Decoding How Undergraduate Students Contextualize History Documents

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CONTEXTUALIZATION, an essential component of reading like a historian, involves weaving together an interpretation of a document that situates it within its historical context. Contextualizing requires not only assessing evidence within the document, but also incorporating external background knowledge. Situating a document within its social, economic, political, and cultural contexts ultimately leads to a more profound understanding of the document. A complex cognitive task, contextualization surpasses mere basic comprehension of a document.

This study explores how undergraduate students approached the complex cognitive task of contextualizing historical documents. As part of their professional preparation to teach secondary social studies, undergraduate teacher candidates (TCs) conducted Decoding interviews with undergraduate students enrolled in world history and United States history survey courses. Decoding interviews—metacognitive interviews that surface and make explicit tacit thinking—form a key component of the Decoding

the Disciplines paradigm for researching and teaching disciplinary thinking.[1] During these Decoding interviews, TCs asked students to contextualize historical documents in order to elicit their cognitive processes. This case study presents findings from those interviews based on three research questions:

1. How do students in history courses approach contextualizing a document?
2. What cognitive bottlenecks inhibit students from more expert contextualized thinking?
3. How might instructors address these cognitive bottlenecks?

Our research uncovered a range of strategies that students used to contextualize documents, as well as a catalog of potential bottlenecks that hindered more expert contextualized thinking.

Research on Contextualization

Researchers have published few recent studies on the historical thinking heuristic of contextualization.[2] Perhaps the most seminal work on contextualization comes from research that Samuel Wineburg conducted after the cognitive turn. In his expert-novice study of how historians and students read historical documents, Wineburg identified the historical thinking heuristics of sourcing, corroborating, and contextualizing. He also observed differences in how historians and high school students read documents.[3] In a subsequent study, Wineburg compared how a historian of Abraham Lincoln and another historian contextualized documents related to Lincoln.[4] Although the former historian possessed more background knowledge, the latter historian still demonstrated the habits of mind necessary for crafting contextualized interpretations. One such habit of mind involved the "specification of ignorance," which enabled historians to ask questions and generate interpretations despite incomplete background knowledge. Other researchers have described similar heuristics and habits of mind in historians.[5]

Expert thinking in history poses a challenge for students.[6] Instead of critically analyzing and interpreting documents, students often approach them as mere sources of unquestioned information.[7] Additionally, students often display presentist inclinations, viewing documents through a modern mindset rather than interpreting them

in their historical context.[8] Furthermore, students may lack sufficient background knowledge of historical developments, themes, and chronology to make contextualizing interpretations.[9] Addressing these problems of contextualizing thinking remains a persistent problem in teaching history.[10]

This study aims to enhance our current understanding of how students contextualize historical documents. Through investigating a sample of undergraduate students, both history majors and non-history majors, enrolled in introductory history survey courses, this study explores the challenges that students encounter in their efforts to develop more expert contextualized thinking. The study's findings offer insights on areas in need of instructional interventions to address the ongoing problem of teaching contextualized thinking to students.

Research Context

Research took place at SUNY Cortland, a public university within the State University of New York system. TCs conducted Decoding interviews as part of the course HIS 399: "The Teaching and Learning of History." TCs take this course as part of a four-semester professional sequence, usually beginning in their third year of college. In the course, TCs conducted Decoding interviews to develop their ability to elicit and interpret students' historical cognition. This study draws data from two iterations of HIS 399, conducted in 2021 and 2022, respectively. In the 2021 iteration, TCs interviewed students enrolled in HIS 100: "The World to 1500." In the 2022 section, TCs interviewed students enrolled in HIS 200: "United States to 1877." Both HIS 100 and HIS 200 meet SUNY Cortland general education requirements and history major requirements, and thus attract students from all majors. The majority of enrollees take these courses during their first or sophomore year of college.

During the 2021 iteration of HIS 399, 19 TCs conducted interviews with 36 students studying world history. Out of the 36 students, 16 consented to participate in this study. In the 2022 iteration of HIS 399, 24 TCs conducted interviews with 14 students studying U.S. history, out of whom 13 agreed to participate in this study.

Stage	Description of Decoding Stage
1	Instructors define bottlenecks that prevent student learning.
2	Instructors uncover the mental tasks experts use to work through those bottlenecks.
3	Instructors model experts' mental tasks for students.
4	Instructors provide students with opportunities to practice those mental tasks.
5	Instructors plan to motivate students and lessen resistance to learning.
6	Instructors assess students' mastery of the thinking tasks.
7	Instructors share findings from the Decoding process.

Figure 1: Seven stages of the Decoding the Disciplines framework. Modified from Joan Middendorf and David Pace, "Decoding the Disciplines: A Model for Helping Students Learn Disciplinary Ways of Thinking," *New Directions for Teaching and Learning*, no. 98 (2004): 1-12.

Methodology, Data Collection, and Analysis

This study investigates interviews conducted by TCs using the Decoding the Disciplines paradigm. This paradigm consists of a seven-stage iterative framework, summarized in **Figure 1**.[11] Recent innovations in the Decoding paradigm include its connection to Students-as-Partners and the use of Decoding interviews to surface and make explicit students' tacit disciplinary thinking.[12] Embedding Decoding into teacher candidate preparation helps TCs learn to elicit students' thinking, contend with previously under-examined disciplinary thinking, and gain a pedagogical framework for the practices of secondary teaching.[13] We used case study research methodology to examine these Decoding interviews on contextualizing documents, utilizing grounded theory to analyze interview notes and transcripts.[14] SUNY Cortland's institutional review board provided prior approval for the study.

All TCs in HIS 399 completed all learning activities and assignments. Additionally, we invited all students enrolled in the partnered undergraduate history courses to participate in Decoding interviews. However, only those TCs and students who provided written consent comprised this study's data set. To minimize any

undue pressure on participants, their decision to participate in this study had no bearing on their course grades, and researchers would only learn of their decisions after instructors had finalized grades. HIS 100 and HIS 200 instructors never learned which students provided consent to include their interview data in the study. TCs also had the opportunity to exclude their interview data from the study, although none did.

