

Critical Thinking in History: A Misnomer?

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The Research problem

The purpose of this study was twofold. First, to determine whether utilizing lessons aligned with historical thinking affected students' ability to think critically as measured by the Cornell Critical Thinking Test. Second, to examine the extent to which instructing students with lessons consistent with historical thinking affected metacognitive skills as analyzed through think-aloud sessions with participants. The hypothesis was that the systematic implementation of lessons and activities consistent with engaging students in historical thinking; the independent variable, would increase students' critical thinking and metacognitive abilities; the dependant variables. Additional independent variables including grade point average (GPA), gender and school type were also examined to more thoroughly analyze the data. Further explanations of these variables as well as the rationale for the study follow.

Definition of variables

Three main variables require definition to frame the conceptual nature of this study: critical thinking, metacognition and historical thinking. For these purposes critical thinking was operationally defined as "reasonable and reflective thinking focused on deciding what to believe or do" (Ennis, Millman & Tomko, 2004, p. 1). And additionally as a general skill-set involving goal directed behavior which stems from analysis of the nature and context of a problem (Dreyfus & Jungwirth, 1980). Metacognition was defined as thinking about one's thinking through a cyclical process of analyzing, self-monitoring and evaluating one's response to information in an effort to more clearly understand new knowledge (Sternberg, 1998).

Historical thinking, for this study, was defined as a "process of using historical information including deciphering content, perspective, point of view and perceived facts" (Chowen, 2005, p.11) via inquiry into and analysis of multiple (often primary) sources for deliberative conclusions (Exploring the National Standards, 1995). All three concepts, critical thinking, metacognition and historical thinking, are clearly related, however, distinctions, which will become evident through the review of the literature, are important in understanding the nature of this study. Briefly, the domain-specificity of historical thinking involves distinct skills which may or may not be associated with more general critical thinking and metacognitive skills. An intention of this study was to seek evidence of the transferability of certain historical thinking skills toward more general thinking skills. Implications of such transferability would demonstrate value in teaching students skills consistent with historical thinking beyond the history classroom. Demonstration to the contrary would show the distinctions between historical thinking and critical thinking and metacognition too significant for transferability with the lessons and activities used for this study.

Three additional independent variables examined in this study include Grade Point Average (GPA), gender and school type. Their place in this study was to examine any other differences in achievement found not only between experimental and comparison groups, but also among groups within the experimental group as a result of engagement in the lesson plans and activities. GPA has been researched regarding student achievement indicating that students with higher GPA perform better on general learning tasks and demonstrate higher achievement on standardized tests (Crawford, 1975). In a meta-

analysis of the relationship gender has to student achievement, Catsambis (1991) found no significant difference exists in learning opportunity between male and female students, and with equity in opportunity, no significant difference was found regarding achievement. A longitudinal study of student achievement in public versus private schools similarly found no differences among those students in overall academic achievement (Sassenrath, Croce, & Penaloza, 1984). These terms, essential to this research, will be further explained and contextualized in the subsequent chapter, but first an explanation of the rationale of this study is necessary.

Rationale

Currently, history in the schools is widely seen as less important than other core disciplines such as reading, writing and math, the key areas on which students are evaluated in the current climate of standardized testing. There are debates as to whether or not history should be included as a discipline on these tests (Tenam-Zemach & Landorf, 2006). Many argue that inclusion helps keep history relevant in our schools, while others believe that the purpose and consequences of these tests are fundamentally wrong, therefore keeping history off the table is best for the discipline (Chowen, 2005). Those with the former view often see standardized tests as quality assessments which test skills far beyond simple rote memorization. If so, research into critical thinking and metacognition as it relates to teaching history content is appropriate indeed.

