DEVELOPING PRESERVICE TEACHERS' PEDAGOGICAL CONTENT KNOWLEDGE
ABOUT HISTORICAL THINKING

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Over the past few years, there has been considerable explication of what it means to think historically.[1] According to this research literature, expert historians think about such issues as placing historical events within context and chronology, considering the differing perspectives of participants in events, and taking the bias and intention of different source documents into account. The teaching of history has turned toward instructional models involving young learners in genuine historical inquiry, in order to meet more demanding standards for historical thinking.[2] At the same time, technological aids to the teaching and learning of history, most often through some sort of "authentic" historical inquiry involving source documents accessed through hypertext and on the Internet, have increasingly been used.[3] Yet there is also concern that strong content area knowledge does not necessarily lead to effective pedagogy.[4] Within the context of these developments, future teachers of history face considerable challenges to develop their own content knowledge of history and their pedagogical content knowledge of how to help youth engage in historical inquiry that is meaningful to them and prepares them for participation in democratic society.[5] An initiative in 2002-2003 at a large Midwestern public university attempted to better prepare future teachers of secondary history, through their involvement in open-ended inquiry with youth into the history of their neighborhood during a technology-rich after-school program. In this paper, we explore important issues in developing future teachers' pedagogical content knowledge of high school students' historical thinking, through case study research into our efforts.

Theoretical Perspective

Our perspective on learning is informed by cognitive and sociocultural theory and research.[6] We view learning as an active, social process mediated by the cultural and material tools available to learners.

In this view, learning is fostered by authentic participation in communities of practice, and evidence for that learning is seen by increasingly sophisticated participation by the individual learner in those practices, as exemplified in conversation and action.[7] This general view of learning has specific implications for the development of what Shulman refers to as the content knowledge and the pedagogical content knowledge of history.[8] As its name implies, pedagogical content knowledge integrates subject matter with pedagogy and is attentive to discipline specific practices of inquiry and organization and the particular challenges of teaching presented by each subject. For example, a history teacher with a commanding grasp of pedagogical content knowledge will understand history's rules of evidence and argumentation, including how to read primary sources and will be able to convey those skills to students in the context of teaching historical content.

Our view does not seek to promote disciplinary knowledge for its own sake, however; rather, it privileges aspects of historical thinking which promote preparation for citizenship in a participatory, pluralist, and deliberative democracy.[9] We maintain that having learners participate in historical inquiry that is meaningful to them, in a supportive social context with the technological tools of the information age, can play an important role in preparing citizens who are able to identify with, analyze, and respond morally to the past and the present.[10] In order to support such a vision, preservice teachers need to develop teaching skills that put a model of meaningful historical inquiry into practice. In this study, we explore how preservice teachers' experiences with actual learners illustrate and help them learn the pedagogical content knowledge necessary to put such a vision of history instruction into practice.

We will refer throughout this manuscript to aspects of historical thinking found in the National Standards for History.[11] The standards lay out five related aspects of historical thinking important to grades five to twelve:

1. Chronological Thinking, which includes temporal thinking and recognizing change over time.
2. Historical Comprehension, which includes comprehending a variety of historical sources, differentiating between fact and interpretation, and understanding historical context.

3. Historical Analysis and Interpretation, which includes comparing and contrasting, understanding multiple perspectives, analyzing cause and effect, particularly multiple causations, and understanding the nature of historiography and the tentativeness of historical interpretation.

4. Historical Research, which includes formulating questions, obtaining information from a variety of sources, and supporting interpretations with historical evidence.

5. Historical Issues-Analysis and Decision-Making, which includes identifying issues and relevant historical antecedents, evaluating alternative courses of action, and evaluating the implementation of a decision.

This portion of the standards emphasizes skills involved in the *process* of doing historical inquiry. This suggests that expert historical knowledge is more than a body of facts , and that the discipline of history involves higher order cognitive processes that lead to verification of historical facts and interpretations. We agree with those who argue for the importance of disciplinary knowledge that the development of historical thinking skills is an important goal, though not the only goal, of history education.

Furthermore, while recent literature cautions against an over-reliance on discipline specific knowledge, we maintain that these historical thinking standards are valuable in a context beyond the practice of history.[12] They articulate skills and help promote dispositions of critical thinking, evaluation, empathy, and action that enable thoughtful participation in democratic society[13]. So as we discuss pedagogical content knowledge and its connection to historical thinking, it is with this larger aim in mind.

Our use of these aspects of historical thinking is not meant to imply that any one individual "obtains" these skills once and for all and then "applies" them to any situation which arises. Instead, we concur with socioculturalists in maintaining that individuals develop increasing fluency through participation in practices such as the five categories of historical thinking.[14] In our discussion of the content knowledge and pedagogical content knowledge of participants in these historical inquiries, we will make reference to relevant portions of the standards.

The above frameworks form the backdrop for the study detailed below. Although the above positions are not without controversy in history education, we began this project with the assumption that teachers who wish to fulfill the laudable goal of involving their students in historical thinking need to develop pedagogical content knowledge for facilitating inquiry that requires such practices. The purpose of this paper is to clarify challenges in engaging preservice teachers in becoming facilitators of historical inquiry that requires historical thinking. Although high school students' participation in the six historical thinking practices outlined above are described below, the impact of these activities on transfer tasks or other outcome measures was not assessed and is beyond the scope of this study.

Overview of the initiative

The initiative this study grew out of sought to engage high school-aged youth and preservice teachers in after-school activities during which they constructed Web sites about the cultural history of their neighborhood. The design of the learning environment was based on related literature and experience in after school inquiry-oriented and technology-rich learning environments, as well as the research on historical thinking and learning.[15] Prior to the school year, the team developed a Web site meant to scaffold investigation of the neighborhood's history through a set of teaser questions, overviews, and digitized primary source documents about five themes: "Where we live," "Where we play," "Where we learn," "Where we work," and "How we change our community**."** These themes were carefully chosen as ingredients of an urban community's institutions and social practices. We hoped that they would be recognizable to and resonate with students and provide a basis on which to build such historical thinking skills. The on going significance of such topics point out continuities between the past and the present. At the same time, changes in the individual's experiences within each of these institutions and traditions–leisure, school, work, and activism—illustrate the different contexts of the past and the present. Under the direction of one faculty member (Westhoff), a graduate research assistant combed through local archives, newspapers, museums, and secondary sources to gather primary source materials and write historical overviews. We sought sources that lended themselves to multiple perspectives, a variety of presentations (text, images, graphs, newspapers, etc.), and were likely to be of high interest to students.