At the start of HIS 399, TCs received instruction on the Decoding paradigm. In addition to the seven stages of the paradigm, TCs learned interview techniques for conducting a Decoding interview.[15] To develop their interview technique, TCs worked in pairs to conduct several Decoding interviews, exploring tacit disciplinary thinking related to various historical reading tasks: sourcing a document, contextualizing a document, and corroborating two different documents. In each pair, one TC interviewed the other, and the instructor offered occasional guidance while circulating around the classroom. After fifteen minutes, the TCs switched roles and repeated the interview. Finally, the whole class evaluated the Decoding interviews during a debriefing session. In the following classes, TCs continued their study of contextualization, including reading Sam Wineburg's *Historical Thinking and Other Unnatural Acts* and Avishag Reisman and Wineburg's article, "Teaching the Skill of Contextualizing in History."[16]

In the latter part of the semester, TCs conducted interviews with students enrolled in partnered history survey courses. Students in HIS 100 had an assigned essay in which they analyzed a primary source selected from a list their instructor had provided; TCs interviewed HIS 100 students on how they contextualized their selected primary source. For interviews with HIS 200 students, TCs used an 1870s illustration titled *Montcalm Trying to Stop the Massacre* (included in **Appendix A**). This illustration depicts French General Louis-Joseph de Montcalm's attempt to prevent his Native American allies from killing British soldiers and civilians captured at the Battle of Fort William Henry in 1757. We provided a description for this illustration, modified from one available at the Digital Inquiry Group's "Beyond the Bubble" curriculum.[17]

TCs took detailed notes during their interview and, afterward, wrote a reflective memorandum that captured their initial impressions. TCs also recorded interviews if the student provided consent, which

we subsequently transcribed. Following their interviews with students, TCs met in small groups of three to five members. Each small group considered a "class" of five to six students, including interview notes, transcripts, and reflective memoranda. TCs searched for patterns of thought across those students. They assessed where students excelled, identified any bottlenecks students encountered, and explored possible responses to those bottlenecks.

Following group work, each TC prepared an individual final report, in which they analyzed their students' disciplinary thinking, highlighted strengths, and identified potential bottlenecks. The TCs then suggested teaching strategies in response to this analysis. They justified their proposed activities with references to scholarly literature. Lastly, the TCs reflected on their learning from the Decoding project and its relevance for their future secondary teaching.

Following two cycles of Decoding interviews, we compiled a comprehensive data set containing field notes, reflective memoranda, and transcripts from Decoding interviews with consenting students. The data set also incorporated the TCs' individual final reports. To maintain anonymity, we used a random three-digit number to identify students and TCs in the data set.

In the summer of 2022, the four authors employed open coding to scrutinize emerging patterns in the data set independently.[18] Following open coding, the authors convened to develop categories and sub-categories for focused coding.[19] **Appendix B** defines these focused codes. The authors then independently applied focused coding categories to the interview data. At least two authors read each of the twenty-nine Decoding interviews. Finally, the authors met to establish interrater reliability. In areas where assigned codes disagreed, the two authors collaborated to reach a consensus on the coding. **Appendix C** displays the focused coding results.

Findings

Sourcing as a Prelude to Contextualizing

To weave a historical context around a document, historians must first identify attributes of its creation, such as the author or creator, the intended audience, the date and location of its creation, the genre, and other relevant variables.[20] Without this information, historians

cannot properly situate a document into its historical context. While historians instinctively source before reading documents, students in our study demonstrated inconsistency in using this heuristic when asked to contextualize a document.

The majority of students (86.20%) displayed some aspect of the sourcing heuristic during their interviews, with only a small minority (13.80%) showing no discernible use of sourcing. Of those students who did source, they most commonly identified the date of the document's creation. For example, S677, a non-history major, noted that "time period is important because times change so rapidly." A higher percentage of history majors (83.33%) identified the date of a document compared to non-history majors (70.59%). Comparable percentages of world history students (75.00%) and U.S. history students (76.92%) identified the date. Overall, 22 out of 29 students (75.86%) identified the date of the document's creation during their interviews.

Identifying the author of a document emerged as the second most common sourcing code. Among the 29 students, 17 (58.62%) mentioned authors in their interviews. A higher percentage of non-history majors (76.47%) identified the author compared to history majors (33.33%). Additionally, a slightly higher percentage of world history students (62.50%) than U.S. history students (53.85%) identified the document's author.

We found that students gave the least attention to the location of a document's creation. Only 12 students (41.38%) mentioned identifying location in their interviews. A slightly higher percentage of non-history majors (47.06%) than history majors (33.33%) identified the location of a document's creation, and a higher percentage of world history students (50.00%) identified the location compared to U.S. history students (30.77%). We might attribute this latter difference to the wider temporal and spatial gap between students' own frames of reference and the documents they studied. World history documents predated 1500 and came from diverse global locations, while the U.S. history document came from the United States circa 1870. Therefore, students in our study may have found the location more noteworthy when the document came from outside their own frame of reference.

Only 6 students (20.69%) went beyond date, author, or location to address additional sourcing attributes such as audience or genre.

S500, a history major, spoke about the roles of a document's audience, "so I can piece together what type of relationships they may have, and backgrounds, and biases, and things like that." Similar percentages of history majors (25.00%) and non-history majors (17.65%), as well as world history students (18.75%) and United History students (23.08%), identified sourcing categories beyond date, author, or location.

