comparison that both colonies “had problems with the Indians” and cited background knowledge about King Philip’s War—a conflict between the New England colonists and Native Americans (Grace TAP 79). Grace recalled this information while reading Nathaniel Bacon (Document 7) which speaks directly to the Virginia Colonies struggles with Native Americans. Although Grace did not indicate why she did not include the comparison in her essay, her essay indicates that she utilized Bacon (Document 7) to discuss a different claim focused on the economic disparities in Virginia.

Finally, Randall also identified a point of similarity between the colonies when he recalled that both colonies struggled with Native Americans. He discussed the comparison in relationship to document information from Berkeley (Document 6) and information from

background knowledge. However, he recalled this comparison after he had already drafted a claim that contradicted this information (Randall Essay, Paragraph 4, Sentence 7). Instead of revising his essay to speak to the comparison he recalled, Randall became frustrated and finished his essay without including the comparison.

Chronological reasoning processes

The writing task prompted students to compare and contrast the development of the two colonies in the time period *prior to 1700*. Although not explicitly prompting students to engage in chronological reasoning, it was expected that participants would be able to recognize and differentiate the time period of the task (a form of periodization) along with change over time within the colonies. All participants met these expectations by writing essays within the time period of the task and recognizing the colonies changed over time. Beyond this, the task prompt and document set did not emphasize or make obvious the relevance of chronological reasoning and it was unclear whether and how participants would engage in chronological reasoning while completing the task.

Chronological reasoning was more evident in the composing process of the participants than in the essays, as only two essays showed evidence of substantive chronological reasoning—that is, chronological reasoning that went beyond simply restating the prompt language *prior to 1700*—whereas six of the eight participant’s composing processes demonstrated chronological reasoning. Of the six that demonstrated chronology in the think-alouds, four did so sporadically and largely in service to making sense of the documents. As well, most of these instances occurred while participants read the documents prior to organizing or drafting the essay. For example, Jay’s think-aloud demonstrated evidence of chronological reasoning as he began reading Winthrop (Document 1). Jay read the sourcing information at the top of the document

and noted that the document was from “...before they landed down in the New England region” (Jay TAP 8). Recognizing this chronological detail was in service of sourcing the document.

Grace also engaged in chronological reasoning in service of sourcing documents and to occasionally position documents in relation to each other. For example, in approaching the Articles of Agreements (Document 2), she noted it “...was six years after [the Puritans] came” (Grace TAP 23). Similarly, as she read the sourcing information for Nathaniel Bacon (Document 7), she positioned the document in relation to Governor Berkeley (Document 6) by indicating it “...was three years after Berkeley needed help for the wars with the Indians” (Grace TAP 67).

Hannah and Rachel’s chronological reasoning differed somewhat from the other participants in that they both engaged in chronological reasoning consistently at numerous points throughout the composing process. Rachel engaged in chronological reasoning to contextualize the documents in relation to a major event (the Great Migration) during the time period the task was situated within, while Hannah’s chronological reasoning was characterized by tracking documents’ dates of origin in relation to each other. Hannah did not connect her chronological ordering of the documents to the broader processes involved in advancing her argument or completing the task, and evidence of Hannah’s chronological reasoning did not appear in her essay. This contrasts with Rachel’s chronological reasoning which worked in service of contextualizing document information and background knowledge.

The chronological reasoning demonstrated by participants during the composing process revealed the two strategies they employed to help contextualize and make sense of the documents: 1) placing the documents in relation to a significance period situated within the set timeframe of the task, and 2) tracking the chronology of each document in relation to the previous document.

Corroboration processes

Six of the eight think-alouds revealed that participants engaged in corroboration processes to confirm details and support their understanding of document information, events, or emergent themes from the documents. Of those six, four participants also corroborated to verify chronological details across multiple documents.

The process data indicated that most of the participants limited corroboration to one or two instances in which they verbalized their thinking about comparing information across documents. For example, Jay corroborated document information within the New England documents as well as within the Virginia documents. For the New England documents (Documents 1, 2, and 3), Jay noted and confirmed the religious emphasis and “theme” of unity in New England by attending to specific language used in each document. Jay also corroborated information from two of the documents for Virginia by noting a “theme of disunity” from language in John Smith (Document 5) and Governor Berkeley (Document 6). Similarly, Rachel noted a number of similarities in the New England documents including the emphasis on unity as well as noting details about a shared space for planting.

Rachel, Grace, Anci, and Hannah all engaged in a form of corroboration that was in service of their chronological reasoning. Grace, Anci, and Hannah all attended to and noted the relationship of the dates among multiple documents. For example, as Hannah began reading the Articles of Agreement (Document 2) she indicated it was written in 1636 “a little bit after the first document” (Hannah TAP 37), while Grace discussed how Nathaniel Bacon’s Manifesto (Document 7) was written “three years after Berkeley needed help for the wars with the Indians” (Grace TAP 64-66) referring to details from Governor Berkeley (Document 6). Rachel also corroborated in service to her chronological reasoning by verbalizing about the change over time

between 1624 when there was no mention of women in Smith's account of Virginia versus the Ship's List in 1635 that documents a few women on the Ship bound for Virginia.

Despite evidence of corroboration in the composing process data, evidence of corroboration in the essay data was absent.

Summary of cross-case findings

Each individual case demonstrated a range of historical reasoning during the composing process that was not inferable from their respective essays. Across cases, three recognizable patterns of historical reasoning were visible in the composing process but were not inferable from the essays. Participants generated far more historical comparisons and drew upon a wider range of prior knowledge about the period than was evident in their essays. As well, participants' chronological reasoning and corroboration processes were amply visible during the composing process, but these processes were largely absent from the final essays.

DISCUSSION, IMPLICATIONS, AND CONCLUSIONS

Prior research on students' historical thinking and reasoning has relied on evidence in the form of students' written work products such as essays and short answer responses to make claims about students' ability to reason historically and make historical arguments (Grant, Gradwell, & Cimbricz, 2004; Monte-Sano, 2008; Monte-Sano & De La Paz, 2012; Reisman, 2012; Young, & Leinhardt, 1998). Further, some have asserted that the document-based history essay task is a highly effective tool for assessing what students know and are able to do in history (Nokes & De La Paz, 2018). The present study examined eight students' historical reasoning as manifest in the process of composing a document-based historical essay in response to a DBQ prompt to further explore and understand the nature of students' historical reasoning while writing.

It was expected that the reasoning demonstrated in the students' essays would represent a subset of the reasoning processes identified in the process data. Although students' written essays do indeed bear evidence and traces of students' historical reasoning processes, the findings show that the final essay product provides an incomplete view of students' historical reasoning and the reasoning demonstrated in the essays was not representative of the range and complexity of the reasoning students engaged in while composing the essay. That is, the DBQ task elicited a range of reasoning processes that the product tended to blur or hide altogether, including a large amount of students' prior historical knowledge, background knowledge, chronological reasoning, and contextualization around the documents and events of the period. This is the case for all eight of the study cases but is especially so for students whose essays suggest only partial mastery of historical reasoning processes. As well, the findings revealed a complex relationship among students' understanding of the task expectations, understanding of

the documents, use of historical background knowledge, and the historical reasoning evident in the process data.

In the present study, participants' essays also showed the document set being used in fairly similar and homogenous ways and for similar claims; however, during the composing process, participants engaged in a range of complex historical reasoning with the document. Additionally, the cross-case patterns that emerged elucidated the large number of prompt-relevant historical comparisons that participants made during the composing process, but many of these comparisons were not present in their final essays as these comparisons were largely dependent on prior historical background knowledge. As well, evidence of chronological reasoning and corroboration processes was not readily present in students' written essays; however, multiple students' process data demonstrated a range of instances in which chronological reasoning was being employed in service to students' corroboration and contextualization processes.

Historical Reasoning Absent from Product and Present in Process

Chronological reasoning processes. The task prompt asked participants to compare and contrast the development of the two colonies in the time period prior to the year 1700 and while it did not explicitly prompt or emphasize chronological reasoning, it is likely that prompting to focus on the "time prior to the year 1700" scaffolded participants to restrain their responses to the correct time period. Nevertheless, the chronological reasoning that was made visible during the composing process was extensive in some cases and largely absent from the essays. For example, both Rachel and Hannah engaged chronological reasoning throughout their reading of the document set in service of contextualizing the documents and the documents' relationship to the time period. Rachel read the documents and placed each one in relationship to when the

Great Migration occurred, and in drafting her essay, she connected her argument to the larger historical event. Hannah actively tracked the date of each document and when approaching a new document, she placed it in relationship to the other based on when it was written. Similar to Hannah's approach, Grace also tracked the origin of documents in relationship to multiple documents and events. Of the six that demonstrated chronology in the think-alouds, most of these instances occurred while participants read the documents prior to organizing or drafting the essay.

Beyond Dawson (2004) and Haydn et al.'s (2014) book which offered a framework and broad trajectory for students' chronological reasoning, relatively little research has attended specifically to how students engage in chronological reasoning or students' development of an understanding of "historical time" (Stow & Haydn, 2000, p.87). In many ways, Rachel's sophisticated chronological reasoning extends beyond these current models and expectations of students' chronological understanding by tracking and documenting the Great Migration in relation to the documents she encountered. Rachel effectively built a time-oriented understanding of the documents and the events of the period by using the Great Migration as an anchor event/period of time to organize and place the documents and other events in relation to each other. This strategy supported Rachel in her efforts to organize and represent her thinking in the essay and may have enabled her to connect the argument she planned to advance in her essay to a broader historical period of time.

Corroboration processes. Six of the eight participants engaged in corroboration processes to confirm details and support their understanding of document information, events, or emergent themes from the documents, although the prompt did not explicitly prompt students to corroborate. Further, of those six participants, four also corroborated in concert with

chronological reasoning processes to verify chronological details found across multiple documents. Similar to their chronological reasoning, participants engaged in corroboration while reading and making sense of the documents prior to drafting the essay and did not corroborate while drafting essay text or revisiting documents while composing.

Contextualization with background knowledge. While there is a lack of recent research in how students contextualize as well as how students use background knowledge to do so (Reisman & McGrew, 2018), the current study illustrates that all participants talked about what they already knew that was potentially relevant to the comparison of the two colonies and the various documents in the set. They did so with two apparent purposes in mind: to integrate information in the document set with what they already knew, a process important for coherent understanding; and to determine what and how to incorporate information from the documents in their essays. However, it was rare that essays demonstrated the rich ways in which students reasoned about the colonies based on their knowledge of events preceding as well as following the period that was the focus of the DBQ prompt.