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Overviews linked the local experience with broader issues in American history. Thus a sit-in at a local bank connected to the Civil Rights movement of the 1960s and the story of a local baseball hero was described in the context of the Negro Leagues and baseball history.

By the time the youth used it, the Web site for the project consisted of an opening page, linked to one of the five major topics, "Where we live," "Where we play," "Where we learn," "Where we work," and "How we change our community." Each one of these areas of the site had an opening "splash page" (see Figure 1), which was linked to one or more information pages (see Figure 2). For instance, the splash page for "How we change our community," shown in Figure 1, previews some interesting and potentially surprising aspects of the community's history of activism and change. In this case, high schoolers might not know that banks where African-Americans could open accounts would not hire African-Americans, or that protests had taken place right in their neighborhood. By continuing on to the details page on the Jefferson Bank protests (see Figure 2), the youth could learn a bit more about the organization behind the protests, the Congress on Racial Equality (CORE), and its activities, by reading the overview text along the left-hand side. Along the right-hand side of the page were links to historic documents related to the topics (see Figure 2). In this case, a reprint of a document created by CORE, several newspaper articles about the protests, and a picture from a newspaper, were available for viewing. These documents were scanned and stored as Adobe PDF™ files, and in order to follow copyright restrictions, stored in a password protected area for the educational use of the project members only.
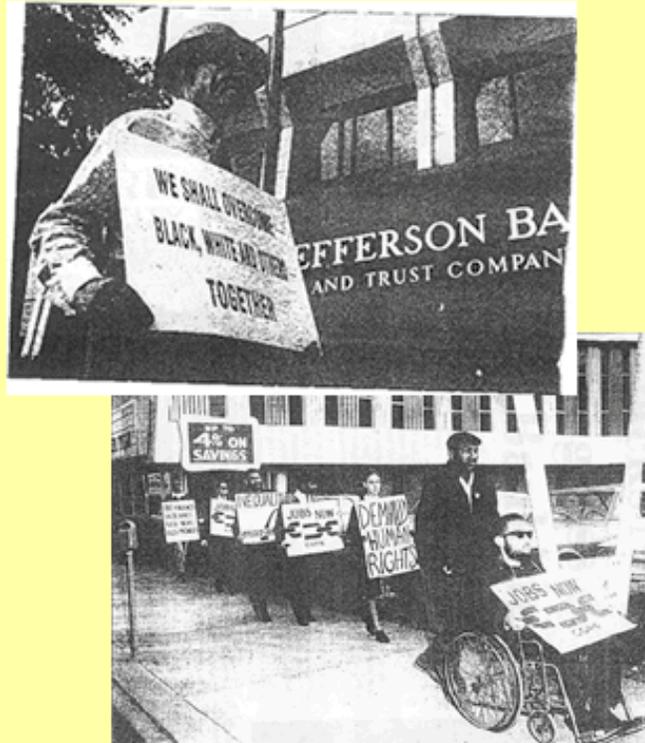
How We Change

Sit-down Strike

Injunction

Did You Know?

- African-Americans were not hired at banks where they had accounts?

- A bank still in existence was the site of a sit-down strike in 1963?

- An integrated group of protesters was arrested for their participation in the strike?

Power

Jobs

Money

Figure 1: Splash page for "How we change our community"

The Congress on Racial Equality (CORE) and the Jefferson Bank Demonstrations

In 1947 at the University City apartment of Irv and Maggie Dagen, a group called Humanity, Inc. met to hear Bernice Fisher speak about the activities of a Chicago based group called CORE (The Congress on Racial Equality). Humanity, Inc. was interested in hearing Ms. Fisher speak because both Humanity, Inc. and CORE-Chicago were organizations committed to seeking solutions to inequality in America. Humanity, Inc, was comprised mainly of students from Washington University who sought to integrate the then segregated, all white college.

Bernice Fisher's speech to Humanity, Inc. stressed the need for citizens (white and black) to actively participate in efforts, which sought to bring to an end to prejudice and segregation in America. Fisher's message stressed peaceful, non-violent activities, which were designed to raise the community's awareness of the injustice resulting from racial prejudice. Fisher's message to Humanity, Inc., however, challenged its members to do more than just talk about racial prejudice. She instead spoke of the need for action to challenge the existing discriminatory practices.

Historical Documents

- CORE Precedent Sheet, Picket Lines, reprinted in Mary Kimbrough and Margaret W. Dagen, *Victory without Violence: The First Ten Years of the St. Louis Committee of Racial Equality 1947-1957* (Columbia: University of Missouri Press, 2000), 39

- "Firms Here Tell CORE Job Quota Demands Will Be Turned Down" St. Louis Globe-Democrat, August 28, 1963

- "Pickets Push Past Deputies into Lobby" St. Louis Globe-Democrat, September 1, 1963

- "Reverend King Defends Injunction Violations" St. Louis Globe-Democrat, September 21, 1963

Figure 2: Details of Jefferson Bank demonstrations, part of "How we change our community"

As we were developing the Web-based resources, we cultivated a partnership with a public high school and a community-based organization working together to improve educational opportunities for youth in the same neighborhood as our historical focus. In Fall 2002, after-school sessions began at the school, with meetings taking place once a week for eight weeks a semester in rooms outfitted with computers on the Internet. In addition to Westhoff and Polman, who led the sessions, a history teacher from the high school and university students enrolled in a secondary social studies methods course acted as facilitators in the program. During the semester, the preservice teachers (PSTs) worked with youth at the neighborhood high school to decide on a focus of their inquiry in the neighborhood, read digitized source documents on the Web site, formulated questions for oral history interviews, and conducted videotaped interviews with community members from different generations. The oral history interviews were recorded on digital video, and the video clips, divided by question, were added to the Web site so the youth could refer back to the interviewees' responses. The youth then worked with the PSTs to write conclusions about their research questions based on historical analysis, and present their findings on Web pages incorporating text, images, quotes, and video clips. As part of their participation in the university

course, the PSTs wrote field notes and a final paper reflecting on the implications of the experience on their views of teaching and learning history.