While a considerable number of students neglected some aspects of sourcing, the majority demonstrated awareness of attending to either the date, author, or location of the document. Instructors should find this encouraging, as placing a document into historical context requires first answering sourcing questions. However, in subsequent sections, we will discuss that, for many students, identifying a document's author and date often took the form of rote informational identification. Additionally, not all students could move from recognizing the need to identify sourcing information to performing that task. While students could quickly list questions, like non-history major S480, who inquired about "where the document was written, when it was written," as things to consider when reading historical documents, they often struggled to answer those questions correctly. This finding replicates that of M. Anne Britt and Cindy Aglinskas, who demonstrated the difficulty high school and college students have accurately sourcing documents.[21] Moreover, even when students correctly identified these sourcing attributes, they often did not make interpretations of historical context using those attributes.

Our findings reveal at least three bottlenecks in the domain of sourcing that might impede students' ability to contextualize. The first bottleneck arises from a complete failure to source, although a minority of students in our study encountered this bottleneck. The second bottleneck involved a limited repertoire of sourcing questions, and students facing such a bottleneck would benefit from a more comprehensive list of sourcing attributes.[22] A third bottleneck happens when students know sourcing questions, but fail to accurately answer them. Secondary teachers often provide students with questions of "who, what, when, where, why, and how" to guide the summary of documents. However, students in our study often confused these questions about a document's content with sourcing questions. Rather than answer who wrote the

document, they identified who the author described in the document. Rather than answering when an author wrote a document, students identified the time period described in its text. Rather than answering where the author wrote a document, students identified the location described in the document. At times, these answers overlap, but students experiencing this bottleneck could benefit from guidance disentangling sourcing questions regarding a document's origins from summary questions regarding a document's content.

Students' Reading Approaches: Contextualizing Headnotes and Sourcing Footnotes

Prior to reading a historical document, historians typically apply the sourcing heuristic and use that to start situating a document into a historical context. To help students do the same, instructors often provide adapted and edited texts.[23] Such adaptations include editorial headnotes and attribution footnotes that clarify the source and its historical context. In our study, we used documents that included a headnote that provided background information about the source and a sourcing footnote that included the author, date, and place of creation. A significant number of students failed to fully utilize these contextualizing aids. We coded students' use of the headnote and sourcing footnote during interviews and also coded when they referred to these editorial supports while reading the document (before, during, or after reading).

We found that 11 students (37.93%) utilized the contextualizing headnote at some point during their reading of the document. Interestingly, a larger proportion of non-history majors (58.52%) than history majors (41.67%) mentioned making use of the headnote. Furthermore, a greater percentage of U.S. history students (53.85%) utilized the contextualizing headnote compared to world history students (25%). We found comparable outcomes when analyzing students' use of the sourcing footnote. We coded 10 students (34.48%) as using the sourcing footnote either before, during, or after reading their document. A higher percentage of non-history majors (47.06%) than history majors (16.67%) spoke about using the sourcing footnote. In addition, a higher percentage of world history students (37.50%) than U.S. history students (30.77%) used the sourcing footnote.

These data reveal an intriguing discrepancy: though 86.20% of the students in our sample acknowledged the necessity of identifying one or more sourcing attributes, a considerably smaller proportion of students employed the contextualizing headnote or the sourcing footnote to actually do so. Despite recognizing the significance of identifying various sourcing attributes of a document and having access to editorial supports for sourcing a document, many students in our study did not appear to avail themselves of these beneficial supports.

In the U.S. history survey interviews, the footnote clearly identified Felix Octavius Darley, an American illustrator from the mid-1800s, as the creator of *Montcalm Trying to Stop the Massacre*. Although some students, such as history major S116, used the footnote to identify Darley and even conducted quick Google searches to learn more about his life, most did not take Darley into account when considering the source. Even with the sourcing footnote identifying Darley and the United States as the location of creation, students frequently speculated that the author of their document came from France or Britain, without naming anyone specifically. These interviews revealed that many students had a disconnection between knowing they should identify the author of a document and knowing how to use the sourcing attribution to do so.

Even some students who did use the contextualizing headnote or sourcing footnote lacked awareness of their purpose or origins. In her interview, non-history major S333 hypothesized that the contextualizing headnote came from a British person involved in the French and Indian War "because it's explaining what happened and it doesn't really seem like it's from either [French general] Montcalm's point of view and it doesn't seem like it's from the Native American point of view either." In actuality, the course instructor in HIS 200 adapted and expanded upon a headnote produced for the Digital Inquiry Group website. This raises an important consideration for editorial scaffolds used in edited documents for teaching purposes: the authors of these editorial annotations often remain invisible. These editorial interventions tend to follow a certain discourse style of an "anonymous author"[24] writing in "textbookese."[25] While intended to assist students in understanding the documents they read, these editorial additions often obscure their authors and purposes.

Our findings on students' use of contextualizing headnotes and sourcing footnotes suggest two bottlenecks that students might

face: skipping over the headnotes and footnotes, and lacking awareness of their origins and purposes. Instructors could attend to both bottlenecks through more explicit instruction on the origins, purposes, and use of these editorial interventions. Making the author of these interventions more visible through a change in discourse style could also further support students' use of these scaffolds.[26]

Students' Reading Approaches: Gist Reading, Mining for Facts, and Asking Questions

Our interviews revealed that many students employed two distinct reading approaches: reading for the gist of a document and mining for facts to support their thesis. Specifically, 23 students (79.31%) reported reading or skimming the whole document to grasp the main idea or gist of it before conducting analysis. Additionally, 18 students (62.07%) engaged in what we labeled "fact-mining": skimming the document to extract specific information to support an argument. Finally, 13 students (44.83%) reported asking themselves questions while reading.

It may seem that gist reading and fact-mining describe two contrasting reading approaches. Gist reading, which involves seeking a general overview of a document, takes a broad perspective. Fact-mining, on the other hand, involves a more focused scouring of a document for specific details to support an argument. However, our qualitative analysis uncovered evidence to suggest that while these two methods may appear contrasting, students ultimately used them for the same epistemological outcome: *a priori* interpretations of documents.

