USING EDUCATIVE CURRICULUM MATERIALS TO PROMOTE THE

DEVELOPMENT OF PROFESSIONAL TEACHING KNOWLEDGE

Except where reference is made to the work of others, the work described in this dissertation is my own or was done in collaboration with my advisory committee. This dissertation does not include proprietary or classified information.

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USING EDUCATIVE CURRICULUM MATERIALS TO PROMOTE THE DEVELOPMENT OF PROFESSIONAL TEACHING KNOWLEDGE

Cory Callahan

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USING EDUCATIVE CURRICULUM MATERIALS TO PROMOTE THE

DEVELOPMENT OF PROFESSIONAL TEACHING KNOWLEDGE

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Cory Callahan was born in Long Beach, California on March 5, 1975, attended eight public schools in three states, and in 1993 graduated from Enterprise High School in Enterprise, Alabama. He first attended Enterprise State Junior College, earning Associates degrees in both Arts and Sciences, and then transferred to Auburn University. Cory graduated with a Bachelor of Science degree in Social Science Education in 1998 and began his teaching career at LaGrange High School, LaGrange, Georgia. While teaching students World History and American History, he entered graduate school at Auburn University and graduated with a M.Ed. in Social Science Education in 2002. Cory then began to work toward a PhD. He is currently teaching students Modern European History at Auburn High School in Auburn, Alabama. He and his wife, Amy, have been married for ten years and have three wonderful children:
Gray (5 years old), J.P. (3), and Claire (1).

DISSERTATION ABSTRACT

USING EDUCATIVE CURRICULUM MATERIALS TO PROMOTE THE DEVELOPMENT OF PROFESSIONAL TEACHING KNOWLEDGE

Cory Callahan

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This study explored the dynamic teacher-curriculum relationship to determine whether experiences with educative curriculum materials for using historical photographs might contribute to three social studies teachers' professional teaching knowledge as it relates to problem-based historical inquiry. Specifically, this three-iteration design experiment examined any changes in participating teachers' understanding of the following four research-based principles: learning should be purposeful, connected, active, and structured to encourage success. Data obtained from this implementation also addressed the following questions: can educative curriculum materials featuring historical

photographs help social studies teachers develop professional teaching knowledge as it relates to problem-based historical inquiry? How do social studies teachers who are new to problem-based historical inquiry interact with and use educative curriculum materials featuring historical photographs? Can educative curriculum materials designed to develop problem-based historical inquiry influence teachers' practice decisions? Can educative curriculum materials help teachers' articulate a professional teaching knowledge as it relates to problem-based historical inquiry? While the three participants tended to use the educative curriculum materials virtually indistinguishably from traditional resources, they each seemed to become more reflective; the educative curriculum materials seemed to prompt the teachers' rather modest development of a more professional teaching knowledge as it relates to problem-based historical inquiry.

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Style manual used is *Publication Manual of the American Psychological Association, 5th Edition*.

Computer software used is *Microsoft Word for Macintosh*.

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CHAPTER ONE: INTRODUCTION

Introduction

As its founders intended, American-style democracy fashions a multi-cultural society where no one person or group monopolizes academic discourse or public opinion. This rampant pluralism obliges all who desire participation to become educated, whet their respective consciences, and act. Citizens' likeliest forays into political activity are voting for or against political representatives and legislation, joining or challenging civic organizations, and supporting or refuting societal reforms. Citizens may even abstain from public policy-making entirely as a message, or pseudo-vote, of displeasure in their choices for governance.

Still, significant questions exist regarding Americans' abilities to, through their experiences in modern democracy, freely develop and exercise a sharpened conscience. Among these questions are: what degree of Americans' sense of the common good is derived, with little reflection, from the multitude of radio, television, newspaper, and Internet outlets? Can the voting franchise distinguish civic leaders who use media in promoting the common good from those promoting only themselves or a special interest's agenda? Are citizens summoned to jury duty able to critically analyze evidence to justly incriminate or exonerate an accused peer? In sum, when confronted with information, do Americans tend to be active interpreters or passive recipients? Underscoring the importance of these questions, George Wiegel (2005) writes,

> If democratic institutions and procedures are expressions of a distinctive way of life based on specific commitments, then democratic citizenship must be more than a matter of following procedures and abiding by the laws and regulations. . . [a] democratic citizen is someone who can give an account of his or her commitment to human rights, to the ordered conversation about public good that is pluralism, to the rule of law and equality before the law, to the decision-making by the majority and the protection of minorities. (p. 108)

The society Weigel envisions depends greatly upon citizens developing the knowledge, skills, and thoughtful dispositions to join such a mutually beneficial conversation. Because of their tremendous diversity and reach across racial, socio-economic, and religious strata, Parker (1996) has posited that public schools are the ideal space for beginning to develop citizenship of this type. More specifically, the secondary social studies curriculum provides perhaps the greatest potential for nurturing environments where students learn of and begin to meaningfully address contemporary America's largest concerns. Unfortunately, the vast majority of secondary social studies teachers' experiences as students and in teacher-education programs leave them without the requisite skills to successfully teach students in this fashion. Helping teachers overcome barriers to a truly meaningful pedagogy, as Wiegel and others describe, would likely make a considerable difference in students' classroom experiences (Grossman & Thompson, 2004; Onosko, 1991; Remilliard, 2002, 2005) and perhaps their democratic citizenship.

To mitigate some of the more daunting teaching challenges, a recent line of research has investigated the possible effects of planning resources that are specifically designed to facilitate teachers' learning. These planning resources are typically called *educative* curriculum materials (Davis & Krajick, 2005) because of their explicit intent to facilitate teachers' learning. The educative curriculum materials that I created for this study were specifically designed to support the development of teachers' professional teaching knowledge as it relates to problem-based historical inquiry.

Professional teaching knowledge is the result from a teacher combining theory-based researcher knowledge and classroom practitioner knowledge (Saye, et al., 2005). This combination typically occurs through collaboration situated in active classrooms; it is co-created by merging together the expertise of teachers and researchers as they attempt to improve education for students. Problem-based historical inquiry is a specific social studies pedagogical approach that consists of the following four principles: learning should be purposeful, learning should be connected, learning should be active and challenging, and learning should be structured to encourage success (Saye, 2008). For both professional teaching knowledge and problem-based historical inquiry, I have provided further definitions in the ensuing section of this chapter and more robust descriptions in Chapter Three.

By their nature, curriculum materials (e.g., textbooks, handouts, visual aids, and discussion guides) are bound to *specific* knowledge and skills related to a *particular* topic. When discerning how to nest curriculum materials into a precise course of study, I concentrated on what would likely augment America's democratic ideals by promoting

active civic participation and also make an original contribution to the field of social studies education.

Two underlying assumptions guided my discernment. First, democratic societies are seemingly predicated on the notion that well-educated citizens can recognize and critique the many attempts to manipulate their decisions, political, economic, or otherwise (Peck, 2005). And second, America has been transitioning from a written-culture to more of a visual-culture, and modern society is an increasingly visual environment where still and moving images—billboards, pictures, graffiti, magazines, television programs, online video clips, music videos and computer games—inundate students' daily lives (Burns, 2006; Werner, 2002).

To be academically successful, students must be proficient readers and writers; they must be literate. Literacy has been traditionally defined as the ability to use language to read, write, listen and speak as a means of communication. The United Nations Educational, Scientific and Cultural Organization (UNESCO) expounds, "literacy is the ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts" (2006, p. 3). Extrapolating the UNESCO definition to the world apart from school, students (citizens) must also be able to decode and analyze the elements, messages and values communicated by imagery; they must also be *visually* literate (Burns, 2006).

Therefore, I decided to create educative curriculum materials that would provide teachers with opportunities to develop their respective students' visual literacy skills and help develop citizens who would be more likely to critique graphically depicted information and act according to their well-informed conscience. I chose to employ

historical photographs because they seemed to carry an inherent assumption of "truth" not afforded other medium; this assumption provided the need for authentic critique.

Study Overview

I first became interested in this topic during my experiences as a cooperating teacher with pre-service interns. Neither their collegiate preparedness, nor my collegial advice seemed to directly impact their teaching practice to the same degree as the planning materials they used to prepare classroom events. The tangible curriculum materials seemed to provide more assurance of surviving another day with students. During research for an advanced degree, I discovered that my interns' weighty reliance on curriculum materials was typical of teachers, especially novices (Ball & Cohen, 1996; Ben-Peretz, 1990; Caron, 2005; Goodlad, 1984; Tyson-Bernstein & Woodward, 1991). Through discussions with my major professor, John Saye, I began to wonder what, if anything, could be done to curriculum materials to substantially improve social studies teachers' practices, students' experiences, and perhaps eventually, our democracy. We began to investigate the literature surrounding instructional resources and discovered educative curriculum materials (see Davis & Krajcik, 2005; Collopy, 2003; Grossman & Thompson, 2004; Lloyd, 1999; Remillard, 1999; Schneider, Krajcik, & Marx, 2000). We then formalized this interest into a dissertation topic, refined variables, and attempted to mitigate other possible influences.

With his guidance, I examined three social studies teachers across a three-iteration intervention to determine whether experiences with educative curriculum materials for using historical photographs could help teachers develop a professional teaching knowledge. As I describe more thoroughly in chapter three, these educative curriculum

materials were designed to support teachers' developing professional teaching knowledge as it relates to the following four principles of problem-based historical inquiry: learning should be purposeful, connected, active, and structured to encourage success. I collected and analyzed data from in-depth, open-ended interviews, direct observations, and teachers' written documents, all of which are more fully described in the next chapter.

Research questions. The question at the center of my dissertation research is: Can educative curriculum materials for using historical photographs help social studies teachers develop professional teaching knowledge? Winnowing this question into a logistically manageable project led me to the following sub-questions:

1) How do social studies teachers who are new to problem-based historical inquiry interact with and use inquiry-oriented educative curriculum materials?
2) Can educative curriculum materials promoting problem-based historical inquiry influence teachers' practice decisions?
3) Can educative curriculum materials promoting problem-based historical inquiry help teachers' articulate a professional teaching knowledge?

Purpose statement. In sum, my study's purpose was three-fold: to describe a clearer understanding of the interaction between novice social studies teachers and a series of curriculum materials specifically designed to elicit an educative experience, extend the dialogue between social studies teachers and teacher-educators concerning the potential of educative curriculum materials to develop professional teaching knowledge, and to increase and improve the classroom practice of employing historical photographs as a meaningful experience for teachers and students. The field needed this study as

particular details surrounding educative curriculum materials, especially in secondary social studies, were largely unexplored. Also, this study answered calls for further research on how to meaningfully use visual data to promote civic competence through classroom instruction.

Definitions

Some of the specific terms used in this study, while perhaps commonly used by educators, tend to have several possible meanings. To create a better understanding and accurate measurement, the following terms are operationalized below: educative curriculum materials, teacher-learning, professional teaching knowledge, problem-based historical inquiry, scaffolds, and cognitive apprenticeship

Educative curriculum materials. I used Davis and Krajcik's (2005) term educative curriculum materials (ECMs) to refer to specifically re-purposed planning resources that provide opportunities for teachers to develop their professional knowledge and skills. These materials attempt to assist teachers in developing a clearer understanding of content, pedagogy, and pedagogical content knowledge. This triad of teaching aspects represents what Brown, Collins, and Duguid (1989) call situated learning; teachers coming to learn content and pedagogy together, and through the experience they refine their professional competency. In the next chapter, I discuss more fully the advocate position for this blending.

Teacher-learning. Throughout this study I attempted to measure the effect, if any, that educative curriculum materials may have had on teacher-learning. I employed Remillard's (1999) definition of teacher-learning as any change in a teacher's

understanding of facts and concepts directly related to the content material, and any change in a teacher's practice and pedagogical decision-making.

Professional teaching knowledge. I employed the definition as described by Saye, Kohlmeier, Brush, Mitchell, and Farmer (2005): professional teaching knowledge is defined as the combining of theory-based researcher knowledge (published/public) and classroom practitioner knowledge (individual/private). This combination typically occurs through authentic and situated work taking place in schools. It is co-created by merging together the expertise of teachers and researchers as they attempt to improve education.

Problem-based historical inquiry. As I describe thoroughly in chapter three, the educative curriculum materials designed for this study attempted to support teachers' developing professional teaching knowledge as it relates to problem-based historical inquiry. Problem-based historical inquiry is a specific pedagogical approach that consists of the following four principles: instruction should provide students' a learning environment that is purposeful, connected, active, and structured to encourage success. *Purpose* means that students are engaged in a deep, sustained learning and struggling with problems of the past to more meaningfully address problems of their present. *Connected* is linking previous knowledge and newly-learned information. Because they focused on attempts to resolve an authentic societal concern, students are *active* participants in forming and debating their decisions. Finally, students are considered capable of higher levels of thinking if properly supported, or *scaffolded*.

Scaffolds. Scaffolding typically refers to the temporary metal-framework that construction workers use to erect an edifice of brick and mortar. Educational research, however, uses the term as Vygotsky (1978) defined it: "role of teachers. . . in supporting

the learner's development and providing support structures to get to that next stage or level" (p. 56). Saye and Brush (2002) identify scaffolds and scaffolding in two categories *hard* and *soft*. They describe hard scaffolds as static supports that anticipate general difficulties, and soft scaffolds as dynamic, situation-specific aids to help learners process data. For example, hard scaffolds are handouts, worksheets, or computer interfaces that contain guiding questions and instructions for students that address predicted challenges; soft scaffolds are the *just in time* conversations between teachers and students as they actively complete their assigned tasks. Hannifin, Land, and Oliver (1999) define scaffolding slightly differently, emphasizing the cognitive purposes each type of scaffold serves. For example, during teachers' lesson planning, *metacognitive* scaffolds attempt to provide them with assistance in how to manage their thinking (e.g., when to employ a specific mental strategy or mnemonic device). The *procedural* scaffolds attempt to explain how to best use the resources and tools made available to the teachers. The *strategic* scaffolds suggest approaches for identifying, connecting, and evaluating new information in regard to its fit with previous knowledge and experiences. *Conceptual* scaffolds are used to suggest what teachers may want to consider during their encounters with the educative curriculum materials.

Also, I included *foundational* scaffolds that provided teachers with the opportunity to better understand the historical content by providing evidence trails that must be followed in order to form a meaningful understanding of a particular time and place (Saye & Brush, 2007). Conceptual scaffolds tend to prompt students to *consider* certain content, whereas foundational scaffolds attempt to more fully *explain* declarative

specifics. Again, this dissertation's third chapter will provide specific examples of both hard and soft scaffolds as they were used specifically in this study.

Cognitive apprenticeship. Collins, Brown, and Duguid (1989) articulated the cognitive apprenticeship model of instruction that applies lessons learned from traditional artisan preparation to critical thinking. First, skilled experts typically demonstrate for novices how to complete challenging tasks (often called *modeling*). Next, experts allow novices to attempt some sub-skills while watching closely and offering constructive advice (*observing* and *scaffolding*). Finally, experts give more responsibility to novices until eventually the novice becomes nearly as skilled as the expert.

Anticipated Limitations

This study occurred almost exclusively in the field: twenty-one of the twenty-four strands of data, including interviews and observations of the teachers, were collected in the participants' respective classrooms. While the classroom environment was essentially authentic, providing valuable information regarding how practicing teachers interact with and use educative curriculum materials, it also created some limitations. A few aspects of data collection were changed in order to accommodate the teachers' professional needs (e.g., the schools respective scheduling of breaks). The differing locations and circumstances affected the teachers' sharing, their demeanor, or in any way determined the quality or quantity of their responses is unknown. However, each of the teachers conducted themselves in a rather professional and comfortable fashion, leaving me to believe they were describing what they believed to be realistic representations of their craft.

Another limitation of this study is that the participating teachers' successes and failures may reflect more of their familiarity and comfort with either visual imagery or technology than with the educative nature of the curriculum materials. Had these three variables been more clearly distinguishable, my data analysis may have yielded differing results.

Comparability across the three participants' cases is also limited. First, comparability is limited because two of the three teachers were novices in a traditional sense, each having taught fewer than three years. The third respondent, with ten years of service, was only a novice in the sense of being new to the persistent issues in history method of inquiry-oriented instruction. While over a year prior to this study, he attended a week-long seminar introducing problem-based historical inquiry, he had not implemented any of its materials or teaching strategies. Second, two respondents taught their sections of American history on a block schedule where classes met for ninety minutes every day of one semester. The other respondent, however, taught on a more traditional schedule, meeting with her students for fifty minutes every day for two semesters. Consequently, that respondent's experience with the educative curriculum materials lasted eleven months as opposed to the other participants' seven. While the cases are individually rich, together they lack a close approximation of characteristics that would strengthen their comparability.

Another possible limitation of this study involves its reliability, the likelihood that other researchers under similar circumstances could replicate this design experiment. Therefore, I have included a rather lengthy appendix of the historical photographs, the teachers' and students' handouts, and other resources necessary for replication. Also, this

study's definitions and expressions may not be universally accepted by researchers, however, I have attempted to clearly operationalize my study's terminology to minimize confusion and error.

Again, this study's findings are nearly impossible to extrapolate or generalize beyond these three teachers and their experiences. However, the study still provides valuable information for furthering the dialog regarding the possibility that educative curriculum materials can help teachers develop professional teaching knowledge.

Keywords

Educative Curriculum Materials (ECMs), Social Studies Education Reform, Teacher Learning, Professional Development, Professional Teaching Knowledge, Problem-Based Historical Inquiry (PBHI)

CHAPTER TWO: LITERATURE REVIEW

The End and Means of Social Studies Education

Stakeholders typically agree that a quality education empowers children and promotes democratic ideals. In fact, there is almost universal reference to "developing citizenship" as a justification for public education (Barton & Levstik, 2004). However, when specifically defining the terms *quality* and *citizenship* as they apply to the social studies, or identifying precisely with which curriculum resources they should be advanced, agreement quickly dissolves (Adler, 2003; Hahn & Tocci, 1990; Saxe, 2003). Some demand that public education account for and reflect the convictions of the nation's political and cultural majority, and that curricular decisions be made accordingly (Cheney, 1994; Saxe, 1996). Others argue that America's diverse, oftentimes multi-ethnic, learning communities warrant greater autonomy (Cohen, 1995; Turner-Vorbeck, 2005). Parents, students, teachers, administrators and politicians have continuously negotiated education reforms, leaving teachers in the modern era to instruct increasingly dynamic learners while being held accountable to ever-rigorous, sometimes conflicting expectations (Jos Eacute, 2000; McNeil, 2000). For example, in 2006 while demanding that teachers academically challenge students and develop citizenship, Florida legislators simultaneously debated the following language in House Bill 7087-04-e3, a proposed amendment to their state constitution:

> American history shall be viewed as factual, not as constructed, shall be viewed as knowable, teachable, and testable, and shall be defined as the creation of a new nation based largely on the universal principles stated in the Declaration of Independence. (lines 1159-1163)

HB7087-04-e3 and its supporters sought to narrow social studies instruction to what some call a traditional, expository, and teacher-centered framework (see Dewey, 1938; Martorella, 2001; Peck, 2005**)**. Social studies teachers and researchers who promote a traditional pedagogical model (hereafter traditionalists) advocate students listening to lectures, reading textbooks, copying notes, and emulating the scholarly patterns of previous generations. To ready students for the community awaiting them, traditionalists encourage memorization of significant historical facts; typically presented as undisputed, from a single perspective and that comprise what VanSledright (2002) calls a meta-narrative. This meta-narrative depicts America as the greatest of all nation-states, where liberty and justice are ever-rising, where political mistakes are acknowledged as either the lesser of two unfortunate options or a necessary evil from which a greater good eventually sprang, and where the best and brightest citizens of John Winthrop's (1630) *City on a Hill* are exemplars of human dignity and fairness. Teaching in this fashion is said to provide the nation a type of promissory note that grateful, obedient, and loyal citizens are preparing to join society (Saxe, 2003).

Traditionalists also maintain specific definitions concerning meaningful teaching and learning. For example, a public school teacher's primarily responsibility is thought to be instilling the aforementioned zeal for the nation (e.g., venerating its heroes and singing its patriotic songs), encouraging students to stay abreast of current events, pay their taxes,

and vote in elections. Likewise, a well-educated student is defined as one who can memorize, recall, and intelligently discuss facts that adults have deemed significant (Sizer, 1984) or, in Hirsch's (1988, p. 2) words, demonstrate "cultural literacy." Many traditionalists also believe that a shared body of knowledge establishes an objective intellectual standard both knowable and attainable for all students. Accordingly, they insist that too little historical content is taught in schools and, if remedied, students throughout the country could join an established a national vocabulary and shared heritage necessary for multi-ethnic communities to coexist peacefully. While opponents caution against an American past dominated by White, Anglo-Saxon, and Protestant terminology, advocates insist it is the best way to create a unified culture from the nation's abundant diversity (Cheney, 1994; Hirsch, 1988; Saxe, 2003). Traditionalists claim the lack of objectively known material across and within society inevitably leads to individuals being isolated and societies being fragmented. Instead of people knowing only *their own* past, traditionalists see great value in having everyone learn *a common* past. Students who particularly benefit are those classified as "disadvantaged" or "at-risk" who can learn the meta-narrative as they begin combat the factors that determine many of their socioeconomic fates (e.g., poor grades, deficient communication skills, ignoring social norms). A majority of states now require students to demonstrate a level of mastery of the meta-narrative by passing a standardized competency exam, consequently called high stakes, in order to earn a high school diploma. Adequate performance on these uniform, typically multiple-choice, exams has added an additional requirement for high school graduation and thus the opportunity for college degrees, military careers and other high-paying vocations.