The project had a multitude of goals for institutions and individuals. A local non-profit community organization sought to support school-university partnerships that would benefit the community and its members, as did each of those institutions. We hoped that the youth would understand their community's history, use technology to develop creative historical products, reinforce basic literacy skills, and develop leadership. Finally, we hoped that preservice teachers would experience an educational environment that promotes inquiry-based learning, enhance their ability to integrate technology in their teaching, gain insight into high schoolers' historical thought, and become familiar with the educational needs and potential of the youth.

<center>Research Setting, Data Sources, and Research Methods</center>

This project was conducted in a public high school in a large Midwestern city. In this school, one hundred percent of the students were African American. Ninety-nine percent were on free or reduced lunch, and 0% of the students performed at or above the standard on an eleventh grade social studies standardized test. The school was part of a neighborhood renewal effort involving real estate development and educational improvement. A non-profit organization supported educational reform and improvement in the neighborhood schools, while still operating within the context of the large urban district. That organization provided contact with the high school principal, who recruited the social studies department chair and another teacher to moderate the after-school club. The club meetings took place in rooms equipped with computers and Internet connections; there were eight meetings a semester for 1.5 to 2 hours each. Students were recruited by teachers and through flyers distributed at the school; in this first year, attendance was a challenge, with twenty youth coming at least once, but only five who participated in at least five sessions. No students attended all the sessions. Given the free-choice nature of the after-school program and the transience of the high school participants, the program was not designed to mimic a school setting with assignments or assessments. In order to complete their websites, however, the high

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school youth read primary sources, conducted interviews, took notes, and completed writing tasks, all of which provided practice in basic literacy skills.

Preservice teachers were concurrently enrolled in a social studies methods curriculum and methods course in which they were introduced to the historical thinking standards. This course falls in the semester prior to student teaching. Like the high school youth, college students participated voluntarily. In previous coursework, PSTs engaged in fieldwork, though because of time constraints, their experience in working with students directly was limited. In addition, each undergraduate PST must complete a social science major (usually history). Post-degree students seeking certification must complete the equivalent of a major in one of the social sciences if they do not already have one. The background of the PSTs featured in these case studies included two post-degree candidates who held master's degrees in history, two master's of education degrees students one of whom had an undergraduate degree in history and the other a degree in geography, two undergraduates majoring in political science and history respectively, and one graduate student in museum studies. The content background and graduate/undergraduate ratio was generally representative of the population in the social studies certification program, though the balance of the latter does shift slightly from year to year.

The data sources for this research included descriptions of club activity and the interviews conducted by participants, as well as artifacts created by youth (notes, Webpages) and by PSTs (fieldnotes, papers). Each after-school club session was videorecorded and transcribed, providing evidence of discourse in large group discussions, announcements and framing by the group leaders, and discourse of selected small group interactions in conducting inquiry. These descriptions of daily activity were augmented by observational fieldnotes taken by the researchers. In addition, each oral history interview conducted by participating youth was videorecorded and transcribed, providing a record of those events. The notes participating youth and their adult facilitators (PSTs) took, as well as the multimedia Webpages (text and images) they composed, were archived after each session. Finally, the PSTs wrote observational field notes and reflections based on their daily involvement, and those

documents, along with papers they wrote for their university course, provided insights into their perspectives.

The research method for this analysis was case study focused on the development of pedagogical content knowledge of the PSTs tied to the five aspects of historical thinking in the standards described above (NCHS, 1996). The sampling for the case study was purposive; we selected three cases that revealed the most interesting issues for future teachers in becoming facilitators of historical inquiry. Thus, the level of generalizability of these findings to other cases is not known; rather, we focus on interpreting how the guidance of PSTs intersects with the participation of youth in practices requiring historical thinking over time.

Results: Case Studies of Pedagogical Content Knowledge

In order to illustrate PSTs' relevant pedagogical content knowledge, we present three cases below. In each case, we first describe in narrative form the actions within one small group inquiry project conducted by high school-aged youth with the guidance of PSTs. In order to see how the inquiry developed, we describe the historical thinking practices and historical content knowledge of youth as displayed throughout the course of their inquiry narrative. We also explicate how the PST used or refined pedagogical content knowledge to support the inquiry, and also, where relevant, discuss the importance of the PST's history content knowledge and epistemological stance. As we discuss in the conclusion to the article, these case studies suggest that teachers' pedagogical content knowledge is an important aspect of providing learning experiences in which teachers serve as guides to student inquiry, rather than disseminators of information, that offer balance between the rigors of the historical discipline and history that students find personally meaningful and is useful in shaping their ideas about action in the present, and that helps teachers see and build on the learning potential of all students.

Moving North and Living in Segregation

This first case illustrates how pedagogical content knowledge helped the PST serving as a guide in facilitating students' inquiry and skill-building processes, rather than as a disseminator of information. Steve (all PST and high school student names are pseudonyms) was an undergraduate PST majoring in

history whose primary previous interactions with youth were as a substitute teacher. He worked with Kamisha and Elissa, tenth-graders who regularly attended the after-school club meetings in the second semester of the school year. In the course of the semester, Steve allowed the girls to take the initiative in their learning but asked pointed questions and made well-timed observation that pushed their thinking forward.