At this time many state standardized tests in America do not include history as a portion of the test, however, some ask students to answer questions from other disciplines such as language arts, science and mathematics, in a way which requires critical thinking and metacognitive processing, skills perhaps bolstered by engagement in historical thinking. More importantly for students, teaching students to think historically, that is, employ practices often utilized by historians, may better equip them to become critical thinkers and be engaged in the processes and issues of democracy, arguably more significant than success on a standardized test. Such practices include examining multiple sources toward a more objective truth of historical events or persons thereof, engaging in investigation into the various issues by which historical events occurred, and deliberative reflection of previously held evidence for a more complete picture of the time or people examined as well as the environment in which the focus of the investigation occurred (Exploring the Standards, 1995). Hermeneutic investigation such as this offers students methods for deciphering fact from opinion and detecting bias (Stanford Encyclopedia of Philosophy, 2005). Additionally, engaging students in employing multiple perspectives to examine history content may combat a tendency to seek news and information which verifies our position rather than informs us in an effort to develop a perspective based on evidence. Moreover, according to Wineburg (2001), “(t)here is a growing recognition by educators and policymakers that questions of historical reasoning carry implications that go well beyond the curricular borders of history” (p. 51). With a growing call to emphasize higher order thinking skills (Chowen, 2005), a need to examine pedagogical practices regarding such skills becomes more relevant with each passing year.

Along with consideration of higher order skills, assessed more frequently in schools, one must also consider the encouragement of thinking skills as vital to socialization of students and perpetuation of democratic ideals. In *Democracy and Education* educational philosopher John Dewey (1916) illustrated the link between the words communication and community and how vital communicative thinking is to education. Dewey believed that teaching effective communication among the members of a community, however small, was key to developing a thriving democratic society (Dewey, 1916). More recently, Seixas (1993) noted a community of inquiry in which goals and actions of historians are connected with those of teachers and students. These connections move students to a more cognizant understanding of history and its relevance. Moreover, a more broadly outlined process of socialization is further gained from inquiry into the past in such a manner. However, teachers avoid talking about communicative inquiry regarding history because of its tenuous and hypothetical nature (Evans, 2004), resulting in students’ inability to engage in the thinking, and therefore, socialization process. Students, however, could gain communication skills developed through the reasoning, analysis and deliberative skills central to historical thinking, which in turn, contribute to socialization and the perpetuation of the values of democracy.

A brief history of how American curriculum, specifically history curriculum, has encouraged and discouraged skills associated with historical thinking including reasoning, inquiry, deliberation and purposeful learning via primary and secondary source analysis, demonstrates the ambiguity teachers and students have felt toward engagement in history. Through this study, I hoped to gather sufficient and relevant data to contribute to the body of research already conducted on the properties of lessons and activities consistent with historical thinking as an independent variable and the nature of transferability of particular skills to conflate with non domain-specific dependant variables of metacognition and critical thinking.

In the following section, relevant literature regarding the history of using inquiry in schools, a tenet of the operationalized definition of historical thinking, is reviewed. Additionally, literature is examined which relates to aspects of current historical thinking methodology, metacognition and critical thinking to give the reader a context for this study within current scholarship.

Review of Relevant Literature

A History of Reasoning in Schools: The Struggle toward Historical Thinking

Historian Robert Strayer (1998) puts the intent of history education succinctly. Strayer contends that we must:

understand that much of human culture is a dialogue with history, often contested with others who see the past very differently. In the endless creation of our constantly changing cultures, we continuously make use of bits and pieces from the past-events, symbols, and recollections-to construct a meaningful and livable world for ourselves and to serve our own interests in the here and now. (p.31)

This assertion suggests that the essence of public education is to help students develop thinking and reasoning skills to better equip them for society rather than fill them with facts that will likely have little use after graduation. In the last fifteen years however, we have seen a shift toward accountability of schools and students. To measure accountability, standardized testing has become ubiquitous in American schools. From this tendency, we see inclination away from teaching thinking and reasoning skills, to teaching an agreed-upon bevy of facts and concepts to be tested periodically, as determined by legislators who are advised by national, state and local education administration. To that end, we have seen many classroom studies which examine the way in which teachers teach. These studies have often intended to discern whether the research showing the importance and “teachability” of critical and historical thinking, for example, is transferring from the pages of research journals and academic conferences into the classrooms.