The present findings attest to the challenges of assessing contextualization processes through an essay task (e.g., Huijen et al. 2018). The process data indicate that sensemaking most definitely involved contextualizing focal events. The degree to which an essay affords opportunities for contextual analysis undoubtedly depends on the document set and the prompt, as discussed below.

Types of Historical Background Knowledge

It is well-established that historical background knowledge plays a critical role in historical reasoning and argumentation (Seixas & Ercikan, 2015), especially for contextualization processes (Huijgen et. al, 2018). This was the case for the participants in the

present study, as the composing process data illustrated. Participants in the present study demonstrated a full range of what van Boxtel & van Drie (2018) call “first order” historical knowledge by which they mean knowledge of events, structures (e.g. indentured servitude), themes and concepts (e.g. unity, exploration, conquest), and chronology (e.g. Jamestown settlement preceded larger settlements, the Great Migration). However, the composing process data in the present study also elucidated more nuanced types of historical background knowledge. For example, many participants referenced the “three G’s” or “God, gold, and glory,” to describe the Age of Exploration. This reference is exemplary of a highly specialized historical phraseology used within the context of schooled history—a phrase used in history that holds meaning that is more specific than the phrasing signifies, sometimes used as a reminder for more specific historical content.

Participants also referenced specific *biographical knowledge of the historical actors* who wrote the documents included in the set. These historical actors included Nathaniel Bacon, Governor Berkeley, John Smith, and John Winthrop. For example, Anci’s focused on specific words (togetherness, unity) in the documents authored by Winthrop based on her prior biographical knowledge about his role as a leader of the Puritans, a group that left England due to Christian persecution. She attributed his choice of language to his perspective on the group as being bound together by God to model Christianity for the world and avoid annihilation.

Participants also relied on *a range of chronological background knowledge*, some of it proximal to events and themes within the time period of the prompt and some of it more distal. Proximal and distal chronologies were revealed in participants’ understandings of the ordering of events and the significance of the chronological timing in relationship to their arguments. For example, Hannah’s composing process revealed that she recalled historical background

knowledge about Christopher Columbus that could be used in her introduction to contextualize her argument by "...[talking] about more things before [the period]...." However, she subsequently eliminated the inclusion of this information because she decided that the Columbus material rested too far outside the time period identified in the prompt (Hannah TAP 123). Similarly, Jay demonstrated a rich understanding of a broad chronology when he discussed distal future historical events. Specifically, he talked about how the religious foundations of the northern colonies would eventually lead to tensions over the use of slavery in the southern colonies. Finally, during her composing process, Rachel discussed both distal (Spanish exploration) and proximal (the Great Migration) chronological events.

In addition to participants bringing in their prior knowledge of specific historical content, they also relied on four other types of background knowledge: *inquiry strategies* for engaging in historical inquiry, evaluation criteria for determining *historical significance*, explanatory *historical frameworks*, and *DBQ task constraints*. The first three of these reflect students' epistemological orientation to history and historical argumentation.

Historical inquiry strategies. Participants demonstrated their knowledge of *how to engage in historical inquiry* through their sourcing and corroboration activities as well as their efforts to place colonial development into a larger chronological framework. Their attention to specific historical actors, their perspectives, and their roles in the events that unfolded are also indicative of that which is valued in historical analysis. As well, they are reflective of an epistemological orientation to historical interpretation as contestable. Participants displayed their understanding of how to engage in historical inquiry by voicing an awareness that historical arguments are interpretations intended for an audience. For example, Rachel discussed that her essay not only had an audience, but also recognized that her own argument would be weakened

by including extraneous details about more distally related historical events. This illustrates that Rachel was cognizant of an audience as she constructed her argument and that her own document analysis as a reader may not serve the audience or her argument. Thus, knowledge of how to engage in historical inquiry was visible throughout the composing process although barely evident in the essays. The historical inquiry evident in the composing process shows rich understanding of how history works, how historical actors matter in a given event, and how that matters for historical interpretation.

Knowledge of historical frameworks. Historical frameworks (e.g., economic, political, governmental, religion, movement of people) reflect broad principles and systems that operate in societies and can provide explanatory frames that generalize across specific historical content. This form of knowledge was visible in the written artifacts (e.g. t-charts organized by social, economic, political frameworks) participants generated to organize the information they were gathering from the documents. For example, Jay changed the focus of his analysis and argument to social and religious differences among the colonies when he realized that the document set lacked information on economic differences. This type of knowledge was also revealed in the reasoning participants engaged in as they analyzed events and documents.

Participants' Task Models

Participants generally shared a common model about how to complete the DBQ task based on shared classroom experiences and specific instruction around argumentative historical writing. This included a common understanding of the task instructions, time constraints, and what elements to include in the essay. Participants were familiar with the expectations of the College Board DBQ task and understood that the task required them to include: 1) a thesis statement that would take a position on the reasons for similarities and differences between the

two colonies, 2) analysis of the documents that attended to a document's intended audience, context, authorial perspective, or purpose, 3) contextualization of their argument and documents, and 4) synthesis by connecting their argument to another historical period (College Board, 2015). Additionally, participants shared a similar path through the task: beginning with reading and making sense of the prompt and documents, then prewriting and planning in some form, and then writing the essay.

Rachel's task model closely followed the DBQ task expectations and prior classroom instruction. Rachel consistently articulated task expectations and the need to incorporate her "analysis" of the documents into the text of the essay. Rachel also voiced her understanding that the essay must include elements such as "historical background knowledge" and "explanation" of evidence" into the essay. As compared to other cases, Rachel invested more time reading the task prompt and instructions, and her think-aloud included more talk about the task demands. As well, she voiced a clear need to include "analysis of the documents" in her essay.

Although all participants shared the same general understanding of the task expectations, they all prioritized different elements as evidenced in their individual composing processes. Comments made during the composing process as well as the post-task interview responses provided information on students' individual task models. These comments showed that participants responded differently when they encountered obstacles in completing the DBQ task, revealing a variety of backup models that they defaulted to in order to complete the task.

For example, Jay's initial task model included a focus on analyzing the two colonial societies based on religious, political, and economic frameworks; he assumed that the documents would provide information relevant to these. However, as he began to put his essay together, he realized that the document set did not support the arguments he initially intended to advance.

Thus, the initial assumption derived from his task model — that he would apply specific explanatory frameworks relevant to societies — could not be achieved and he shifted his explanatory plan to one consistent with the task constraint of using information in the document set. During the composing process he noted that he could “...knock out most of [the documents]” by focusing on social dimensions. Jay’s post task interview explicitly indicated that this “threw [him] for a loop” because he expected the documents to relate more closely to the economic and political dimensions. Rather, Jay’s essay ended up prioritizing use of social frameworks supported by document information over comparison of the colonies along a variety of societal dimensions.

Although Jay restricted the frameworks he used in his analysis, he continued to operate with a task model that included analysis using explanatory frameworks drawing on evidence in the document set. Other participants shifted to what might be called a “fill-in-the-blank” task model: participants shifted their focus from historical analysis of the documents to identifying ways to *include* document information in their essay. That is, although their reading of the documents often included rich analysis to substantiate their emerging arguments, their goals shifted to identifying *any* document information that they could plug into the essay *somehow*. In some cases, this involved identifying the most proximal or familiar piece of document information— e.g. Winthrop’s “city upon a hill” quotation— and building the quotation into an essay narrative about each colony. For example, both Anci and Mary demonstrated that they understood the task expectations and began with the same task model as other participants, but their composing processes both shifted and broke down during the task and shifted away from attempts to make evidence-based claims with the documents. Instead, the expectation to include a certain number of documents in their essay superseded the expectation to do so by using

evidence from the documents. Instead, Anci adopted the aforementioned narrative approach. Similarly, Mary's relationship with the documents became transactional, focusing on what she could take from the documents as she transitioned from reading and analyzing the documents to planning and prewriting for the essay. As a result, Mary advanced a number of inaccurate statements for the sake of document inclusion. In essence, these participants defaulted to *knowledge telling* (Bereiter & Scardamalia, 1987) practices during the composing process to include information *about* or *around* a document.

Most participants also tracked what documents they had attended to during the process of composing the essay by either checking off documents as they wrote about them or by counting the number of documents referenced in their essay at the end of the task. This behavior was likely meant to ensure that they met the task expectations for the DBQ and illustrates how students' understanding of the task expectations shaped their responses, and possibly in ways not intended by the assessment.

The DBQ as an Assessment of Historical Reasoning

The DBQ assessment is designed with the intention of providing evidence of a student's ability to engage in historical reasoning and analysis using a provided set of documents to address a specific task prompt. Consistent with VanSledright's (2014) assertion that any given historical writing task cannot "sample every cognitive strategy, procedural concept, and interpretive goals contained in [a] model" (pg. 67), any given DBQ can provide evidence relevant to only a subset of all that comprises historical argumentation. What that subset is is constrained by the document set and the prompt. The prompt used in the present study privileged historical comparison as the primary target reasoning process, as evidenced in the essays.

However, this prompt simultaneously limited the historical reasoning processes the essay might provide evidence of, a point well documented by the cases reported in this study.

The task prompt introduces constraints that necessarily limit the nature of the evidence visible in an essay. Some types of prompts, focal events, and types of documents will inevitably prioritize some historical reasoning processes over others. Had the prompt for the present study been phrased differently, even with the same document set, other historical reasoning processes would likely have been more visible. For example, the task prompt might have been: *To what extent did John Winthrop and John Smith influence their respective colonies and in what ways did this lead to differences in the colonies?* Provided with the same document set, one might expect this task prompt to elicit responses that included a larger consideration of these historical actors' motivations or purposes (historical perspective taking), more specific contextualization and historical background knowledge use, and may have led to a more direct comparison of the Winthrop and Smith documents for points of agreement and disagreement (corroboration).

Time constraints are also a critical consideration in the use of DBQ's to assess students' historical reasoning and may have played a role in the shift to knowledge telling seen in some of the participants in the present study. This occurred despite the lack of an explicit time limit in the present study. This occurred despite the present study not imposing time limits for students to complete the task. The current DBQ includes seven documents in a set, reduced from 16 that were once included. Clearly, completing a DBQ within a specific time constraint will disadvantage slower readers and may have a snowball effect in that time spent reading is time not spent analyzing and integrating with a thesis and information from other documents.