Still, others challenge the traditionalist view and consider high-stakes testing to be "the single largest and possibly most destructive federal intrusion into America's public schools" (Emerson, 2002, p. 44). They tend to advocate a teaching philosophy proceeding from the works of John Dewey, Lev Vygotsky, Jean Piaget, and others (Brown et al., 1989; Martorella, 2001). Social studies teachers and researchers who advocate constructivism (hereafter constructivists) promote an interactive pedagogy that emphasizes personal experience, synthesizing conflicting accounts, and students constructing an original understanding of the material; the very tasks traditionalists oppose and that HB7087-04-e3, if passed, would have made *illegal*. Constructivists claim that society has never been as uniform as traditionalists suggest and that teaching as though it were is bellicose jingoism, not citizenship. Rather than impart the meta-narrative, many constructivists advocate using basic facts as means to more profound ends. Citing the demands of contemporary twenty-first century society, constructivists believe that it is insufficient to merely posses knowledge and skills and that students must apply them to solve the real-world problems faced by their local, state, and national communities (Engle, 1976; Griffin, 1992; Hunt & Metcalf, 1996); thus, they introduce and develop in students the democratic *practices* specifically demanded of their society. Some have even suggested that this type of citizenship preparation should be schools' ultimate goal (Saye, 2005).

Teachers who engage students in an academic discourse of this variety undertake the responsibility of presenting an evenhanded and rational treatment of the past in an open-minded environment where investigation and critique pace students' learning. Constructivist social studies teachers believe that citizens are called not to simply revere

the Constitution and its framers, but to continue their work by perpetuating democratic living (Adler, 2003). Constructivist classrooms are thought to be, as John Dewey described, laboratories of democracy where students are taught the skills and attitudes needed to participate in civil society and enter contemporary debates over public issues. To those who fear this purposeful concentration on participatory citizenship leads to poor test results, constructivists often counter that students who experience such instruction have, in the recent past, scored as well on the National Assessment of Education Progress (NAEP) exam. Levin, Newmann, and Oliver (1969) and more recently Newmann, Bryk, and Nagaoka (2001), and Smith and Neimi (2001) found that when compared to those who experience more traditional instruction, students who engage in more authentic intellectual work—like that often found in constructivists' classrooms—perform as well or better on tests of their higher order thinking and learning. Unfortunately for many students, higher order thinking and learning are not typically evaluated in standardized tests. Additionally, there is currently a nationwide initiative to further investigate the effects of constructivism and authentic intellectual work on students required to pass standardized tests. The underlying motivation of that research project is to test the theory that constructivist classroom experiences do not hinder students' performance on high-stakes exams (viz., http://www.auburn.edu/academic/societies/ssirc/).

Traditionalists and constructivists seek at least one common goal; to streamline and rationalize an overcrowded curriculum in order to better educate children. Trumpeting history and geography above all other social sciences, traditionalists are willing to sacrifice what Martorella (2001) calls the "disequilibrium" and "ambiguity" associated with constructivism and its social critique (p. 8). Instead, they prefer to cover

as many of the historic and geographic facts as have been conventionally agreed upon; therefore, providing all students a uniform American educational experience. Conversely, many constructivists sacrifice breadth and prefer to delve into controversial issues of public concern (Engle, 1976; Engle & Ochoa, 1986; Newmann, 1990; Newmann, & Associated, 1996; Oliver & Shaver, 1966), teaching the critical-thinking and decision-making skills they deem vital to modernity. Both approaches attempt to answer what Parker (1996,) calls the essential question confounding educators of this era "what does it mean to educate children in such a way as to fashion them for the demands of an increasingly diverse society" (p. 2). Putting it another way, how do social studies teachers define and implement *e pluribus unum* in their classrooms?

There are, however, parallels in the visions of traditionalists and constructivists concerning secondary public schools as they enter the twenty-first century. True, their philosophies have fundamental differences concerning how to best develop students into enlightened citizens (Hartoonian, 1994), what content and skills warrant inclusion in the curriculum, and also in what direction teacher-educator programs should follow. Both traditionalists and constructivists seem passionately concerned with historical facts; the former celebrate them as the end and the latter employ them as a means to an end. Traditionalists tend to think of critical analysis of information as a goal, but one where virtually all the facts surrounding an issued are needed. Constructionists tend to consider the deliberative process concerning an issue vital to retaining and building the habits of mind when approaching similar problems.

Teaching Students to Construct Meaningful Understandings of the Past

Despite a long familiarity with "history," students rarely question how we know what we purport to know and instead typically absorb information without questioning how the information was collected or why it is being presented (Marcus, Paxton, & Meyerson, 2006). Unlike most students, professional historians regard events and people of the past not *as history,* but rather the raw materials from which *a history* is derived (Peck, 2005). Historians engage in what Davidson and Lytle (1992) call "the art of historical investigation," which involves the collection and interpretation of various forms of evidence to gain an understanding of what was likely to have occurred in the past. While the types of evidence historians collect and analyze will be addressed in succeeding sections of this chapter, the interpretation of evidence is addressed more fully below.

Many social studies researchers have equated "doing" history with learning history (Barton & Levstik, 2004; Holt, 1990; Levstik & Barton, 1994; VanSledright, 2002; Wineburg, 1999, 2001). As Peter Sexias (1999, p. 329) elaborates: "content and pedagogy are inseparable in (history education) . . . (e)ven conceiving them as two different categories that must be united, is no longer helpful." At the core of this ideology is historical interpretation, where individuals grapple with evidence in regard to its bias, attribution, strength and weakness as an argument, evidence used as support, and corroboration with other evidence. Historical interpretation also demands contextualizing evidence into a particular space and time to arrive at an understanding of the broader political, cultural, and economic developments that shaped the events and people under investigation (Peck, 2005). This purposive grappling, some call it deliberation,

culminates in an investigative agency to question, evaluate and arbitrate between conflicting evidence (Davidson & Lytle, 1992). Strong, consistent research over the past thirty years suggests that students can be taught to successfully employ the tools of historical investigation to construct meaningful understandings of the past (Ashby & Lee, 1987, 1997; Barton & Levstik, 2004; Booth, 1980, 1983, 1994; Lee & Ashby, 2000a; Lee, 1983; Short & Carrington, 1992, 1999; VanSledright, 2002). Holt (1990) suggests that, not only *can* students be taught to think this way, they *should* be taught to recognize that much of history is a contested interpretation of events; this, he says, better prepares them to address events in the present. A democratic society as described in the foregoing section of this chapter demands that citizens develop an understanding of cultures, politics, economics, and, perhaps more importantly, the many attempts to affect or manipulate their decisions, political or otherwise (Peck, 2005). Studying history has purpose beyond demonstrating some degree of familiarity by passing standardized exams. Developing students' historical competence can prepare them for the challenges they faces as *active* citizens who must *critique* information regarding complex issues (e.g., public policy, shared resources, international relations) and *act* according to their well-informed conscience.

In a study that seemingly initiated research concerning students' ability to read and interpret documents *historically*, Wineburg (1991a, 1991b, 1992) found that students rarely had a systematic process for conceptualizing the particular documents presented to them. Inspired by the 1960s Amherst History Project, Wineburg asked a class of high school students and professional historians to use eight written documents and three visual documents to reason about what happened at Lexington Green on April 19, 1775.

Both groups were asked to think aloud as they engaged the documents, thus allowing a "window into their thinking not afforded by any other methodology" (1992, p. 2). Wineburg found that students lacked three particularly useful protocols, referring to them as heuristics, when interpreting the historical texts: sourcing, contextualizing, and corroborating. Compared with the historians, the students rarely looked for the document's creator; instead they often read the texts without addressing the author's possible biases or point of view. Students also rarely thought about the texts in relations to exactly where and when they were created, they failed to contextualize the documents into a specific place and time. Corroborating evidence found in the documents was the other missing protocol; students did not flip back-and-forth between documents to verify facts presented as evidence. Wineburg attributed these deficiencies, at least partially, to the epistemological perspective evidently shared by the students, but not the historians. The professionals approached the documents as suggestions of what may have occurred that day in Massachusetts and affixed many qualifications to the reluctant conclusions they were asked to make. While the historians seemed to know they were *constructing* history, the students assumed they were being asked to *find* it. Although the students demonstrated no systematic routine for analysis, they sought clear connections and avoided conflicting evidence; moreover, they offered definitive conclusions regarding the event.

It is significant that in Wineburg's (1991a, 1991b, 1992) research, students were presented with "raw materials" and no specific guidance with which to interpret them. Without structure the students resorted to employing the only interpretive tools they know; Kahneman and Tversky (1973) call this the "availability heuristic" (p. 1) For

students to think more historically about documents, they need to form the interpretive habits that come more naturally to learned academicians, specifically historians.

In 2000, Lee and Ashby studied the progression of historical understanding in British students ages seven to fourteen. This study continued their line of research of Concepts of History and Teaching Approaches, the CHATA project, and sought to map the challenges younger students experience when studying and reconciling conflicting historical accounts. From the written responses and subsequent interviews of twenty primary students, Lee and Ashby identified a six-step progression in historical understanding: thinking of the part as given set of facts that authorities convey, thinking of the past as inaccessible, seeing the past as a set of stories, recognizing the biases of the stories to assign credibility, accepting the past as told from *someone's* viewpoint, and finally understanding history as a reconstruction of evidence strands. The researchers found that students could be taught to progress through the identified stages, however they would have to be explicitly lead by their teachers. Without specific scaffolding, changes did not occur in the students approach to understanding the past. Lee and Ashby suggest that students need to be taught the *framework* for assimilating new data and for accurate and meaningful historical interpretation, not to produce "miniature professional historians" (p. 204) but to encourage citizens to critique information, appreciate multiple perspectives, question traditions, and thus become thoughtful consumers of the information they encounter.

On this point, Shemilt (2000) agrees; he cites data from his study of British teachers trying to teach students that "history" is a *form* of knowing. Shemilt assisted in the Schools History Project (SHP) where students ages thirteen to sixteen were taught to

adjudicate competing accounts, evaluate explanations, and determine credibility en route to making logical, evidence-based conclusions of the past. From observation of students working with historical accounts and subsequent interviews, Shemilt identified four levels or historical thought that, although different from, are complimentary to Lee and Ashby's progressive stages. Shemilt found that his participating students began thinking of history in chronological landmarks: events that had little or no connection to other events. In the next level, students began to recognize relationships between apparently unconnected events by finding common themes and causal relationships, next, students identified the dynamic convergence of three "interlocking dimensions" (p. 97) that animate human behavior: economics, socio-political, and intellectual and religious. In the final, most advanced level, students recognized that "truth" and "validity" are often temporal aspects of history and that coherent and rational alternative explanations of history must be accepted.

In both previous studies, Lee and Ashby (2000) and Shemilt (2000), the determining criteria from progressing to a more sophisticated historical understanding seemed to be the amount of scaffolding provided by the teachers. Both studies found younger students thinking more historically than older students *when provided specific guidance*. Although working with older students, Stearns (2000) concluded similar results when researching college freshman and their development of historical analysis abilities. Stearns acknowledged that forming the habits of historical thinking would take longer than one semester, yet he attempted to better understand where the concept of "comparison" fit into the process. His student-participants unsuccessfully wrote a "comparative paper" after having been assigned to read narrative summaries of two

differing cultures. Stearns then designed subsequent exercises that included a template to guide students in charting similarities and differences, and determining relevant data to include in the comparison. The comparative papers turned-in with the templates were considerably more successful regarding historical thinking, and an overwhelming majority of interviewed students claimed (a) the additional structure helped them think through the comparative process, and (b) that the subsequent discussion sessions were much livelier and more productive. Stearns's (2000) findings are consistent with the earlier studies that when instructions are more explicit and thorough, students are better able to use historical accounts to make logical conclusions of the past.

Using Wineburg's (1991) research as a point of departure, Yeager and Davis (1996) wanted to know how in-service teachers would read and interpret the same documents. Employing similar "think aloud" methodological protocols and including a post-intervention interview, they found three "types" or "styles" of historical interpreter. The two most common types were the "entertainer" and "accuracy seeker" who read the documents very much like Wineburg's students, rarely sourcing, contextualizing, or corroborating evidence presented from the texts. Respectively, they discussed liking documents according to their potential to captivate and selectively read for information already accepted as "fact." The minority type was the "constructivist" who read the documents similar to a historian, looking for biases, placing texts into specific times and places, and checking details across documents. As the title implies, this type of interpreter approached the tasks under the assumption that they were constructing a version of the past, not simply finding the right one. Yeager and Davis found that the professional development of teachers, both pre-service and in-service, was of little consequence as it

did not introduce or reinforce thinking historically. Also, they found that prior content knowledge was not a relevant factor when interpreting the texts; the very knowledgeable and the slightly knowledgeable reacted in a very similar fashion. The researchers tentatively concluded that too little historical thinking was taught to teachers, and hypothesized that teachers must be able to think historically before expecting the same from their students.

Bohan and Davis (1998) also modeled their study on Wineburg's (1991a, 1991b, 1992) research, however they asked three high school social studies teachers to "think aloud" with sixteen documents concerning the atomic bombing of Hiroshima, Japan. In addition to interpreting the texts, the teachers were also asked to write a narrative account of the bombing and describe (in writing) how they would use the texts with students. As with Yeager and Davis (1996) and Wineburg (1991a, 1991b, 1992), Bohan and Davis found that their participants' inexperience with thinking historically was manifest in their inability to use the documents meaningfully to understand the past. Again, students failed to account for the creators of the texts on their biases or attempt to verify information among or across documents to reconcile inconsistencies. One participant was reported to have sought the particular context (time and place) of some of the documents, however she did so unsuccessfully —likely due to insufficient background knowledge. Bohan and Davis suggest that these teachers selected the documents they would use with students for engagement or support of a previously determined conclusion: reasons inconsistent with historical thinking. The researchers also suggest that teachers need much more practice with sourcing, contextualizing, and corroborating evidence from historical texts.

Seixas (1998) also studied student-teachers' abilities to select and subsequently interpret historical documents. The four participants were asked to select a text and develop a sequence of questions to help guide students through analyzing it meaningfully. As in the previously described studies, Seixas's participants were provided no specific structure or guidance in completing the task, however unlike the other studies Seixas did not employ a "think aloud" methodology (participants filed written responses and were interviewed thereafter). The student-teachers found the selection of a document to be a challenge and their historical analyses even more so. While two participants selected written texts and the other two selected visual texts, all four student-teachers demonstrated unfamiliarity with thinking historically about their selections. Seixas deemed three of the selected texts "inaccessible" for secondary students according to length, vocabulary, and grammar (or artists' conventions with visual texts), and allusions to archaic cultural references. Again the issue of employing the "availability heuristic" arose; two teachers imposed their contemporary moral views onto their reading and analysis of the texts. No participant explicitly addressed the biases of the texts' creators, however one student-teacher wanted students to recognize that the photographer had arranged the scene and proposed a question to illicit that observation.

Constructivists who employ a pedagogy that includes the model of teaching history as described in the studies above, attempt to develop in students the thinking skills most commonly associated with historians; not to develop scores of professional historians, but to introduce and allow the practice of skills needed to produce a reflective understanding of their contemporary existence. Covering textbook material, concentrating on (and often memorizing) summarized information concerning mostly

politics, diplomacy and conflict is unlikely to result in a meaningful understanding of the past (Davidson & Lytle, 1992; Levstik & Barton, 1994; 2001). In fact this way of teaching and learning may actually train what constructivists would call "bad" habits that future citizens would employ in critiquing information they use to judge current events. However, a sustained, in-depth historical investigation is more likely to help students to make real-life, meaningful sense of the past *and* the present (Wellman & Gelman, 1992). The tools of historical investigation that students learn (how to find information, evaluate evidence, reconcile conflicting accounts, and create an original narrative to explain events past and present) are transferable to the present (Levstik & Barton, 1994; 2001; Wellman & Gelman, 1992). These goals are consistent with the constructivist's view of conscientious citizenship.

Yet the rationale for studying history in secondary schools remains significantly different from that of professional historians (Thornton, 1991). Students can employ the tools of historical investigation to learn and develop the behaviors and characteristics demanded of thoughtful, active democratic citizens. A historical-investigative framework introduces and develops the knowledge, skills, and attitudes necessary to make intelligent decisions concerning conflicting political and public issues (Engle, 1976; Engle & Ochoa, 1986; Oliver & Shaver, 1966). Some social studies researchers have emphasized the importance of students being, not simply becoming, active citizens; encouraging them to exert their political influence (Newmann et. al., 1996). The type of historical deliberation mentioned above has been called the most significant component of democratically-minded social studies education because, it is argued, an open-minded "exploratory dialogue" derived from a reflective study of information is the foundation of

a participatory and pluralistic democratic society (Barton & Levstik, 2004). While neither traditionalists nor constructivists tend to be prepared to meaningfully engage in historical thinking teaching strategies, growing research suggests that thinking more *historically* about various forms of visual and multimedia data enhances students' and teachers' respective abilities to evaluate, make decisions, and think critically (Epstein, 1994a; 1994b; Marcus, et al., 2006; Seixas, 1998; Wineburg, 1999). The next section of this dissertation addresses the role visual data might be able to play in social studies education.

The Role Visual Data Can Play in Social Studies Education

Adults tend to use written documents—newspapers, magazines, letters, legal contracts—to make sense of the world, but texts tend to hold far less significance for contemporary teenagers. Instead, they tend to rely more on visual data—online videos, photographs, cartoons, feature films, video games—to form conclusions about the world (Burns, 2006; Callow, 2006). Perhaps this reliance on visual data is because information in the twenty-first century is more often represented in visual forms (Burns, 2006). Students learn from and *in* environments that are saturated with multimedia; "with many learning to read, write, listen, speak, and make meaning of their lives through . . . media" (Aiex, 1988, p. 47).

Encouraging teachers to strengthen student agency for interpreting visual source materials is also consistent with current trends in professional historiography. Historian Peter Burke (2001a, 2001b) writes that he and many of his colleagues have recently widened their interests considerably by rethinking what constitutes a historical document worthy of interpretation. A growing number of historians now routinely include visual

images in their interpreting of evidence. Burke (1994) claims this allows a broader understanding of a context surrounding individuals and events under investigation; sketches, pictures or other visual data can add information otherwise unavailable from text-only resources.

Connecting this phenomenon to classroom research, Seixas (2001) encourages teachers to rethink texts to include cultural artifacts including films, receipts, grocery lists, and songs. Other researchers have called for a pedagogy that helps students recognize how such cultural artifacts powerfully work in their lives (Giroux, 1992, 1997). Stereotypes, group identities, public concerns and power relationships are all negotiated through society's production, circulation and consumption of visual images (Werner, 2002). Furthermore, the market-production and cultural-consumption of images can authorize or contest widely held perceptions of normative behavior and its desirability. These powerfully persuasive messages require equally powerful tools for discussion, critique and analysis (Callow, 2006). Some argue that members of politically marginalized and lower socio-economic communities are in most need of these skills because visuals tends to promote traditional social relationships (Callow, 2006; Werner, 2002). To be academically successful, students must be proficient readers and writers – they must be traditionally literate. However, to successfully navigate the world outside schools, they must also be visually literate—able to decode, comprehend, and analyze the elements, messages and values communicated by images (Burns, 2006; Callow, 2005). Students in all content areas are almost exclusively presented with text-based instruction, sharply contrasting their social experiences away from schools (Burns, 2006). Research strongly suggests that teachers tend to neglect potentially rich visual literacy strategies,

and instead rely heavily on texts and workbooks, writing assignments, and other strategies that emphasize traditional literacy (Ball & Cohen, 1996; Ben-Peretz, 1990; Caron, 2005).

Enhancing traditional instruction with historically relevant visual images (e.g., paintings, drawings, sculptures, photos, architecture) provides more than an engaging activity, it also constitutes a dynamic opportunity for all students to learn and hone valuable interpretive skills to make sense of the world (Marcus, et al., 2006; Schoenfeldt, 2002). Research also suggests that providing visuals in combination with text and speech enhances retention and transfer of data (Mayer, 2001; Nesbit & Adescope, 2006). Recently published textbook chapters typically contain patchwork collections of written and visual data, however, many argue that textbooks present visuals cosmetically, including captions nearby that explain only the "correct" information to be gleaned (Felton & Allen, 1990; Werner; 2002). It is possible that textbooks could be structured differently to be more constructivist and, in fact, the Teachers Curriculum Institute recently published *History Alive!* a textbook (2002) specifically formatted to create opportunities for students to interpret and discover. However, even this outlying example fails to have students consistently think historically about visual data. Although pictures, charts, maps, graphic organizers, flowcharts, timelines, and tables have a long history of inclusion within the social studies, many researchers suggest they are not an authentic, or meaningful use of visual resource materials (Howard, 2001; Nesbit & Adescope, 2006). On the occasion when visual documents are employed, they tend to be used as support for an already derived understanding of the past, not as aides to help construct one as constructivists advocate (Callow, 2006; Seixas, 1998). Again, this is not how historians

use visual documents, nor does it introduce or develop the critical consciousness that citizens need to interpret the visual data that inundate their lives. Werner (2002) suggests that teachers and curriculum designers should concentrate on the "relationship" between a visual and its viewer because they "comprise an irreducible unit in which both share authority" (p. 405).

While many reformers over the past several decades have called for teachers to employ historical images in their instruction (see Burns, 2006; Felton & Allen, 1990; Giroux, 1992, 1993; Vogler, 2004; Howard, 2001; Seixas, 2001; Werner, 2002), I have only identified the following four scientific studies of teachers' and students' semiotics and how they might go about thinking historically about visual resources: Levstik and Barton (1994, 1994), Callow (2006), VanSledright (2002), and Wineburg (1999).