Gaea Leinhardt, Catherine Stainton, Salim M. Virji and Elizabeth Odoroff (1994) also conducted extensive research into the practices of teachers. In their research they reported a pattern of “mindlessness” in schools. The authors indicated that although students can learn to reason, deliberate and engage in historical thinking at a very early age, most social studies classrooms fail to challenge them to do so, relying on rote memorization of facts and mindless lecture, in which students are passive learners. Beyond their research Wineburg (2001) and Barton (2005) have more recently affirmed these findings in their research with elementary and middle school students. Leinhardt et al. (1994) explained that a typical social studies classroom continues to be a place where students absorb data for later use on a test, with little or no higher order thinking applied to the information presented. From consideration of classical historians and their learning methods, interviews with current teachers and analysis of one “excellent” teacher, the authors attempted to investigate the pervasiveness of “mindlessness” in history classrooms.

From observations of various classrooms, Leinhardt et al. (1994) concluded that there are three “naturally occurring sites” in which teaching and learning reasoning in history can develop. First is in students’ writing. Writing samples allow students to express reasoning skills and apply those skills to the material. Second is in the textbooks. Textbooks can, if effective, provide examples of mindful reasoning in history and use these examples as a model for students to develop these skills. Moreover, through the use of primary sources in a lesson, students are also encouraged to engage with the content, often beyond what secondary sources allow. Through effective use of primary sources, a student can better comprehend

the time period which he is examining. Lastly is in the classroom itself. In a classroom in which deliberation and exchanges of thoughtful ideas are explored, a student can learn to reason by following the model presented. Unfortunately, although these potential sites may be easily accessible, the authors found that reasoning and deliberation of issues in social studies classrooms is the exception rather than the rule.

Primary Sources as Related to Historical Thinking

Primary sources are much heralded as effective teaching in and of themselves. Like all tools in teaching however, they too are ineffective without foresight as to the intentions of their use and implications of the results. Employed properly, they have the potential to engage students toward realizing the past with newfound understanding, as well as to encourage active learning (Levy, 2004). Yet at the same time the use of primary sources illuminates the fact that we cannot know the past as easily as we know our own time. This realization provides an anchor to students that although we can and do judge the past, we must not judge it in terms of the present, rather in spite of our present (Wineburg, 2001). The complexities in dealing with the past become more evident through the use of sources directly from the time period, and directly involved in the event or involved with the person of inquiry. Primary sources include such artifacts as historical documents, art, photographs, artifacts, diaries, memoirs, video images, and certain newspaper accounts. Accounts written or spoken after the event or describing a person or persons may be considered a primary source yet are debated as to categorization.

The benefits from employing primary sources in a social studies classroom are numerous. Students using effective primary sources gain an understanding fundamental to quality history education- a grasp of multiple perspectives. As students realize multiple perspectives while analyzing historical events, they are better attuned to their own perspectives and biases as well as those of others. When a student questions the absoluteness of facts from a textbook, he seeks a more complete understanding of the time in question. In addition to seeing multiple perspectives from use of primary sources, students may also gain a better comprehension of history as a reconstruction of the past. While examining a textbook, for example, a student familiar with utilizing primary sources to understand a historical event may be better able to further investigate into the facts as presented (Barton, 2005).

From the aforementioned research, one can better see that engaging students in historical thinking is not an easy process with primary sources as the vehicle. Teachers must understand the intent of historical thinking and act accordingly to engage students. Often through the sourcing and corroboration heuristics, teachers along with their students can determine the validity and necessity of each source for themselves, and this is precisely why teaching students to more effectively analyze the documents they study is vital to true understanding of history, and to historical thinking. Initially, students may not be receptive to this type of historical inquiry, as it goes against most of what they are used to as a passive student, receiving information for later regurgitation. It is, therefore, largely up to the teacher to become competent with the sources himself to present historical events and actors in an engaging way and to ask appropriate probing questions to move students into the methodology. The research done regarding historical thinking has attempted to determine if historical thinking is taught effectively in our social studies classrooms.