Additionally, the DBQ task holds potentially hidden task constraints that depend on how the DBQ is portrayed in the classroom. Participants in the present study held a variety of models

for how to complete the task, only some of which conformed to the expectations and assumptions of the assessment designers. For example, Jay's interpretation of the task expectations led him to narrow and limit the focus of his essay to the organizing frameworks he readily could support with document information. Similarly, Grace intentionally decided to skip an opportunity to use a document a second time that would have enabled her to make a more sophisticated argument because her task model did not include using documents more than once. These examples underscore the significant role that participants' understanding of the task parameters have on how the task is completed, what they believe constitutes a successful essay, and the evidence a finished essay provides relative to historical inquiry.

Finally, the DBQ assessment assumes that students bring prior historical knowledge to the task that is sufficiently organized enough for students to contextualize documents, events, and connect their arguments to "broader historical events and processes" (College Board, 2015, pg. 6). And yet in the present study, participants regularly set aside their relevant and connected prior historical background knowledge and various historical comparisons from their essays because of their understanding of the task expectations. This limited opportunities for students to not only demonstrate contextualization with their historical understanding and background knowledge, but hindered students historical reasoning during the process as well. Students demonstrated that they possessed the requisite prior historical knowledge to make sense of the documents and construct comparisons, but comparisons that relied in part or solely on prior knowledge were not included.

Recent changes in the design of the AP U.S. History Test have addressed some of these constraints by redesigning the DBQ task to further limit the numbers of documents included and by including other forms of assessment such as short response source analysis items that may be

able to account for target processes that may be absent from a given DBQ task. However, it is still unclear whether these changes move far enough to provide an adequate insight into students' historical reasoning and whether these changes have impacted and altered how the DBQ is portrayed and utilized in classroom practice.

Limitations

As with any study that employs think-aloud methodology, there is the issue of reactivity. That is, the process of verbalizing one's thinking may in fact alter the nature of that thinking (Erikson & Simon, 1993; Smagorinsky, 1989; Stratman & Hamp-Lyons, 1994). Although students' reasoning was no doubt altered and likely enhanced by thinking-aloud, the primary goal of this study was to make the process of students' historical reasoning visible as they interacted with multiple documents, the task prompt, and prior knowledge of historical content and practices to produce an argument in the form of an essay product. Thinking aloud is perhaps the only way to make these processes visible in individual students working independently of one another.

Although being forced to think-aloud may enhance historical reasoning processes, it adds a substantial task demand to the already demanding DBQ task. Thus, it may also hamper students' ability to reason historically. In an effort to mitigate additional task demands, students participated in a training session where they had to counteract this potential with opportunities to practice thinking-aloud while reading and writing prior to engaging in the actual DBQ task.

The DBQ task holds a powerful position in the context of most AP U.S. History classes. Although Ms. Johnson's classes were largely inquiry focused and shaped by the Project READI learning objectives, the DBQ and the AP assessment loomed throughout the academic year. Similar to the perennial discussion and tension around "breadth vs. depth" with regard to

teaching history content, successfully tackling the DBQ was presented to students as one of the goals of the class. The tension between teaching and learning historical reasoning from multiple historical documents and preparing for the DBQ may have limited the degree to which history as contested interpretation was prioritized in the classroom.

Implications

There are a number of implications of the present study for the design of assessments of historical reasoning as well as for practitioners. It also raises issues in need of further research.

Assessment design. The DBQ claims to be designed to assess students' historical reasoning with documents. The present study reveals the limitations of the evidence available in the essay product of the DBQ task with respect to the stated goal of the assessment. DBQ tasks must go through rigorous design iterations to determine the extent to which the task prompt and document set actually result in historical arguments that elucidate the desired target skills. Document sets need careful development, and further limiting the number of documents may provide students more opportunities to make sense of fewer documents and develop a more coherent historical argument. Building DBQ's with a narrower historical grain size may limit the amount of relevant background knowledge that students need to draw on to complete the task, but may altogether miss opportunities to capture the reasoning of students with less background knowledge. Conversely, DBQ's with too broad of a grain size may not effectively prompt students to construct a complex historical argument. As more assessment instruments are developed to assess students' reasoning, assessment designers should give special attention to the fuller range of types of background knowledge that students may bring to a given task in their models, as many of the cases in the present study point to a challenging negotiation between students' background knowledge and the information in the document set.

In recent years, new and more finely tuned assessments of historical reasoning and argumentation have been developed. Given the limitations of DBQ writing tasks, these new forms of assessment may be more appropriate and effective at assessing a number of dimensions of student's historical reasoning. For example, the Historical Assessments of Thinking (HATs) assessment (Breakstone, 2013; Smith, Breakstone, & Wineburg, 2019) offers promising results for assessing specific dimensions of historical reasoning and can be used as formative assessments to assess students transfer of reasoning processes to new documents and topics. Additionally, the Assessment of Historical Analysis and Argumentation (AHAA) (Reisman, Brimsek, & Hollywood, 2019) includes a set of questions that build in complexity and scaffolds student's thinking as they evaluate two historical documents with competing accounts. The development of these assessments may offer more effective means to assess students' historical reasoning.

Practice. In addition to providing DBQs to students to prepare for the final summative examination, teachers utilize DBQ tasks in their classrooms for a variety of purposes. This includes evaluating students' essays to estimate their historical reasoning and ability to articulate an evidence-based argument in writing. Although the DBQ is often heralded as the gold standard for evaluating students' ability to read, reasoning and write in history, the findings of this study suggest that the discrepancies between the reasoning evident in the process versus the final essay were greater for those whose essays were more incomplete. This holds critical implications for instruction as outcomes for students in the history classroom would be less favorable for students that struggle to express their thinking and historical reasoning in writing and more favorable for students for students that do not. Students should have opportunities to make their reasoning

known in multiple ways, beyond the written essay, in addition to additional support in historical writing.

The present study also illustrates that focusing classroom instruction on providing students' opportunities to engage in historical inquiry through the critical examination of historical documents is an effective approach to fostering students' historical reasoning for the purposes of producing evidence-based arguments. Classrooms that utilize primary and secondary historical sources to engage students in historical inquiry are well-positioned to support students' historical reasoning. To that end, teachers must provide students opportunities to make their thinking visible with multiple representational forms to support their movement toward more complex argumentative accounts and explanations. For example, teachers should provide students opportunities to read, discuss, and argue their historical interpretations of documents in small groups or whole class discussions. Structured classroom debates focused on historical documents and competing historical accounts may also provide students opportunities to voice their thinking.

Additionally, teachers often identify and select DBQs for use in their classrooms based on the current historical period or unit being taught, and in most cases, not based on their target outcome processes. Teachers should exercise caution when utilizing the DBQ as an assessment of students' historical reasoning as many prompts do not explicitly ask students to demonstrate particular historical reasoning processes in the essay. For example, some processes, such as corroboration, were entirely absent from the students' essays in the present study. Teachers should be sensitive to what the AP U.S. History DBQ is actually able to assess and consider whether alternative assessments may be more appropriate for assessing certain reasoning processes.

For research. The findings of this study call into question the reliance on the written products of the composing process as the sole indicator of students' historical reasoning and argument construction. The historical reasoning revealed during the composing process was more complex and more encompassing than what could be inferred from the final essay. Further research is needed to elucidate historical reading and writing processes to address how their relationship and impact on what is learned and how that learning occurs. In addition, experimental comparisons of variations in DBQ prompts while holding the document set constant may reveal interesting differences among prompt type and the historical reasoning processes they prioritize. The composing process data revealed that participants often engaged in chronological reasoning and corroboration processes while reading and making sense of the documents, but not while drafting and assembling their essay. How such processing relates to the nature of the historical argument that is ultimately crafted bears investigation.

Finally, future research should consider examining English language proficiency in the context of writing a DBQ, as language proficiency is a mediating factor between students' historical reasoning and the production of both written and spoken performances that are used in the assessment of historical reasoning. This study did not address the question of whether student's first or second language influenced the ways in which they attempted to think and/or complete the historical writing task; however, many participants spoke additional languages. For example, Randall, voiced his struggle and frustration while trying to recall particular words on more than one occasion. It cannot be determined whether that frustration stemmed from a possible language issue, the reactivity or cognitive demands of the think-aloud task, a simple struggle to recall a word, or some other unknown variable. This line of inquiry may further expose the limitations of historical assessments like the DBQ.

Conclusions

Over the course of the last few decades, new goals and objectives for history learning have shifted the focus from the learning and recitation of historical facts to historical thinking. However, researchers have noted that the development of assessments in the domain of history has been slow to catch up (Ercikan and Seixas, 2015; VanSledright, 2013). Some (e.g., Nokes & De La Paz, 2018) have asserted that “...student writing, including argumentative writing, can be used to assess mastery of objectives related to historical thinking” and that students’ argumentative writing “may hold the greatest promise for assessing students’ historical thinking” (pg. 566). However, in light of the present study, this may not necessarily be the case for the Document-Based Question. Indeed, students’ historical essays are a convenient and useful source of data for teachers and researchers alike; however, future research and assessments that rely solely or heavily on students’ written products should take into account that those products provide an incomplete picture of the historical reasoning processes students know and are able to do. Designers of historical assessments of historical reasoning must rigorously test written assessments that purport to assess a range of historical reasoning processes, in addition to recognizing the limitations of students’ written products as sources of evidence. Teachers utilizing DBQs as assessment tools should also recognize their limitations as an assessment of students’ historical reasoning and should seek to identify DBQ tasks that foreground the historical reasoning processes that the teacher is specifically trying to support in the classroom.