Many of the students we interviewed adopted a gist reading approach, but they commonly mentioned reading the entire document to assess its relevance to their argument or topic. For instance, S250, a non-history major, explained that he would go through a document multiple times to identify keywords or phrases that matched his topic. Similarly, S266, a history major, stated that he read the whole document to determine if it applied to his topic. S295, another non-history major, described how she read a document in its entirety to determine if it fit her essay. In all these cases, the students prioritized their argument or essay and used gist reading as a way to ensure that the document supported their planned work.

In contrast to gist readers, fact-miners did not read the entire document. Instead, they skimmed in search of specific details to support their thesis. For example, S250, a non-history major, explained how he highlighted information that he believed he could use for his argument. Similarly, S295, also a non-history major, described using multiple documents, not to interconnect and corroborate them, but rather to find "specific facts" that could support her ideas; she searched for "information to help support" her argument. S704, a history major, stated that he searched for "context to support argument or information" for his topic in the documents he read. Although fact-miners did not read the entire document, their reading strategy shared a common starting point with gist readers: an *a priori* argument or thesis. Both approached the documents with the goal of finding evidence that supported their preconceived theses.

These findings align with an earlier study in which TCs interviewed students in a world history course to investigate their source selection for a research paper. Some TCs in that study observed that students began with a claim and then sought out sources to support it.[27] Even in the present study, where instructors provided students with documents, students still tended to interpret them in a way that aligned with their preconceived notions. As in other research, the students in our study established interpretations before reading the document and then only attended to evidence that supported their interpretation.[28] This, however, goes against the principles of sound historical thinking. Rather than selectively considering evidence that supports *a priori* claims while ignoring other evidence, good historical thinking involves assessing available evidence and then developing an *a posteriori* claim based on that evidence.

Historians engage in the specification of ignorance as they read, approaching documents with a willingness to embrace uncertainty and recognize their limited understanding of the past.[29] A vital part of their work involves posing questions to documents. As Robert Bain explained, historians read with the aim of identifying how documents support, extend, or contest their comprehension of the past.[30] However, less than half of the students in our sample reported asking themselves questions while reading documents. We coded only 13 students (44.83%) as mentioning self-questions. Significant variability existed between history and non-history majors, with

two-thirds (66.67%) of history majors reporting self-questioning, compared to less than one-third (29.41%) of non-history majors. Some students, such as history major S480, reported asking questions such as "where the document was written, when it was written, why it was written, who was the target audience…if there was any bias and for what reason the author would be biased." Others, such as history major S831, shared that they do not "really ask questions."

These findings indicate two types of bottlenecks students face as they read documents. The first bottleneck involves an epistemic stance: eschewing a specification of ignorance and instead searching for confirmatory evidence for preconceived notions. The second bottleneck connects to the first: a limited repertoire of self-questions for engaging in specified ignorance. Students could benefit from instruction on the types of questions to ask when reading documents, such as Bain's list of determining how a document supports, extends, or contests one's understanding of the past. Questions such as these can act as "mindtools" that aid students in resisting *a priori* interpretations and adopting a historian's mindset of specified ignorance.[31]

Weaving Interpretations of Historical Context

A large number of students in our study demonstrated aspects of the sourcing heuristic. However, despite participating in an interview that asked them how they contextualized documents, fewer students moved from sourcing a document to interpreting its spatial or temporal context. In total, 75.86% of students made some sort of contextualizing interpretation, compared to 86.20% who could identify some sort of sourcing information. Of the interviewed students, only 15 (51.72%) spoke about interpreting the author of a document, compared to 16 students (55.17%) who discussed interpreting the date of a document. Additionally, only 7 students (24.14%) based their interpretations on a document's location. Overall, history majors interpreted documents at a greater rate (83.33%) than non-history majors (70.58%).

Our contextualizing codes did not evaluate the quality or accuracy of students' contextualizing interpretations. Instead, we only coded for their attempts to interpret a document's historical context using sourcing information. Our findings indicate that some students face a bottleneck of conflating contextualization with sourcing. While

sourcing requires identifying information about a document's origins, contextualization necessitates a more interpretive approach. These findings also suggest that some students face a bottleneck in treating documents in the history classroom as sources of information to memorize and comprehend, rather than sources of evidence to use for crafting interpretations. The difference in our findings between the percentage of students who sourced a document and those who made contextualizing interpretations suggests that instructors may need to define contextualization as interpretation, not just identifying the date and location of a historical document. Further, instructors could provide increased opportunities to support students' cognitive apprenticeships in such interpretive historical reasoning to help them address these two bottlenecks.[32]

Building the Background Knowledge Necessary to Weave Context

We coded interview data for instances where students discussed their background knowledge and how they used it to contextualize. We found that students relied on three main sources to build background knowledge. Students most commonly cited the Internet, with 13 students (44.83%) mentioning it during their interviews. A higher percentage of non-history majors (52.94%) than history majors (33.33%) reported using the Internet, as did a higher percentage of world history students (56.25%) than U.S. history students (30.77%). Variations in prior background knowledge may explain these differences. History majors might possess more background knowledge than non-majors and, consequently, may not need to supplement that background knowledge. Similarly, given that the students in our sample resided in the United States, they may have had more background knowledge of U.S. history than world history.

Qualitative data analysis revealed various ways students utilized the Internet. For instance, S295, a non-history major, claimed to gather background information solely "from the library databases." However, many other students heavily relied on Google for their background information. Certain students shared their techniques for searching on Google, such as placing emphasis on domain endings to determine credibility. S266, a history major, claimed he refrained from using "random .com websites," and instead opted

for ".edu and .org sources." Relying on domain endings as a sign of credibility, although useful, can also lead to misunderstandings. S691, a non-history major, incorrectly assumed that "anything that comes from a history website, anything from a .org or a .edu is always a safe source to use." These results echo those found in an earlier study on how world history students selected sources for a research paper.[33] Although using the Internet to research background information can be a productive strategy, these findings reveal one potential bottleneck in how students use the Internet: limited methods for assessing the credibility and appropriateness of the Internet's vast offerings. Students facing this bottleneck need resources for developing digital literacy and navigating the Internet to accumulate appropriate background knowledge.[34]

The course professor emerged as the second most frequently mentioned source of background knowledge. Nine students (31.03%) stated that they relied on the professor or classroom lectures for interpreting the context of documents. Non-history majors (47.06%) and world history students (50.00%) mentioned the professor more frequently than history majors (8.33%) and U.S. history students (7.69%). Students mentioned the course textbook the least as a source of background knowledge. Only two non-history majors in the world history course (6.90%) reported using the textbook. Like the Internet code, variations in the percentages of history majors versus non-history majors and world history students versus U.S. history students might relate to the extent of prior background knowledge students possessed.