Levstik and Barton (1994, 1996) asked 58 American elementary students to place nine visual documents chronologically from "longest ago" to "closest to now." Many of these students identified and linked together historical information and a few thought deeply about some of the values conveyed through the images. However, a majority of the students were "uncritical of their veracity" (1994, p. 192) and without overt instruction they often misled themselves into ahistorical assumptions and conclusions. More optimistically, Levstik and Barton found that with constructivist instruction consistently mediating students' interpretations, they tended to revisit their interpretations with new evidentiary data (the study described this as a *dynamic perspective*) or continually revisit the whole sequence of events to alter their tentatively drawn conclusions (*synoptic perspective*).

Callow (2005) found that a class of year-six students in Australia (11-12 year olds) were able to construct a meaningful understanding of that nation's democratic style and electoral system from the information they gathered from interpreting written and visual texts. While the study concentrated on students' ability to learn specific vocabulary and demonstrate their knowledge through a believable "project," it also required students to recognize political positions in images. With explicit directions students were able to successfully recognize historical perspectives as conveyed via political posters from the past, and then apply their skill to create their own from an assigned modern perspective.

VanSledright (2002) found that American students in a fifth-grade class (9-10 year olds) from Maryland were more motivated and self-directed learners when working with written and visual texts. With explicit directions participating students developed a deeper understanding of history through an inquiry-based approach that employed visual document analysis than when memorizing data. Students also seemed to retain the information and were able to apply it to new situations.

Wineburg (1999) found that eight American twelfth-graders (17-18 year olds) from California were less likely to make meaningful decisions about the past without explicit directions. The student were merely presented with visual documents and asked to think-aloud about which of them "most accurately depicted what went on." Left to their own devices, students rather arbitrarily and capriciously selected an image without any systematic reflection or comparison across outside knowledge or other documents, written or visual. Moreover, students tended to rely on there sense of historical inevitability – carelessly binding a cause to an unrelated effect.

In each of the four studies mentioned above, researchers found that even with explicit directions, thinking historically and interpreting visuals was very challenging for students. Without concrete instructions there was virtually no historical thinking. Students struggled mightily with recognizing why the creator of the image may be a significant clue for its interpretation. Bias and point of view were perhaps the most difficult concepts for the respective students to grasp. Also, the content knowledge needed to decode intended meanings and conventions of visual artists limited the success of the students. Finally, students lacked the habits of mind (i.e., souring, contextualizing and corroborating) that often lead to meaningful interpretations of texts. Interestingly, while all of the studies included at least one photograph, none specifically addressed the differences found in interpreting an image as opposed to a traditional textual document.

Historical photographs. Photographs may be the most prevalent visual art form in contemporary American society. Modern cameras are small and seem to store a disproportionately large number of pictures, making it difficult for aficionados to imagine when cameras were large, cumbersome and expensive. In 1973, Sontag (p.33) called photography a popular social right and a tool of self-expression; today's disposable film cameras, handheld digital cameras, and image-capturing cellular phones make photography even more so presently. The camera's omnipresence, often used in combination with Internet websites like www.facebook.com, www.myspace.com, and www.youtube.com suggests that modern citizens consider their lives to be valuable, fascinating or otherwise worthy of recording, remembering, or sharing.

For several millennia, painters, sketch artists, architects and sculptures created art with what Johnson (2004, p. 6) calls "great fecundity." Similarly, photographers have

been creating from 1839 when Nicéphore Niépce produced the “light-tight box” and the world’s first photograph, *View from his window at Gras*. Louis Daguerre refined the process into a mobile apparatus soon thereafter, and virtually everything and everyone since has been photographed (Sontag, 1973; Strickland, 1992).

Unlike movies, online videos, television programs, and video games that present a director’s orchestrated vision, still photographs require much more agency from viewers as they determine the order, pace, and timing of images (Sontag, 1973). Because they are small, and more recently digitally formatted, images are very likely to be carried in someone’s wallet or purse, collected into books or family albums, framed and hung on walls, placed in lockers and cubicles, displayed as computer desktop-backgrounds and on cell phone and iPod screens. Perhaps this familiarity with viewing and practicing photography explains why many people consider photographs “pieces of the world rather than statements of it” (Sontag, 1973, p. 5). This presumption is not held in the case of fine arts. The gap between professional photographer and amateur photographer is commonly thought to be much smaller than that between professional and amateur painters, sketch artists, architects, and sculptors. Fine-artist are typically thought to be *creating art*, while many consider photographers to be *capturing reality* (Johnson, 2004).

Some, however, have rejected the notion that photographs are intrinsically true or objective and recognize that they too interpret and manipulate reality (Peeler, 1990). For example, photograph can be easily reduced or enlarged, darkened or lightened, airbrushed, cropped or otherwise changed to alter its meeting. Additionally, even before a photograph is captured, its photographer has made several interpretive decisions that directly influence a future viewer’s experience. With each photograph, photographers

must decide what to include and exclude from their viewfinders, how much light and from what direction to allow onto their subjects, to employ a sharp or soft focus, and what to highlight in the foreground and what to place in the background (Davidson & Lytle, 1992). These decisions culminate in emphases that photographers always and explicitly impose on their audience; these are deliberate and unavoidable impositions of the photographer's standards of truth, beauty and that which has value (Thum & Thum, 1974). The following are but two historical examples of the aforementioned decisions: Mathew Brady dragged bodies into what he called *better position* for many of his Civil War photos and Ansel Adams deliberately selected angles to omit *eye sores* from many of his nature photographs. As Gilbert (1995, p. 217) writes: "the camera can't lie . . . but the photographer can."

Throughout its history, the camera has been used to produce photographs that inform, persuade, manipulate, and even implicate and exonerate (Sontag, 1973; Thum & Thum, 1974). When carefully critiqued, photographs can revel as much about the photographer as they do about the image they record. Like Susan Sontag a decade earlier, Alan Trachtenberg (1989, p. xvi) called photographs "not simple depictions, but constructions" of reality. Because photographers are image-makers and image-arrangers, photographs have almost always had a clear political function—for ideologues to emphatically communicate their views. Social reformers of the 1890s used Jacob Riis's *How The Other Half Lives*, a photographic collection of New York City's Lower East Side and its abject poverty and filth, to convince then-governor Theodore Roosevelt to extensively renovate (Davidson & Lytle, 1992). Similarly, early 1900s Pittsburg, Pennsylvania labor unions used Lewis Hine's photographs of child workers and

dangerous working conditions to advance their agendas with the public and win debates with management (Peeler, 1990; Seixas, 1987).

Julia Margaret Cameron sought to minimize Victorian England's rigid social distinctions by juxtaposing photographs of the famous (Alfred, Lord Tennyson, Charles Darwin, and Robert Browning) along side the non-famous (passerby invitees from London's streets) sitting in similar poses and under similar lighting (Gilbert, 1995). Annie Leibovitz has attempted to make similar statements concerning who and what has value in the twenty-first century. Leibovitz, perhaps America's most well-known photographer, routinely displays pictures of celebrities and ordinary people, both displaying similar life experiences (Liebovitz, 2006; McGuigan, 2006). Although separated by more than a century, Cameron and Leibovitz have attempted to equate or normalize human experiences by *translating* them into images that virtually everyone can understand. Diane Arbus attempted a similar feat in 1960s America. She specifically photographed people with physical abnormalities, amputees, and aging nudists in order to challenge individuals' conceptions regarding what should be looked at and what has value (Gilbert, 1995). A decade later, Robert Mapplethorpe used photographs of sadomachism and homoeroticism to make similar challenges to the values and norms of modern society – resulting in litigation and protests (Morrisroe, 1995).

The works of Arbus and Mapplethorpe illustrate the potentially contentious interplay between photographs and public policy—issues of privacy, free speech, censorship, and the source of funding for the arts. Sontag (1973) claimed that photographs either create a moral position or reinforce an already existing one by stimulating the impulse to consider, or reconsider, an issue. Photographers throughout the

past seem to have assumed the absolute privilege to find, ignore or include, emphasize and record anything in the effort to awaken citizens' respective consciences and goad their moral sense (Thum & Thum, 1974). Stange (1989) argues that this assumed privilege motivated the Farm Security Administration (FSA) in the 1930s as it sought to document that era's poorest. Walker Evans, Dorothea Lange, and others took dozens of photographs of their volunteer subjects in order to get "the precise expression on [their] face that supported [the photographers] notions about poverty. . . dignity. . . and exploitation" (Sontag, 1973, p. 6). FSA project manager Roy Stryker provided scripts to his photographers, directing them to capture specific images that he could use to communicate and promote his John Dewey-inspired progressive ideals (Stange, 1989). Stryker even changed the project's direction in 1942 when America entered the Second World War. He then scripted Evans and Lange to collect images of people "with a little spirit…more contented-looking" (Sontag, 1973, p. 62). Stryker parlayed his orchestration of the FSA's emotional and moralistic photographic documentary into a "wartime propaganda agency, then moved on to (lucrative) public relations efforts for Standard Oil (Peeler, 1990, p. 509).

Students should be taught to read historical photographs in an effort to prepare them for Stryker's modern-day counterparts who manipulate the deluge of visual data, including photographs, comprising the world away from school. Democratic citizens need the interpretive tools necessary to identify and evaluate the powerful messages and arguments that are presented to them. Again, if democracy is to be something more than a term students memorize from their textbooks, citizens must be able to think and act in a way that their well-informed conscience allows.

Difficulties in teaching and learning with historical photographs. Historical document analysis introduces significant challenges to learning. Initially, learners must consider the tasks and instruction centered around visual data relevant and worthwhile, because only then are they likely to earnestly contemplate the content material (Levstik & Barton, 2001; VanSledright, 2002). Once teachers convince students to actively engage documents, they must then convince them that history is *constructed* from weaving together evidence trails (Davidson & Lytle, 1992). Also, students rarely accept that various people can view the same event and think differently about it (Afflerbach & VanSledright, 2001). Another obstacle is that teachers and students are typically unfamiliar with the vocabulary, syntax, and grammar of most historical genres (Unsworth, 1999).

In regard to reading a visual text, successful interpretation necessitates knowledge of the historical content and of common artistic conventions and references to cultural norms of the time period (Lowenthal, 2000). Without this knowledge foundation, learners often shape their attitudes toward the past through their understandings of contemporary issues. This *presentism* can interject unnecessary political or moral dispositions and lead to mis-interpretations (Seixas, 1998). Kahneman and Tversky (1973) call this phenomenon the "availability heuristic" and claim that it leads students to solve interpretation problems with only the cognitive tools that are easily available to them. Teachers need to be able to combat this and develop the mental acuity necessary to know what is needed in order to interpret documents meaningfully.

Nesting historical photographs in the prior discussion of the rival pedagogical approaches, traditionalists would again claim that students' content knowledge is the key

to them understanding historical photographs. Constructivists, however, would implement photographs very differently. They would employ a historical photograph to engage students, to motivate them to research and discover information needed to understand the photograph. In other words, constructivists might liken photographs to *mental pegs* upon which to *hang* facts; historical interpretation is thought to lead to stronger linkages.

Consequently, that which makes visuals so challenging for students to interpret, their richly embedded pictorial messages (Burns, 2006), also provides rationale for introducing them into problem-centered learning environments. Explicating visual documents requires the command of decoding symbols and recognizing historical references through images (Hietzman, 1996); where students skillfully act upon, not absorb, information. According to both Greenberg (2002) and Sexias (2001), analyzing the dense narrative within textual and visual historical documents is an active and authentic task required of contentious world citizenship. Moreover, when visual documents are integrated into a social studies curriculum, they can motivate students to thoughtfully engage the content material (Jacobs, 2002) and attempt to understand traditional themes and concepts (Epstein, 1994a).

Teachers also experience significant challenges when designing and executing classroom experiences involving document analysis. Among the most significant challenges are selecting worthwhile documents, their own historical analysis abilities, and formulating and sequencing questions to induce thoughtful student responses (Burns, 2006; Seixas, 1998; Vogler, 2004).

Educative Curriculum Materials

The many attempts to use curriculum as an agent for education reform – the 1893 National Education Association's Committee of Ten, the 1918 Cardinal Principles of Secondary Education, the 1920s and 1960s progressive movements – have resulted, at best, in minimal successes (Martorella, 2001). Curricular reforms seem to have been founded on the assumption that a basic, hierarchical structure to learning exists, and that teachers need only to discover and follow it in order to improve the quality of education. In each of these reforms efforts, professionals and scholars were extraordinarily prolific in their production of materials to create thoughtful, active, and stimulating classroom environments and turn students into intellectual workers (Fenton, 1967; Martorella, 2001). Amid their promise, however, these reforms were unsuccessful in significantly influencing classroom practice. Over a century later, the nation's social studies classrooms largely remain teacher-centered and expository (Martorella, 2001; Massialas, 1992). Lockwood (1985) suggested that the proposed changes were simply too drastic for most communities and that reading levels of the student-materials were too high for typical secondary students. Rossi (1995) added that failing to attend to ethnic and gender differences also led teachers and students to virtually ignore the reform materials.

Curriculum developers typically consider their reform materials as exemplars of what research suggests is possible, but teachers are often pessimistic that theory-based materials will "work" with their students. Both sides agree that the planning and decision-making that truly counts is that which classroom teachers complete – simply because it is the planning that is implemented (Lloyd, 1999).

Developing professional teaching knowledge. Professionals learn from each other: they exchange ideas, collaborate, read and contribute to journals, and keep abreast of contemporary movements in their field. Teachers, however, do not typically engage in the aforementioned activities. In regard to refining their craft – managing classrooms and designing experiences – teachers tend to rely exclusively on anecdotes stemming from their direct, personal experiences (Saye, et al., 2005). Consequently, practitioners' knowledge of their craft (hereafter craft knowledge) is situated in their classrooms and fashioned as pragmatic solutions to specific teaching challenges. Most teachers socialized into this model consider teaching a highly personal profession where the most valuable skills are learned on-the-job, and therefore disregard suggestions from teacher-educators and researchers.

Many have suggested that part of the challenge to refining a repertoire is that teachers rarely trust new strategies before actually seeing them work in classrooms (Cuban, 1984; Lortie, 2002; McNiel, 2002). However, being physically isolated from colleagues, having too little time for meaningful professional development (Onosko, 1991), and experiencing a lack of infrastructure to build thoughtful communities (Thomas, Wineburg, Grossman, Myhre, & Woolworth, 1998) comprise significant barriers to teacher collaboration.

Saye, et al. (2005) and Heibert, et al. (2005) suggest that an individual's personally derived craft knowledge alone does not amount to a *professional* knowledge base. Many school systems' and states' teaching accreditation offices seem to agree – they often require teachers to accumulate credits awarded for attending professional development workshops, conferences, and seminars. However, these professional

development opportunities are rarely organized to coherently and consistently support teacher-learning. Instead, school systems typically employ an “a la carte” approach where teachers choose to attend (or not) the opportunities provided.

Some have suggested a more concentrated effort to develop teachers’ professional teaching knowledge—merging their craft knowledge with general principles derived from academic research (hereafter researcher knowledge). Education researchers develop understandings of schooling from repeated scientific field-tests and reviews of literature germane to their specific topic, then publish their findings for critique. Saye, et al. (2005, p. 2-3) say it succinctly “craft knowledge is concrete and specific. . . . (and) private” while “researcher knowledge is public, propositional, and replicable.” Traditionally, teachers compartmentalize the two; employing what they have learned from experience and discounting much of what researchers suggest may be fruitful. Because of their unique placement and influence on classroom experiences, curriculum materials maybe a well-positioned vehicle to develop professional teaching knowledge that integrates practitioners’ grounded understanding of the classroom with the findings of researchers. This is not to suggest that *all* researchers arrive at the same conclusions or espouse the same vision and purpose of schooling—clearly they do not. However, the overall goal of developing professional teaching knowledge is to provide teachers with a sound rationale beyond their anecdotal experiences, to encourage collaboration, and to keep abreast of current movements.

These goals are well beyond the scope of traditional social studies curriculum materials and professional development opportunities that typically impart only cursory information and procedures for using specific resources. Additionally, these goals exceed

expectations set forth by newly developed *educative* curriculum materials, which will be discussed further in the forgoing section of this chapter. Educative curriculum materials often present teachers with only researcher information regarding content, pedagogy and pedagogical content knowledge. Arguably, the key component of developing professional teaching knowledge is eliciting teachers' *reflection* on their practice, and in this study I attempt this through positing questions. These prompts represent what Collins, Brown, and Duguid (1989) call "cognitive apprenticeship" – experts leading novices toward more sophisticated thinking.

More specifically, cognitive apprenticeship is a model of instruction that applies lessons learned from the traditional enculturation of artisans. In the fine arts, novices apprentice with experts to learn a craft; an expert demonstrates skills while the novice watches, then the novice attempts some of the minor skills while the expert watches closely, offers feedback and critique. Eventually, the novice becomes more expert in the desired skills through the guidance, critique and opportunity provided by the more experienced and skilled artisan.

Curriculum materials. Research suggests that teachers rely heavily on commercially marketed planning resources, perhaps explaining why the adoption and use of such materials is a common strategy for attempting to reform classroom instruction (Ball & Cohen, 1996; Ben-Peretz, 1990; Caron, 2005; Goodlad, 1984). When teachers employ someone else's lesson materials, they typically do so with little alteration and thus relinquish great influence concerning classroom events (Cohen & Ball, 1999). Ironically, while employing a combination of textbooks, pacing guides, programs of study, workbooks and other pre-packaged materials, teachers frequently claim to be

dissatisfied with them (Ben-Peretz, 1990; Grossman & Thompson, 2004). Teachers often complain that curriculum developers remove much of the individuality and personality essential for successful teaching (Ball & Cohen, 1996). Teachers also claim that omissions and exclusions within the materials force them to disregard proven strategies, employ unfamiliar strategies, or devise impromptu, often unsuccessful, strategies (Remillard, 2002, 2005). Conventional planning resources tend to be either too vague (e.g., state and local curricular frameworks) or too specific (e.g., videos and viewing guide worksheets) to enhance a teacher's professional abilities to any measurable degree (Grossman & Thompson, 2004). In failing to acknowledge or anticipate the powerful role teachers play in determining exactly how their materials will be executed, designers may significantly limit their materials' potential effectiveness (Berman & McLaughlin, 1978; Stake & Easley, 1978; Sarason, 1982; Remillard, 2005).

Curriculum materials have traditionally sought to teach students, with teachers only facilitating or dispensing classroom experiences. In concentrating on student-learning, curriculum materials often neglect the parallel teacher-learning necessary for their successful implementation (Dow, 1991; Powell, Farrer, & Cohen, 1985; Putnam & Borko, 2000; Sarason, 1982). Some advocates have argued that education reform must begin with a redesigning of curriculum materials to educate teachers along with their students because curriculum materials are the single most influential criteria determining what occurs in the nation's classrooms (Ball & Cohen, 1996; Cohen & Ball, 1999; Tyson-Bernstein & Woodward, 1991). If redesigned, these materials can teach teachers how to implement new instructional strategies and to ignore traditional methodologies that have become unsuitable (Remillard, 2000). Because, teachers quickly become

reliant on available curriculum materials, and because they rarely adapt them to better meet the needs of their individual learning environments, teachers (especially novices) must be taught to integrate the various components of curriculum materials into a cohesive, successful teaching technique (Grossman & Thompson, 2004).

Whereas traditional curriculum materials are designed to promote student learning, Davis and Krajcik (2005) use the term *educative curriculum materials* to refer to planning resources designed specifically for teacher learning. Ideally, teachers who use educative curriculum materials to prepare classroom events would experience an integration of content and pedagogy, leading to a third aspect, what Shulman (1986) calls pedagogical content knowledge (PCK). Content, of course, is subject matter specific to each discipline, pedagogy refers to the general instructional strategies employed to help students learn, and pedagogical content knowledge targets teachers' knowledge of specific strategies and practices, various ways to represent content and encourage student thinking about ideals specific to a given discipline. Educative curriculum materials are not designed to be what Apple and Jungck (1990) call *teacher-proof*, nor are they intended to, as Dow (1991) calls, *independently work on* students. They are specifically designed to elicit a conversation between teachers and the planning resources.

The few projects that are discussed in the ensuing section of this chapter claim to be educative offer a clear template for designers to begin repurposing curriculum materials. First, educative curriculum materials can support and supplement teacher's knowledge of content specific subject matter and understanding of related concepts and theories (Ball & Cohen, 1996; Davis & Krajcik, 2005; Schneider, et al., 2000). This can take the form of supplementary notes, overviews or explanations that lead teachers to

consider the content in more robust ways beyond the reading level of students (Schneider, et al., 2000). This can promote specific learning of facts, themes, and concepts within a given discipline. Along with concise explanations, educative curriculum materials can provide guides for teachers to anticipate misconceptions students bring into classrooms (Davis & Krajcik, 2005). Teachers can use these materials to develop ideas how to organize and teach social studies information in more meaningful ways.

Second, educative curriculum materials can develop pedagogical thinking as they help guide teachers in making decisions regarding instruction. Instead of simply guiding practice, these materials may be able to develop teachers' abilities to think about the underlying rationale of teaching strategies. This relates directly to professional teaching knowledge in that materials presented could ask questions of teachers eliciting a blending of craft and researcher knowledge. Textual notes or audio-video multimedia may offer an opportunity for teachers to view colleagues discussing their experiences in learning styles, multiple intelligences, and suggested best practices for modern learners.