By stating that historical reasoning can be developed within any typical classroom with common tools such as an effective textbook, topic-minded deliberation and primary source analysis, researchers such as Leinhardt et al. (1994) send a message that the failure to engage students in reasoning is a problem that can be surmounted.

Historical Thinking

Incorporating cognitive learning theory with a discipline such as history proved more complicated than learning a more concrete skill such as cooking where the learner simply follows the recipe with little creative or conceptual input. Historical content often requires an understanding of a culture and a time far different from today's, with participants and events alien to today's students. The motives, values, beliefs, perspectives and experiences are all vastly different, and ignoring those differences is detrimental to learning to think historically. Providing students opportunities to see connections among historical content is part of the complexity which makes historical thinking challenging.

Helping students to make connections in history, in an effort to make historical content part of their schemata, and metacognition part of their learning, has been demonstrated as a key to providing meaningful learning in the discipline of history (Voss & Silfies, 1996). Although this type of investigation into learning theory was, and in many ways still is, a misfit with the new standards era of education beginning in the early 1980s, researchers interested in connecting cognitive learning theory with history forged innovative ideas to do so. Ultimately, incorporating learning and thinking skills with pedagogy has become the essence of historical thinking. Although not defined succinctly by principal advocates such as Sam Wineburg, one can gather methodological processes teachers can follow and practice to engage students in the processes of historical thinking. To conflate excerpts from various researchers in the field of historical thinking, one may define historical thinking as a “process of using historical information including deciphering content, perspective, point of view and perceived facts” (Chowen 2005, p.11) via analysis of multiple (often primary) sources and inquiry into historical content for deliberative conclusions. Historical thinking may be considered the active doing of history; that is engaging in the acts of historians.

Metacognition and History Education

Metacognition is a basic learning strategy with distinct levels and “duties” to actualize for more effective learning through reflection and self-monitoring (Donovan & Bransford, 2005). It is a process by which knowledge is realized and expertise is achieved. Schraw (1998) cites Garner (1987) in the distinction that cognitive skills are necessary to perform a task, while metacognition is the understanding of how the task was performed. Metacognition refers to what we know about our knowledge including the gaps in it. In history education, teachers can facilitate these skills in students, thereby increasing the meaningful learning of historical content (Donovan & Bransford, 2005). When reading historical text, a teacher cognizant of improving metacognitive skills in his students may focus intently on the reading, interpreting words in context and pausing often for students to write their ideas of the narrative including their confusion and prior knowledge. Additionally metacognitive strategies can be employed in history as a way in which students consider appropriate questions to pose and investigate while analyzing history content. Moreover, utilizing metacognitive strategies allow for knowing “why caution is required in understanding people of the past” and “what to look for in evaluating historical account of the past...” (Lee, 2005, p. 32). Upon completion, a debriefing of sorts is enacted to discuss results of the reading as it relates to future and past readings. And the discipline of history benefits from this type of cognition since the “facts” of history acquire coherence only from continual interpretive processes and judicious filtering of noteworthy historical data toward integration into significant patterns (Hollander, 1982). These patterns are most closely associated metacognitive processing. Most research regarding metacognition recognizes three basic elements of this process. The first element is developing a plan of action, second is maintaining and monitoring the plan, and the third is the evaluation of that plan (Sternberg, 1998). The process can be seen as a cycle of plan of action to evaluation and back to a new plan of action. The nature of metacognition suggests that it is a beneficial process by which learning is enhanced. In fact, the journey from novice to expert in any domain, including history, requires metacognition whether it is recognized as such or not. Metacognition is therefore a vital aspect of learning. Without it, students, including those studying history, may not achieve and succeed in the classroom and are not equipped with appropriate strategies to continue lifelong learning. Learning strategies such as metacognition can be taught in history classrooms. As students learn skills to make them more successful in learning historical content, an intrinsic motivation to learn becomes evident, thereby prompting deeper learning.