Carla van Boxtel and Jannet van Drie have shown that possessing a rich network of historical knowledge organized around key concepts prepares students to better contextualize documents.[35] Although professors may intend for lectures and textbooks to develop this background knowledge for interpreting historical context, our findings indicate that students may not fully grasp the purpose of these resources. They face the bottleneck of failing to connect lectures and textbooks to reading historical documents. Students may require explicit linkages between lectures, textbook readings, and interpreting historical documents—in particular, how lectures and textbooks can establish a chronology and organize historical knowledge around conceptual and thematic frameworks that can apply to reading documents.

Using Prior Knowledge to Weave a Contextualizing Interpretation

We also coded for how students applied background knowledge to contextualize. Twenty students (68.97%) made positive, accurate, and historically grounded comments that interpreted historical context. For instance, history major S500 made an interpretation of the *Montcalm Trying to Stop the Massacre* illustration that demonstrated how his knowledge of the time influenced how he read the document:

> During this time especially, the tensions between the British, the French, and the Native Americans was quite strenuous, and so the Native Americans were always depicted, you see that these are really dark Native Americans. Of course, the pictures are black and white, but they barely have details on their face. They almost look like monsters and demons.

S500 used his background knowledge of the strained relations between Europeans and Native Americans to positively interpret how the illustrator depicted the Native Americans. A greater percentage of history majors (83.33%) than non-history majors (58.82%) and comparable percentages of world history students (68.75%) and U.S. history students (69.23%) demonstrated positive use of prior knowledge.

Although historians and history educators have defined the term "presentism" in different ways,[36] in our study, we categorized comments as presentist if they applied present-day values and frameworks to the thinking of historical actors. We did not code as presentist the comments where students applied their own contemporary ideas or values to the document, but instead only if they inaccurately ascribed present-day frameworks to a past person's perspective.[37] For example, students often reinterpreted Montcalm's motivations using frameworks from the present. Multiple students applied a present-day concept of a hero to him, including non-history majors S143 ("I think it would be that he's the hero. He's trying to be heroic.") and S333 ("They would most likely want to portray them as a hero to make the story seem like everything's always good on their side."). Other students used the framework of land conflict to interpret Montcalm's motivations. S961, a history major, explained, "So it feels like the Native Americans are just trying to protect their land and their people, whereas [Montcalm], whatever

his name is, just kind of invaded it for his own personal gain." In this example, the student used her present-day frameworks to understand interactions between indigenous people and European settlers; while often appropriate for many interactions in North America, this framework does not accurately reflect the nature of Montcalm's particular interactions with his Native American allies at the Battle of Fort William Henry.[38]

Fourteen student interviews (48.28%) contained presentist comments. Interestingly, a higher percentage of history majors' interviews (66.67%) contained presentism compared to non-history majors (35.29%). However, history majors also provided a greater total number of interpretive and contextualizing comments, which provided more opportunities for presentist interpretations. A higher percentage of students in the U.S. history course (69.23%) made presentist comments compared to those in the world history course (31.25%). Increased familiarity with the subject matter and national narrative may have contributed to the higher incidence of presentism among U.S. history students, while students in world history may have approached historical actors as more "strange" as they analyzed history in tension between the strange and the familiar.[39]

Our analysis of interview data also revealed a pattern that we refer to as "tunnel vision." Tunnel vision displayed itself particularly among the U.S. history students who analyzed the *Montcalm Trying to Stop the Massacre* illustration. Although this image depicts a historical event that took place in 1757 during the French and Indian War, American artist Felix Octavius Darley created it in the 1870s or 1880s during a period of post-Civil War settlement and conflict between the United States military and indigenous people in the western territories. However, even when students correctly identified this sourcing information, they still tended to focus on the events of the French and Indian War that occurred over a hundred years before the illustration's creation. Rather than centering on the post-Civil War period of western expansion, students' interpretive gaze remained fixed on the French and Indian War. For instance, S783, a history major, explained her background knowledge related to the document thusly:

> I know that during the Seven Years' War, it was between England and the colonies right after the revolution happened, and most of the Native Americans that were still living in what was just formed as

> America were siding with the British because they were like, "Oh, we'll help you out. We'll get you all set up." That's pretty much the background knowledge that I have on it.

S783 and other students in the U.S. history course demonstrated the phenomenon of tunnel vision as they continued to concentrate on the events of the French and Indian War even after identifying sourcing information indicating the post-Civil War period of western expansion.

Numerous students, even when making presentist or tunnel-vision comments, displayed a commendable awareness of Native American perspectives. Non-history major S143 demonstrated such consideration of Native Americans' point of view:

> From the point of view of the people trying to fight back at him [Montcalm], I think that maybe this was their land, he came, and he was taking over what they had. A lot of times, that has to do with diseases or things. They could fear the things he's bringing over, like diseases or other types of things that they might not be used to… I think from his point of view, it could be he's trying to take over the land and turn it into something more. But that was already the land of the people. He doesn't really have the right to be doing that.

Such comments illustrate students' ability to offer vital correctives to the Eurocentric "master narrative" of U.S. history.[40] This signals a positive development in the teaching and learning of that national history. However, many students imposed this new and more complex narrative in ways that disregarded the evidence and sourcing information of the illustration.