Third, educative curriculum materials can develop pedagogical content knowledge because they regard teachers as curriculum co-designers in the sense that they too bring creativity and originality to the relationship. Thus, these newly purposed materials call for teachers to adapt, shape, and interpret teaching strategies as they plan and implement instruction. New teaching strategies can be added to a teacher's personal inventory of classroom procedures (Ball & Cohen, 1996; Collopy, 2003; Davis & Krajcik, 2005; Remilliard, 2000). Teacher-learning and subsequent change in classroom procedure seem to relate very closely (Remillard, 2000). Teachers' practice can include support for connecting themes from previous units, and foreshadow future ones (Crocco,

Davis, & the National Council for the Social Studies, 2002). Educative curriculum materials can also support teachers in developing what Davis and Krajcik (2005, p. 5) call "pedagogical design capacity" the skill of constructing "progressive, integrated and contextually situated" activities that engage typically uninterested learners.

Educative curriculum materials have not been suggested to solve all the problems teachers experience, but rather provide support in the ways mentioned above, strengthen teacher agency in decision-making, and in so doing, develop professional teaching knowledge.

Traditionally, stakeholders have reviewed and adopted curriculum materials in regard to their advertised potential to promote *student* learning; however, recent studies concerning teacher preparedness suggest that curriculum materials should be considered for their potential to promote *teacher* learning. Creating curriculum materials for prompting teacher learning and developing professional teaching knowledge is a new idea and is yet to be fully developed or researched (Rosaen, Schram, &Herbel-Eisenmann, 2002). Although many curriculum materials may claim to be reform-minded or innovative, Table 2.1 illustrates seven projects that currently claim to be *educative* or that feature significant elements required by the construct.

Table 2.1: Existing educative curriculum materials

Educative Curriculum Materials (Discipline)	Brief description of the supplementary materials to be used in lieu of the traditional text	Educative designs for enhancing **Content Knowledge**	Sample educative scaffolds designed to enhance **Pedagogical Content Knowledge**	Sample educative scaffolds designed to enhance **Pedagogy**
Teaching the Multiparagraph Essay (English)	A sequential nine-week unit particularly for secondary language arts Focuses primarily on the teaching of writing skills Includes brief sections of literary texts, concentrating on two short stories Includes a very brief section detailing a few grammar hints	**Form**: Supplementary notes, literary excerpts, definitions **Format**: Text **Example**: Excerpts from recent literary pieces are provided to familiarize teachers with the most current authors, recent trends and themes in language arts	**Form**: Structured outlines for planning a complete unit **Format**: Text **Example**: Dense suggestions for linking each lesson of a 45-day semester into a comprehensive course of study	**Form**: Explanations why teachers should initiate discussions with students as a powerful instructional technique and subsequent strategies to increase communication **Format**: Text **Example**: Suggestions as to what to expect from students experiencing the lessons and provides scenarios for teachers to anticipate and roll play meaningful exchanges
Curriculum Assess System for Elementary Science "CASES" (Science)	An online environment providing educative curriculum materials to novice elementary science teachers Advocates a scientific inquiry approach to teaching elementary science which necessitates the encouraging of student questions	**Form**: Supplementary notes, teacher scenarios, **Format**: Online and hyperlinked text, interactive discussion message-boards, **Example**: "Images of inquiry" are fictional narratives that describe possible scenarios that novice and less-experienced teachers can learn how to address science specific learning opportunities	**Form**: Supplementary notes, teacher scenarios **Format**: Online and hyperlinked text, interactive discussion message-boards **Example**: Strategies for generating student questions about astronomy and ways to incorporate them into lessons while meeting state and local mandated curriculum	**Form**: Supplementary notes **Format**: Online and hyperlinked text, interactive discussion message-boards **Example**: Providing instructional rationale behind each activity overtly attempting to add to each teachers repertoire of instructional techniques

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Mathematics Plus (Math)	A Harcourt Brace Jovanovich reform-oriented textbook reflecting National Council of Teachers of Math standards 13 chapters, and subsequently divided into "daily-lessons"	**Form**: Supplementary notes **Format**: Text **Example**: A "problem of the day" teachers solve and use to open each lesson; exemplifies the mathematical principle to be taught	**Form**: Supplementary notes **Format**: Text **Example**: A teachers' guide providing suggestions for additional mathematics teaching strategies including those involving calculators	**Form**: Supplementary notes **Format**: Text **Example**: Supplemental materials suggesting and explaining the educative value of additional teaching strategies collaborative
Pacesetter (English)	Concentrates on six units, or the equivalent of one full year of secondary English instruction Includes texts, assignments, activities and assessments	**Form**: Supplementary notes, literary excerpts **Format**: Text **Example**: "Narrative Notes" provide dense explanations for teachers to enhance their understanding of traditionally hard-to-follow concepts	**From**: Supplementary notes **Format**: Text **Example**: Specific graphic organizers, handouts and verbal cues to elicit student meaningful responses Detailed explanations of the purposes behind employing particular assignments for high school language arts students	**Form**: Supplementary notes **Format**: Text **Example**: The materials encourage teachers to incorporate portfolios as an authentic instructional assessment. Helps advise teachers organize their lessons into effective presentations. Materials that include a detailed explanation of the philosophical reasoning supporting each activity.

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Core-Plus Mathematics Project (Math)	A four-year long curriculum for teachers to enact national math standards Multi-week units of instruction built around real-world scenarios, developing and testing theories	**Form**: Supplementary notes **Format**: Text **Example**: Explanations of tables and graphs and equations with different relationships (linear, quadratic, exponential)	**Form**: Supplementary notes, summaries **Format**: Text **Example**: Explanations of how cooperative learning and class-wide discussions are significant to understanding scientific themes and definitions	**Form**: Supplementary notes, summaries **Format**: Text **Example**: explanations of the rationale behind having students work cooperatively, and the benefits of having students work together to create understandings
Force and Motion (Science)	10-Week inquiry based science lesson curricula	**Form**: Supplementary notes, overviews, summaries **Format**: Text **Example**: A supplemental worksheet that explains the idea that standing still could be considered as having a constant velocity of zero.	**Form**: Supplementary notes, **Format**: Text **Example**: An explanation of probable student responses to the demonstrations suggested in the unit materials. Also included are possible answers to the probable responses.	**Form**: Supplementary notes, summaries **Format**: Text **Example**: "Learning sets" to explain the rationale behind sequencing events in a unit to build knowledge upon itself.

Research Studies of Educative Curriculum Materials

Investigating the possible effectiveness of educative curriculum materials "is a new idea and almost no research has been done in this area" (Schneider, et al., 2000, p. 55). The few identified attempts are from science, mathematics, and English curriculum designers who seemingly pioneered the concept of redesigning planning resources with an overt concentration on educating teachers in order to better educate students (Ball & Cohen, 1996; Collopy, 2003; Grossman & Thompson, 2004; Remillard, 1999, 2000; Schneider, Krajcik, Marx, & Solomon, 2000). Evolving iterations of these newly re-purposed curriculum materials emphasize developing teachers' content knowledge, pedagogical reflection, and familiarity with newly emerging theories concerning learning (Collopy, 2003; Davis & Krajcik, 2005; Schneider, et al., 2000). Table 2.2 reveals findings of the seven investigations of educative curriculum materials conducted at the time of this writing. In all seven investigations, researchers found that teachers "acted upon" the materials—they actively read, selected, and considered various passages, and overall made conscious decisions according to their individual learning needs. Consequently, having anticipated many of the teacher's questions, the materials seemed to support teacher-learning in the areas of content and pedagogy. All five identified projects were text-based attempts at having teachers read information to develop and refine competencies. Each of the studies implied to the rest of the field that having teachers concentrate on their own learning, not simply the tools that may facilitate it, can enhance their understanding of content material and teaching strategies.

Lloyd's (1999, 2002) examination of two New England mathematics teachers' experiences with an innovative reform text produced findings related to this study. For

nearly three years Lloyd investigated whether curriculum materials could help teachers make sense of cooperative-learning and exploratory problem-solving as they pertained to teaching high school algebra. Both participants demonstrated great difficulty in accepting the innovations suggested by the materials; they routinely ignored many of the aspects specifically designed to be educative. Through the lens of professional teaching knowledge, the two teachers did not blend together their respective craft knowledge developed from a decade of classroom teaching to the research-based suggestions presented in the materials—they tended to use their craft knowledge as a filter for determining which aspects of researcher knowledge they would accept and implement. Still, when implementing research-based suggestions the teachers rarely reflected substantially on them. Lloyd concluded her study with the following observation and suggestion: teachers have become accustomed to curriculum materials that concentrate on attractive packaging and entertaining delivery, not the construction of teaching knowledge; therefore, curriculum designers who wish to create educative materials should strongly encourage teachers' understanding the rationale behind them.

In her study of two Mid-Western elementary school math teachers using a reform text, Remillard (1999, 2000) found results similar to Lloyd's. Throughout the year-long investigation, the teachers' reading of the text was selective and interpretive—they tended to emphasize aspects their teaching experiences suggested would "work" and ignored the others. Again, the implementation was without substantive reflection. Remillard found that when the teachers' learning occurred, it was when they had to make decisions concerning which specific activities they were to enact with students. The study suggests that curriculum materials intended to be educative should provide explicit

opportunities for teachers to make pedagogical decisions regarding the design of classroom events for their students.

In a third investigation of potentially educative mathematics curriculum materials, Collopy (2003) also studied two Mid-Western elementary teachers for nearly a year as they encountered reform materials. One of her participants matched the profile emerging from the earlier studies (selective reading and overt omissions). The other participant, while admittedly traditional and reluctant towards new pedagogy, offers a different model. This teacher clung to the supplementary materials and employed the research-based suggestions with little alteration. She employed only researcher knowledge in her planning of classroom events, without using her personal craft knowledge. Collopy offered an explanation: although a veteran of eleven years, this teacher was a novice at mathematical theory and conceptual processes (the subject of the materials) and thus embraced the materials as they strengthened her exact weaknesses. Unfortunately, there has been no additional investigation of this particular teacher to determine whether she eventually began to blend together her craft knowledge to the researcher knowledge she so enthusiastically accepted. This teacher demonstrated no professional teacher knowledge; her classroom practice was influenced as greatly by only one-half of it, albeit the researcher rather than the practitioner half, as the participants from the other studies.

Researchers have also investigated the possible role educative curriculum materials can play in reforming secondary science education. Schneider, Krajcik, and Marx (2000) followed three middle school teachers for ten weeks as they implemented a reform curriculum. While each teacher used the materials very differently, they all were reported to have developed a better understanding of science content and pedagogy as a

result of experiences with the curriculum. Schneider, et al. also found that the more the teachers used the materials, the more they learned how to successfully implement the curriculum into practice. The teacher with the most years of service (seventeen years) was found to have learned the most, while the teacher with the least (one year) learned the least; the researchers suggest this is because the veteran used the materials faithfully and the novice discontinued using them mid-study. However, from the data presented in the study, it is very difficult to discern whether the veteran teacher blended her craft knowledge to the researcher knowledge suggested by the materials.

In the final study of educative curriculum materials included in this chapter, Grossman and Thompson (2004) investigated three novice English teachers as they responded to two sets of reform materials. The teachers each had powerful encounters with the curriculum, all three were reported to employ the materials verbatim during their first encounters. However, in subsequent encounters, one teacher adapted the materials to better fit her students. This may have been due in some part to her blending craft and researcher knowledge to form a professional teaching knowledge base form which to design meaningful classroom experiences, but one cannot be sure. The evidence presented in the findings and conclusions sections of the study do not support that hypothesis. The teacher only elaborates on *what* adaptations she made without explaining *why* she made them.

Table 2.2: Research studies of educative curriculum materials

Researchers; Year; *Research Question*	Particular **Features**, **Methods**, and *educative curriculum materials*	Particular **Findings** and **Implications**
Remillard, J.T.; 2000; *Can using a reform-oriented text contribute to teacher learning that is related to changes in math teaching?*	**Features**: Observations of, and bi-weekly interviews from two 4th Grade teachers who planned instruction using a reform-text. **Methods**: *Mathematics Plus*, one-year duration, no professional development accompanied the curriculum materials.	**Findings**: The most fruitful teacher learning occurred when the teachers were prompted by questions to decide exactly how to act upon the text. **Implications**: Curriculum materials should provide "space" for teachers to make decisions concerning their learning environments.
Collopy, R.; 2003; *What effect, in regard to mathematics, did the use of curriculum materials designed to support teacher learning have on two elementary teachers?*	**Features**: Observations and interviews of two veteran upper-elementary teachers **Methods**: *Investigations in Numbers, Data, and Space*, one year duration, no professional development accompanied the curriculum materials during the year.	**Findings:** Curriculum materials designed to support teacher-learning can have significant impact in regard to professional development, but not for all teachers; Teachers' reading of curriculum materials is dynamic and often divergent. **Implications:** Teachers are going to questions the materials, thus designers must anticipate them and build those opportunities into the materials.
Grossman, P. & Thompson, C.; 2004; *How do English (language arts) teachers perceive and use new curriculum materials that are scaffolded for teacher learning?*	**Features**: Classroom documents, observations, as well as individual and group interviews of three elementary school English teachers **Methods**: Two sets of curriculum materials explored: *Pacesetter* and *Teaching the Multiparagraph Essay*, four year study of beginning teachers, no professional development accompanied the materials.	**Findings:** Initial encounters with the materials were very powerful in forming instruction. **Implications**: Curriculum materials should be more comprehensive (in what to teach and how to teach it) as fewer problems are faced when enacting them.

Table 2.2: Research studies of educative curriculum materials

Researchers; Year; *Research Question*	Particular **Features** and **Methods**, *educative curriculum materials*	Particular **Findings** and **Implications**
Lloyd, G.M.; 1999: *How do teachers make sense of the themes of cooperation and exploration as they implement innovative curriculum materials?*	**Features:** The four-week, reform oriented math curriculum **Methods:** *Core-Plus Mathematics Project*, direct teachers toward a more cooperative classroom as the students address real-world problems.	**Findings:** The teachers needed help in not only recognizing the need to reform curriculum, but also how to reform it. Their professional knowledge was enhanced by the reform materials **Implications:** Reforms must address the gap between researchers and classroom teachers
Schneider, R.. Krajcik, J., & Marx, R.; 2000; *What role can educative curriculum materials play in supporting teachers learning new (science and math) practices in the classroom over time?*	**Features**: a projected-based curriculum was a guide, as it had educative features, teachers had a one-week professional development seminar, three Saturday sessions, and weekly in-classroom support offered by university and school personal **Methods**: *Force and Motion*, examining three teachers use of educative features in curriculum materials – also, their classroom practice across a ten-week elementary science unit on force.	**Findings:** Each participating teacher reported that the educative features helped them understand the science and math concepts, instructional strategies, and what students may be thinking. Also, each teacher suggested that subsequent iterations include easier-to-read handouts for their students. The most experienced teacher stopped reading the materials early on. **Implications**: The materials offer professional development inside the classroom, but may need outside opportunities for further discussion. The most novice teacher had the most gains from and the most interaction with the materials.

These investigations also suggest that as teachers plan classroom events with educative curriculum materials, the resulting interaction or conversation significantly contrasts with the traditional planning routine. Traditionally, curriculum is developed for teachers to implement in the classroom with no overt attempts to develop teaching competency. However, teachers using educative curriculum materials may develop their pedagogical content knowledge by making decisions, constructing and critiquing arguments, and refining their understanding of the content material and teaching.

While conventional planning resources are often enthusiastically advertised as "ready-to-use," educative curriculum materials regard teacher interaction with the resources as vital. Focusing on core concepts and treating them in depth, teachers using educative curriculum materials can acquire a firm conceptual base for learning content and pedagogy. Also, by emphasizing potential learning, teachers are situated into a context for learning instructional strategies necessary for leading students to acquire, produce, use, and communicate knowledge.

Technological affordances to enhance educative curriculum materials. Current education reform efforts tend to include some form of technology (Cuban, 2001), but individual teachers' respective mediation of emerging technology tends to determine its effectiveness (Saye, 1998). Surprisingly, the advent of computers and advanced multimedia technologies has had little impact on the pedagogical decision-making of teachers and has therefore enacted little change in the classroom experiences of students (Cuban, 2001). Although often enthusiastic, teachers tend to employ technology infrequently and without reflecting on *why* they are doing so (Burns, 2006; Cuban, 2001). A recent study investigated ways to combat teachers' tendency to intermittently and

unreflectively employ technology. Aust, Newberry, O'Brien, and Thomas (2005) explored ways to refine and evaluate a systemic promotion of thoughtfully integrating technology into teacher-education programs. They initiated what they called *The Learning Generation model* that attempted to create contexts and conditions where technology might be fruitfully integrated; they specifically attempted to promote novice teachers' interest, ownership, and collaboration in implementing presentation software and other educational technologies. Their findings support others' conclusions that teachers are often proficient in their ability to use word processors, online resources, and other basic computer functions—but not so with presentation software. They also reported that teachers often use multimedia presentation software (e.g., Microsoft's PowerPoint® and Apple's Keynote®) "as 'shovelware' to replicate 'chalkboard' displays of text and bulleted list in direct instruction" (p. 192). More optimistically, they suggest that with just minimal training novices may begin to more meaningfully integrate technology; developing problem-centered and project-based lessons. However, without such training, teachers often feel less comfortable and less effective using innovative technologies and often resort to traditional, text-focused, and expository means of instruction (Saye, 1998).

Therefore, convincing teachers of technology's educative potential and developing a comfortable familiarity may be crucial to meaningful reform. While classroom teachers may be becoming more accepting of technology as a partner, even team-teacher (Saye, 1998), in preparing students for competent civic participation, they rarely recognize its potential for professional development. Integrating traditional, student-focused curriculum design with an emerging openness to technology can create

instructional models to better educate teachers (Lampert & Ball, 1998). Successful teacher-concentrated technology initiatives, as with student-concentrated efforts, revolve around integrated, educative strategies that explicitly cultivate professional competencies. Two affordances of electronic technologies that could be employed for educative purposes are: (a) accessing resources that may lead to teacher-learning and (b) establishing communities of likeminded colleagues that may promote professional teaching knowledge.

Online environments offer teachers almost unrestricted access to materials. Instructional tools unimaginable a generation ago, such as Webquests (Milson & Downey, 2001) and Virtual Reality (Sherman & Hicks, 2000; Saye, 2000), offer potentially overwhelming teaching options. However, physical access to resources is not necessarily intellectual access (Howard, 2003). Simply presenting materials to teachers without providing what Kame'enui and Simmons (1999) call the architecture of instruction does little to foster the intellectual growth of teachers or students (Thomas et al., 1998). Environments that offer tremendous access to information are only beneficial when learners, in this case teachers, become active co-creators of how best use that information. (Land, 2000). In this regard, technology allows teachers to maximize time, a valuable educational commodity. In a few minutes of browsing the Internet, teachers can find lesson plans, handouts, rubrics, and even tools and templates to create their own materials. Teachers can select the most appropriate resources for the composition of their classes, and with some guidance, personalize them. For example, WebQuests are Internet learning environments where teachers can find scaffolded curriculum materials that require students to *use*, not simply *locate*, information (March, 2004). WebQuests reduce

instructors' resource search-time (Milson & Downey, 2001; Molebash & Dodge, 2003) and concentrate their efforts to formulate meaningful instruction.

In contrast to WebQuests, Civics Online, [re]Envisioning the Democratic Community (http://www.civics-online.org/introduction.html), is an online project that provides civics teachers more professional development tools and richer experiences with civics-only classroom activities. Civics-Online claims to provide teachers with the ability to search for and retrieve multimedia primary resources for promoting "Core Democratic Values" according to Michigan's state curriculum standards. Civics_Online provides teachers with text hyperlinks that attempt to improve instruction by suggesting theory-based best practices. The website provides hyperlinks where teachers visiting the website can read through the interface, and choose to click on an explanation of the rationale underpinning the lesson, or in this case, click on questions that teachers could ask themselves, and in answering, perhaps improve their instruction.

Along with accessing materials and reading about best practices, technology can also allow teachers to *observe* them in context. Researchers suggest this may be educative, because teachers who actually see or experience progressive classroom instruction tend to become more open-minded, reflective, and enthusiastic about teaching (Fishman, 2003; Richardson & Kile, 1999; Tochon, 1999). Therefore, online environments can also display videos of teaching vignettes to create powerful enrichment opportunities (Fishman, 2003; Lampert & Ball, 1998; Shrader, Fishman, Barab, O'Neill, Oden, & Suthers, 2002). One such environment is the Persistent Issues in History Network (hereafter PIHnet), "a national community of teachers who engage their students in problem-based historical study that promotes competent citizenship" (Saye & Brush,

2005, p. 168). The PIHnet can promote foundational knowledge, reasoning skills, and thoughtful dispositions in teachers by allowing them to view and reflect on wise-practice video segments from real classrooms.

Experiences like viewing video case studies and subsequent teacher reflections may ease difficulties found in envisioning new teaching methodologies (Lampert & Bell, 1998). What Saye and Brush (2002) call soft-scaffolding, the impromptu teacher-student exchanges that occur during instruction, is difficult to fully communicate through a textual description. Therefore, the PIHnet online environment has collected video from dozens of progressive classrooms and excerpted them into vignettes to accompany a textual transcript. Together video and text target multiple learning-channels (Mayer, 2001) and therefore may be more educative for novice teachers. The PIHnet encourages teachers to discover and learn from others teachers' attempts at wise-practices (Saye & Brush, 2005).

Another affordance of educative technology is an interactive online discussion space among teaching colleagues seeking to refine their professional skills (Saye, et al., 2005; Thomas, et al., 1998). Sarason (1990, p. 45) notes "it is virtually impossible to create and sustain. . . conditions for productive learning for students when they do not exist for teachers." An atmosphere conducive to developmental teaching strategies rarely permeates in schools; the conservative draw of traditional school environs often quells the efforts of progressive, experimental teachers and teacher-educators (Lampert & Ball, 1998, Saye et al., 2005; Thomas et al., 1998).