During the first session, when they participated in a group trying to imagine what the neighborhood might have been like fifty years ago, Kamisha and Elissa required a good deal of prompting to engage in the question; their group with three adults and three youth was dominated by adult talk. During the second session, the girls browsed through the Web site and decided to focus on the theme "Where We Live." In this section of the Web site, they encountered newspapers, maps, and pamphlets regarding a successful 1916 referendum to legislate segregated neighborhoods. A newspaper account and map of the city outlined how this referendum contributed to their neighborhood becoming one of four overwhelmingly African American neighborhoods in the city. The section also presented information on the migration of African Americans from the South to Northern cities. The incongruence of a city legislating segregation and African Americans from the South moving to that city to escape segregation particularly struck Elissa. She and her partner Kamisha, with the support and input of Steve, then formulated their research question: "Why did African Americans, who moved to [their city] to escape the hardships that they faced in the Deep South, choose to stay in [their city] even though they faced segregation and discrimination?"

Having such a well-formulated question led the group naturally to read various sources of information as evidence, and Steve's role as a guide became critical in this process. On their Web site, they make reference to migration of African Americans to the North which was presented in the overview, to oral histories, and to interviews conducted during the course of the semester. While they did not reference primary sources from the Web site, the girls' first encounter with the primary sources in Week 2 shaped their historical question. Kamisha and Elissa demonstrated growing skills in historical research, which included formulating questions from encounters with sources and obtaining data from a

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variety of sources (Standard 4A and 4B). With Steve's help, they took important steps toward interrogating historical data and seeking to understand multiple causations and interpretations for past events (historical analysis and interpretation, Standard 3C, analyze cause-and-effect relationships bearing in mind multiple causation). In Week 5, the girls listened to an oral history of an 82-year-old man (who was unable to make the trip to the high school for the youth to interview him). The interviewer [an African American teacher at the high school] prompted him "Can you talk about segregation, going to an all-black school." He responded, "That was back in the '30s, and there wasn't no segregation in the schools then."

Kamisha was startled by this response, and Steve later built on this as a critical opportunity for intervention. She had read that the city had imposed housing segregation in 1916, and she knew that her high school was a historically black high school. The disparity between her prior knowledge and the octogenarian's recollection of his experience was clearly troubling and needed some explanation. In Week 7 when the girls began to sift through their notes to outline their narrative, Steve reminded them of the discrepancy in the sources: "One of the things that I thought was really interesting, that would fit in with this [discussion of the community] is that he said, he was asked if there was segregation, what the schools were like back then. And he said that they didn't have segregation, which is not true." He went on, reinforcing what they had previously learned, "You know, there was segregation. But to his memory, the way he remembered it, . . ." Kamisha interjected, "[her high school and two others] were the only schools that allowed blacks." As they moved on from there, the troubling discrepancy between the sources seemed to remain in the back of their minds. The girls also looked carefully at the interviews they had conducted themselves and at Steve's prompting found two patterns emerging—lack of violence and sense of community. Indeed three interviewees recalled that the neighborhood was close-knit, a theme that fascinated the girls and which they specifically asked about in the second and third interviews. Mrs. S. reported that "everybody knew about everybody, and everybody took part in everybody's family." Mr. B. recalled that "lot of families knew each other. So, like, I couldn't do much, because the next door neighbor was going to tell." Dr. K. explained:

We had more of a *community* than they do have now. I lived in an area in a place called [his street name], and everybody knew everybody. Families and the entire school community. . . The teachers even lived in the area. . . .My fourth grade teacher lived in the area. My second grade teacher lived in the area. So it was really a community.

Confirmed by three sources, the positive experience of living in a close-knit neighborhood impressed the girls and offered them a way to explain the 82-year-old's puzzling assertion that there was no segregation. Making a plausible, if unconfirmed leap, Kamisha and Elissa noted in their Web site text that the neighborhood was close-knit and "Some people felt that even though schools were segregated, they didn't feel like they were being treated unfairly." Steve's interventions in their work with these sources helped them recognize multiple causations for human action (Standard 3E) as the girls sought to answer their original questions of why African Americans moved North when they would still face segregation. "Job opportunities", a chance to "improve their lifestyles," and relative freedom within a supportive, "close knit" community were all reasons, they posited, based on their work over the semester.

Steve supported their inquiry in a number of ways that illustrated his pedagogical content knowledge. He recognized opportunities for the students to ask follow-up questions of their sources, in this case interviewees, when they hinted that they might be able to provide additional information. When Ms. S. told the girls that her parents had moved from Mississippi, they failed to ask why. Steve pointed this out to them, and when in a later interview, Dr. K. mentioned his parents had come from Louisiana and Arkansas, Kamisha immediately asked for more information. Steve's understanding of the importance of asking the right questions of sources was critical. He was further attentive to the lessons that working with primary sources provide historians, and the challenges such sources pose for students who are unsure what to do with discrepancies in documents or are likely to discard evidence as "wrong" rather than ask the more complicated questions of what different and conflicting evidence can tell us about the past (Standard 3H).[16] His careful questions facilitated the students' success in these areas, though he did not find it easy. "There were times when I really struggled to let my students struggle with the material. Whenever they encountered something difficult or came to a point where they didn't know where to go, I

tried to encourage them by asking them questions that [helped] them focus in on where they need[ed] to go with something or find the appropriate answer." He connected his own learning process here back to a classroom textbook:

> I'm reminded of one of the examples . . . where a student was struggling to understand a sculptor's meaning. Rather than just telling the student what it was about, the teacher asked the students questions in order to help him rule out what the sculpture wasn't about …Most of my involvement consisted of prodding and encouraging them in the direction that I felt that they wanted to go. There were certain times that the girls needed either some redirection or simply a reformulation of ideas in order for them to take the next step, and I tried to be available for them to use as a resource.

Finally, Steve's comfort with using multiple sources for research was evident, and he was able to model and encourage Kamisha and Elissa at the outset to consult a variety of materials and keep notes on them. His role as a guide in this process was more significant than he realized, and his satisfaction at the end of the project was justified: "By the second to last session, when we began writing our text, Elissa and Kamisha were able to process through all of our notes with an almost professional acuity for that which was relevant, easily discarding that which did not fit into our topic." Steve helped them in this process by asking often, "Is that important?" to their argument, as they commented upon their notes. "Tracking this growth was one of the most exciting and impressive things that I encountered during the course of the semester," he said.