These findings suggest that using prior knowledge to contextualize interpretations has both positive implications and potential bottlenecks for students. Students in our sample frequently relied on their prior knowledge to make accurate interpretations of historical context. However, this approach also led to a bottleneck of overfamiliarity with the past, resulting in presentist interpretations and a tunneled vision that focused on prior knowledge at the expense of evidence within the document itself. Historians similarly navigate this balance between prior knowledge and the evidence they encounter in documents. Additional research into this intricate process could provide recommendations for teachers on how to guide their students to effectively use prior knowledge when interpreting historical documents.

Bias: A Preliminary Learning Progression

Bias emerged as a prominent theme during our data analysis. As historians recognize, every document carries certain biases, as all authors inevitably hold a positionality and perspective that shape their writing. However, this concept can prove troublesome as students learn how to use inevitably biased documents to make interpretations about the past.[41] In our study, we coded whether students acknowledged the presence of bias in the texts, defined it, and approached it from a binary or nuanced perspective.

The binary perspective on bias represents a more novice understanding of the concept, whereby a document's bias rendered it unusable or its lack of bias made it useful for learning about the past. A more advanced understanding of bias takes a nuanced approach to the concept, acknowledging that all texts contain bias or perspective, but this does not necessarily impede their usefulness for historical analysis. During their interviews, students might make both types of comments. Slightly more student interviews indicated a nuanced understanding of bias (58.62%) than a binary understanding of bias (51.72%), implying that the undergraduates in our sample might have begun to progress beyond bias as a binary concept into a more nuanced understanding. However, significant variation existed in students' nuanced comments about bias, suggesting the need to further define the "messy middle" in a learning progression of bias.[42]

Although we only differentiated between binary and nuanced comments on bias, in actuality, a more leveled progression of understanding bias existed among students. To structure this progression, we drew on the work of Peter Lee and Denis Shemilt's learning progressions for second-order historical concepts as well as elements of the scheme developed by William Perry.[43] As a result, we present a preliminary learning progression for the concept of bias in **Figure 2**. Due to the limited nature of our sample, this proposed progression remains preliminary, with further research necessary to define the complexities of thinking about bias. Moreover, because the interviews did not explicitly focus on bias and the limited educational range of participants, we did not come across student comments dispersed throughout all levels of our proposed learning progression.

Level of Bias	Evidence from Student Interviews
Level 1: Bias Unrecognized: Students approach a text only for surface-level information, accepting its accuracy and reliability without questioning its underlying biases or assumptions.	A considerable number of students did not discuss the concept of bias during their interviews. Nine out of 29 students (31.03%) had no bias-related codes in their interviews.
Level 2: Biased versus Objective: Students adopt a dualistic approach to texts, considering some as biased and others as objective or unbiased. Students perceive bias as a negative attribute, rendering biased texts unusable. Students often regard authorities as unbiased.	S333 (non-history major): "I feel like most people that go out of their way to make documents for people to learn off of don't really have a biased opinion. I feel like they took information that they knew and that they gathered from different places and kind of put it all together." S480 (history major) would first identify the perspective of a document's creator. From there, he would be able to identify *if* the document exhibits any bias and the underlying reasons for the creator's potential bias.
Level 3: "Two Sides to Every Story": Students still take a dualistic approach to texts, not in terms of biased versus objective, but rather in acknowledging the presence of two perspectives on the past, and texts could present one point of view or the opposing point of view.	S143 (non-history major): "[We] usually learn that there's two point of views. It could be portrayed that he's trying to be victorious and take over the land, but that could really be the land of the people and he could be doing something that's wrong to them. I think that there's two point of views and the illustration of that could show many different ways…because there's always two sides to a story, first of all. Obviously, this isn't exactly what happened in that very moment." S534 (non-history major) desired a second source with more information. He explained that having only one source made it challenging to determine what had occurred and that he did not have the opposing perspective of the Native Americans involved in the event.
Level 4: Bias as Opinion: Students acknowledge bias as a matter of point of view and perceive different interpretations as opinions. Amidst the multitude of opinions, students utilize their prior knowledge and personal preferences to select the text they should reference.	S875 (non-history major): "People's biases, where they're from, impact how an event is recorded." S875 (non-history major): An author "will always be biased toward the side that they feel is right."
Level 5: Bias as Perspective: Students understand that biases or perspectives influence all texts. Students can still use these texts, but they must consider the author's motivations and context when using them. To evaluate and use texts effectively, they can apply specific criteria.	S480 (history major) explained that completing sourcing would allow him to identify the creator's perspective. S266 (history major) emphasized the importance of cross-examination and corroboration in identifying biases present in texts and determining their reliability.
Level 6: Positionality in Texts and in Readers: Students not only recognize the inherent perspectives in all texts, but also gain an understanding of their own positionality as readers, which influences how they interpret texts.	This level remains primarily theoretical since our data set did not reveal substantial evidence of students engaging in discussions about their own positionality and biases when reading texts.

Figure 2: A Preliminary Learning Progression for Bias

Rather than identify a discrete bottleneck that might hamper students' progress towards contextualization, this learning progression suggests several points where students might deepen their understanding and use of the concept of bias as they interpret documents. Such a learning progression could help identify places where students seem to encounter bottlenecks and suggest routes to the next stage of the progression. Additional research could establish this progression's applicability to varying student populations across multiple stages of learning.

Limitations

The nature of Decoding interviews involves self-reporting, which may limit data collection. Interviewees' unexamined thinking can lead to unaddressed issues, such as bias, which was not a focus explicitly during interviews, but emerged as a prominent theme in subsequent analysis. Moreover, students may hesitate to report bottlenecks, shortcomings, or points of confusion. To address these limitations, Decoding interviews focused on probing questions to elicit tacit thinking, and we used near peers to conduct interviews, which may have encouraged students to feel more comfortable sharing honest metacognition.[44]

As authors, our positionalities pose a potential limitation to this study. To address this concern, we involved undergraduate students and a faculty member in the process of reading the data and defining coding categories, bringing in multiple perspectives. We established a series of code definitions to promote consistency in our interpretation. Moreover, to ensure the reliability of our findings, we employed multiple coders and resolved any discrepancies through consensus.