Progressive teachers need support from like-minded professionals, especially when they belong to curriculum departments that uphold traditional, status quo

pedagogical approaches. The difficulty of envisioning and circulating innovative teaching techniques may be due to insufficient examples available for teachers to experience (Saye, et al., 2005). This is increasingly significant, as Lampert and Ball (1998) report, because novice teachers cite schools and faculty as learning-hubs where they gain most of their content knowledge and instructional strategies. Discussion forums, chats, blogs, bulletin boards, and email can facilitate a collaborative dialogue to integrate research findings with various practitioner experiences (Hiebert, et al., 2002). This dialogue can produce both proven and potentially educative resources to better support teacher learning. One such environment supported by University of Michigan, the Curriculum Access System for Elementary Science (CASES) is found at www.cases.soe.umich.edu. Teachers visiting this website can join discussion groups to exchange ideas and practices with others from, theoretically, around the nation. The CASES website is intended for developing a nationwide online community of science teachers.

In regard to social studies, educative curriculum materials may be able to support teachers as they develop the ability to construct professional teaching knowledge. Social studies researchers, however, have afforded educative curriculum materials scant attention. Again, I was able to identify only seven educative curriculum projects at present, all science, math, or English. I have been unable to identify any social studies curriculum materials that either claim to be explicitly educative or contain educative features that specifically intend to develop all three features of educative curriculum materials: pedagogy, content knowledge, and pedagogical content knowledge. Again, PIHnet produces the most educative social studies materials widely available. Believing that the promotion and advancement of democratic ideals is the overarching

goal of social studies, and particularly history classes (Levstik & Barton, 2001), the PIHnet aims to educate teachers and students to develop the foundational knowledge, reasoning ability and thoughtful dispositions to make informed decisions concerning enduring societal questions. What the PIHnet materials did not include that might have been more ideal for effective educative curriculum materials was an integration of its exemplar lessons and the philosophy's explanatory rationale. This vacuum, or gap, of possibly more educative environments and materials is precisely what I proposed investigate with this study.

This dissertation continues with chapter three, my methodology for conducting a research-based investigation of *educative* curriculum materials for social studies. First, I introduce the theoretical framework behind the research design, then I elaborate on my definition professional teaching knowledge as it relates to problem-based historical inquiry, and finally I discuss the intervention. The final sections of chapter three describe the setting and participants and the data sources I studied, collected, and analyzed.

CHAPTER THREE: METHODOLOGY

Introduction

In this chapter I first describe the theoretical perspectives I used in the planning and enacting of this design experiment. Then, I discuss how these particular educative curriculum materials were designed to support the development of teachers' professional teaching knowledge as it relates to the following four principles of problem-based historical inquiry: learning should be purposeful, connected, active, and structured to encourage success. Next, I articulate the research questions I employed to assess the degree to which the social studies teachers' experiences with the educative curriculum materials may have contributed to their development of the previously mentioned professional teaching knowledge. I then catalogue the participants and their respective settings before discussing the designed intervention itself—tracing the construction of each lesson and depicting its underlying rationale. Finally, I account for the threats I faced regarding the trustworthiness of this qualitative investigation.

Theoretical Framework

To understand the complex mental processes associated with learning, one must employ a theoretical perspective that provides a means for beginning to make sense of cognition. For several decades, education researchers have used a socio-cultural theory to investigate thinking and learning as they occur in working classrooms (Otero, 2003) and it seemed appropriate for this study of teachers' experiences with educative curriculum

materials. From a socio-cultural theoretical perspective, all human behavior results from the discernment mediated in one's mind by devices called cultural tools (Barton & Levstik, 2004; Grossman & Thompson, 2004; Remillard, 2002; Taba & Elzey, 1996; Vygotsky, 1931, 1977, 1978). To elaborate, rational people typically have reasons for their conduct; consciously or not they (actors) allow environmental features (cultural tools) to shape their thinking (mediated action) and subsequent behavior (actions). This thinking, or mediated action, involves collecting, interpreting, and transferring information for actors to better perceive, decipher, and explain the world around them (Cole, 1996; Vygotsky, 1978; Wertsch, 1991, 1995, 1998). Cultural tools structure and transform actors' mediated actions, and are therefore dynamic partners in humans' thinking, learning, and behavior (Otero, 2003).

Connecting this philosophy to my study, a review of relevant literature led me to believe that teachers employ a number of cultural tools in mediated actions that result in their teaching beliefs and classroom practices. While school settings, pacing guides, state standards, professional development opportunities and high-stakes tests are common environments features that are used as cultural tools, teachers tend to rely most heavily on their curriculum materials. Teachers typically consider curriculum materials to be complete, ready-made packages that need only to be opened and used with students. However, in this study I continue the line of research suggesting that teachers, with guidance, could use curriculum materials as cultural tools to mediate a better understanding of content material, teaching and learning in general, and social studies specific pedagogy to synthesize a more professional teaching knowledge.

A goal of this investigation was to determine whether educative curriculum materials could broaden teachers' vision of, and deepen their relationship with, planning resources. Instead of using traditional planning materials as cultural tools in mediated actions to survive another day, could teachers begin to use planning materials to develop their craft? This mediated action may provide potentially dynamic interactions between teachers and their repurposed materials (Lloyd, 1999; Remillard, 1999). If, as some suggest, the medium is inseparable from the message (Montessori, 1948, 1949; Postman & Weingartner, 1969; Wertsch 1998), then educative curriculum materials may be integral to teachers' learning (Grossman & Thompson, 2004; Remillard, 1999, 2005).

This study also proceeds from the schema, or schemata, theory. Articulated by Barlett (1932) and more recently by Rumelhart (1980), schema refers to the intangible mental representations created in a learner's mind when attempting to comprehend information (LeSourd, 1993). Schema naturally occur when learners abridge, sort, and idiosyncratically interconnect new ideas to existing thoughts (Anderson, 1984; Howard, 2001; Rumelhart, 1980). When learners develop more elaborate schemata, it typically involves more than simply adding new tangents to previously conceived representations. New data may cause significant restructuring, or reconceptualizing, of one's original mental map of interconnected information (LeSourd, 1993; Nesbit & Adescope, 2006).

Teaching has been described as a combination of both science and art (Brubacher, Case & Reagan, 1994) replete with symbolic and aesthetic components that learners, in order to understand, need to connect with previous knowledge and experiences (Armento, 1986; Evans, 1989; Kagan, 1989; Levstik & Pappas, 1992; Saloman, 1979). While experienced and novice teachers typically possess a relatively detailed schema map for

teaching their subject, neither typically articulate schemas connecting theory-based research with practical experiences in ways that suggest a professional teaching knowledge (Saye, et al., 2005). The educative curriculum materials developed for this study attempted to introduce and prompt thoughtful consideration of new data concerning professional teaching knowledge, and encourage significant development to teachers' existing schema maps.

Principles Underlying this Study's Repurposed Curriculum Materials

Again, the educative curriculum materials that I created for this study were designed to support the development of teachers' professional teaching knowledge as it relates to the following four research-based principles of problem-based historical inquiry: learning should be purposeful, learning should be connected, learning should be active and challenging, and learning should be structured to encourage success. Each principle is specifically addressed below.

Purposeful. Problem-based historical inquiry lessons are centered around recurring societal concerns that are fundamental to human communities. These societal concerns afford students the opportunity to engage in real-world problem-solving where factual, definitional, and value conflicts are deliberated (Newmann & Oliver, 1970; Saye & Brush, 2004; Shaver, 1992). Instead of memorizing information from a textbook or lecture, which engrosses few people in society, problem-based historical inquiry provides students with a more authentic purpose: deep, sustained learning and struggling with problems of the past to more meaningfully address problems of their present — and future. Succinctly, Saye and Brush (2004) state that social studies "activities should be a means to a civic end" (p. 128). That end should be reasoned decision making about

enduring social problems." This type of purposeful academic work consists of more than the ability to do demonstrate minimal competence at learning tasks or passing a test; it requires students to think at high-levels and develop robust understandings instead of superficial memorization.

Connected. Researchers in cognitive psychology have suggested that experts and novices tend to think and solve problems differently due to their respective *connectedness* of data (Simon, 1976). Experts possess advantages that tend to limit the abilities of novices, namely that experts tend to have larger and more interconnected schema. Helping novices develop richer schema may result in them thinking more deeply and at higher levels because, it is suggested, retrieving data from a rich schema involves less work than from a barren schema (interconnected data is easier to retrieve), but also it imparts more complex and sophisticated representation of the world and its problems. As mentioned earlier, problem-based historical inquiry organizes instruction around profound ideas or concepts that, in turn, tend to pose major concerns for virtually all human societies (e.g., majority will and minority rights, justifiable actions during armed conflict). These profound ideas function as mental-anchors to which students attach both their previous knowledge and newly learned information. Integrating previous and new understandings and thereby creating different, perhaps more robust, connections within their individual schema, students also may recognize links between past and present, and causes and effects.

Active. Because it focuses on attempts to resolve authentic, recurring societal concerns, problem-based historical inquiry is largely collaborative and often includes students debating, or at least discussing, their positions with their peers (Newmann &

Wehlage, 1995; Saye & Brush, 1999). Problem-based historical inquiry typically employs rich, diverse historical documents as a means for students to discover the past and presents them with the differing "sides" to an historical event. No individual alone can perceive the complexity of social reality, thus a student attempting to understand the past needs the help of others who, through discourse and deliberation, can together meaningfully reason about previous (and present) events. This collective rationality, socially constructing an understanding of reality through public discourse and critically reasoning together, broadens and deepens all students' experiences and perspectives.

Structured. Problem-based historical inquiry is founded on the belief that all students are capable of higher levels of thinking if properly supported. For students to develop the many, varied skills and rich knowledge needed to be reasoned problem-solvers, teachers must appeal to each student's individual needs –often at the time the need presents itself. For nearly thirty years educational researchers have used the term *scaffolding* to describe the "role of teachers. . . in supporting the learner's development and providing support structures to get to that next stage or level" (Vygotsky, 1978, p. 56). Elaborating further, Saye and Brush (2002) identify scaffolds and scaffolding in two categories *hard* and *soft*. They describe hard scaffolds as static supports that anticipate general difficulties, and soft scaffolds as dynamic, situation-specific aids to help learners process data. Because of the socially constructed aspect to problem-based historical inquiry, students are also encouraged to use peers as resources to think more deeply. These scaffolding resources allow students diverse avenues for rigorous, sustained thinking. Again, problem-based historical inquiry attempts to structure novices' thinking to help them develop richer and more interconnected schemata—more like schemata of

experts—that might imparts more complex and sophisticated representation of the world and its problems. Problem-based historical inquiry proponents hope this may result in students thinking more deeply and at higher levels.

Research Questions

The considerable influence curriculum resources tend to have teachers and their planning and enacting of classroom events made it seem reasonable to inquire further into the relationship between teachers and educative curriculum materials created from the four problem-based historical inquiry principles described in the foregoing section of this chapter. In distilling possible scenarios into a realistically manageable study, I concentrated on one particularly profound aspect of social studies teaching, professional teaching knowledge as it relates to the four problem-based historical inquiry principles, and one specific approach through which to attempt its development, educative curriculum materials featuring historical photographs. It was possible that interacting with and using the educative curriculum materials could significantly increase teachers' knowledge of content, teaching strategies and learning styles, and wise practices for teaching social studies. However, it was also possible that the educative curriculum materials could affect teachers no differently from traditional planning resources, leaving teachers' and students' classroom experiences relatively unchanged. The overarching objective of this project was to gather data relating to the teachers' relationship with the educative curriculum materials, and to report, through heavy description, any effects and effectiveness, or lack thereof, that may be derived from the direct experience. Following the constructivist tradition, this study employed the assumptions of an emergent design, context-dependent inquiry, and inductive data analysis. Also, this study occurred where

the phenomena of teaching and learning occurred: the natural setting of the teachers' respective classrooms.

Following a review of research germane to the topic, I began this investigation with several hypotheses regarding teacher-learning and the possibilities of designing educative curriculum materials in hopes of developing professional teacher knowledge at it relates to problem-based historical inquiry. Of course I made a conscious effort to keep these hypotheses at a distance when analyzing the data resulting from this study. My hypotheses were that educative curriculum materials could facilitate a meaningful interaction between social studies teachers new to the problem-based historical inquiry pedagogy, significantly influence teachers' practice decisions, and help teachers articulate a professional teaching knowledge when explaining the rationale underlying their motives.

My nearly eleven years of classroom practice and university graduate-level studies suggested that teachers are often very pessimistic about problem-based historical inquiry. Teachers tend to consider their students incapable of achieving such demanding academic goals and that the professional demands make it unreasonable for teachers. However, my personal experiences and collegiate studies again led me to believe that developing teachers' professional teaching knowledge could empower them with the skills, knowledge, and confidence to successfully teach their students with problem-based historical inquiry strategies. My overarching research question was: *Can educative curriculum materials featuring historical photographs help social studies teachers develop professional teaching knowledge as it relates to problem-based historical inquiry?* Narrowing this question led me to the following sub-questions:

1. How do social studies teachers who are new to problem-based historical inquiry interact with and use educative curriculum materials featuring historical photographs?
2. Can educative curriculum materials designed to develop problem-based historical inquiry influence teachers' practice decisions?
3. Can educative curriculum materials help teachers' articulate a professional teaching knowledge as it relates to problem-based historical inquiry?

In sum, my study's purpose was to describe the interaction between social studies teachers and a series of curriculum materials specifically designed to elicit an educative experience, and to inform the field (viz., social studies teachers and teacher-educators) concerning the potential of educative curriculum materials for developing professional teaching knowledge as it relates to problem-based historical inquiry. This study was needed as particular details surrounding educative curriculum materials, especially in social studies, were largely unexplored. Also, this study answered calls for further research on how to meaningfully use visual data, particularly historical photographs, as a means to promote civic competence.

Design Intervention

This design experiment, also called design-based research, (Brown, 1992; Collins, 1992; Design-Based Research Collective, 2004; Hoadley, 2004; Joseph, 2004; O'Donnell, 2004), investigated the possible effects of a three-iteration intervention across three cases. I chose to examine active practitioners knowing that education researchers often create a credibility gap between themselves and teachers when they divorce their research from everyday classroom experiences (Design-Based Research Collective, 2004;

Levin & O'Donnell, 1999). In fact, several professional journals have recently called for increased design experiments studying teaching and learning in their natural contexts to extend, refine, and perhaps create new understandings of real-world classrooms (see the special issues of *Educational Researcher*, 2003; *Educational Psychology*, 2004, *Journal of the Learning Sciences*, 2004). While particular nuances of this relatively new approach to education research are not yet fully established, there are many guiding principles for intertwining the goals of investigative research with the practice of classroom teachers (Dede, 2004; Joseph, 2004).

Nearly a century ago, researchers bemoaned difficulties in studying complex, diverse classroom environments (see Thorndike, 1910). Growing understandings of higher-order cognition, instructional strategies, and research methodology throughout the last century led Brown (1992) and Collins (1992) to advocate education researchers employing experimental laboratory techniques to investigate the phenomenon of teaching and learning in actual, functioning classrooms. Design experiments, however, contain unique challenges and drawbacks (Dede, 2004; Kelly, 2004). Unlike laboratory settings where researchers universally control all variables, classrooms are environments where changes in any one aspect of the phenomenon of teaching and learning inevitably reverberate into other, perhaps unexpected, aspects (Brown, 1992). In design experiments any differences in dependent variables are virtually impossible to attribute to specific independent variables, therefore, these research studies attempt to holistically investigate the learning environment to study theoretically possible design affects on teaching and learning (Collins, Joseph, & Bielaczyc, 2004).

Due to the demanding agenda of design experiments (Hoadley, 2004), the research is typically collaborative, conducted over several iterations and unforeseen difficulties (e.g., reading levels of prompts, students' absenteeism) are refined in order to more clearly understand a real-world context. Data is collected from multiple sources for researchers to identify and consider the various effects possibly brought about by the intervention. To better understand the entire environment and to gather as many points of data as reasonably possible, multiple data sources are also included to provide rich data-triangulation (Denzin, 1978). For these reasons, I worked closely with the participants to orchestrate many aspects of their planning and enacting of the intervention's lessons. Ultimately however, the teachers had final authority regarding all classroom events.

During the first iteration, I provided the participants with a detailed lesson plan containing many educative features, the lesson plan for the second iteration contained fewer educative features, and for the third iteration I provided only a series of historical photographs with no educative features. As my direct influence over the planning and classroom events waned, I observed the teachers to investigate whether they developed and employed the professional teaching knowledge that I attempted to encourage them to construct. This combination of theory-based interventions and practical experience produced findings that can inform both researchers and classroom teachers regarding wise practices (Brown, 1992; Collins, 1992; Design-Based Research Collective, 2004).

Participants and Settings

In each of the five investigations into educative curriculum materials I identified in the research literature, participants with fewer experiences teaching in ways promoted by the repurposed materials had richer experiences. Additionally, I found that both

Collopy (2003) and Schneider, et al., (2000) employed the term *novice* slightly differently from its traditional use; they both used the term to describe teachers who had virtually no experience with the skill under investigation, irrespective of their years of professional service. These novices also tended to engage in more dynamic interactions with their educative curriculum materials. As I was particularly interested in developing teachers' professional teaching knowledge as it relates to problem-based historical inquiry, I selected three social studies teachers who were unfamiliar with problem-based historical inquiry and also unaccustomed to using historical documents, particularly visuals, in an problem-centered classroom. This decision was consistent with the relevant literature, as the research studies included in the previous chapter used either two or three participants who had little or no experience in teaching in ways their educative curriculum materials encouraged.

I found participants for this study through a purposeful, criteria-based sampling (Patton, 1987; Rudestam & Newton, 2001; Creswell, 1998) that identified teachers who were inexperienced using historical photographs in a constructivist, or problem-based historical inquiry, pedagogy, and who taught students in a course where photographs could be employed (post-1839, when the camera was first developed). I used the scripts found in Appendices A and B as a foundation for emails and phone calls to colleagues and potential participants: eventually three emerged.

Acknowledging that the results of this study would not be generalizable, I sought to describe a full range of environments that comprise an average teacher's typical experience. Perhaps strengthening typicality, participants comprise both genders, public and private schools, first- and second-career teachers, and high and low socio-economic

communities. Some qualitative researchers claim that data from studies such as this may extrapolate to populations with similar characteristics and in environments (LeCompte, Preissle, & Tesch, 1992). This investigation will hopefully spur further studies—perhaps ones of a much larger scale that could produce more generalizeable principles across social studies education.

To protect the participants' anonymity, their names, locations, and other potentially identifiable characteristics are changed or broadened. The study's three participants are as follows:

1. Nessarose was in her second year of teaching three sections of American History Part Two (Reconstruction to the present). She had no experience related to problem-based historical inquiry. Her private, parochial high school housed grades 9 through 12, consisting of approximately 1,000 students, of which 87% were Caucasian, 12% were African-American, and 1% other. Fifteen percent of the total student population received a free or reduced lunch.

2. Fiyero was also in her second year, taught one section of American History Part Two (Reconstruction to the present), and two sections of U.S. government. She had no experience related to problem-based historical inquiry. Her public, high school housed grades 10 through 12, consisting of approximately 1,300 students, of which 56% were Caucasian, 40% were African-American, and 4% other. Forty-three percent of the total student population received a free or reduced lunch.

3. Dillamond was in his tenth year and taught three sections of American History Part Two (Reconstruction to the present). Thirteen months prior to this study, he attended a week-long seminar introducing him to problem-based historical inquiry. However, he had not implemented any of its materials or teaching strategies. His public high school housed grades 10 through 12, consisting of approximately 1,200 students, of which 66% were Caucasian, 28% were African-American, 5% were Asian-American, 1% Hispanic-American, and 1% other. Twenty-three percent of the total student population received a free or reduced lunch.

Lesson Construction

As a consequence of creating three, single-lesson activities that could supplement their existing materials, the educative curriculum materials were not centered around a recurring societal concern. Instead, the lessons concentrated on a closely related sub-question distilled from the recurring societal concern; I called it a topic-specific question. While most history classrooms feature a traditional lecture approach where teachers cover the widest possible swath of past events, students tend to see little purpose in simply memorizing facts and dates. This study's educative curriculum materials attempted to create classroom experiences to help students develop rich understandings about the past to make informed judgments about profound social concerns. As describe earlier, this problem-based historical inquiry framework helps students see purpose and worth in their study of the past. As the National Council of the Social Studies (1994) states, "(t)he ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world" should be the goal of social studies instruction (p. 8).

The iterations would allow students to develop foundational knowledge, clarify key concepts, and confront conflicting claims; however, each single lesson would not allow students the time or opportunity to appropriately form and defend solutions to a profound societal concern. Ideally, instead of teaching only a single lesson, the participating teachers would have taught a series of interconnected lessons culminating in students discussing, deliberating and eventually making informed judgments regarding a larger, recurring societal concern.

Another consideration was that each of the lessons, or iterations, was to introduce teachers to using historical photographs to develop students' foundational knowledge and social studies skills. It seemed appropriate to present teachers with resources for using photographs as they fill newspapers, magazines, billboards, television screens, webpages, cell phones, family albums, art galleries, and more. Humans tend to forge their thoughts, beliefs, and values from photographs, often accepting them as unerring, objective, and value-free depictions of reality. However, photographers' decisions (e.g., angles, lighting, foreground and background content, symbols employed, cropping, etc.) often make photographs not depictions, but rather *constructions* of reality. Critically deconstructing and analyzing photographs can develop students' abilities to thoughtfully reflect on the information and messages of the visual imagery inundating their daily lives. As described in chapter two, analyzing historical photographs demands the development of what is often called visual literacy, the ability to critically analyze, interpret imagery, and understand arguments and messages communicated by visuals.