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APPENDIX A

Project READI History Learning Goals

- 1. Engage in close reading of historical resources, including primary, secondary, and tertiary documents, to construct domain knowledge. Close reading encompasses meta-comprehension and self-regulation of the process.*
- 2. Synthesize and reason within and across historical resources using comparison, contrast, corroboration, contextualization, sourcing, and other historical processes.*
- 3. Construct claim-evidence relations, using textual evidence and explaining the relationship among pieces of evidence and between evidence and claims. Different types of historical sources (primary, secondary, tertiary) provide different kinds of evidence.*
- 4. Use interpretive frameworks such as societal structures (e.g., political, economic, technological), systems (e.g., feudalism, colonialism, Jim Crow), patterns (e.g., periodization, individual vs. mass agency, immigration, industrialization), and schools of historical thought (e.g., idealism, material determinism) to analyze historical claims and evidence.*
- 5. Evaluate historical interpretations for coherence, completeness, the quality of evidence and reasoning, and perspective.*
- 6. Demonstrate understanding of the epistemology or underlying beliefs, seeing history as inquiry into the past, seeing it as competing interpretations that are contested, incomplete approximations, open to new evidence and new interpretations.*

Copyright Project READI

APPENDIX B

DBQ Writing Task Prompt and Documents

PART A: Document-Based Question

Directions: This question is based on the accompanying documents. The documents have been edited for the purpose of this exercise. You are advised to spend 15 minutes planning and 40 minutes writing your answer.

Write your responses on the lined pages that follow the questions.

In your response you should do the following:

- State a relevant thesis that directly addresses all parts of the question.
- Support the thesis or a relevant argument with evidence from all, or all but one, of the documents.
- Incorporate analysis of all, or all but one, of the documents into your argument.
- Focus your analysis of each document on at least one of the following: intended audience, purpose, historical context, and/or point of view.
- Support your argument with historical examples outside the documents.
- Connect historical phenomena relevant to your argument to broader events or processes.
- Synthesize the elements above into a persuasive essay that extends your argument, connects it to a different historical context, or accounts for contradictory evidence on the topic.

1. Compare and contrast the development of two distinct English colonial societies in the New England and Chesapeake regions prior to 1700, analyzing the reasons for similarities and differences in the development of English colonial societies in these regions.

APPENDIX B (Cont.)

Document 1

Source: John Winthrop, Puritan Governor of the Massachusetts Bay Colony, *A Model of Christian Charity*, written on board the Arbella on the Atlantic Ocean, 1630.

God Almighty in his most holy and wise providence hath so disposed of the condition of mankind, [that] in all times some must be rich, some poor, some high and eminent in power and dignity, other mean and in subjection....[yet] we must be knit together in this work as one man. We must entertain each other in brotherly affection, we must be willing to abridge ourselves of our superfluities, for the supply of others' necessities. We must uphold a familiar commerce together in all meekness, gentleness, patience, and liberality. We must delight in each other, make others' conditions our own, rejoice together, mourn together, labor and suffer together, always having before our eyes our commission and community in the work, our community as members of the same body. So shall we keep the unity of the spirit in the bond of peace.... We must consider that we shall be as a city upon a hill. The eyes of all people are upon us, so that if we shall deal falsely with our God in this work we have undertaken, and so cause him to withdraw his present help from us, we shall be made a story and a by-word through the world. We shall open the mouths of enemies to speak evil of the ways of God,...shall shame the faces of many of God's worthy servants, and cause their prayers to be turned into curses upon us.

Document 2

Source: Articles of Agreement, written and signed by eight Puritan men, Springfield, Massachusetts, 1636.

We whose names are underwritten, being by God's providence engaged together to make a plantation...do mutually agree to certain articles and orders to be observed and kept by us and by our successors....

1. We intend by God's grace, as soon as we can, with all convenient speed, to procure some Godly and faithful minister with whom we purpose to join in church covenant to walk in all the ways of Christ.
2. We intend that our town shall be composed of forty families... rich and poor.
3. That every inhabitant shall have a convenient proportion for a house lot, as we shall see [fit] for everyone's quality and estate. ...
4. That everyone shall have a share of the meadow or planting ground....

APPENDIX B (Cont.)

Document 3

Source: John Porter, Deputy Clerk, Ship's List of Emigrants Bound for New England from Weymouth, the 20th of March, 1635.

1. Joseph Hull, of Somerset, a minister, aged 40 years
2. Agnes Hull, his wife, aged 25 years
3. Joan Hull, his daughter, aged 15 years
4. Joseph Hull, his son, aged 13 years
5. Tristram, his son, aged 11 years
6. Elizabeth Hull, his daughter, aged 1 years

-
7. Temperance, his daughter, aged 9 years
 8. Grissel Hull, his daughter, aged 5 years
 9. Dorothy Hull, his daughter, aged 3 years
 10. Judith French, his servant, aged 20 years
 11. John Wood, his servant, aged 20 years
 12. Robert Dabyn, his servant, aged 28 years
 13. Musachiell Bernard, of Batcombe, clothier in the county of Somerset, 24 years
 14. Mary Bernard, his wife, aged 28 years
 15. John Bernard, his son, aged 3 years
 16. Nathaniel, his son, aged 1 year

-
21. Timothy Tabor, in Somerset of Batcombe, tailor, aged 35 years
 22. Jane Tabor, his wife, aged 35 years
 23. Jane Tabor, his daughter, aged 10 years
 24. Anne Tabor, his daughter, aged 8 years
 25. Sarah Tabor, his daughter, aged 5 years
 26. William Fever, his servant, aged 20 years
 27. John Whitmarke, aged 39 years
 28. Alice Whitmarke, his wife, aged 35 years
 29. James Whitmarke, his son, aged 5 years
 30. Jane, his daughter, aged 1 years
 31. Onseph Whitmarke. his son, aged 5 years
 32. Rich. Whitmarke, his son, aged 2 years

-
74. Robert Lovell, husbandman, aged 40 years
 75. Elizabeth Lovell, his wife, aged 35 years
 76. Zacheus Lovell, his son, aged 15 years
 77. Anne Lovell, his daughter, aged 16 years
 78. John Lovell, his son, aged 8 years
 79. Ellyn, his daughter, aged 1 year
 80. James. his son, aged 1 year
 81. Joseph Chickin, his servant, 16 years
 82. Alice Kinham, aged 22 years
 83. Angell Hollard, aged 21 years
 84. Katheryn, his wife, 22 years
 85. George Land, his servant, 22 years
 86. Sarah Land, his kinswoman, 18 years

-
103. John Hoble, husbandman, 13
 104. Robert Huste, husbandman, 40

APPENDIX B (Cont.)

Document 4

Source: Ship's List of Emigrants Bound for Virginia prior to July, 1635

These underwritten names are to be transported to Virginia, embarked in the Merchant's Hope, Hugh Weston, Master, per examination by the minister of Gravesend touching their conformity to the Church discipline of England, and have taken the oaths of allegiance and supremacy:

| | | | |
|-------------------|----|------------------|----|
| Edward Towers | 26 | Allin King | 19 |
| Henry Woodman | 22 | Rowland Sadler | 19 |
| Richard Seems | 26 | Jo. Phillips | 28 |
| Vyncent Whatter | 17 | Daniel Endick | 16 |
| James Whithedd | 14 | Jo. Chalk | 25 |
| Jonas Watts | 21 | Jo. Vynall | 20 |
| Peter Loe | 22 | Edward Smith | 20 |
| Geo. Bocker | 17 | Jo. Rowledge | 19 |
| Henry Eeles | 26 | Wm. Westlie | 40 |
| Jo. Dennis | 22 | Jo. Smith | 18 |
| Tho. Swayne | 23 | Jo. Saunders | 22 |
| Charles Rinsden | 27 | Tho. Bartcherd | 16 |
| Jo. Exston | 17 | Tho. Dodderidge | 19 |
| Wm. Luck | 14 | Richard Williams | 18 |
| Jo. Thomas | 19 | Jo. Ballance | 19 |
| Jo. Archer | 21 | Wm. Baldin | 21 |
| Richard Williams | 25 | Wm. Pen | 26 |
| Francis Hutton | 20 | Jo. Gerie | 24 |
| Savill Gascoyne | 29 | Henry Baylie | 18 |
| Rich. Bulfell | 29 | Rich. Anderson | 50 |
| Rich. Jones | 26 | Robert Kelum | 51 |
| Tho. Wynes | 30 | Richard Fanshaw | 22 |
| Humphrey Williams | 22 | Tho. Bradford | 40 |
| Edward Roberts | 20 | Wm. Spencer | 16 |
| Martin Atkinson | 32 | Marmaduke Ella | 22 |
| Edward Atkinson | 28 | | |
| Wm. Edwards | 30 | <i>Women</i> | |
| Nathan Braddock | 31 | Ann Swayne | 22 |
| Jeffrey Gurrish | 23 | Eliz. Cote | 22 |
| Henry Carrell | 16 | Ann Rice | 23 |
| Tho. Tyle | 24 | Kat. Wilson | 23 |
| Gamaliel White | 24 | Maudlin Lloyd | 24 |
| Richard Marks | 19 | Mabell Buser | 14 |
| Tho. Clever | 16 | Annis Hopkins | 24 |
| Jo. Kitchin | 16 | Ann Mason | 24 |
| Edmond Edwards | 20 | Bridget Crompe | 18 |
| Lewes Miles | 19 | Mary Hawkes | 19 |
| Jo. Kennedy | 20 | Ellin Hawkes | 18 |
| Sam Jackson | 24 | | |

APPENDIX B (Cont.)

Document 5

Source: Captain John Smith, leader of the Virginia colony, *History of Virginia*, 1624.

When the (large ship) departed, ...those of us that had money, spare clothes, credit to give bills of payment, gold rings, fur, or any such commodities, were ever welcome to [purchase supplies. The rest of us patiently obeyed our] vile commanders and [bought] our provisions at fifteen times the value,...yet did not repine but fasted, lest we should incur the censure of [being] factious and seditious persons.... Our ordinary [food] was but meal and water so that this...little relieved our wants, whereby with the extremity of the bitter cold frost...more than half of us died. The worst [among us were the gold seekers who] with their golden promises made all men their slaves in hope of recompenses. There was no talk...but dig gold, wash gold, refine gold, load gold.... Smith, perceiving [we lived] from hand to mouth, caused the pinnace [small ship] to be provided with things fitting to get provision for the year following. [Two councillors] Wingfield and Kendall,...strengthened themselves with the sailors and other confederates [and planned to go] aboard the pinnace to alter her course and to go for England. Smith had the plot discovered to him. Much trouble he had to prevent it, till with...musket shot he forced them to stay or sink in the river; which action cost the life of Captain Kendall. These brawls are so disgustful, as some will say, they were better forgotten.

Document 6

Source: Virginia Royal Governor Berkeley and His Council, 1673.