Changing the Community

In this second case we see that strong pedagogical content knowledge helped PSTs maintain a balance between history that maintains the rigorous standards of the professional discipline and history that offers a usable past to a high school student seeking to define himself as an actor in today's world. Carlos was a tenth-grader who participated in both semesters of the after-school club, although he missed meetings periodically and worked with a wide variety of pre-service teachers. Carlos' first day at the club was the third session of the fall semester. On that day, he began working with a PST named Shannon in

order to focus in on an issue of interest. Shannon had a master's degree in history and was seeking a

career transition teaching certificate. The other two PSTs who worked with Carlos over two semesters,

Matthew and Jo, had extensive experience with historical research and using primary sources. This

experience helped ground their interactions with Carlos in solid historical standards, while helping him

pursue his own desires to formulate a usable past. Carlos was not born in the city and had some interest

in its differences with other cities. He was also interested in businesses, so was intrigued when he and

Shannon looked at a 1924 article in a black-owned newspaper mentioning there were no black-owned hat

or clothing stores, banks, or pawnshops. They discussed focusing on black-owned businesses in the

neighborhood, though he ultimately decided to focus on the civil rights movement after conducting an

interview with a local activist, Norman Seay.

As Carlos prepared to conduct the oral history with Mr. Seay, Shannon informed him that Mr.

Seay had "participated in the Civil Rights movement [locally], was arrested for his activities, and met Dr.

[Martin Luther] King." Another PST noticed how "Carlos' eyes got large as he asked in disbelief, 'Who?

Which one? That man right there?'" Matthew, who had worked on the historical research for this project

as a graduate student in history, helped Carlos briefly prepare questions for Mr. Seay. Carlos stated an

interest in how African-Americans were treated now as compared to before the civil rights movement,

and he carefully wrote out the question. Matthew suggested he could be more specific about whether he

meant social life, family life, business, or school, but Carlos insisted he was interested in Mr. Seay's

response to the general question. Based on Matthew's explanation, Carlos also wrote a note to himself to

ask about the organization to which Seay belonged. Then it was time for the interview. In response to the

question about how life had changed, Mr. Seay described how laws as well as traditions that enforced

segregation had been changed. Carlos then asked, "How has your life changed as a result of the civil

rights movement?" and Mr. Seay spoke of his satisfaction at fighting discrimination. Mr. Seay spoke of it

as a continuing wound, however, and that he still evaluates whether he is being discriminated against

when he goes into a new restaurant. He took obvious delight when Carlos asked him about the protests at

the bank and described how he and other protesters picketed, spent time in jail, and eventually achieved fair hiring practices for African-Americans in the city's banks.

Near the end of the interview, Carlos asked about the topic he had planned to be his main focus, black-owned businesses. He asked, "How do you feel about black-owned businesses in the community? Do you feel we are rising above?" Despite Carlos' focus on the present in the question, Mr. Seay mentioned that there were many Jewish-owned businesses previously in the neighborhood, before talking about the general lack of black-owned stores in the neighborhood today. Carlos' question did not necessarily reflect a "present-minded" comprehension of the past, so much as a preoccupation with how to judge and act in the present. When the response offered him little information to shed light on the changes in black-owned businesses over time, he did not end up incorporating this topic into his Web pages.

Carlos was inspired by the experience of interviewing Norman Seay to focus on "segregation, protests, and demonstrations." Two PSTs worked with him the following week to make sense of the interview and plan his next stages. He reviewed portions of his interview, as well as another that had mentioned the Jefferson Bank protests. Despite repeated encouragement from the PSTs, Carlos did not take notes as he was reviewing the interview and a related newspaper article the PSTs shared with him. He was either unwilling, or unsure, of how to go about selecting material to be noted. One of the PSTs wrote down some of the ideas that he stated verbally, but they were initially unable use guiding questions to led him to realizations. As one of them said, "it was like pulling teeth to get him to make a response about his own ideas." They began making progress when they moved from higher-level interpretation issues to more concrete questions about the pictorial content of his Web pages. Deciding on a specific image to include led to more discussion and decisions on the content and layout for his Web pages. Carlos decided on an introductory page, with links to a page about his interview with Mr. Seay, a page about the Jefferson Bank protests, and a page entitled "What can you do to change the neighborhood?" When one PST asked him what he found interesting about the interview, he said it was a "once in a lifetime

experience," and he included this reaction on the Web page text. With much encouragement from the

PSTs to build on and elaborate each statement, he composed the following text:

> I think that this interview is a once in a lifetime experience, because he is knowledgeable and you
>
> don't get to talk with someone with those experiences. In the 1960's he met Martin Luther King.
>
> He met a long time resident of this neighborhood at every protest during this time period. He
>
> talked about the Jefferson Bank Protest.

It is possible that Carlos was shy and unwilling to be judged by relative strangers, but a number

of historical thinking issues may have interfered with his ability to interpret the interview with Mr. Seay.

He lacked factual knowledge about the chronology of events related to the Civil Rights Movement, as

well as the perspectives and experiences of the participants in such historical events. Aware of this, the

PSTs drew from their own knowledge of the Civil Rights Movement, as they strove to help Carlos make

sense of various sources. They recognized that Carlos found the interview responses—and specifically

those to the questions *he* asked—easier to use than the newspaper and other written sources. In addition,

the concrete specifics of involvement—Mr. Seay met Dr. King, and he spent time in jail—were more

salient to Carlos than the broad sweep of the social groups involved in the movement. With

encouragement from Matthew, Carlos found and included two quotes from the interview with Mr. Seay

on his Web pages, and a quote from a newspaper as well. This first quote from a print source itself quoted

Mr. Seay ("they hadn't expected that we would be that well organized"), perhaps making it more

accessible since Carlos had by that time a learned a good deal about Mr. Seay. Thus, Matthew, using his

pedagogical content knowledge, provided Carlos with a bridge into print sources by helping the student

recognize that individual's perspective portrayed in those sources.