Along with developing visual literacy, students also need a framework to help them think about visual data historically. They need to know to read visual documents as evidence, and know how to piece together evidence trails to reason about and draw informed conclusions about the past. Employing these *habits of mind* of thinking historically, students may become more productive, thoughtful democratic citizens. To that end, the participants were encouraged to distribute a copy of a student handout, a data retrieval chart, specifically designed for their students to use for compiling notes. Participants were encouraged to explain that examining photographs historically differs considerably from looking at them traditionally, and to draw their

students' attention to the data retrieval chart that, by careful design, concentrates students' analysis in each of the following four components of historically thinking: *Sourcing* the photograph (account for who created it and why), *Contextualizing* and analyzing the of the particulars of the photograph (contents, angle, lighting, background), *Corroborating* the photograph's information and messages with those of other documentary evidence, and *Thinking deeply* about the photographs to derive a reasoned, meaningful understanding about the past.

After deciding to develop lessons around topic-specific questions and historical photographs, but before considering the specific social studies content of the iterations, I brainstormed the *type* of lessons to construct. I wanted the first two lessons to demonstrate different, yet potentially effective, problem-based historical inquiry wise-practices, while the third lesson was left for the participants to design. In attempting to create exemplars of the problem-based historical inquiry model of instruction, I buttressed the first two iteration's lessons with the philosophy's guiding principles—that learning should be: purposeful, connected, active, and structured to encourage success. In constructing the third lesson, participants were given the opportunity to think-aloud (literally talk out loud to themselves as if they were thinking internally) without lessons or other materials beyond a series of photographs; thus were able to demonstrate any professional teaching knowledge perhaps developed through their use of the educative curriculum materials.

Then, when overlaying the timing of three lessons, spread relatively evenly across one class section and atop a traditional pacing for an American history course I realized that the lessons would likely address the Progressive era (taught early), the Great

Depression era (middle), and a post-Second World War, “modern’ era (late). Once email correspondence with each participant confirmed these content-areas as acceptable, I derived a recurring societal concern that, again, ideally would have been the hub of instruction that each lesson would have been tethered to. I then distilled this recurring societal concern into two lesson-particular, topic-specific questions. For the recurring societal concern I arrived at “What, if any, is society’s responsibility to the poor and needy?” and for the topic-specific questions: “How well did Progressive Era society address poverty and those in need?” and “How well did Depression Era society address poverty and those in need?” respectively.

Lesson construction for iteration_1. Again, the overarching goal of this investigation was to examine teachers’ interactions with educative curriculum materials that attempted to develop problem-based historical inquiry professional teaching knowledge. Thus, the types of classroom activities presented in the lessons needed to be examples of the wise-practices founded upon the four problem-based historical inquiry principles described earlier. For iteration_1, I developed a three-part teaching strategy where the teacher was to model historical thinking about a photograph, lead students as a whole class through thinking historically about a second photograph, and then assign small, heterogeneous groups of students to think historically about a third photograph. This three-part teaching strategy, sometimes called cognitive apprenticeship, is an example of structuring students to support deep, sustained, rigorous thinking. Students first have critical analysis modeled for them, then they are assisted in the endeavor, and finally they attempt the higher level of thinking on their own. This method of structured analysis applies lessons learned from the traditional preparation of artisans where a

skilled expert (in this case, the teacher): (a) demonstrates to novices (students) how to complete challenging tasks; the teacher models historical thinking about the photographs, (b) allows novices to then attempt some sub-skills while offering advice; the teacher assists students in historically thinking about another photo, and (c) gives more responsibility to the novice until eventually the novice becomes as skilled as the expert; students work together semi-independently on a third photo. Because thinking historically about only three photographs provided too little information for students to responsibly construct and test hypotheses answering the topic-specific question, the lesson called for presenting a broader historical context. I then developed a multimedia presentation to present four historical photographs for the teachers to employ during a very brief lecture, giving students additional information with which to form and test their ideas regarding the topic-specific question.

A significant factor underpinning any possible teacher-learning from this lesson was scaffolding. While the term scaffolding typically refers to temporary framework that construction workers use to erect an edifice of brick and mortar; educational scaffolding refers to teachers' attempts to provide support-structures getting students to higher levels of thinking (Vygotsky, 1978). Also, Saye and Brush (2004) describe hard-scaffolds, fixed supports that anticipate general difficulties, and soft-scaffolds, the dynamic, situation-specific aids that teachers employ to help their students' process data. In this lesson, I presented teachers with a hard scaffold, a student handout I called a data retrieval chart, or DRC. It was a static support designed to anticipate students' needs and guide them through the unfamiliar tasks associated with thinking historically about photographs. As for soft scaffolding, hyperlinks within the lessons strongly encouraged teachers to, during

the time that students analyzed photographs and completed the data retrieval chart (DRC), move about the room, visit each group, initiate conversations regarding their historical thinking, and offer specific, individualized feedback—at the precise time it was most needed.

Next, I designed procedures for teachers to facilitate their students synthesizing their findings from thinking historically about the photographs and to form tentative hypotheses concerning the topic specific question. Hypothesis-forming**,** a basic step in problem-based historical inquiry, has students collect and organize data relating to a question, analyze data, generate their own knowledge, and draw inferences about the data to answer the question. This method encourages higher order thinking skills, divergent and creative thinking, and closely resembles the way real social scientists (e.g., economists, historians, geographers, political scientists) conduct research. Again, I designed this lesson to ask students, by way of topic-specific questions, how well did society in that particular era address poverty and the needy, requiring them to draw upon the foundational knowledge they gathered throughout the lesson, but also moral reasoning, political philosophy and governance. The lesson's clear purpose, another problem-based historical inquiry principle, was to exam the problematic issue of poverty as it has arisen in the past, and in doing do refine certain habits of mind that help in making decisions about similar issues in the present.

Instead of emphasizing exercises contrived only to exhibit minimal academic competence, I attempted to promote the problem-based historical inquiry principle of active, authentic, collaborative schoolwork by designing the lesson to encourage students to construct knowledge valuable beyond the schoolhouse. Thus, I crafted an introduction

to the lesson its transition into the analysis of the historical photographs. To promote an active, socially constructed understanding of reality through public discourse, I suggested a seemingly impromptu discussion, *what comes to mind when you hear the word poverty?,* at the beginning of the class to engage students and encourage their participation. The first few minutes of each lesson are often when students decided whether class going to be worth expending their effort: gathering their attention and rousing their curiosity from the start may be crucial. When discussions ebb, student-participation tends to follow. Therefore, at this point in the lesson teachers were encouraged to transition from the general discussion about poverty into the Progressive Era by specifically mentioning the topic-specific question and its purpose, and reiterating the real-world value of the skills (e.g., ability to recognize and analyze visual messages) being introduced and developed in this lesson.

The problem-based historical inquiry principle of encouraging students to actively resolve complex social concerns led me to design students collaborating in small groups to pool their resources and together grasp more of reality's complexity (collective rationality). Groups play a significant role in our pluralistic society (e.g., committees, teams, social organizations) and because citizens inevitably define *the common good* differently, students who are soon to join participatory democracy need meaningful experiences working in heterogeneous groups.

Also, thinking *actively* tends to have different meaning for the variety of students in teachers' classrooms. Thus, I wanted to ensure that the lesson was informed by multiple intelligences**,** an educational theory suggesting that seven different kinds of intelligence exist in humans (Gardner, 1983; 1999a; 1999b). This theory argues that

intelligence, as traditionally defined, does not adequately account for the vast array of humans' abilities. The seven intelligences identified are: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal. Schools tend to emphasize only logical and linguistic intelligences (reading and writing), and while many students succeed in this environment, many others do not. This theory also argues that students deserve a broader vision of education where teachers employ different methodologies to design classroom experiences to reach all students.

I then suggested that the teachers close this lesson with a reiteration of its purpose: promoting meaningful 21st century citizenship. The teachers were also encouraged to take the final few minutes of class to mention how the lesson was situated into the week, month, and perhaps even the semester plan of studying American history. Appendix C contains the resulting narrative from iteration_1, using historical photographs to think deeply about the Progressive Era. It is only the foundational lesson plan without its educative features. Appendix D contains the student handout created as a hard scaffold for data collection, it anticipates that students will need considerable guidance thinking historically about the lesson's photographs.

Finally, I searched several university and public libraries as well as countless Internet websites for historical photographs that would present students with a well-rounded treatment of the Progressive Era. I wanted photographs that provided students enough information to *discover* upon their analysis, and that they could then begin thinking meaningfully about the topic specific question. I wanted approximately five engaging photos; too many photos would have caused students to lose interest (diminishing returns) and too few would not have provided enough information for

students to think historically about the era. Additionally, I looked for photographs that worked together. They needed to provide conflicting points-of-view and information, causing students to have to account for the conflict and in-so doing, get a wider view of the issue. The photographs also needed to provide a well-rounded treatment of the Progressive Era, they needed to address many different aspects of the past, such as public policy, private responsibility, religion, economics, socio-cultural, demographic, etc. Within the online lesson, I presented the historical photographs raw, with only a citation typed above each. Appendix E reveals the series of seven historical photographs I presented to teachers in iteration_1.

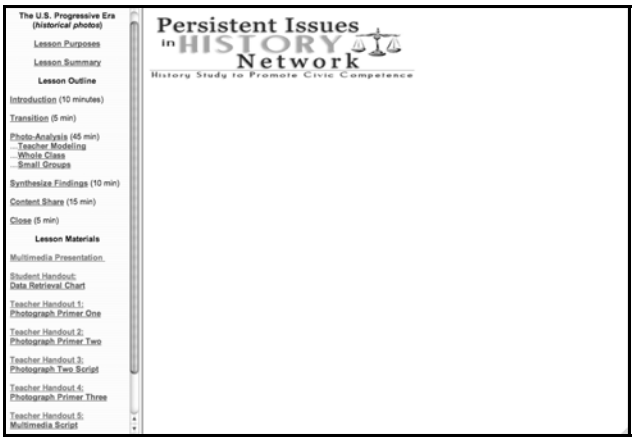
Educative features of iteration_1. After finalizing the lesson plan, I decided which educative features to include in the materials and how best to do so. I created an online lesson whereby the Internet and its ubiquitous multimedia (e.g., audio-video and text) could facilitate the type of just-in-time data relevant to the educative features of the lesson. Otherwise, I concluded teachers would have had to read through seemingly endless papers searching for footnotes or endnotes, and I would have had to omit multimedia altogether. Therefore, this study's educative curriculum materials were created online at www.pihnet.org, the Persistent Issues in History Network (hereafter PIHnet), because it is arguably the most technologically savvy and educative online environment available for social studies teachers. Also, I selected this site because I had access to and familiarity with its curriculum designing tools. My initial conversations with the participating teachers suggested that they taught in technology-accessible schools where planning and instruction routinely occurred through multimedia. To facilitate the planning experience for the participants, I helped each acquire membership

in the network and access the website. Also, when I arrived for the planning observations I handed the teachers hardcopies of the lesson materials—the teacher and student handouts they were very likely to print.

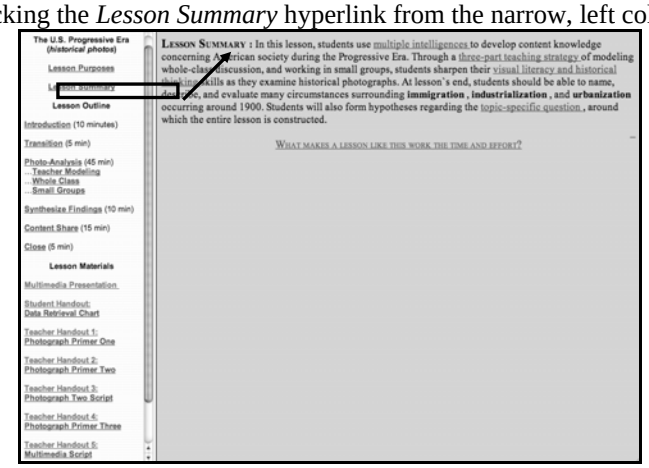
The PIHnet online interface, the actual look of webpage on the computer's monitor, played a large role in my logistical planning. Creating what it calls an activity presents a screen with a narrow, left column and a wide, right column. I decided to fill the narrow, left column with a very brief lesson outline and make each of the outline's words a hyperlink, causing a webpage to then fill the wide, right column with the explanatory, narrative paragraphs. I then hyperlinked specific words within the webpage in the right column that, when clicked, caused a pop-up windows to emerge. For consistency, every hyperlink in the lesson outline caused a related explanatory webpage to appear on the right, and every hyperlink in the explanatory webpage caused a related educative feature to appear. Figure 3.1 illustrates the interface at three differing stages.

Figure 3.1: The PIHnet interface at differing stages

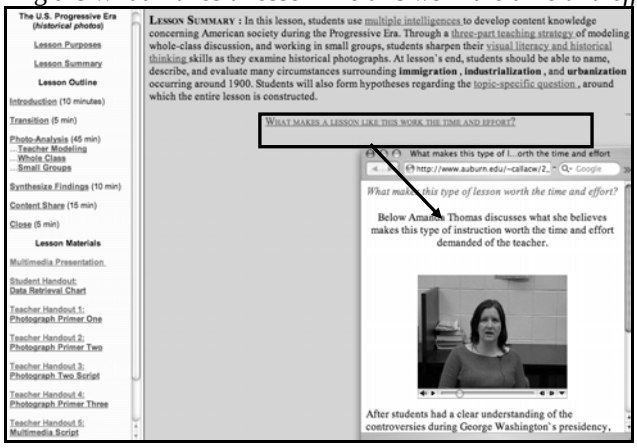
The initial interface: a lesson outline in the narrow, left column and an open wide, right



Clicking the *Lesson Summary* hyperlink from the narrow, left column



Clicking the *What makes a lesson like this work the time and effort?*



My next consideration was to create primers for each of the first three photographs, and a script to accompany the four photographs to be used in a multimedia presentation. I assumed that the participants would be unfamiliar with both thinking historically and photographic imagery from the era, and thus would need additional background and foundational information. The problem-based historical inquiry principle of connecting information and expanding a learner's schema led me to create the teachers' primers (Appendices F through H). By organizing the primers according to the steps of historical thinking, they were specifically designed to help teachers integrate their prior knowledge of the era with newly presented data to create different, perhaps more robust, connections within their individual schema, and recognize links between past and present, and causes and effects. I assumed that if teachers made these connections, they in turn would help their students do the same. Also, because of their lack of experience in doing so, I created a proposed script for teachers to use as they led their students to historically analyze the second photograph (Appendix I). Also, I create a script for the teachers to use in guiding students through the multimedia presentation of the final four photographs (Appendix J). These final two resources are also examples of the lesson attempting to scaffold the teachers; the resources model rigorous historical thinking and suggest multiple ways of encouraging student to develop an understanding of the content.

Having developed these foundational scaffolds, I then made a list of each choice I faced in constructing the lesson and the rationale I employed to arrive at each decision. This rather lengthy narrative became the base for the educative features that I would add to the curriculum materials. The research studies I examined in preparation for this

investigation suggested several key guidelines in determining what and specifically how to infuse the lesson with educative features. I presented the data in either textual or audio-video formats depending on the better fit. For example, it made sense to present *transitions* as a brief paragraph because it was a rather short description that could easily be read in a few sentences. However, I thought it best to present the *What does soft-scaffolding look like in a real classroom* as a short video clip of a teacher deftly completing this task. The bottom line in my decision-making was to present the participants with the most direct, pithy opportunity to build professional teaching knowledge, combining their personal experiences with best practices as suggested by academic researchers studying the field. The final tally was twenty-three educative features: fourteen textual paragraphs, five text and photograph combined, three Quicktime® videos, and one multimedia presentation.

With the hyperlinked videos, I embedded Quicktime® movies into a webpage and included a very brief contextualizing explanation for the teachers to read prior to them watching the video, which would not begin playing until the teachers clicked for it to play. The first video shows a teacher reflecting on why she believes lessons such as this are worth the time and effort demanded of teachers, the second displays a teacher modeling historical thinking on the photograph that the teachers will in turn model for their students, and the third, as previously mentioned, presents video of a teacher interacting with students in a real classroom setting.

Appendix K details each of the twenty-nine educative features within the lesson plan for iteration_1, describing each one's specific purpose, the medium by which it was communicated, and the problem-based historical inquiry educative feature that teachers

were encouraged to develop through its proposal. To promote teachers becoming active seekers in their own learning and to maintain the project's legitimacy, they had considerable freedom deciding which hyperlinks to visit or to ignore. My thinking in this regard was that if, during their first pass through the materials, they may have been less familiar with the tools built into the online lesson, and thus may wish to visit the procedural scaffolds that explain the resources available to them and how they work. However, upon successive iterations, if the teachers became more familiar with the tools, they might choose not to visit those hyperlinks.

Lesson construction for iteration_2. In many ways the second iteration was very similar to the first. With iteration_2, I wanted to reinforce many of the particular teaching aspects that were first introduced in iteration_1. For example, the topic-specific question for iteration_2 was "How well did Depression Era society address poverty and those in need?" which reads almost verbatim from iteration_1's "How well did Progressive Era society address poverty and those in need?". My intention with both questions was to introduce and reinforce the teaching strategy of building instruction around a meaningful question, as opposed to including as many facts as time allowed. With the topic specific question and lesson objectives and purposes already prepared, I developed lesson activities differing from iteration_1, yet still grounded in the problem-based historical inquiry principles for wise-practices. For students to sharpen their visual literacy and historical thinking throughout iteration_2, I constructed a two-part teaching strategy of teacher modeling and response groups. As before, I encouraged teachers to model historical thinking for their students with the first photograph, however for the remaining photographs I presented the participants to response groups, a classroom discussion

strategy in which students first work in small groups in order to understand, synthesize, and analyze information presented to them and then bring their understanding forward in a whole class discussion. Because no student can alone perceive the full complexity of any social reality, students can more effective understand the past through discourse and deliberation with others. Together students can more meaningfully reason about the past, and because it is a group's conclusions being discussion, not one's individual conclusions, students engaged in response groups are more likely to publicly defend perspectives. This strategy can be effective when teachers wish to have their students discuss people, discoveries, concepts, or events as well as interact with primary materials relevant to the particular subject and derive a socially constructed understanding of the past.

Intentionally similar to iteration_1 for reasons already described, this iteration encouraged teachers to begin the lesson by initiating a seemingly impromptu discussion (what should be the response to people who go bankrupt—people unable to pay their debts?), then transition into the content material by emphasizing that the skills and knowledge comprising this lesson are essential for truly thoughtful 21st century citizenship (there are, and likely will always be, people, groups, organizations, and corporations who use visual imagery to influence students' decision-making, spending, voting, etc.). Following the teacher-modeling and response groups, the teachers were then encouraged to ask their student-groups to more formally address the topic-specific question in light of the all the information from the day's lesson by directing them to complete the back-side of the student handout, the data retrieval chart, which overtly structures their hypotheses about the past and intending to support deep rigorous

thinking. The teachers were then encouraged to assign the recommended homework assignment (having students answer the topic specific question at the very bottom of the DRC back-side), and then close this lesson with a reiteration of how historical thinking and visual literacy have a clear purpose for meaningful 21st century citizenship. Appendix L contains the resulting narrative (without educative features) from iteration_2 and Appendix M contains the students' handout, the data retrieval chart.

I then searched several university and public libraries and Internet websites for effective historical photographs that would present students with a well-rounded treatment of the Depression Era. Because this lesson featured response groups that tend to take considerably more time to conduct than the modeling approach of iteration_1, I knew to look for fewer photos. Appendix N contains the series of five historical photographs used in iteration_2 and Appendices O through S contain their respective primers.

Educative features of iteration_2. As with the previous iteration, after I finalized the lesson I then decided which educative features to include in the materials and how best to do so. While with iteration_1 I was primarily concerned with the diminishing returns that too many educative features would cause, iteration_2 held more challenging concerns. For two reasons these decisions were considerably harder to negotiate than with the first iteration. First, the design of the study called for a decrease of educative features, requiring the removal of some of the hyperlinks. By itself, that would have been a daunting task; however, a second and much larger concern loomed. It was my distinct impression that in iteration_1 the participants had not visited the hyperlinks with the regularity I had anticipated. I will describe this phenomenon much further in the next

chapter, but for the purposes of describing my methodology I include here that the only hyperlinks consistently visited by all three participants appeared to be the foundational scaffolds—the teacher primers and the student handouts. This was somewhat alarming in that I wanted to ensure that my intervention was actually implemented. However, because this was a design experiment calling for a collaborative and refined intervention conducted over several iterations, I amended the second iteration to include just one fewer educative hyperlink than the first. To encourage the participants to visit more, if not all, of the educative hyperlinks during their next planning session, I sent an email (Appendix T) to each of them explaining that it might have been too unfamiliar to them to *initially* read-through and *initially* react to the online materials while I was across their desk observing and taking notes. Perhaps this was a bit too intrusive as compared with their normal planning routine. I suggested that it might be better for the second iteration if I waited to observe them until *after* they had the opportunity read-and-work through the lesson independently. In that case, when I visited them they would *re-view* the materials with me and give me a *re-evaluation* of their impressions and thoughts made concerning the usefulness or futility of the lesson and its hyperlinks. I made it clear that this was an attempt to create a scenario more conducive to both them and me.

I also considered changing some of the language (e.g., word choices, tone) within the educative hyperlinks to perhaps a more reader-friendly, collegial format; one that may have seemed less like jargon to the participants. Had one of the participants stumbled over any of my syntax (e.g., mispronouncing, wanting clarification, etc.) or in another way expressed uncertainty about or frustration with the language of the educative hyperlinks, I would have been more inclined to alter the wording. However, since nothing

of this sort occurred, I deduced that my time would be better spent refining and creating the lesson online at the PIHnet.