We thought it our duty...to set forth in this our Declaration, the true state and condition of this country in general and our particular...[inability to fight] a war at the time of this invasion [by the Dutch].... [We] therefore do most humbly beseech your majesty and your most honorable council to consider that Virginia is intersected by so many vast rivers as makes more miles to defend than we have men of trust to defend them. For by our nearest computation we leave at our backs as many servants (besides Negroes) as there are freemen to defend the shores and all our frontiers [against] the Indians.... [This] gives men fearful apprehensions of the danger they leave their estates and families in, while they are drawn from their houses to defend the borders. Also at least one third [of the freemen available for defense] are single freemen (whose labor will hardly maintain them) or men much in debt,...[whom] we may reasonably expect upon any small advantage the enemy may gain upon us,...[to defect] to them in hopes of bettering their condition by sharing the plunder of the country with them.

APPENDIX B (Cont.)**Document 7**

Source: Nathaniel Bacon, colonist and leader of a rebellious volunteer militia in Virginia, “Manifesto,” 1676.

We appeal to the country itself...by what cabal...the designs of many of those whom we call great men have been transacted and carried on, but let us trace these men in authority and favor to whose hands the dispensation of the country’s wealth has been committed; let us observe the sudden rise of their estates [compared] with the quality in which they first entered this country... Now let us...see what sponges have sucked up the public treasure and wither it has not been privately contrived away by unworthy favorites and juggling parasites whose tottering fortunes have been repaired and supported at the public charge....

Another main article of our guilt is our open and manifest aversion of all... Indians. ... Now whereas we do declare and can prove that they have been for these many years enemies to the King and country, robbers and thieves and invaders of his Majesties’ right and our interest and estates, but yet have, by persons in authority, been defended and protected even against his Majesties loyal subjects....

APPENDIX C

Think-Aloud Training Protocol

(40 minutes— April 2016)

Housekeeping (5 minutes): Verify scheduled time & meeting place with participants.

PART ONE: Overview & Instructions

(5 minutes)

Today we are going to practice **thinking-aloud** so that you prepared and understand what to do when we sit down together for your session later this week.

During that session, you're going to complete your DBQ from class, and as you complete the DBQ, I would like you to think-aloud the *entire time*. That means as you read the prompt, read and analyze the sources, and write the essay, I want you to think-aloud.

Today, we are going to practice thinking-aloud with some documents from the Civil Rights Movement, and we're going to begin writing an essay with those sources together.

Again, when I ask you to think-aloud, you should say EVERYTHING you are thinking the entire time— from when you begin reading to the time you finish writing your essay. It's important that you keep talking. If you happen to be silent for a period of time, I will remind you to talk by saying "what are you thinking?"

Before we continue, does anyone have any questions?

[Pass out training source set and writing prompt to participant and assign each participant with a partner.]

PART TWO: Modeling Thinking-Aloud

(5-10 minutes)

When I ask you to think-aloud, what I want you to do is to tell me everything you are thinking as you work. From the time you start your DBQ to the time you finish, I want you to think aloud about everything.

So, when you think-aloud while **reading**, I want you to read the text out loud as you read so I know where you are in the source, and while you're reading, I want you to tell me what you're thinking anytime you want; for example, at the end of every sentence. You can go back to any part of a source anytime- just like when you're doing any DBQ, and you can go through the sources as many times as you want. Just make sure you're doing everything out loud.

Modeling Example 1:

APPENDIX C (Cont.)

For example, let me show you what this looks like. I'm going to read a sentence from one of the sources we will work on today. It is Document 2.

It Says: "Source: Excerpt of King's Letter from Jail after getting arrested for protesting in Birmingham, May 1963.

Think-aloud statement: So, I know this is talking about Dr. Martin Luther King, and he was writing while he was in jail...because it says it right here, and I think he was in jail because he was trying to get arrested, because they were trying to overflow the jails.

Then it says: My Dear Fellow Clergymen, I am in Birmingham because injustice is here."

Think-Aloud Statement: So, this basically tells me that he's in Birmingham at that time because of the injustice there. But it says "Dear Fellow Clergyman" which means he is writing to a bunch of pastors. It reminds me that lots of pastors did not want MLK to protest in Birmingham, they wanted him to wait, but MLK really wanted to intervene...so I think MLK is responding to them here.

[Stop]

So that is an example of what I mean by saying what you're thinking out loud and reading out loud. I read a statement or section of text out loud, and then I said whatever I was thinking about. It can be anything you're thinking about— what it reminds you of, a question you might have about a source, or words or ideas that might not make sense to you. After that, I might continue to think out loud about it, I might continue reading out loud and keep going, or I might annotate the source and write something and talk about that. Whatever you normally do when you're writing a DBQ.

Any questions about that?

[Answer any questions]

Modeling Example 2:

So it's the same then when you think aloud while writing. Again, tell me what you're thinking the entire time. As you write, you should say aloud everything that you're thinking about as you write, and talk aloud as you write.

For example, I might think-aloud and write by saying and writing: "In his letter responding to the pastors, (and I'm looking at document 2) MLK asserted the importance of opposing segregation by taking action. So I'm thinking that is a good way of introducing this source ... I'm trying to say something here about how urgent and important it was to act at that particular time... so I think that works here.

Does that make sense? Any questions about how this works?

[Answer any questions]

APPENDIX C (Cont.)

PART TWO: Practicing Thinking-Aloud (30 minutes)

Instructions:

So now you're going to practice thinking-aloud with your partner. You're going to take turns practicing thinking aloud while working on this source set. The first partner is going to practice thinking-aloud as they read and think about the prompt. Then, the second person is going to practice thinking-aloud with Document 1.

When it's not your turn to think-aloud, your job is to help make sure your partner continues to think-aloud and be in charge of the audio recorder. So if your partner is silent for more than 5 seconds, remind them to talk by asking "what are you thinking?" or by saying "continue to think out loud." I also want you to listen to what your partner is saying.

Decide now who is going to practice thinking-aloud first. *[Provide each small group a recorder.]*

Reading Round 1

Partner 1 thinks aloud while reading the prompt.

Partner 2 thinks aloud while reading Document 1.

Research asks: What was that like? What was hard about it what was easy? *[Debrief]*

Reading Round 2

Partner 1 thinks aloud while reading Document 2.

Partner 2 thinks aloud while reading Document 3.

Reading Round 3

Partner 1 thinks aloud while reading Document 4.

Partner 2 thinks aloud while reading Document 5.

Debrief. Any questions?

Thinking-Aloud while Writing

So let's move on to practicing thinking aloud while we are doing things beyond reading. What I'd like partner 2 to do is to begin drafting a thesis statement for this task while thinking aloud. We'll give you about 3 minutes to do this now, but when you do the think aloud with me, you won't have any time restrictions.

Partner 1: remember to remind the person to think aloud the entire time if they're silent for more than 5 seconds.

Debrief: How was that? Questions? What was hard about that? What was easy?

Now let's switch. I'd like partner 1 to try any think-aloud while writing a body paragraph.

APPENDIX D

Think-Aloud Protocol Script & Post Think-Aloud Interview Questions

[Begin recording]

Thank you again for your willingness to participate. Today, you are going to be writing a DBQ.

I want you to complete this DBQ like you normally would, but while you work, I want you to say out loud EVERYTHING you are thinking the entire time— from when you receive the DBQ prompt to the time you finish writing your essay. You can go through the sources as many times as you want, or go back to sections that you’ve already written, just be sure to do everything out loud.

While you’re working, I want you to say what you’re thinking about at the end of every sentence. Also, be sure to read aloud what you are reading or writing, so I know where you are in the sources and or your writing.

I will remind you to tell me what you’re thinking by asking “what are you thinking?” or telling you to continue thinking-aloud.

Here is Document B from when we trained together. Let’s practice thinking-aloud again before we begin (prompt participant to practice thinking-aloud with Document B).

Do you have any other questions before we begin?

[Student Begins Task]

Post Task Interview Questions:

1. So, how do you think you did (overall on the task)?
2. Did you include everything you wanted to in your essay?

Thank you again for your willingness to participate.

APPENDIX E Historical Reasoning Codes: Think-Aloud Protocol Data

| Code | Description | Example |
|-----------------------|---|---|
| Sourcing | Attending to the author(s), title, caption, genre, type, date/time, audience, or perspective of a document— including motivations, purposes, and intentions, and their reliability. | <ul style="list-style-type: none"> <i>The fifth source was Captain John Smith, leader of the Virginia colony, History of Virginia, 1624. Um, so Captain John Smith, like, the speaker.</i> <i>I just noticed that he constantly mentions we, as a sense of connecting himself to his audience, so I'm thinking his audience are the people who are also on board with him on the Arabella. That's his main audience, so he's talking...he is connecting himself to his audience to like, get like a closer feel to them.</i> |
| Contextualization | Placing/situating a source, event, historical actor(s), or background knowledge in time and space. | <ul style="list-style-type: none"> <i>I highlighted "knit together" because I remember from in class, the Puritans and the people who came to New England found it necessary to be, like one, like to work together in unity...</i> <i>So again, in the Chesapeake Region, there's, there's, there's disunity and, there's a real underlying anger. I know that, I know that, one of the reasons for Bacon's Rebellion, was because Bacon and his followers didn't feel like William Berkeley was doing enough to protect against the Indians.</i> |
| Corroboration | Looking across documents to compare and contrast information/details across sources to identify and/or discuss two or more points of agreement across documents for a claim, and/or recognizing discrepancies across documents. | <ul style="list-style-type: none"> <i>Document six, is the source from the Virginia Royal Governor Berkeley and his council from 1673...[Participant reads 1st paragraph of source] So that kind of matches with, I had in document four, so that just verifies it.</i> <i>Hm, like maybe connect that to document 2, that everyone has like their own kind of land, a share of the meadow and s ground, so maybe I can quote that, we'll see what kind of analysis I could do with that. Context... so maybe I can connect it with purpose. So that could be connected to the city on a hill because he's saying that they're going to be a unified community and, six years later when they make a set of laws it shows that everyone's going to have to contribute to that community.</i> |
| Chronology | Recognizing or attending to time and ordering of sources, historical actors, and/or events in relationship to one another. | <ul style="list-style-type: none"> <i>...rebellious volunteer militia in Virginia, "Manifesto," in 19, 6. in 1676. Which was three years after Berkeley need help for the wars with the Indians.</i> <i>John Winthrop is the Puritan governor of the Massachusetts Bay Colony, a model of Christian charity, written on board the Arabella, on the Atlantic Ocean in 1630. So this was before they landed down in, the New England region.</i> |
| Periodization | Recognizing or attending to discrete historical units of time (ages, periods, units). | <ul style="list-style-type: none"> <i>...so the ones that are coming from England during the Great Migration, they're kinda like skilled, and they can like, different skills they can contribute to, um, the colony, so family farms, different skilled settlers.</i> |
| Historical Comparison | Making direct connections between two or more events, historical actors, developments, societies, idea, or periods— including recognition of similarities and differences. | <ul style="list-style-type: none"> <i>So, when [migrants] came to the Chesapeake it was mostly men, mostly men that came, and young men. So not many women, which meant, lower, there's not enough, they're not many families. Which made, which is already different from the New England colonies.</i> <i>That is, that we can make a point of comparison, err, one contrastion [sic] [participant laughs] between the settlers who came from the Virginia company who were focused mostly on profit and making money for that company and the settlers from the Puritans who were focused mainly on their religious mission and finding religious exodus.</i> |