In addition to information on his interview with Mr. Seay, Carlos put a page in his Web site about

"What could you do to help your neighborhood." Interestingly, thinking about the impact of decisions

within different historical contexts, an aspect of "historical issues-analysis and decision-making," played

a role from Carlos' first day at the club. When he and Shannon looked at the newspaper article from 1924

mentioning a lack of black-owned clothing stores and banks, they noticed the article suggested that

African American youth of 1924 consider changing that state of affairs. Later, he asked Mr. Seay how *his life had changed* as a result of the Civil Rights Movement, not just what role he had played in the movement. During the second semester, Carlos would ask Dr. K, "How did you stick with your views and beliefs when you went out into society?" Carlos was interested in how the enduring concern with taking direct action to improve the community, which Mr. Seay exemplified so dramatically during the Jefferson Bank protests, could be applied to the different context of the neighborhood in the early twenty-first century. But he had difficulty expressing his ideas on this and especially suggesting way students can help. In the second to last session of the first semester, Carlos finally made some progress on this page entitled "what you could do." Westhoff encouraged him, saying "you should think big here … and I bet Norman Seay didn't think small or think things were impossible before he began his activities." Matthew followed this by asking Carlos to return to his sources for ideas, "What did Norman Seay do? That might give you ideas, even if they don't apply today." Carlos replied, "complain if you don't agree with the government." He then began writing bullet points down, including "get involved in community service, joining school clubs, voting, protesting unfair government actions, and supporting local business."

Using the past as a tool to think about acting in the present is especially dangerous when one has ill-formed ideas about the past. Carlos' ideas expressed above are an instance when a PST took the opportunity to push Carlos' lack of historical comprehension. Matthew asked Carlos if the bank was owned by the government, and Carlos said "yes." The after-school club was too brief to make up for all Carlos' gaps in understanding the historical context of the Civil Rights Movement, but this was one opportunity the inquiry offered for correcting a "monocausal" misconception of historical analysis and interpretation. In this case, the PST sought to help Carlos see how government did not act alone in practicing discrimination; instead, discrimination was carried out in many cases by business owners and simply allowed to exist until protesters pressured those businesses as well as the legislative and judicial branches of government to stop discrimination.

During the second semester, Carlos worked with Jo, an aspiring museum professional who was enrolled in the methods of teaching social studies course to develop a knowledge of pedagogy and

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curriculum design. Jo had a year's worth of experience as a research assistant working on historical and archaeological research about another neighborhood in the city, but she had no other coursework or practical experience in education. Her facilitation of Carlos' work suffered to some degree because she sometimes had unrealistic expectations of his interest (for instance wondering why he didn't go to the library between sessions to work on this free-choice, out-of-school activity), and because she struggled with ways to facilitate his learning. Thus, her lack of previous pedagogical training limited her, but her familiarity with how to work with primary sources benefited their work together. She supplemented the project's archive, bringing several apt sources relevant to Carlos's project. With her help, he built on the foundation he had gained in the previous semester to successfully incorporate this important aspect of historical research (Historical Research Capabilities, Standard 4B, obtain data from a variety of sources).[17] He added a page about the neighborhood redevelopment group's history over the past forty years, using quotes from Mr. Seay as well as three different newspaper articles and a memoir that Jo supplied. Carlos also filled out the previously planned page on the Jefferson Bank protests with a narrative explanation, supported by quotes from participants. He also demonstrated progress in a number of other aspects of historical thinking.

A frustration Carlos expressed in the penultimate club meeting exemplified the progress he had made as a historical thinker. He said to Westhoff, "I just wish I had more information." This offered her the opportunity to show how his frustration could be transformed into a lesson about an important aspect of historical thinking—that interpretations of history are tentative, subject to changes as new information is uncovered (Standard 3H). She told him, "I understand your frustration. But you have what you have, and you've got to use what you have. That's all that historians [can] ever do … it's the hardest thing in the world, because you have high standards for yourself, and you want to know as much as you can." His experience in the club pointed out to him the necessity of another aspect of historical thinking, "identify[ing] the gaps in the available records and marshal[ling] contextual knowledge and perspectives of the time and place in order to elaborate imaginatively upon the evidence, fill in the gaps deductively, and construct a sound historical interpretation" (Standard 4D).[18]

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Throughout the two semesters, the PSTs' work with Carlos reveals important aspects of pedagogical content knowledge. All the PSTs had to be careful to not yield to Carlos' appeals to tell him what he should write, but like Steve had, ask the kind of guiding questions that were effective in helping him take responsibility for his work. At the beginning, he made more progress when guided to make concrete decisions about content such as what picture to include, but then he made increasingly sophisticated use of the Seay interview, and finally other historical sources, under the guidance of the PSTs. In addition, the PSTs' content knowledge about sourcing related directly to their ability to facilitate Carlos' use of sources. Matthew and Jo, who had experience as research assistants in history using a variety of sources, were much more able to guide Carlos in the use of print sources than were the other PSTs with whom he worked. All of the quotations from print sources he included were added during sessions when he was working with Matthew and Jo, the PSTs more experienced at conducting historical research. In addition, Carlos' frustration with not having comprehensive information on his inquiry became a resource later on when it could be turned into a lesson on how historians reach tentative interpretations with the available evidence.

Understanding Changes in Leisure Time Activities

In this last case, we see the contrast between two PSTs who displayed strong pedagogical content knowledge (PCK) and another whose PCK was not well-developed. Their different levels of PCK shaped their widely varying impressions and interactions with same student: the former were able to build effective learning tasks and see potential and progress in a student who struggled with numerous aspects of historical thinking and basic skills; the latter conflated lack of basic skills with lack of historical thinking ability and potential.

May was an eleventh-grader who participated both semesters in the voluntary after-school clubs. Initially she seemed most interested in using the technology to display her interest in music, social life, and pop culture; she needed prodding to include a historical dimension. May's knowledge of one of the most basic historical principles, chronology and change over time, was limited, and thus the PSTs who worked with her focused on helping her understand that leisure time activities and teen culture were

different in the 1920s, 1950s, 1960s, and 1980s. They also tried to help her use a number of different sources—oral histories, text-based primary documents, materials available on the Internet—to construct her knowledge of the past.