The most significant alteration I made in the educative features for this lesson, aside from exchanging primers, was replacing the *three-part strategy*, *ten minutes, impromptu discussion,* and *Breaker Boys* hyperlinks with *response groups*, *selecting photographs,* and *Migrant Mother*. Serving more as an addendum to Appendix K Appendix U details the ten newly introduced educative features within iteration_2. As before, this appendix describes each one's specific purpose, the medium by which it was communicated, and the problem-based historical inquiry educative feature that teachers were encouraged to develop through its proposal.

Lesson construction for iteration_3. For iteration_3, I provided teachers with only twelve historical photographs (Appendix V). With my direct influence over their planning and enacting classroom events removed, I observed the teachers for any evidence suggesting that they had developed or employed the professional teaching knowledge that the educative curriculum materials encouraged them to construct. Specifically, I looked for pedagogical decisions and rationale informed to any degree by the four problem-based historical inquiry principles: learning should be purposeful, connected, active, and structured to encourage success.

At the close of my observing the teachers teaching their Depression Era lesson, I asked them what content they thought they would likely be covering with their classes in the middle of December. Each mentioned that they would have covered the Second World War, two hinted that they would probably not have covered the Cold War, while the third indicated that she would likely be covering the Civil Rights Movement. I later

emailed the participants asking if a lesson concerning American poverty in the 1960s and 1970s would be acceptable. They each agreed. Therefore, I again searched for effective historical photographs, this time presenting a well-rounded treatment of poverty in the "modern era" of the 1960s and 1970s. While I did not create primers for the photographs, I decided to include a contextual paragraph on the reverse-side of each to provide enough information for the teachers to be able to decide whether or not to use the photo in their lesson. For example, I assumed that the participants were not overly familiar with the 1960s' VISTA program, and thus I included that VISTA was an acronym for Volunteer In Service To America and that the program was a national initiative to provide food and medicine to America's underserved, poverty-stricken areas. Including this contextual information was consistent with readily available traditional curriculum materials.

Procedures

Again, this design experiment examined three novice social studies teachers across a three-iteration intervention to determine whether experiences with educative curriculum materials helped them develop a professional teaching knowledge as it relates to problem-based historical inquiry. Table 3.1 is a brief timeline of the project's three data points: a pre-intervention interview, a three-iteration intervention, and a post-intervention interview. There were two significant design aspects associated with Data Point Two: (a) successive iterations provided curriculum materials enhanced with fewer educative supports for teachers, and (b) participants did not know that I, the researcher, designed the resources provided to them.

Table 3.1: Brief research project timeline

Data Point	When Collected	Source of Data
1. Pre-Intervention Interview	July 2007	Interview & Think-aloud
2. An Intervention of 3 iterations (decreasing in educative features)	August 2007 October 2007 December 2007	1) Think-aloud with ECM 2) Pre-instruction interview 3) Observation/instruction 4) Post-instruction interview
3. Post-Intervention Interview	January 2008	Interview

During iteration_1, I provided teachers with a fully developed, online lesson plan containing all the resources necessary for teaching the lesson, including the seven photographs to use, annotations, and the formal teacher and student handouts. Also, the lesson plan contained many multimedia educative features (e.g., hyperlinks and pop-up windows).

The materials I provided for iteration_2, again contained all of the necessary materials for teaching the lesson, however, there were fewer educative features embedded in the online lesson plan. With the lack of educative features, I intended to create the opportunity for teachers to apply any newly learned skill or knowledge, and articulate any newly developed professional teaching knowledge related to problem-based historical inquiry.

For iteration_3, I did not provide an online lesson plan. Instead, I presented teachers with only twelve photographs and asked them to think aloud as they construct a lesson plan describing how they would use (all or a sub-set) of the photographs. As I presented teachers with the photographs I asked them to plan as they normally would, only doing so aloud – not silently. This data compared with data from each teacher's

think-aloud occurring after the pre-intervention interview (Data Point One) as well as their previous planning encounters (iteration_1 and iteration_2) provided rich data for analysis.

Existing studies suggest that teacher-learning develops in iterative cycles over time (Collopy, 2003; Grossman & Thompson, 2004), therefore iterations that comprise this intervention occurred in August, October, and December 2007, respectively. The rationale for such spacing is that in order to measure any *development* in professional teaching knowledge, participants needed opportunities to reflect upon and practice any newly developed knowledge, skill, or disposition. Delaying iteration_3 into January 2008 would mean that the second semester of the school year had begun and for each of the participating teachers that would bring new sections of their courses filled with new students studying the content material in very close chronological proximity to the content material for iteration_1. Figure 3.2 provides a more robust illustration of the timeline, data points, and collection methods to accompany the foregoing narrative.

Figure 3.2: Methodology and data collection from this design experiment

DATA POINT ONE	DATA POINT TWO	DATA POINT THREE
Pre-intervention interview and a think-aloud protocol gathering self reporting, independent reporting data regarding: - personal data, experiences in education - developing professionalism - using the seven historical photographs from iteration_1	An intervention of three iterations, decreasing in educative features, each comprised of the same four-step procedure: <u>Step One</u>: using think-aloud protocols, each teacher plans with the educative curriculum materials for using historical photographs - occurring a week before instruction <u>Step Two</u>: brief pre-instruction interview - shortly before instruction <u>Step Three:</u> observation of instruction and looking for evidence of effectiveness in developing professional teaching knowledge as it relates to PBHI: - Purposeful - Connected - Active - Scaffolded <u>Step Four</u>: brief post-instruction interview - shortly after instruction	Post-intervention interview gathering the following data: - planning with educative curriculum materials and traditional materials - "conversations" with educative curriculum materials - interactions with students - revisit dispositions, beliefs and definitions - construction of professional teaching knowledge - comments and suggestions for future educative curriculum materials
Audio recordings, transcripts, and field notes for ***baseline*** and *measurement* data	Audio recordings, field notes, and artifacts to obtain ***intervention*** and *measurement* data	Audio recordings, field notes and transcripts to obtain ***reflection*** and *measurement* data
JULY 07	AUG 07 / OCT 07 / DEC 07	JAN 08

First data point. The initial data point was a pre-intervention, baseline interview occurring in July 2007, one month prior to the intervention's first iteration. The purpose of conducting this interview with the participants was to obtain baseline data regarding persons, events, activities, organizations, feelings, motivations, claims, concerns, and other factors of significance to them (Lincoln & Guba, 1985, p.268). I approached each interview with an interview guide listing questions I planned to ask. However, I specifically allowed for other topics to emerge, specific to each participant (see Appendix W). Through this approach, I asked interview questions in an open-ended fashion, minimizing any imposition (Patton, 1987). Each of the interviews lasted around sixty minutes.

During the actual interviews I remained somewhat free to re-word questions rather spontaneously and in a more conversation style consistent with researchers and participants seeing each other as colleagues (Patton, 1987). In the course of each interview, new ideas and issues inevitably emerged, needing elaboration or further exploration of events, feelings, or perspectives. Occasionally, I requested elaboration or additional information from a participant through a follow-up email if, upon further reflection on the interview, I deemed it desirable.

I asked the participants questions concerning their personal experiences in education as a student and teacher, their respective definitions of social studies and rationale for teaching it to secondary students, and how they go about the task of developing their professional skills. At the close of the interview I asked each teacher to address a mini-archive of seven historical photographs. Employing verbal-reporting, or think aloud, protocols (VanSledright, 2002; Pressley & Afflerbach, 1995) I gathered data

regarding how the teachers typically plan with such artifacts. I remained silent during the thinking aloud, only to ask "what are you thinking now?" when a participant was continuously silent for several minutes. If a participant asked me specific question regarding the photographs, I answered in a rather vague fashion that encouraged their agency (again, see Appendix W for sample prompts). It is significant to note that these seven photographs also constitute the educative curriculum materials in iteration_1. I had hoped that comparing the teachers' interactions with the same materials, first without, then with, educative features would provide rich data for later analysis. This entire interview was audio-recorded, I made field-notes and also photocopied any notes teachers made while they planned. Additionally, I sent a transcription of the interview to each teacher to verify accuracy of the event.

Second data point. The next data point was an intervention consisting of three iterations, each containing the same four-step procedure. Step-one was each teacher thinking-aloud while planning instruction using the educative curriculum materials. This occurred, roughly a week or two prior to instruction. Again, I used a prompting statement similar to that employed in the aforementioned initial think-aloud event and then remained silent as each teacher planed instruction, asking *"what are you thinking now?"* or "*how do you think that would work with your classes*" or "*how do you think your students might respond to that*" when appropriate. Again, if the participant asked me a specific question, instead of refusing to answer the question and projecting an aloof, evasive, or rude demeanor; I attempted to answer the question in a vague fashion so as to encourage the teacher to have to make their own decision. Often this meant restating the question or rewording it in a more collegial or colloquial terms. This interview was

audio-recorded, I made field notes as I observed, and if the teachers make notes, then I copied them for later analysis. Additionally, I transcribed the entire planning session and sent the transcripts to each teacher to verify accuracy and meaning.

Steps two, three and four occurred in rather quick succession on the day of instruction. Step-two was a brief pre-instruction interview with the teachers shortly before they taught the lesson planned with the educative curriculum materials and step-four was a brief post-instruction interview taking place shortly thereafter (see Appendixes X and Y, respectively). In step-two I asked the teachers to state their goals and expectations for the lesson and in step-four I asked for their immediate reactions to and thoughts of the lesson. Again, both steps were audio-recorded when possible, and I made field notes. Additionally, I transcribed these events and sent the transcripts to each teacher for verification and clarification.

Step-three of this procedure was the teachers actually teaching the lesson planned using the educative curriculum materials in step-one. Each lesson was audio-recorded, and I took field notes as I observed from within the classroom under investigation. I developed an observation protocol that allowed me to specifically look for evidence that the teacher demonstrated any professional teaching knowledge developed through the use of educative curriculum materials, I made extensive notes as determining that which was important may not have been possible until much later. As with the aforementioned steps, I transcribed the entire event and send pertinent portions of the transcripts to each teacher, verifying accuracy and clarifying meaning.

Third data point. The final data point was a post-intervention, reflection interview occurring in January 2008, approximately one month following iteration_3 and seven

months from the initial pre-intervention interview. I asked teachers to reflect on their interactions with the educative curriculum materials, to describe any similarities or differences in planning with them compared to traditional materials, and revisit their previous dispositions and beliefs as mentioned prior to the intervention (see Appendix Z).

Data Analysis

Ideally, this would have been a large-scale study, researching many participants over several years to derive generalizable principles (Creswell, 1998). However, the time, cost, and lack of fully developed educative curriculum materials necessary for such a longitudinal, cross-sectional study, made it impractical – if not impossible – for a doctoral candidate, secondary school teacher, husband and father of three small children. Therefore, consistent with the identified educative curriculum materials investigations, I took a more idiographic approach studying behaviors and characteristics exhibited by a few teachers over nearly a school year. This investigation was an initial foray into a topic that the social studies field needed described in detail and may contribute more to existing knowledge by illuminating new challenges than arriving at specific solutions.

For the most part, qualitative research studies have no rigid formula, absolute procedure, or single "right way" to analyze data. Instead researchers custom-build an academically rigorous template for data analysis that conforms to generally accepted guidelines (Creswell, 1998; Guba, 1978; Patton, 1987). My analytic template began with reading and re-reading all of the data collected (Agar, 1980; Creswell, 1998; Patton, 1987; Tesch, 1990) which consisted of transcripts and field notes from two formal interviews, three planning observations, and three teaching observations—eight slices of data per participant for twenty-four total slices. I then chronologically organized the raw

data according to the three cases investigated and created a case record (also called a case narrative) to describe the participants' experiences as I observed them (Huberman & Miles, 1994; Patton, 1987; Rudestam & Newton, 2001). Analyzing the cases individually, I first looked closely at the participant words for metaphors, analogies, and concepts to use in a more pure description of their experience (Bogdan & Biklen, 1992; Huberman & Miles, 1994). I then brought order to the voluminous data by winnowing it into codes, sometimes called themes, patterns, or categories, that became basic descriptive units of information (Bogdan & Biklen, 1992; Creswell, 1998; Rudestam & Newton, 2001; Wolcott, 1994). I began deductively with a short list of codes to look for, which I derived from the review of literature that generated my study's research questions (Guba, 1978; Lincoln & Guba, 1985; Patton, 1987). This list of themes developed significantly as many more emerged from the data. Emerging codes were derived from rigorous content analysis, reading and rereading the individual cases looking for a convergence of quotes or observations that expressed the same idea, topic, concept or issue.

This inductive analysis resulted in the two following typologies, or classifications: codes articulated into verbal categories by the participants (indigenous typology) and codes not specifically articulated by the participants, but rather ones I named (analyst-constructed typology). I continued coding, specifically seeking regularly occurring ideas, until I reached a saturation of categories, then I refined categories and sought differences between them (Guba, 1978; LeCompte, et al., 1993; Strauss & Corbin, 1998). I then interpreted my findings by attempting to attach meaning and significance to them and explaining relationships and linkages. After analyzing each of the cases individually, I then analyzed across cases, comparing and contrasting findings (Patton, 1987).

Trustworthiness

My conclusions are particular to those situations, time periods, people and places specifically studied. Still, I needed to determine how much trust could be placed into my analysis, and therefore addressed the issues of reliability and validity in order to convince the field that my findings and conclusions are trustworthy (Lincoln & Guba, 1985). This investigation did not have the advantage of total control of all variables, nor could statistical analysis be used to produce meaning from the data. Instead, I relied on thorough descriptions, inductive analysis, data triangulation, and logical argument founded in compelling evidence to convince readers that threats to reliability and validity, components of trustworthiness, were carefully addressed (Patton, 1987; Rudestam & Newton, 2001).

Reliability. Reliability is the likelihood that other researchers under similar circumstances could replicate my study. In addressing my study's reliability, I need to attend to the following: my role as researcher, participant selection, social situations, constructs, and methodology. In recognizing, handling, and specifically describing each of these aspects, I attempted to enhance my study's reliability.

My ideal role as researcher was that of an observer who simply wanted only to learn all I could about the interactions of the participating teachers and the curriculum materials I presented to them. This role may have lessened any pretense that may have led the teachers to share with me what they think I "wanted to hear" or "should have heard". If this *observer* role was rejected, I was prepared to assume the status of a *newspaper reporter*, or *colleague*. Either of these roles should have been familiar to the

teachers and still would have provided me access and context needed to collect adequate and appropriate data as described earlier.

With Nessarose and Fiyero I had no relationship beyond our email correspondence originating from my seeking participants for this study; however, I was somewhat acquainted with Dillamond. He and I had taught in the same school system for one academic year and had spoken a few sentences to each other at occasional system-wide meetings. To each participant I routinely and clearly communicated the needs of the study and specifically explained the timeline for its data collection. Considering this investigation caused me to care tremendously about their thoughts and feelings regarding their professional decision-making, participants may have found the study to be an exhilarating and dynamic experience. Therefore the relationships that emerged from a lengthy investigation such as this may have become rather significant to the participants, more so than to me. Although I had not indication of such, at the study's conclusion the participants may have sensed a feeling of loss and sadness. However, to combat these feelings, I was very clear to each participant at the onset and throughout the project about exactly when I would eventually be leaving their environments. I tried to be very direct in this endeavor.

In attempting to further strengthen reliability, I included verbatim accounts from the interviews and precise descriptions of my observations, and allowed the review of my findings by my dissertation committee. With these measures, I attempted to increase the likelihood that other researchers would apply the same themes to the data collected and presented. Also, I kept an audit trail (Rudestam & Newton, 2001), a meticulous record of

the progress of the study's processes so that other researchers could understand the conclusions reached from the raw data.

I have also described criteria for selecting participants, specifically defined the constructs that guide the study, made known my assumptions entering the study, and described my methods for collecting and analyzing data (LeCompte & Preissle, 1993). Also, detailed descriptions of the teachers' settings are included to increase reliability. In earlier chapters, I have attempted to clearly define, or operationalize, significant constructs for the possible replication of my design and observation schedule.

Validity. Validity refers to the accuracy of my findings; whether my findings truly represent the reality investigated and whether they can be compared to other groups (LeCompte & Preissle, 1993). The large amount of time qualitative researchers typically spend with their participants is a strength regarding validity. Visiting my participants routinely over seven months allowed for continuous data analysis and refinement of my descriptions to more closely match their experiences. Interviews and observations occurred almost exclusively in the natural setting of the teachers, their classrooms, and are therefore offer a more realistic portrayal of teaching and learning. As previously described, I conducted member checks to allow the participants to verify data recorded. Participants received an electronic copy (email attachment) of each interview and observation transcripts for their review and perhaps clarification. Suggested changes from the member checks were made, and if so were re-sent for additional verification of those changes.

Despite these intrinsic strengths, the inherent (albeit disciplined) subjectivity of my study demanded that I account for the specific threats of history and maturation,

observer effects, and false conclusions (LeCompte & Preissle, 1992; Wolcott, 1990, 1994). Below, I address each threat.

History and maturation. The nature of this qualitative study demanded the careful investigation of the process and possible change of teachers' perceptions of their professional occurring over several months. Inevitable changes in the teachers' social settings were considered history and changes in the progressive development of the teachers were considered maturation. The social setting of each participant was certainly not static; there were small environmental, social, and cultural changes—such is the nature of investigating the real world. The participants also changed according to the norms of each, as established by their respective professional and social cultures. I attempted to control for threats to both history and maturation by establishing thoroughly descriptive baseline data for possible systematic replication and comparison later in the study. I also attempted to discover behaviors and norms expected in each participant's respective professional and socio-cultural context.

Observer effects. The data from this investigation needed qualification and validation. The participants provided information from their point-of-view, one that was inevitably shaped by their idiosyncratic environments, and perhaps also influenced by their relationship with me, the researcher. Accordingly, the participating teachers did not know that I had created the educative curriculum materials; therefore, they did not feel a sense of obligation to think well of the materials so as to not offend me personally. The data is only valid for their particular contexts and can only be replicated if I make the context explicitly clear to other investigators. The seven months over which I collected data increased validity, as it afforded me the opportunity to thoroughly search for

evidence to strengthen, refute, or corroborate my conclusions. Also, my time spent with the teachers made me less visible to them as they planned instruction. This may have allowed for a more *normal-for-them* flow of activities, as opposed to the participants presenting a false, ideal self or in some other way acting *abnormally-for-them*.

False conclusions. However carefully I account for reliability and validity, deriving false conclusions remained a threat. Without quantitative statistical indicators, qualitative researchers must seek other means to avoid false conclusions. As the study proceeded, I continuously sought alternate explanations, accounted for rival and discrepant data, and therefore added strength that the conclusions I suggest are the most probable. Also, I triangulated (Denzin, 1978) data from the intervention's three iterations to assess whether the participating teachers implemented the type of instruction they planned. I also triangulated data emerging from each of the three data point to assess any development of professional teacher knowledge. This corroboration from multiple data sources, and confirmation of constructs and descriptions all strengthened the likelihood that my findings and conclusions represent the reality of those studied.

CHAPTER FOUR: INTERACTION WITH AND USE OF EDUCATIVE MATERIALS

Introduction

In this chapter, I address two of the study's research questions: how do social studies teachers *interact with* and *use* educative curriculum materials, and can educative curriculum materials influence teachers' *practice decisions*. I begin by more thoroughly describing the participants in their respective contexts and what I had hoped to accomplish with the curriculum materials when I originally repurposed them, intending them to become educative. This chapter concentrates on analysis from the initial five data slices: the participants' pre-intervention interview, planning and enacting iteration_1, and planning and enacting iteration_2. The remaining three data slices, planning and enacting iteration_3 and the post-intervention interview, are analyzed more in Chapter Five where I address the study's remaining two research questions that concentrate on whether educative curriculum materials help teachers *develop* and *articulate* a professional teaching knowledge as it relates to problem-based historical inquiry. Finally, in Chapter Six, I offer explanations for the participants' experiences, discuss alternate explanations, and present possible implications this study may have on the field.

The Participants

Each of the three participating teachers taught in schools that advocated a traditional pedagogy as described in this dissertation's second chapter. A majority of their respective colleagues, administrators, school board representatives, and community

members foremost expected them to teach declarative knowledge (i.e., facts, dates, names) that could later be recalled as answers to standardized test questions. With the exception of Dillamond's department chair and two additional colleagues, seemingly every stakeholder surrounding the participants discouraged (to varied degrees) problem-centered instruction that might prompt students to openly question authority (i.e., government, schools, parents). In short, these teachers taught in typical secondary social studies environments (viz., Shaver, 1996).

Moreover, Nessarose and Fiyero were both mentored by veteran teachers who, again, overtly encouraged traditional teaching strategies similar to those described in Chapter Two. This tutelage seemed to deeply impact the two true novices who began this study with the same pedagogical approach, a *narrative structure* (Barton & Levstik, 2004). Both teachers tended to present their students with overly simplified stories of the past from a single vantage point, and they imposed a direct cause-and-effect order on historical facts. They also sought—as a primary instructional theme—to engage their students with interesting, story-like descriptions of the past. This study's other participant, Dillamond, also crafted story-like narratives, however, his were far more nuanced and elaborate. He seemed to use instructional time as an opportunity to demonstrate his ability to memorize and retrieve nuanced, discrete bits of "history." More than attempting a well-told story, as was the case with other two participants, Dillamond attempted to create for his students, meticulous fact-chains that rather minutely detailed the past. Because of his concentration on discrete bits of the past as opposed to story telling, Barton and Levstik (2004) would likely classify Dillamond's approach as an *exhibition stance*.