Methodology

The contents of this section include a review of the methodology I employed in this research, including the research participants, the procedures and indication of how the data will be analyzed and interpreted. The pretest/posttest comparison group design is quasi-experimental utilizing mixed methods. The independent variable of the lessons came from various research activities and lessons done in the field of historical thinking. Critical thinking, one of the dependant variables, is measurable from a litany of instruments, and in this study was measured through a long-standing instrument verified to be valid and reliable through years of data, much of which similar to the data I intended to collect.

Examining students' metacognitive abilities was a different challenge. In my research I found no instrument exists to effectively examine such thinking processes, therefore I employed participant think-aloud sessions to seek evidence of this dependant variable (Chowen, 2005; Patton, 2002). In short, administration and analysis of the critical thinking assessment was measured through statistical analysis, while the think-aloud sessions, conducted with a few randomly selected students from the research sample were coded and analyzed for themes emerging regarding students and teachers ideas of metacognition and constructing meaning of the content presented.

Participants

This study was conducted in three high school settings. Originally, four schools were to be used in the study; two public schools and two private schools. However, although permission was granted through high levels of school district and school level administration, the teachers at one public school were not interested in participating. One American history teacher did not see the value of changing her long-held style in favor of new lessons and activities. Another was a new teacher, too overwhelmed to participate. Through many failed and frustrating attempts to contact and persuade, this public high school did not participate in the study. Therefore only three schools were used; two private schools and one public school.

In each high school I employed one secondary American history class as an experimental group to implement a treatment of lessons plans consistent with developing students' historical thinking abilities. Another American history class in each school served as the comparison classroom in which the teacher implemented an intervention other than the experimental treatment. Students in these American history classrooms were randomly distributed, as American history is a required course for both the public and private school students. Therefore all students eligible for the course have an equal chance of being in the studied classes. The treatment was a measure of how the key independent variable, the lesson activities, affects the dependant variables of the students' critical thinking abilities, as measured by the Cornell Critical Thinking Test and the students' recognition of their thinking about their thinking (metacognition) as examined through think-aloud interview sessions. Additionally, data were examined as to how other independent variables, such as gender, grade point average (GPA) and school setting (public or private), contributed to students' critical thinking and metacognition.

To begin, I provided each teacher with a set of twelve lessons specially prepared for the first semester of American history. Each lesson or activity is consistent with lessons or designs from leaders in the field of historical thinking such as: Wineburg, Drake & Nelson, Stearns, Seixas and Brown. I have also taken some lessons I had utilized as a secondary social studies teacher and manipulated them to be more in line with what I have learned about developing students' ability to think historically from the aforementioned scholars. The lessons were reviewed by each teacher and discussed to clarify any perceived confusion or logistical concerns such as resource availability or time constraints.

Procedures

The Lessons/Activities: An Overview

A total of twelve lessons were derived from various sources to engage students in historical thinking. These lessons were adapted from various historical thinking scholars, renowned history lesson plan repositories, and developed from my experience as a social studies teacher. For example, the lesson which enables students to examine various accounts of the Battle of Lexington and Concord was adapted from a Wineburg (2001)_study while the activity examining students' perception of history was adapted from Drake and Nelson (2005). A lesson allowing students to become news reporters during the Battle of Antietam was adapted from one I have used in the classroom with more of an effort toward the operationalized definition of historical thinking employed for this study. Another example is found in analysis of primary sources relating to whether the United States was founded as a Christian nation. I developed this lesson with the ideas of primary source analysis in mind, while using very different sources and discussion questions for analysis. This lesson utilizes tenets of an issue-centered analysis, as viewed by the National History Standards (1995), as students examine the perennial issue of separation of church and state and the intentions thereof based on historical evidence.