Given our limited sample size of only 29 students, we present suggestive rather than definitive findings. Some students did not consent to include their data in this study, and history majors had higher consent rates than non-history majors, resulting in some selection bias. Furthermore, as all students came from the same undergraduate institution, this limits findings to the level of internal generalization. However, despite these limitations, students in other institutional contexts may face similar bottlenecks as those identified in our sample. Indeed, given the proximity between secondary students and first- or second-year university students, secondary students might also face similar bottlenecks in their interpretation of documents.

Conclusion

The findings of this study contribute to our understanding of how undergraduate students approach the cognitive task of contextualizing documents and identify potential barriers to expert contextualized thinking. Given the complexities of contextualizing, our findings provide multiple entry points into describing how students approach this task and identify areas where support might help them better hone this cognitive work. We presented a catalog of at least eleven bottlenecks that students might face while contextualizing historical documents. These include bottlenecks in students' use of sourcing, contextualization aids, reading approaches, and reliance on background knowledge. In addition, our study suggests a preliminary learning progression for how students understand bias while making contextualizing interpretations of documents. Each of these bottlenecks suggests instructional interventions to help students better contextualize, including providing explicit instruction on sourcing, utilizing contextualizing aids, reading for interpretation, and building and using background knowledge. Further research remains necessary to examine the contextualizing cognition of students in other contexts, refine descriptions of students' understandings of bias, and develop effective teaching strategies that bridge the gap between expert historians and novice students when contextualizing.

Notes

This article builds on our earlier work, "Teacher Candidates as Student Partners in Decoding the Disciplines Research: Decoding How University Students Contextualize Historical Documents," *International Journal for Students as Partners* 8, no. 1 (2024): 125-143.

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Appendix A

Montcalm Trying to Stop the Massacre

Context: Both the British army and the French army recruited Native American allies during the Seven Years' War (also known as the French and Indian War). This illustration from the 1870s shows French General Louis-Joseph de Montcalm attempting to stop his Native American allies from killing the captured British soldiers and civilians at Fort William Henry in 1757 during the Seven Years' War. The Native Americans allied with Montcalm did not all speak French and may not have understood his instructions to let their British prisoners live. Among European Americans, depictions of Native Americans as "barbaric" persisted into the 1870s and beyond.

MONTCALM TRYING TO STOP THE MASSACRE.

Title: *Montcalm Trying to Stop the Massacre*
Date: circa 1870-1880
Artists: Felix Octavius Darley (artist), Albert Bobbett (engraver)
Place: United States
Source: Library of Congress. https://www.loc.gov/item/98505902/

Modified from Digital Inquiry Group, "Seven Years' War," Beyond the Bubble: History Assessments, <https://www.inquirygroup.org/history-assessments/seven-years-war>.

Appendix B

Coding Definitions

Sourcing Codes

IDAuthor: The student either identifies the author of the text (for example, Felix Octavius Darley) or mentions that, in reading texts, one needs to identify the author.

IDDate: The student either identifies the date the text was created (for example, circa 1870-1880) or mentions that, in reading texts, one needs to identify the date.

IDLocation: The student either identifies the location where the text was created (for example, the United States) or mentions that, in reading texts, one needs to identify the location.

IDOther: The student either identifies other relevant sourcing information, such as the genre or audience, or mentions that, in reading texts, one needs to identify this relevant sourcing information.

IDAll: The student identifies or mentions the need to identify at least one sourcing attribute from the above codes.

Reading Approaches Codes

Header: The student uses, or mentions using, the contextualizing headnote to read the text. Coders differentiated when the student used, or mentioned using, the contextualizing headnote before reading the text (**HeaderBefore**), during reading the text (**HeaderDuring**), or after reading the text (**HeaderAfter**). These codes are combined into a **HeaderTotal**.

Footer: The student uses, or mentions using, the sourcing footnote to read the text. Coders differentiated when the student used, or mentioned using, the sourcing footer before reading the text (**FooterBefore**), during reading the text (**FooterDuring**), or after reading the text (**FooterAfter**). These codes are combined into a **FooterTotal**.

Gist: The student mentions reading the whole text or skimming the whole text to get the gist, or to summarize, before beginning analysis.

SelfQuestions: The student mentions questions asked of himself or herself while reading. Common questions might include: How does this support my thesis? or What is the author's purpose?

FactMining: The student mentions skimming the text in search of facts about the topic or in support of the student's thesis.

Contextualizing Codes

InterpretAuthor: The student offers an interpretation about how the identity of the author influences how the student reads the text. The student may misidentify the author, but makes an interpretation based on this incorrect author. This may include interpretations of credibility, the author's purpose, or other interpretations.

InterpretDate: The student offers an interpretation of how the time period in which the text was created influences how the student reads the text. The student may misidentify the correct date of text creation, but makes an interpretation based on this incorrect date. This may include interpretations of changing attitudes toward race over time, for example.

InterpretLocation: The student offers an interpretation about how where the text was created influences how the student reads the text. The student may misidentify the correct location of text creation, but makes an interpretation based on this incorrect location. This may include interpretations of different societal values in different locations (that are not necessarily differences of time, but rather differences of space).

InterpretOther: The student offers an interpretation about another category that influences how the student reads the text. This might include the genre or the audience, for example.

InterpretAll: The student offers at least one interpretation from any of the above codes.

Building Background Knowledge Codes

Professor: The student mentions the professor or course lectures as a location to build background knowledge for reading a text.

Internet: The student mentions the Internet as a location to build background knowledge for reading a text. This might include using (or choosing to avoid) Wikipedia, Google, the SUNY Cortland OneSearch, or other online resources. Note that these do not necessarily need to be credible online sources, just online sources mentioned by the student.