The PSTs who worked with May had varying levels of experience and discipline-specific knowledge, which was reflected in their approaches to facilitating her historical thinking. In the first semester, May worked with two students who had master's of education degrees, both of whom had taken several graduate-level courses in history as well as education, and who had a well-defined grasp of historical thinking. This helped them to recognize May's struggles to understand chronology and change over time. Furthermore, they were comfortable with social history and favorably viewed May's desire to compare and contrast her leisure time and interests with those of the particular individuals from previous generations whom she was able to interview. They seized on these interests as a path into historical thinking. In the second meeting, May interviewed Ms. J., a teacher at her school who had grown up in the neighborhood in the 1940s and 1950s. May's questions revealed her interest in teen culture. She asked questions such as "Was there TV or radio?" "What was the type of clothes that you wore?" "Did you eat fast food?" "Were there any clubs where you grew up?" These questions provided her with a basis from which to compare her life and Ms. J's teen years, though her chronological thinking was still simplistic (Standard 1).[19] Elizabeth, the PST who worked closely with May over the semester, observed how she struggled at the outset to understand the nature of historical change:

> When I first began working with May, her historical thinking skills were at a very basic level. . . In reflecting upon Ms. J's interview from the previous week, May made a 'then/now' list in her yellow notebook. [The PST suggested this.] She placed comments Ms. J. made about various aspects of her childhood under the 'then' column and then contrasted Ms. J.'s comments with comments of her own under a 'now' column. While doing this May made several comments that made me believe she was not placing Ms. J's comments in an historical context (on a time line of continuity and change). She seemed to believe that Ms. J's comments represented the entire history of the neighborhood and not just the time period Ms. J grew up during.

The strategy Elizabeth referred to of visually representing change over time laid a foundation for building May's chronological thinking.

Linda, another PST working with Elizabeth that session, observed a similar tendency to see an undifferentiated past, suggesting May's limited understanding of chronological change and historical context. The two PSTs introduced May to a primary source, movie listings from the 1920s, but with little success. After spending considerable time helping May with the intricacies of reading a primary source, Linda commented "I am not quite sure if May connected very effectively with the primary document. . . I think that her sense of the past is right now primarily formed on the basis of what Ms. J. said and that she does not yet grasp the differences between the neighborhood in the 1920s, when our newspaper primary source was written, and the neighborhood Ms. J. remembers from the early 1950s."

The PSTs helped May use oral histories in developing a chronological framework for displaying changes in pop culture and music uncovered through the oral history interviews. In a subsequent interview with Mr. C and Ms. G., two members of the community organization, May asked questions about leisure time similar to those she had asked Ms. J. The differences between their answers and those of Ms. J. helped her begin to process the differences of change over time and to grasp that there is not a single "past" that is different from today. The PSTs were attentive to this developing framework and helped facilitate it. Shannon, a career transitions PST with a previous master's degree in history, built on Linda's earlier efforts at visually differentiating the past by using people's comparative experiences to develop a timeline. She pointed out that "Mr. C's and Ms. G.'s grandparents were probably close in age to Ms. J." Her fieldnotes on that session indicate that she was attentive to the need to build May's history skills, bit by bit. Her comment was calculated to facilitate May's chronological thinking:

> Part of the process should be to provide a historical context for each person interviewed. From that they can eventually move on to asking the question do people of certain generations share similar thoughts, memories and concerns? Are there huge differences in the lives of Ms. J and Ms. G and what are they? In what ways are they similar? How do the large historical events of the time effect [sic] everyday life?

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This interview and Shannon's careful facilitation of May's thinking, seemed to make a difference when it came time to construct the Web site. Elizabeth observed that "her understanding of the comparisons between Ms. J's, Mr. C's and Ms. G's, and her own childhood seemed much more clear. . . May's historical timeline is quickly emerging. Watching May's historical thinking skills develop and grow was one of the greatest rewards of this project."

Elizabeth's positive characterization of May's progress stands in striking contrast to Peter's experience with May a semester later. Having completed the first session, May enthusiastically returned for the second semester's sessions, where she worked with Peter, an undergraduate PST majoring in political science. She was anxious to develop her interest in music during this session, announcing to Peter when she met him during the first week of the second session that "music was a real love of hers and that she wanted to know who was really popular back then." While her reference to "back then" revealed her loose conception of an unspecified past, which she had struggled with the first semester, she articulated her desire to learn about music from a different time period. But rather than view her personal interest in music as a means to build May's historical thinking skills, Peter struggled to find a way to facilitate that process. Peter commented that May's lack of basic skills seemed to prevent her success. "She really did not have many higher order thinking skills. I believe this played a role in her inability to think in terms of a historical perspective and her inability to really research and write appropriately for the final Web site. Over the course of our visits I really did not see much of a change in May's outlooks on history and her skills as it relates to research and writing."

Peter equated May's historical thinking with traditional performance tasks—research and writing. But he was at a loss as to how to facilitate this process in a context specific to historical inquiry. Unlike Elizabeth and Shannon who asked guiding questions about her interest in the past, offered information about context that was relevant to the high school youth or helped find other sources, Peter found it virtually impossible to work with a student who "was not able to formulate correct sentences and other basic tasks that you would think were second nature to a junior in high school." When her product was not up to his standard, he assessed her intellect as poor. In a subsequent third semester of the project,

Peter worked with Kamisha and Elissa, whom he similarly described as lacking reading and writing skills; he commented that neither "exhibited higher level thinking skills," a very different conclusion from that which Steve drew about them the previous semester. Peter's quickness to associate students' lack of skills with lack of ability to think historically compounded the limitations in his own lack of pedagogical content knowledge. Consequently, May made little progress in the second semester, reinforcing the notion that she was working in what Lev Vygotsky would call her "zone of proximal development"; when working with the guidance of a PST with the requisite PCK, she could perform at higher levels than when working with the guidance of a PST with less PCK.[20]