The lessons were also developed with metacognitive processing in mind. Since metacognition can be achieved by students performing experiments which seek to verify or falsify hypotheses (Donovan & Bransford, 2005), the use of primary source analysis and corroboration aims to engage students as they practice “stimulation of additional inquiry” (P. 10) through methods of historical thinking practices. Moreover, the lessons attempt to impart the “strangeness” of the past and clarify students’ ideas of the myriad differences between people of the past and people familiar to them at present.

To ensure construct validity of the lessons beyond guidelines developed from the aforementioned sources, they were also sent out to researchers in the field of historical thinking for examination. The lessons were edited as suggested by these researchers and administered as final drafts to the teachers participating in the study. Since a semester is usually eighteen weeks in length, it was my goal to have the teachers utilize approximately one lesson per week, providing approximately four to six weeks at the beginning of the semester for the return of consent forms and administration of the pretest, and one to two weeks at the end of the semester for administration of the posttest and to allow the teachers to administer their end of semester exams with minimal interference. Some lessons and activities may take only one or part of one class period, while others including student research, may take upwards of three class periods for completion. These lessons therefore constituted a substantial part of the students’ class time. Some of the time spent was variable however, depending on the depth in which some discussions were held.

In order to ensure the soundness of their implementation, teachers were observed presenting lessons. At each school, another certified teacher was asked to record extensive observations of the teacher. Notes were taken and a lesson plan activity record observation form was completed for each observation.

Think-Aloud Sessions

To more fully determine the effect of the lessons on students’ critical thinking and metacognitive abilities, students were randomly selected from the sample of those whose parents consent to participate in think-aloud sessions relating to the lessons in which they have engaged throughout the time frame of the study. The premise of the think-aloud sessions was to determine not only how these students construct meaning from the content presented, but also to discern whether these students feel better able to process and reflect upon historical content as a result of the treatment. Metacognition refers to one’s “awareness of thinking and the self-regulatory behavior that accompanies this awareness” (Driscoll, 2005, p. 107), and analysis of these behaviors might best be accomplished through direct interaction with the participants who can best furnish this information qualitatively. In keeping with Patton (2002), the session protocol included semi-structured questions in which participants were encouraged to discuss content and non-content related topics in such a way as to promote elaboration and clarifications of explanations as necessary. Additionally, participants were asked to pay attention to strategies they use while interpreting text. This strategy, utilized and advocated by Donovan and Bransford (2005), is called metacognitive monitoring and was used in assessing participant metacognitive skills. Through this exercise, the participants were asked to read a piece of historical information and reflect upon it as well as provide a summary of what was read as a way for participants to demonstrate skills of metacognition.

The quasi-experimental mixed methods design of this study allowed me to best gain an understanding of how critical thinking and metacognitive abilities were affected through the systematic implementation of lessons and activities consistent with engaging students to think historically. Results from the Cornell Critical Thinking Tests provided quantitative data relating to critical thinking abilities and the changes thereof as a result of the treatment. The think-aloud sessions provided elaboration on the reflective and analytical practices employed by students as a result of their engagement in the lessons and activities. The results of the findings of both the pretest and posttest as well as the results of the think-aloud sessions are contained in the final two chapters of this manuscript.

Analysis

Data from this research study was analyzed both descriptively and inferentially. To begin, raw scores, percentages and means describe the quantitative data from the pre and posttests (Cornell Critical Thinking Test). From the means, inferential statistical analysis will be employed to seek statistical significance of the effect the lessons and activities consistent with historical thinking have on the dependant variable of

critical thinking skills as measured by the Cornell Critical Thinking Test. An analysis of variance (ANOVA) will determine significance of the treatment's effect.

Think-aloud interview session data was analyzed based on qualitative protocol. Sessions were transcribed and coded to discern themes which emerged from student responses. Student responses to metacognitive questions as well as responses based on various readings from the sessions emerged in thematic categories which developed into an understanding of students' responses to the treatment with regard to their thinking skills. The findings of these data from both quantitative and qualitative methodologies are explained in the final results section at the conclusion of this research.