| | | |
|-------------------------------|---|---|
| Historical Perspective Taking | Viewing or attending to the perspective of the author or historical actor of a source/event | <ul style="list-style-type: none"> • <i>He [Winthrop] keeps saying we. So, I'm just guessing that he, he wants them all to be together because he doesn't want them to feel left alone when they settle and he doesn't want anyone to feel like they're mightier or higher than anyone.</i> |
| Use of Historical Frameworks | Referencing, referring to, or drawing on historical interpretative frameworks— including societal systems, governmental systems, or historical themes | <ul style="list-style-type: none"> • <i>So I'm going to find some way to work this into the essay, and I may reword it differently but I feel like the idea is going to stay the same, and I have a general idea for how I'm going to break this down, one is going to be about the political differences about the two, the second is going to be about, I'm going to do economic second, and then do social third.</i> |

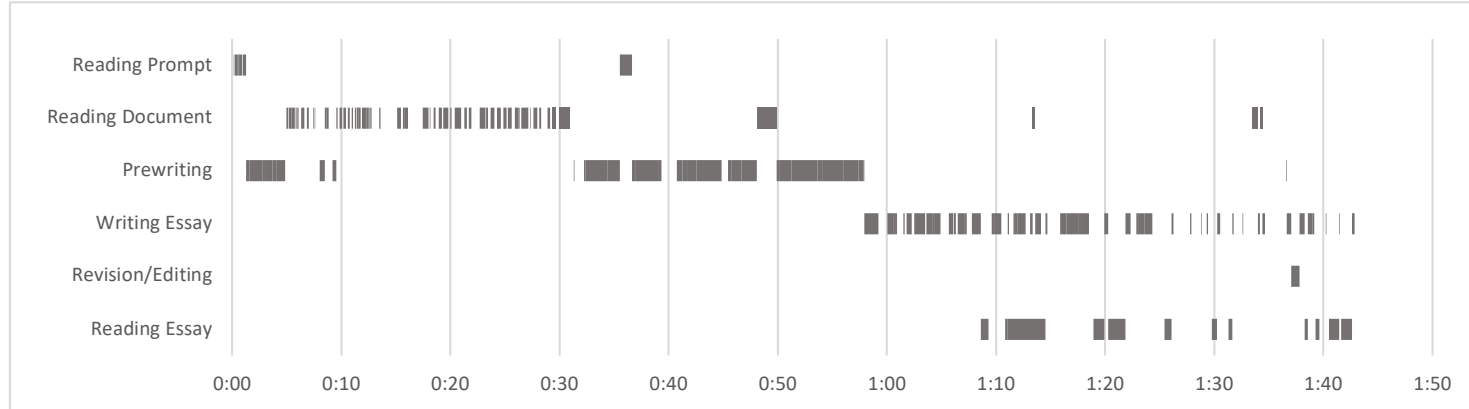
Historical Reasoning Codes: Essay Data

| Code | Description | Example |
|-----------------------|---|--|
| Sourcing | Attending to the author(s), title, caption, origin, genre, type, date/time, audience, or perspective of a document— including motivations, purposes, and intentions, and their reliability. | <ul style="list-style-type: none"> • <i>As Bacon mentioned the Native Americans as “robbers & thieves & invaders,” he paints the picture that the lives of the English settlers or difficult b/c they had to fight for what was their right (Source 7)</i> • <i>John Winthrop demonstrated this in the Model of Christian Charity as he described the New England colony a “city upon a hill.” (Doc 1)</i> |
| Contextualization | Placing/situating a source, event, historical actor(s), or background knowledge in time and space. | <ul style="list-style-type: none"> • <i>In England during the 17th century the country was undergoing significant changes.</i> • <i>This religious fervor juxtaposed against the profit driven Chesapeake region would result in tensions over the use of slavery for the plantations in the South in the future.</i> |
| Corroboration | Identifying and discussion two or more points of agreement across documents for a claim, and/or noting discrepancies across documents. | <ul style="list-style-type: none"> • <i>John Winthrop, the leader of the puritans, before landing down addressed his fellow settlers saying “we must consider that we shall be as a city on a hill.” (Doc1). By this he means it is their duty to stick together and thrive so as to show their religious experiment could work. Another example of this can be seen in the articles of Agreement. One of the points was “that everyone shall have a share of the meadow or planting ground.” (Doc2).</i> |
| Chronology | Recognizing or attending to time and ordering of sources, historical actors, and/or events in relationship to one another. | <ul style="list-style-type: none"> • <i>John Winthrop, the leader of the Puritans, before landing down addressed his fellow settlers saying “we must consider that we shall be as a city on a hill.” (Doc1).</i> |
| Periodization | Recognizing or attending to discrete historical units of time (ages, periods, units). | <ul style="list-style-type: none"> • <i>During the Great Migration, the majority of people settling in VA weren't settling permanently for gold but for profit.</i> |
| Historical Comparison | Making direct connections between two or more events, historical actors, developments, societies, idea, or periods— including recognition of similarities and differences. | <ul style="list-style-type: none"> • <i>In the Virginia colony, many men came and began to seeking gold for themselves leading to less of a united community like in New England.</i> • <i>In contrary, the Chesapeake society turned away from religious views, focusing mostly on economic goals, gold and tobacco. (Doc 5)</i> |

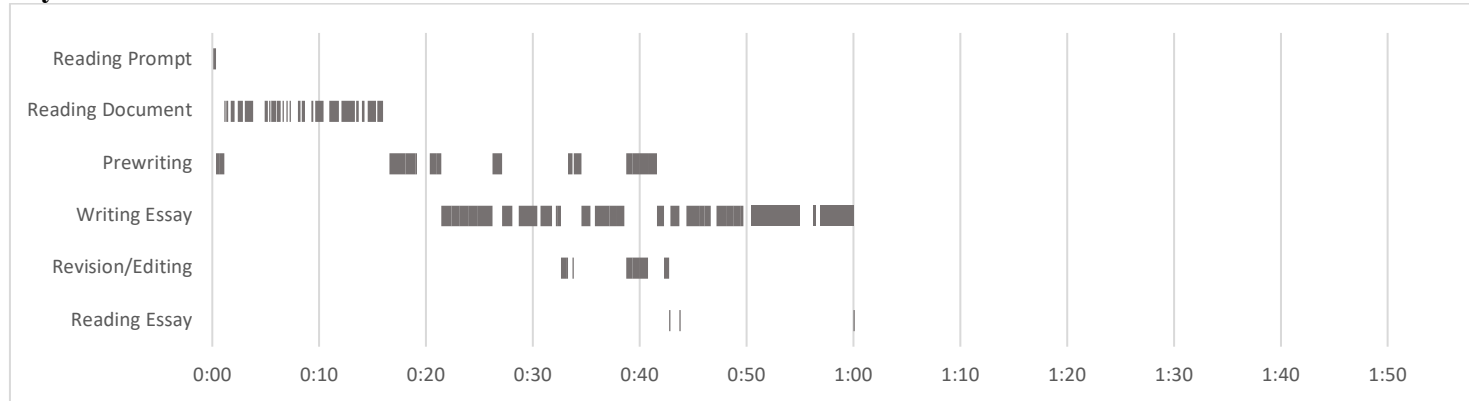
| | | |
|-------------------------------|--|---|
| Historical Perspective Taking | Viewing or attending to the perspective of the author or historical actor of a source/event | <ul style="list-style-type: none">• <i>Knowing that the Puritans were fearful of what awaited them in the New World, he spoke of their importance because they're an example and that they should lead by example w/ no fear.</i> |
| Use of Historical Frameworks | Referencing or referring to historical interpretative frameworks— including societal systems, governmental systems, or historical themes | <ul style="list-style-type: none">• <i>Although they came from the same place, these two distinct English colonial societies in the New England and Chesapeake regions were very different in areas including motives, government, and how the societies developed.</i> |