Textbook: The student mentions the course textbook as a location for building background knowledge for reading a text.

Prior Knowledge Codes

Positive: Student comments reveal drawing on prior knowledge (particularly knowledge gained outside their SUNY Cortland history course) in a positive, historically accurate way that applies to the actual text the student is reading.

Presentism: Student comments reveal engagement in acts of presentism: the student is reading present-day values and ideas into the text in a way that would not apply to the time period in which the text was created.

TunnelVision: While the students' prior knowledge comments are not necessarily historically inaccurate, they do not really apply to the actual text they are reading. They are tangential and/or irrelevant. This is an example of a student sharing everything the student might know about a topic without actually evaluating whether these facts apply to the text in question.

Bias Codes

BiasMentioned: The student mentions the word bias, but comments do not reveal how the student defines bias.

BiasDefined: The student offers a definition of the term bias. These definitions might be correct, incorrect, sophisticated, or novice.

BiasBinary: The student's comments treat bias as something binary—that is, a text is either biased or not biased. Student comments might also mention that we cannot use biased texts.

BiasNuanced: The student's comments reveal that they understand all texts have some bias. The use of the term "perspective" might signal this. Student comments might also mention that we can still use biased texts.

Appendix C

Focused Coding Results

Coding Category	Whole Sample (n=29)	History Majors (n=12)	Non-History Majors (n=17)	World History (n=16)	U.S. History (n=13)
Sourcing Codes					
IDAuthor	17 (58.62%)	4 (33.33%)	13 (76.47%)	10 (62.50%)	7 (53.85%)
IDDate	22 (75.86%)	10 (83.33%)	12 (70.59%)	12 (75.00%)	10 (76.92%)
IDLocation	12 (41.38%)	4 (33.33%)	8 (47.06%)	8 (50.00%)	4 (30.77%)
IDOther	6 (20.69%)	3 (25.00%)	3 (17.65%)	3 (18.75%)	3 (23.08%)
IDAll	25 (86.20%)	10 (83.33%)	15 (88.24%)	13 (81.25%)	12 (92.31%)
Reading Approaches Codes (Contextualizing Headnote)					
HeaderBefore	9 (31.03%)	4 (33.33%)	8 (47.06%)	4 (25.00%)	5 (38.46%)
HeaderDuring	2 (6.90%)	1 (8.33%)	2 (11.76%)	0 (0.00%)	2 (15.38%)
HeaderAfter	2 (6.90%)	1 (8.33%)	2 (11.76%)	0 (0.00%)	2 (15.38%)
HeaderTotal	11 (37.93%)	5 (41.67%)	10 (58.82%)	4 (25.00%)	7 (53.85%)
Reading Approaches Codes (Sourcing Footnote)					
FooterBefore	8 (27.59%)	2 (16.67%)	6 (35.29%)	6 (37.50%)	2 (15.38%)
FooterDuring	1 (3.45%)	0 (0.00%)	1 (5.88%)	1 (6.25%)	0 (0.00%)
FooterAfter	3 (10.34%)	1 (8.33%)	2 (11.76%)	0 (0.00%)	3 (23.08%)
FooterTotal	10 (34.48%)	2 (16.67%)	8 (47.06%)	6 (37.50%)	4 (30.77%)
Reading Approaches Codes (Gist Reading, Fact-Mining, and Self-Questions)					
Gist	23 (79.31%)	9 (75.00%)	14 (82.36%)	12 (75.00%)	11 (84.62%)
FactMining	18 (62.07%)	8 (66.67%)	10 (58.82%)	9 (56.25%)	9 (69.23%)
SelfQuestions	13 (44.83%)	8 (66.67%)	5 (29.41%)	5 (31.25%)	8 (61.54%)
Contextualizing Codes					
InterpretAuthor	15 (51.72%)	5 (41.67%)	10 (58.72%)	9 (56.25%)	6 (46.15%)
InterpretDate	16 (55.17%)	8 (66.67%)	8 (47.06%)	7 (43.75%)	9 (69.23%)
InterpretLocation	7 (24.14%)	2 (16.67%)	5 (29.41%)	5 (31.25%)	2 (15.38%)
InterpretOther	10 (34.48%)	6 (50.00%)	4 (23.53%)	3 (18.75%)	7 (53.85%)
InterpretAll	22 (75.86%)	10 (83.33%)	12 (70.59%)	12 (75.00%)	10 (76.92%)
Building Background Knowledge Codes					
Professor	9 (31.03%)	1 (8.33%)	8 (47.06%)	8 (50.00%)	1 (7.69%)
Internet	13 (44.83%)	4 (33.33%)	9 (52.94%)	9 (56.25%)	4 (30.77%)
Textbook	2 (6.90%)	0 (0.00%)	2 (11.76%)	2 (12.50%)	0 (0.00%)

Coding Category	Whole Sample (n=29)	History Majors (n=12)	Non-History Majors (n=17)	World History (n=16)	U.S. History (n=13)
Prior Knowledge Codes					
Positive	20 (68.97%)	10 (83.33%)	10 (58.82%)	11 (68.75%)	9 (69.23%)
Presentism	14 (48.28%)	8 (66.67%)	6 (35.29%)	5 (31.25%)	9 (69.23%)
TunnelVision	23 (79.31%)	10 (83.33%)	13 (76.47%)	12 (75.00%)	11 (84.62%)
Bias Codes					
BiasMentioned	12 (41.38%)	4 (33.33%)	8 (47.06%)	4 (25.00%)	8 (61.54%)
BiasDefined	4 (13.79%)	2 (16.67%)	2 (11.76%)	1 (6.25%)	3 (23.08%)
BiasBinary	15 (51.72%)	9 (75.00%)	6 (35.29%)	5 (31.25%)	10 (76.92%)
BiasNuanced	17 (58.62%)	9 (75.00%)	8 (47.06%)	7 (43.75%)	10 (76.92%)