Findings

Results from the quantitative pre and posttests were mixed indeed. Although statistical analysis run through the statistical package for the social studies (SPSS) has yet to be finalized, examination of raw scores and percentages of all 120 students from three schools shows that some made major improvements in critical thinking, while others actually saw some decline as measured by the Cornell Critical Thinking Test. Analysis of overall scores mirrored those of individual participants. Upon examination of scores, two schools showed differences in which the participants in the experimental group out-performed those in the comparison group, while the third school saw participants in the comparison group out-perform those in the experimental group. When compared to the differences exhibited in classes (experimental and comparison), however, those improvements lessened. Although students were ideally randomly distributed these American history class, as it is a requirement for all students to pass for graduation, performance on the pretest revealed that critical thinking ability varied from classroom to classroom at the outset, thereby affecting the sample slightly.

While quantitative data demonstrated mixed results in test scores measuring critical thinking ability, participant interviews revealed through metacognitive monitoring students at all schools able to think about their thinking in such a way as to benefit their comprehension and consideration of content. As part of these interviews students were asked to respond to questions regarding specific historical events, and asked to analyze such events based on inquiries posed to allow students opportunity to utilize historical thinking skills. They were to verbalize processes and strategies they employed while responding to questions about the event(s). From these interviews, participants demonstrated metacognitive abilities they found beneficial for analysis of events. At one school, a participant shared that "reading with the primary sources made me think about how I understand the subject....I can see that the more and better sources I use, I can fill in the gaps of the story and get a better picture (of the event)." Moreover, participants interviewed articulated sophisticated understanding of the strategies necessary when examining historical events. One student expressed her newfound understanding of the benefits of such strategies and began to have new appreciation for events in history and a keen interest in the people of the past. She was better able to consider her thought process during analysis from the lesson she encountered as part of this study. Another participant expressed more specific appreciation of sourcing and corroboration in examining historical events. These strategies made understanding easier and made him more thoroughly cognizant of historical events through analysis of various artifacts and consideration of the source regarding intention, audience and proximity to the event. All told, participants expressed notable acknowledgment of personal metacognitive strategies utilized to better gain understanding of resources. Through the participant interviews, the students demonstrated attributes consistent with metacognitive strategies as gained through participation in lessons developed for this research study.

Conclusions and Implications

Through this study I am not suggesting that this mixed-methods approach is the best or only way to gain an understanding of how tenets of historical thinking implemented in a high school American history class affect critical thinking and metacognitive skills but that this study is simply one contribution to that end. As explained, the results of this study were mixed and the hypothesis that engagement in the lessons created, intended to adhere to tenets of historical thinking, would increase non domain-specific critical thinking skills, may not have proven true. Significant however, were personal student accounts in which participants expressed deeper understanding of historical events through engagement in metacognitive

strategies employed within the lessons developed for this study which encouraged them to more effectively consider the artifacts presented.

But what does the lack of significant critical thinking development tell us about the transferability of historical thinking skills to non domain-specific critical thinking skills? As Wineburg (2001) has stated, thinking historically is an “unnatural act”. In this study the attempt to conflate thinking skills from one domain, specifically history, with general thinking skills proved a complex undertaking. More research is needed to substantiate or refute these findings since the implications for education is wide. As we become more pressured with accountability standards in schools, educators and administration seek to find a magic bullet which helps students think more effectively and become more successful in the standardized assessments given most every American student. Without clear evidence that thinking skills in one domain transfer out of that classroom to other, more general, thinking skills, however, that magic bullet remains elusive.

This study did however demonstrate that participants exposed to lessons consistent with historical thinking may be able to consider their own thinking in a more sophisticated manner, thereby helping them develop recognition of the processes and strategies necessary for deeper understanding of history content. And that recognition may suggest an exciting aspect of historical thinking as related to metacognition thereby encouraging more research possibilities.

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