Appendix E: Participants' Paths through the DBQ Problem Space

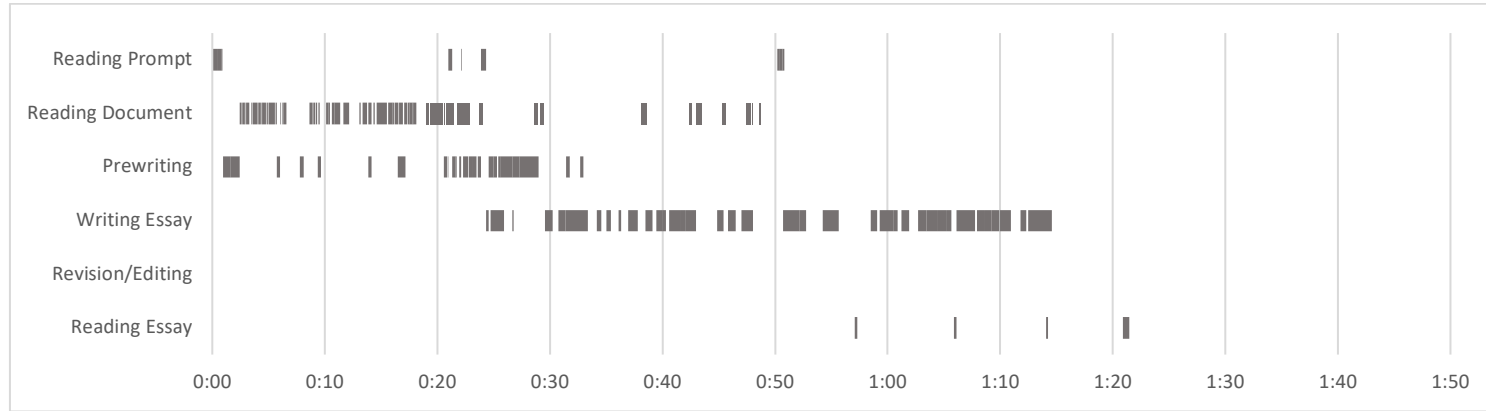
Rachel's Path



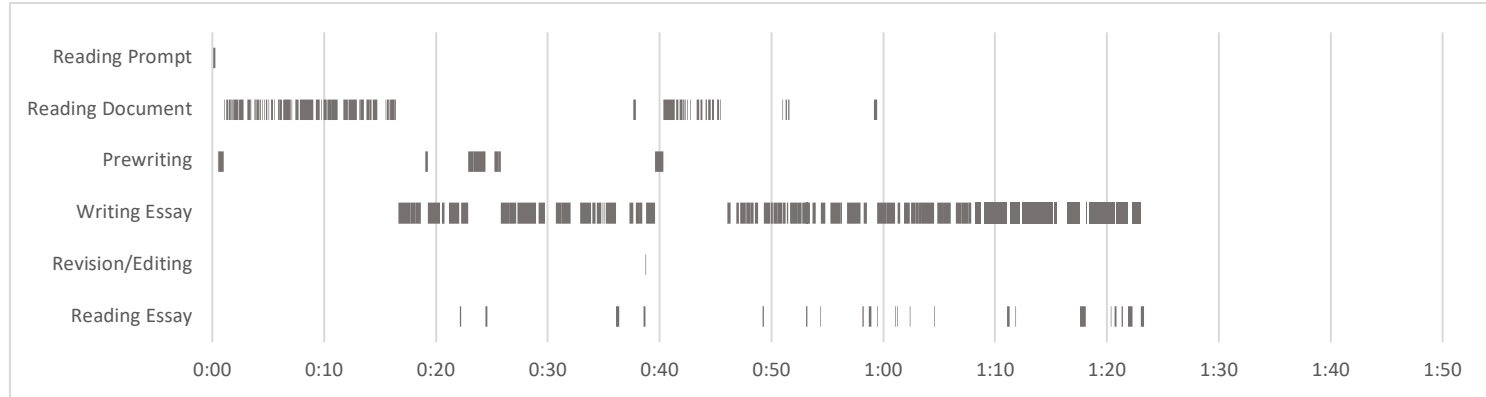
Jay's Path

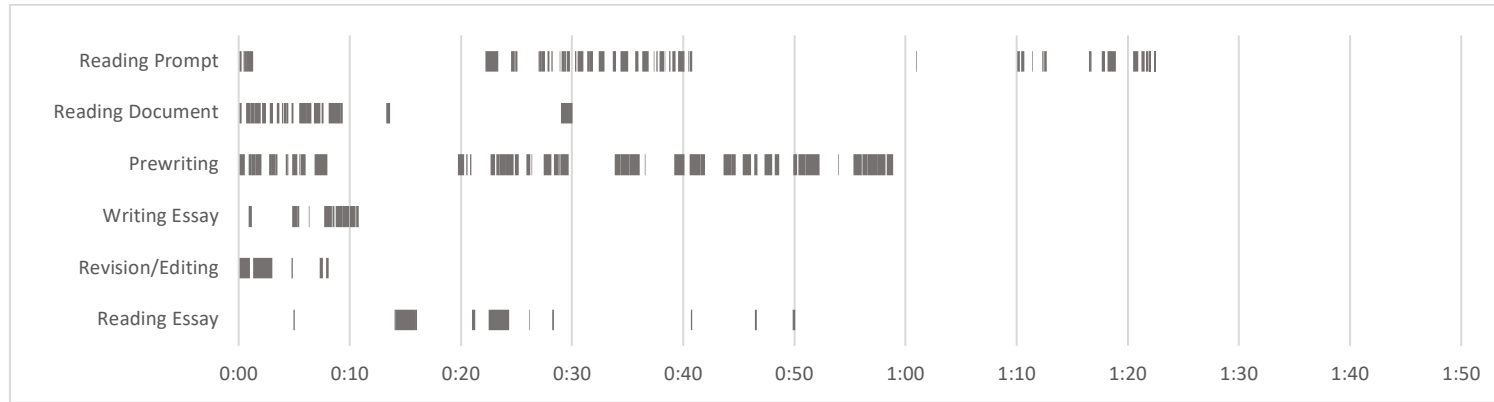
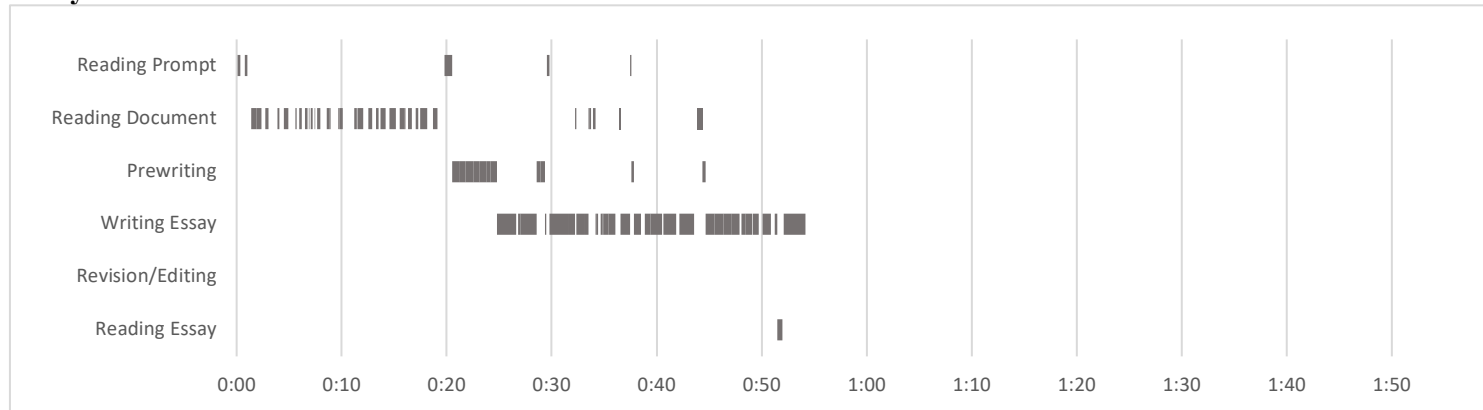


Hannah's Path

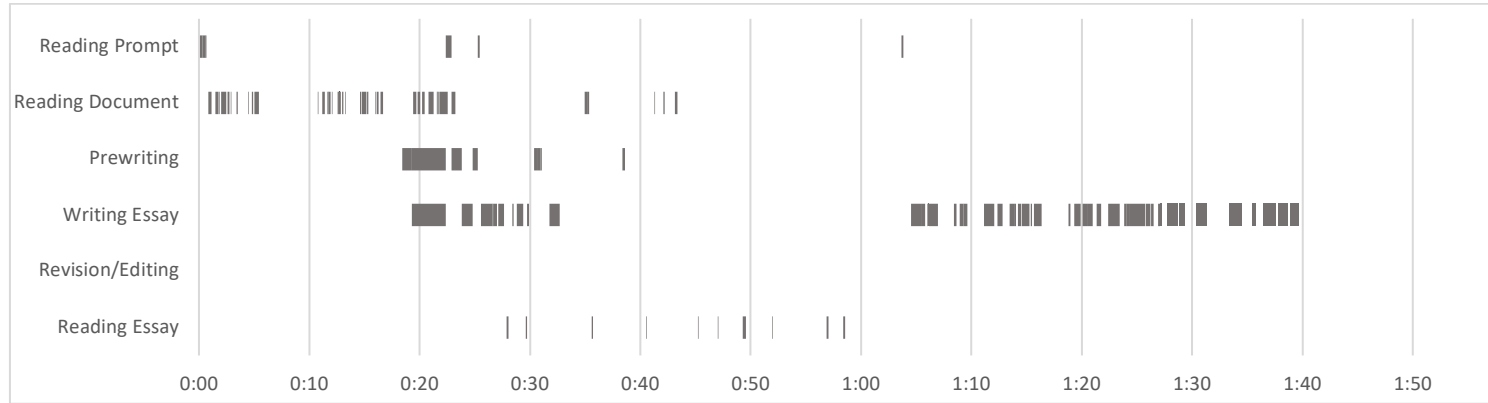


Grace's Path

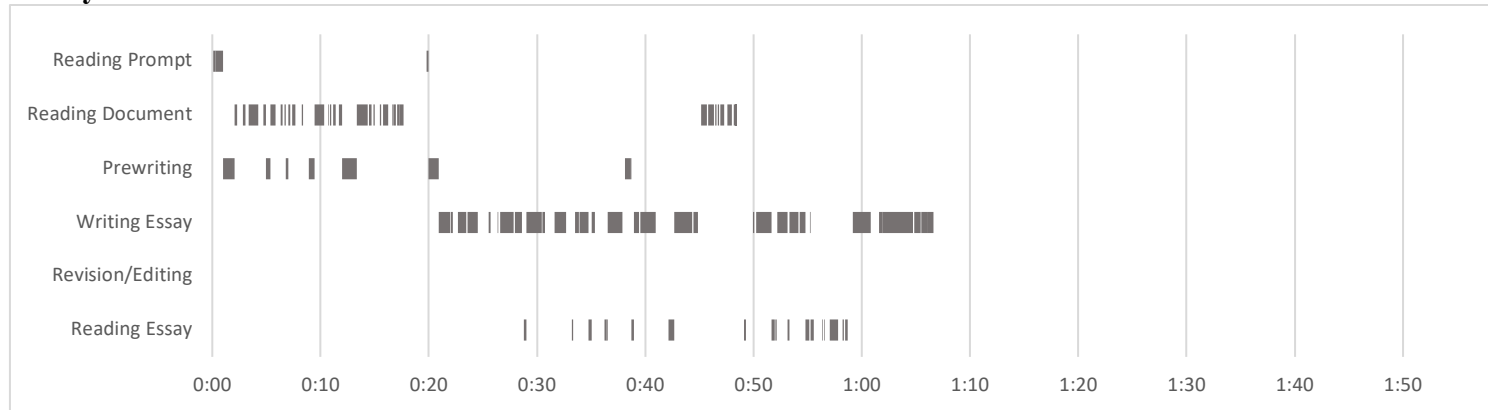


Anci's Path:**Mary's Path**

Randall's Path



Hailey's Path



Michael J. Bolz

Education

PhD, Learning Sciences, University of Illinois at Chicago 2021

Dissertation: Composing Historical Essays: Cases of students' historical reasoning

Committee Members: Susan R. Goldman (chair), Joshua Radinsky, Donald Wink, Robert Johnston, & Anne Britt (NIU)

MA, Learning Sciences, Northwestern University 2009

BA, English Education, Purdue University Calumet 2007

Secondary Education: English Language Arts

Research Experience

Project Consultant, Sense-making in the Disciplines *PI: Carol H. Lee* 2018-2019
Northwestern University, Evanston, IL

- Consulted and supported research design of think-aloud baseline studies and provided disciplinary expertise in History and Literature for software and research design teams.
- Cultivated and extended research partnerships and school recruitment.
- Supported baseline study data collection activities and ran think-aloud studies with partnering schools.