Peter's lack of attention to May's historical thinking and his inability to facilitate it in this context suggests that he and other PSTs operated with both different historical epistemologies and levels of facilitation skills. It is possible that he found May's interest in popular culture troubling in that it was not the kind of historical content he had learned or been prepared to teach. For him, it was not a tool to teach the difficult skills of historical thinking, as it had been for Elizabeth, but was an indication that May simply was not interested in and could not learn history as he defined it. In working with Kamisha and Elissa, he also conflated their ability to think about the past with their specific factual content knowledge. "Both of the girls told me that they had never heard of most of the stuff we were researching." He concluded "they really weren't able to think about the past." But Elizabeth, Linda, and Shannon all found her interest in teen life and popular culture promising. "It is not a surprise that high school students would be more interested in the more trivial subjects of clothes, food, clubs, school, and parties—topics that they are interested in and can relate to," Linda wrote. She saw potential in using such interests to begin to teach chronological thinking skills. "Those subjects actually make very good reference points for observing changes over time and can be a good way for them to begin to show an interest and gain an understanding of the past." Like Peter, Shannon observed that high school students like May "were clearly interested in knowing <u>very concrete</u> kinds of information." But rather than lament the students' lack of abstract thinking and reasoning, she found in this approach epistemological possibilities for doing history. "From the answers they received [to interview questions] they could construct a sort of 'day in

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the life of. . .' scenario which is the first step in being able to visualize everyday life for teenagers in Ms. J's day. What makes this particularly instructive is how it illustrates that all of us, not just professional historians are able to begin the process of constructing a social history of the past."

These PSTs' interactions with May highlight the importance of developing strong content knowledge and pedagogical content knowledge among preservice teachers. May struggled with many aspects of the historical inquiry process, and she never did develop a clear understanding of using primary sources. While other students were able to engage productively with a variety of primary sources, May tended to focus on data from her own interactions with individuals and struggled to make use of a plethora of other available data about popular culture. But the PSTs who worked with May drew very different conclusions about her ability to think historically and her potential as a learner, because of differences in the way they viewed historical content knowledge and in their own levels of pedagogical content knowledge as they tried to facilitate historical inquiry. Elizabeth saw May's understanding of historical continuity and change develop, whereas Peter interpreted May's lack of basic skills as an inability to understand history.

<div align="center">Conclusions</div>

Our findings from the history after-school initiative challenge us to improve how teachers facilitate historical thinking. The open-ended projects and processes of historical inquiry worked best when PSTs were well grounded in the practices of the historical discipline *and* were able to use that knowledge to facilitate students' historical thinking—when they employed pedagogical content knowledge. PSTs served as "guides," rather than mere disseminators of information, helping students use primary sources to create rigorous history and to engage with a meaningful, usable past. They used a knowledge of the discipline, in particular the genre of social history, to motivate and build the thinking skills of students who lacked appropriate preparation in basic skills. Their effectiveness depended on their own knowledge of history—from factual knowledge about particular eras and movements, to knowledge of how to use sources. The PSTs used their history knowledge to help formulate questions tied to what the history students were doing ("How does that support your argument?"), challenge assumptions ("Did the

government own the bank?"), and prompt for action ("Can you explain the discrepancy between the legal fact of segregation in the 1930s and how the community was perceived positively?"). These questions also point to the important role that general pedagogical skills, in this case questioning skills, get coupled with historical knowledge. The PST who had the least training in history struggled the most to facilitate historical thinking, and the PST with no previous pedagogical training struggled with how to work with the student by building on her prior knowledge as a point of departure.

A year of research in this setting, detailed in the cases above, revealed a number of persistent issues in developing future teachers who can facilitate historical inquiry that is meaningful to students and which may ultimately skills and habits of mind valuable in a democratic society. The fact that the youth came to this program with a paucity of factual knowledge about the past (a fact widely pervasive in high school history classes), including details about the Civil Rights Movement and how people lived in different time periods, created challenges for PSTs which their emerging pedagogical content knowledge helped them meet.

As the PSTs repeatedly ran into gaps in students' factual content knowledge, they had to work at "patching" in order to help students conduct historical research and advance the students' historical thinking skills. PSTs with a strong background both in history and pedagogy were more successful in these tasks. The formulation of questions that were meaningful to the youth, when supported with strong facilitation by PSTs and direct encounters with people who could report on their experience of the past, could—and did—help drive the youth to develop both their content knowledge of history and their process skills such as using sources as evidence.

These observations hold several implications for teacher education in the social studies. Neither content knowledge nor general pedagogical knowledge is enough (Thornton, 2005). Those PSTs who were comfortable with both factual knowledge AND the skills of using primary sources in sophisticated ways were most successful in recognizing and facilitating historical thinking. When they blended these with pedagogical skills—in particular, framing questions and presenting information in a number of formats—they experienced the most success. Students who had less experience in the discipline of

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history, Peter for example, may not necessarily understand how to use primary sources or how to use social history and popular culture to teach the historical thinking skills that can help prepare students to engage in democratic society.[21] History courses required of future teachers must introduce them to and provide means for them to practice historical interpretation—gathering, reading, and forming written conclusions about primary sources. In so doing, PSTs will perhaps better understand the historical thinking skills they are called upon to teach.

Furthermore, the general pedagogical knowledge which students typically encounter in teacher education courses must be augmented with attention to pedagogical content knowledge specific to history. The high school youth in the program managed to clear some significant hurdles (albeit a bit clumsily at times), when a PST or university faculty was able to make an observation or ask a question that pushed their thinking forward. The most effective questions arose from familiarity with the discipline, as well as attentiveness to student development, interests, and prior knowledge. Recognizing the cognitive processes related to historical thinking, and knowing when and how to intervene, is one of the more difficult aspects of history education. Pre-service teachers must have the opportunity to develop their pedagogical content knowledge both through their coursework, and to practice it in authentic and supportive settings.

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