Graduate Researcher, Project READI *PI: Susan R. Goldman* 2011-2017
Learning Sciences Research Institute, University of Illinois at Chicago

- Supported research design, data collection, analysis and publication through the History Design Team aimed at supporting students' disciplinary reasoning and argumentation with multiple texts.
- Utilized exceptional communication and relationship building skills to design and deliver professional development to middle and high school teachers on design of instructional modules and strategies for improving disciplinary reasoning.
- Assisted in qualitative analyses for randomized control trials and design-based research studies across multiple design iterations.

Graduate Researcher, CCLCP Program Evaluation *PI: Ann Feldman* 2010-2013
College of Liberal Arts and Sciences, University of Illinois at Chicago

- Collaborated with program directors to design, manage, and execute large-scale program evaluation study with the goal of understanding the lasting and salient skills, practices, and dispositions of the graduates of the Chicago Civic Leadership Certificate Program.
- Analyzed interview data to generate results to support program directors, university personnel, and partnering stakeholders in recommending programmatic changes.
- Successfully wrote and procured over \$24,000 in grants to support program development.

Research Assistant, Instructional Strategies Research Project

2009-2010

College of Education, Purdue University, West Lafayette, Indiana

- Conducted in-depth discourse analysis of classroom discussion data.
- Collaborated with primary investigators to understand Literature teachers varied use of instructional strategies within inclusive and diverse classroom contexts in rural and suburban Indiana communities.

Data Analyst and Research Consultant

2009-2010

Center for Literacy Education and Research (CLEAR), Purdue University

- Design analytical framework and developed coding system for the analysis of student reading data to identify literacy processing errors of higher- and lower-achieving first graders during a Reading Recovery Intervention.

Masters Research Internship

2008-2009

Office of Literacy, Chicago Public School's Headquarters

- Spearheaded curriculum evaluation study across multiple CPS schools to generate internal recommendations for CPS district leadership to identify needed supports for a piloted literacy curriculum and the curriculum's professional development series.

Teaching Experience**Adjunct Professor of Core Curriculum**

2015-2021

Visible Music College Chicago, Lansing, Illinois

- Developed and led multiple sections of graduate level Research Methods and undergraduate sections of English Composition I, English Composition II, U.S. History, & Public Communications in multiple formats including traditional, synchronously and asynchronously delivered to multiple campuses, hybrid, and online.
- Monitored student progress in distance learning courses and collaborated with Vice President of Academics to design policy and procedures for student success.

Distance Learning Coordinator

2017-2019

Visible Music College Chicago, Lansing, Illinois

- Designed courses in multiple formats including traditional, synchronously and asynchronously delivered to multiple campuses, hybrid, and online.
- Supervised online instructors across multiple campuses and delivered professional development, documentation, and best practices for online instructors.
- Monitored student progress in distance learning courses and collaborated with Vice President of Academics to design policy and procedures for student success.
- Oversaw the development and effectively led the expansion of multi-campus distance learning program.

Instructor & University Supervisor, College of Education

2009-2010

Purdue University, West Lafayette, Indiana

- Developed and taught multiple sections of Rhetoric and Composition to students within traditional and blended classroom settings.
- Collaborated across instructors to develop a series of workshops and presentations focusing on advanced revisions strategies for academic writers.
- Mentored and evaluated pre-service middle school teacher education candidates during their student teaching experiences.
- Supported the development of teaching portfolios and instructional planning for teacher candidates.
- Managed relationships among cooperating teachers and teacher candidates across multiple middle schools and high schools.

English Teacher

2007-2008

Forest Park High School, Crystal Falls, Michigan

- Taught all sections of 11th and 12th grade English Language Arts, as well as Speech, Drama and Creative Writing across 9th-12th grade.
- Led the development and implementation of district-wide writing standards and rubric.

Publications

Litman, C., Marple, S., Greenleaf, C., Charney-Sirott, I., **Bolz, M. J.**, & Goldman, S. R. (2017). Text-Based Argumentation with Multiple Sources: A Descriptive Study of Opportunities to Learn in Secondary English Language Arts, History, and Science. *Journal of the Learning Sciences*, 26(1), 79-130.

Shanahan, C., **Bolz, M. J.**, Cribb, G., Goldman, S. R., Heppeler, J., & Manderino, M. (2016). Deepening What it Means to Read (and Write) Like a Historian: Progressions of Instruction Across a School Year in an Eleventh Grade U.S. History Class. *History Teacher*, 49(2), 241-270.

Ko, M., Goldman, S. R., Radinsky, J. R., James, K., Hall, A., Popp, J., **Bolz, M.**, George, M. (2016). Looking under the hood: Productive messiness in designing for argumentation in science, literature and history. In Svhila V. & Reeve, R. *Design as Scholarship: Case Studies from the Learning Sciences*. New York, NY: Routledge, 71.

Popp, J., Heppeler, J., & **Bolz, M.** (2014). Constructing Text Sets to Support Students' Historical Inquiry. Illinois Council for History Education, ICHE Newsletter.

Presentations

Bolz, M. J. (December 2020). The Methods Toolbox: Examining students' historical reasoning during composition. Invited talk presented at the Learning Sciences Research Institute's Speaker Series; Chicago, Illinois

Bolz, M. J. (September 2017). The Journey, Not the Destination: Viewing students' historical reasoning while writing in history. Invited talk presented at the Learning Sciences Research Institute's Speaker Series; Chicago, Illinois

Bolz, M. J. & Goldman, S. R. (2017). Reading, Reasoning, and Writing Like a Historian: What concurrent think-alouds reveal. Symposium presented at the European Association for Research on Learning and Instruction Annual Meeting; Tampere, Finland.

Bolz, M. J. (2017). Process & Product: Examination of one student's historical thinking while writing and thinking-aloud in history. Paper presented at the American Education Research Association's Annual Meeting 2017; San Antonio, Texas

Bolz, M. J., Popp, J. S., Manderino, M., Heppeler, J., Shanahan, C. (2015). Designing Text-Based Inquiry: Supporting students' evidence-based argumentation in history. Paper presented at the American Education Research Association 2015 Annual Conference, Chicago, IL.

Hall, A., **Bolz, M.**, James, K. & Goldman, S. R. (2014) Text-Based Inquiry in History, Literature, and Science. Symposium presented at the National Council of Teachers of English Assembly for Research Annual Conference. Elmhurst College, Elmhurst, IL.

Manderino, M. Heppeler, J., Popp, J. S., & **Bolz, M.** (2014). Designing text sets to support students' historical inquiry. Poster presented at the National Council for the Social Studies Conference, Boston, MA.

Bolz, M. (November 2013). What Sticks? Identifying Program Outcomes through Semi-Structured Interviews. Paper presented at the 2013 International Association for Research in Service Learning and Civic Engagement Annual Conference. Omaha, NE.

Puklin, D., Hall, A., **Bolz, M.** & Popp, J. (April 2012). Doing History? Impact of Texts and Tasks on Engagement. Poster presented at the American Education Research Association Annual Meeting. Vancouver, BC.

Bolz, M. & Chin, D. (November 2011). In the Long Run: The persistence of outcomes after completion of a university-level community engagement program. Presentation at the International Association for Research on Service-learning and Community Engagement (IARSLCE) Annual Conference. Chicago, Illinois.

Bolz, M., Feldman, AM, & Chin, D. (July 2011). Measuring Effects of an Academic Community Engagement Program. Paper presented at The Future of Community Engagement in Higher Education 2nd Annual Summer Research Institute. Boston, Massachusetts.

Schmitt, M. C., Lee, P. A., & **Bolz, M. J.** (December 2009). The Development of Literacy Processing in Higher- and Lower-Achieving First Graders During an Intervention. Presented at the National Reading Conference Annual Conference in Albuquerque, New Mexico.

Publications in Progress

Bolz, M. J., Process vs. Product: Examining students' historical reasoning during composition

Bolz, M. J., Popp, J. S., Manderino, M., Heppler, J. Shanahan, C. Design Text-Based Inquiry: Supporting students' evidence-based argumentation in history.

Teaching Certification

State of Indiana, Professional Educators License, English/Language Arts, Grades 6-12.

Skills & Research Interests

Methods: Qualitative methodologies & research design, design-based research, program evaluation, Nvivo, MaxQDA, HyperRESEARCH.

Professional: Professional development design and delivery, instructional coaching & consulting, instructional technologies

Research Interests: Supporting preservice teacher education, disciplinary literacies, teacher thinking & learning, Inquiry-based learning.

Other Interests: Video production and editing, boat restoration, fishing, cooking.

Service

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| President, Board of Education, Thornton Fractional District 215 | 2019-Present |
| Vice President, Board of Education, Thornton Fractional District 215 | 2017-2019 |
| Chairman, Curriculum & IT Committees, Thornton Fractional District 215 | 2011-2019 |
| Member, Board of Education, Thornton Fractional District 215 | 2011-Present |
| Human Relations Commissioner, Village of Lansing, Illinois | 2018-Present |
| Delegate, Illinois Association of School Boards | 2013-2019 |