Each of the teachers had taught fewer than three years in their current school, and thus had not attained the benefits associated with tenure: job security, collegial respect, increased compensation. In another similarity, each participant was heavily involved in sponsoring extracurricular events; for example, the three teachers each sponsored their school's *Youth in Government* club. Additionally, Nessarose coached her school's women's tennis team and supervised its traveling academic competition team; Fiyero coached cheerleaders and sponsored a dance team; Dillamond coached men's soccer and sponsored a community service club. Twice these extracurricular obligations explicitly intervened in the study; Fiyero and Dillamond each had an after-school planning session interrupted by an impromptu visit from a parent concerned with an extracurricular issue (cheerleading t-shirts and a player's injury, respectively).

Also regarding their environments, Dillamond and Nessarose taught in schools where the teachers' and students' morale seemed to be very high, while in Fiyero's school there seemed to be substantially lower morale. Fiyero also shared that for several consecutive years her school had not successfully met federally legislated (No Child Left Behind) benchmark requirements for Adequate Yearly Progress. Consequently, Fiyero's department chair routinely reminded her and the other social studies teachers to compile thorough documentation on every lesson in relation to the state's eligible content on the course-of-study, the school's curriculum pacing guide, and the students' textbook. All of this served to, as Fiyero quipped, "cover my—accountability" (October 16, 2007). Shortly before the end of this planning session, she also interjected that last semester she was "looking for good resources on the Civil Rights Movement and activities for the end of the year," to which her department chair questioned why she was going to "cover that,

it's not on the grad exam." To this exchange Fiyero seemed indifferent, resigned to the fact that, as she stated later in the study, "social studies classes should focus on getting kids to pass the [graduation] exam" (December 3, 2007).

While planning their lessons for this study, each of the three teachers seemed to acknowledge the educative curriculum materials' notion of allowing students considerably more agency in learning. However, when enacting their lessons, only Nessarose seemed willing to allow students to interpret visual data, account for their sources, and negotiate an understanding about them. And even then, she quickly "corrected" students when their conclusions differed from hers. Not one of the participants strongly or consistently exhibited the teacher characteristics Shaver (1996) and Oliver and Shaver (1966, 1974) suggest as necessary for meaningful issues-centered instruction, "open to the exploration of ideas. . . have a tentative-probabilistic view of knowledge. . . an intelligent, open, inquiring mind. . . willing to interact freely with his or her students, accepting their contributions as valuable and worthwhile to build upon." The participants seemed to find it difficult to create an open-ended learning environment where students would explore the past and think independent of an authoritative, definitive answer.

Nessarose and Dillamond seemed to use the educative curriculum materials differently from their routine use of traditional resources. Throughout the intervention they visited several educative hyperlinks, attempted to use the photographs to develop students' historical thinking skills, and the story-like narratives of the past they continued to present to their students became slightly more reflective (e.g., including multiple perspectives, raising epistemological concerns). Fiyero, however, used the repurposed

materials virtually indistinguishably from her use of traditional resources. Throughout the intervention she visited few educative hyperlinks, continued to employ photographs to illustrate the past, and the story-like narratives she told to her students continued to be overly simple and from a single vantage point.

All three participants seemed to respond strongly to the historical photographs' primers. The primers specifically attempted to build teachers' foundational knowledge and, in regard to professional teaching knowledge as it relates to problem-based historical inquiry, their understanding of students' need to *connect* information. I developed the primers with the assumption that the data they contained and the format in which it was presented might be able to help teachers more effectively question students and guide them to deeper levels of thinking about the past, however they tended to use them differently. Nessarose and Fiyero tended to mine the primers for ways to better entertain their students; Dillamond used them to better explain the relationships between key significant terms. The three teachers each seemed to use the primers to help them complete the higher-ordered thinking *for* their students and then *present* their thoughts for the students to know and remember.

Dillamond and Nessarose also seemed to use the educative curriculum materials to develop their understanding of the concept and function of *scaffolded* instruction, and Dillamond also seemed to develop an awareness of giving his instruction a clear *purpose*. Table 4.1 summarizes the participants' respective school context, initial pedagogical approach, and typical use of educative curriculum materials and historical photographs throughout the intervention.

Table 4.1 – Participants summary

Participant (years teaching)	School context	Initial pedagogical stance, Barton and Levstik (2004) characterization	Use of educative curriculum materials, historical photographs throughout intervention
Nessarose (2)	Parochial school with high student and teacher morale, mentored by a traditional department chair cautious of constructivism, PBHI	Narrative-structure: presented students with overly simplified stories of the past from a single vantage point, imposed a direct cause/effect order on historical facts, sought to engage students with interesting story-like descriptions of the past	Slightly differently from traditional resources, visited several educative hyperlinks, story-like narratives of the past were more reflective, employed photographs to develop students' historical thinking skills to better make sense of the understanding presented to them – not create their own. Possible PBHI PTK development includes the *connected* (primers) and *scaffolded* (data retrieval chart) principles
Dillamond (10)	Public school with high student and teacher morale, worked with a department chair who encouraged constructivism, PBHI	Exhibition stance: obtained personal fulfillment from attaining and imparting discrete bits of historical data, saw teaching as opportunity to display prowess in memorizing and retrieving facts on which he imposed an elaborate and nuanced order	Significantly differently from traditional resources, visited several educative hyperlinks, attempted to provide reasons to learn the intricately nuanced stories and vocabulary terms, employed photographs to introduce historical thinking – avoided inclusive discourse. Possible PBHI PTK development includes the *connected* (primers), *purpose* (topic-specific questions), and *scaffolded* (data retrieval chart) principles
Fiyero (2)	Public school with low student and teacher morale, mentored by a traditional peer who discouraged constructivism, PBHI	Narrative-structure: presented students with overly simplified stories of the past from a single vantage point, imposed a direct cause/effect order on historical facts, sought to engage students with interesting story-like descriptions of the past	Virtually indistinguishably from traditional resources, visited few educative hyperlinks, story-like narratives of the past remained overly simple and from a single vantage point, employed photographs as illustrations of the past – without historical thinking. Possible PBHI PTK development includes the *connected* (primers) principle

Repurposed Curriculum Materials

As described more thoroughly in Chapter Three, these educative curriculum materials were designed to support teachers' development of professional teaching knowledge as it relates to the following four research-based principles of problem-based historical inquiry: learning should be purposeful, connected, active, and structured to encourage success. Instead of memorizing information from a textbook or lecture, these educative curriculum materials promoted lessons that establish a more authentic *purpose*: deep, sustained learning and struggling with problems of the past in order to more meaningfully address problems of the present. These materials also emphasized profound ideas and employed them as mental-anchors to which students may *connect* their previous knowledge and newly-learned information. Because they focused on attempts to resolve an authentic societal concern that might be viewed differently by different individuals, the educative curriculum materials also stressed students being *active* participants in forming and debating their decisions with peers. The educative curriculum materials were also created with the assumption that all students are capable of higher ordered and more expert thinking if properly supported, or *scaffolded.*

What follows is a discussion of the two major themes that emerged from the data collected of the nearly ten months of the study (July 2007 to March 2008). First, I discuss the teachers' epistemological beliefs and what I call their deference to an outside authority, and then I consider their beliefs about their respective student's abilities.

Epistemology and Deference to an Outside Authority

Prominent across all three cases was the participants' epistemological conviction that knowledge was to be received from external authorities rather than to be developed

internally by individual learners. Moreover, the teachers demonstrated that they greatly valued the contribution that the outside authorities could make in their classrooms. As an example, the three participants described and consistently demonstrated a heavy reliance on their students' textbooks. Fiyero and Nessarose were especially insistent, voicing their dependency on the text for planning classroom events. The following is one of twenty-two specific references throughout the study that Nessarose made to her text, "I tend to rely on the book because not many of them [students] are very good note takers. So if I do this [activities with photographs], I normally put book notes on the board and they copy them or underline in their book" (March 20, 2008). Along with this notion of employing the text as a type of informational lowest, common denominator, Fiyero and Dillamond both referenced another integral aspect of their planning with a text: organization. These two participants each suggested that good students are those who read well and are skilled note takers; rarely did they mention another attribute aside from passing the course. Their fidelity to the text may again support my assumption about their epistemological view that knowledge is known, not created.

Also, the educative curriculum materials' hypermedia attempted to present the teachers with "more realistic representations of complex social phenomena," (Saye & Brush, 2007, p.15) such as implementing wise practices in their classrooms. Integrating my personal experiences using online resources to plan classroom events with my visits to several online resources claiming to promote teachers' reflective instruction (viz., cases.soe.umich.edu, civic[s]_online.org, historicalthinkingmatters,org, pihnet.org), I attempted to develop webpages that encouraged the participants to engage the hypermedia. However, despite what I considered inviting positioning on webpage

interfaces and engaging, dissonance-urging prompts, the hypermedia embedded within the educative curriculum materials largely failed. The participants ignored the majority of hyperlinks that sought to initiate their cogitation or reflection. While technology afforded teachers the opportunity to independently negotiate and experience dozens of educative features, they demonstrated little contemplation of the curriculum materials' educative features. Innovative hypermedia structures may have minimized some constraints (e.g., flipping through many pages, chasing footnotes or endnotes), while seeming to exacerbate others. For example, the lack of a clear right way to participate with the materials seemed to diminish the teachers' learning from them. Again, there were no "you absolutely *must* click here" tags for the hyperlinks. The teachers seemed unsure which hyperlinks to visit, how much time to devote to each educative feature, and how to react to the information presented. Routinely, the participants made comments or raised concerns suggesting apprehension; Dillamond asked, "okay, now what exactly does this 'click here' mean? Will that take me away from this lesson — or no" (September 12, 2007) and Nessarose shared a similar question, "what happens if I go there [hyperlink]? Should I go ahead and do that or — is that going to help me" (August 21, 2007). Traditional online lessons tend to be more straight-forward, typically having an unbroken, easy-to-follow pathway from beginning to end. However, the educative curriculum materials' lessons were far less rigid in the order and the pace at which the teachers were able to experience them. Replacing a traditional mentor who would guide the teachers as they planed their lessons, the embedded hyperlinks were intended to provide scaffolding for the teachers' individual needs. This technology-facilitated instruction can help learners by deconstructing "complex tasks into more manageable

chunks. . . guiding self motivation so. . . learner(s) understands [their] own comprehension and progress" (Hicks & Doolittle, 2008, p. 209). However, computerized scaffolding can also prove challenging to learners unaccustomed to accepting pedagogical suggestions from a didactic authority or rethinking their instructional tactics. The mental sophistication and cognitive prowess necessary to negotiate hypermedia scaffolds may be too high for the typical teacher uninitiated to online learning environments.

Again, whereas the educative curriculum materials intentionally lacked precise structure in order to provide teachers with individualized opportunities to develop richer understandings of teaching and learning, the teachers seemed to consider their freedom to navigate the web-based lesson to be, "a bit confusing at the start, not knowing where to go and what to look at and what all to read" (Fiyero, January 12, 2008).

It seemed that the participants attached little meaning to most of the educative features; to those they did attach slight meaning, they rarely synthesized a new, more sophisticated understanding of its content. Their confusion with the educative curriculum materials' hypermedia may support the assumption about their being unsure how to make sense of the materials that asked them to create knowledge instead of finding it.

Perhaps the design format of the materials themselves impeded the participants' opportunities to learn from the educative curriculum materials. Also, time pressures may have contributed to the teachers' preference for the familiar, directive curriculum as opposed to the open-ended learning environment established by the educative curriculum materials. I address each of these possible outcomes in ensuing sections of this chapter.

Beliefs About Students' Abilities

Closely related to teachers' epistemological assumptions are their beliefs about their students' abilities. To varying degrees the participants each demonstrated a belief that their students were very unlikely to, and perhaps incapable of, successfully negotiating the academic challenges of problem-based historical inquiry. More than the others, Fiyero articulated that she did not think that her students possessed much content knowledge ("they [her students] won't know what this is," October 16, 2007), were capable of interpreting data very well ("I don't know that my kids [his students] could that, think historically," October 16, 2007) or could work productively in a collaborative group ("most of the time I can't keep my kids [her students] from talking about each other's momma," December 12, 2007).

Dillamond indicated that he thought his students' language or analytical skills were likely inadequate for the demands of drawing certain distinctions,

> they seemed to really get into it [an opening discussion] last time but I think in this one I'll have to differentiate for them between those who have gambled their money away and those who legitimately have medical problems or lost their job through no fault of their own. (November 1, 2007)

A month earlier he mentioned that "this is kind of a 'low' group, lower than my typical *US Eleven* kids [students]" (September 12, 2007) and when I followed-up by asking him which aspects of the lesson he might alter because of them being, as he called them, a "low" group, he said "none. I guess I'll just meet them where they are."

Slightly different from the others, Nessarose thought her students too unaccustomed to the "really unclear sense of what historical *facts* are, and that seems to be the base of these [lessons]" (March 20, 2008). Earlier in the study she stated, "the kids aren't going to be able to do a whole lot without more – facts, you know what I mean? Like a hardcore this, this and this" (January 22, 2008). It seemed that the participants thought that the uncertainty and controversy inherent to problem-based historical inquiry learning environments was a terribly daunting, and for Fiyero perhaps insurmountable, obstacle for students.

In the following section I begin to consider the participants' stances when they each began the study. Specifically, I evaluate them in regard to their respective closeness to the educative curriculum materials model for professional teaching knowledge.

Fit of Teachers' Entering Assumptions with the Educative Curriculum Materials' Model of Professional Teaching Knowledge

During the pre-interview, think aloud protocol all three teachers described lessons where their students would listen to a lecture and observe the photographs to illustrate the lecture's more poignant examples. In fact, each participant described using the photographs *after* having lectured; none suggested they would use the photographs *during* their lecture. Not one mentioned any facet of a problem-based historical inquiry principle. Again, not one mentioned an analytical framework that resembled any one of the steps of historical thinking. Perhaps the closest anyone came to mentioning historical thinking skills came when Fiyero recognized Jacob Riis's name and claimed that she would "draw [her] students' attention to him and tell them all about his background and being a 'muckraker'" (July 31, 2007).

Nessarose claimed to have used historical photographs routinely, to have often visited the digital archives at the Library of Congress's website (http://www.loc.gov/index.html) and to have had her students divide photos into quadrants for analysis. While this quadrant approach was a traditional use of photographs, by mentioning her visiting the Library of Congress Nessarose demonstrated an active interest in seeking to develop instructional strategies beyond her immediate social context (e.g., collegiate education, department, school). Additionally, when she planned the *Poverty in the Progressive Era* lesson, Nessarose mused. "I don't do much of that [impromptu discussion], but I'll try. They're [the students] just not a real talkative bunch" (August 21, 2007). In attempting to better understand wise-practices and integrate them into her repertoire, Nessarose seemed to have begun this study with a greater openness to entertaining ideas that deviated from her normal practice, and thus perhaps closest to the educative curriculum materials' model of professional teaching knowledge as it relates to problem-based historical inquiry.

How do social studies teachers interact with and use educative curriculum materials?

A consistent remark that each participant made was that their planning sessions in this study were considerably longer that planning with traditional materials. After planning for nearly an hour on September 12, 2007, Dillamond claimed, "I can't remember planning a lesson for almost this long (*sic*)." Nessarose also noted the lengthy planning sessions induced by the educative curriculum materials. In an email exchange, she decided to meet after school as opposed to during her planning period because, as she shared, "if I'm remembering right, last time took longer than I thought [it would], so maybe we better go with 3 [three o'clock in the afternoon]" (January 18, 2008). Perhaps

the teachers' recognition of the length of lesson planning and the mental acuity demanded of it also contained slight frustration. For example, a lengthy lesson planning session that followed an exhausting day of teaching classes and coaching cheerleaders prompted Fiyero's exasperation, "[m]aybe it's just because today was so long and frustrating, but whatever – what am I doing again?" (December 12, 2007).

The participants also seemed satisfied with the amount and specificity of factual, historical data included in the educative curriculum materials; in fact, it may have been their most convincingly held common conviction. Dillamond's September 12, 2007 comment while he held a photographs primer, "I really like this, it's for the teacher and I can just ask questions off of it," was remarkably very similar to both Nessarose's and Fiyero's statements regarding the provided content. Moreover, the fact that they each devoted a majority of their planning to reading the photographs' primers supports the impression that the teachers found the primers helpful. The value that each participant placed on the primers might be due to fact that the primers closely resembled the teaching materials that traditional curriculum resources present. Perhaps the primers fit more directly into the participants' existing schema maps, and thus they felt more comfortable employing them.

This study supports previous research conclusions that social studies teachers' beliefs about teaching, learning, and implementing new curricula are deeply ingrained in their pedagogy. The teachers' explanations of their respective decision-making throughout the study, especially during the think aloud protocol, illustrated that they each had previously formed a traditional teaching philosophy. Again, Nessarose and Fiyero, each in their second year of service, had settled into what Barton and Levstik (2004) call

a “narrative-structure” (p. 129) approach; they presented their students with overly simplified stories of the past from a single vantage point. Other researchers would classify them as a storytelling typology (Evans, 1989), an analytic idealist (Ravitch, 1987), or one who attempts to simply transmit citizenship (Barr, et al., 1977). Such instructional approaches consider effective study of the past to be a teacher-centered historical narrative that impresses upon students a specific understanding of facts deemed by others to have value. They both used the educative curriculum materials to create an understandable chain of events that their students could commit to memory and later recall. For Nessarose the more entertaining the lecture the better,

> when I student-taught, she [the cooperating teacher during her internship] was always moving around telling stories, and the student were all sitting there like “what happened next”. . . . I too try to turn it into a story. It’s a little harder in economics and government, but in US History you can just tell stories. (August 21, 2007)

The stories that Fiyero and Nessarose crafted from the educative curriculum materials, while largely unreflective, included multiple perspectives and passing references to epistemological concerns (e.g., “how do we know? Look at this and see,” Nessarose, February 15, 2008).

Dillamond displayed many characteristics of the above typologies; however, he also clearly demonstrated what Barton and Levstik (2004) call an “exhibition stance” (p. 110). Dillamond specifically chose to teach social studies because he found it personally fulfilling to attain and impart historical knowledge. He mentioned in the pre-intervention interview, “in particular in history, I was interested in [teaching] it because you’d want to

go for further expansion of your knowledge. So, I went in that direction [as a profession] instead of the English" (July 27, 2007). The leisure activities he found personally enriching (e.g., reading historical non-fiction, visiting memorial sites) also enriched him professionally. This overlapping enrichment was intentional. For him, effective instruction was telling an intricate story that delivered nuanced explanations for vocabulary terms that students would need to retain for standardized tests. Dillamond continually stressed that good students knew (meaning remembered) and understood the content material. He considered his exhibiting and imparting historical knowledge to students was helping them improve their understanding of the past which he thought important because "they [students] will have to take the social sciences in college no matter what their major is going to be and we've got to prepare them for that" (August 28, 2007).

These dispositions seemed to have guided the participants' interactions with, and use of the educative curriculum materials. During their planning of the iteration's lessons, Nessarose and Dillamond each freely omitted or ignored aspects of the resources; they also improvised familiar or trustworthy aspects when they seemed needed. For Instance, while teaching their lessons, both teachers spontaneously added a specific point value to a completed data retrieval charts, presumably as an external motivator for their students. Also, they both adapted the educative curriculum materials' introductory grabbers to more closely resemble their previous experiences in preparing students for a study of the past. Instead of introducing their students to the types of questions more expert thinkers ask, or to model for students the kinds of thinking they would be asked to complete

during the lesson, the teachers used the introductions as ice-breakers to establish an engaging classroom environment.

Fiyero, however, never seemed prepared to even partially implement the educative curriculum materials lesson plans and instead attempted to mine them for ways to accentuate her previously created lessons. For example, she stated,

> I tend to teach the Progressive Era as more of societal reforms and political reforms. I'm trying to think of ways to describe how political parties are changing their face to draw in farmers and regular people. So really, I might just use – stress the *Salvation Army* and the *Coxey's Army* pictures. (September 17, 2007)

These core beliefs regarding the nature of teaching social studies seemed to lead the participants to treat the educative curriculum materials in an à la carte fashion. They tended to select individual aspects to accentuate their already-designed lessons. In other words, they selectively read and entertained only those educative features that seemed consistent with their traditional pedagogy. They neither explored nor discovered many of the available opportunities. Again, from a socio-cultural perspective, the teachers' (actors) traditional views about teaching social studies led them to consider the educative curriculum materials online lesson plans (tools) primarily as accents to their established pedagogy (action). The educative curriculum materials largely failed to jar loose the teachers' perspective; their dispositions may have been a type of filter that warded off most educative features. These omissions and improvisations are consistent with earlier curriculum research (e.g., Borko & Livingston; Brown, 2002).

Teachers' entering beliefs should be considered in analyzing any possible effects of this study's intervention. Given the impact of those beliefs, one is left to wonder what might be educative curriculum materials' potential for affecting teaching practice?

Can educative curriculum materials influence teachers' practice decisions?

Planning a lesson's introduction. The educative curriculum materials seemed to slightly influence the participants' planned and enacted lessons. For example, unlike early in the study, each participant planned a clear introduction to the iteration_3, *Poverty in the Modern Era* lesson. Fiyero asked her students to make a "list of all the words we think about when I say 'the 1960s'" (December 12, 2007). Dillamond said that he "would hook them with something like 'how does poor today compare to poor back then? . . . what do you think about when you hear the word poverty?'" (December 7, 2007). Nessarose played a hangman-like game where she thought of a word (poverty), wrote down seven dashes on the board, and asked her students to suggest letters of the alphabet. Nine minutes into the lesson, the correct order of the word appeared and she told her students that the day's lesson concentrated "around that word and we'll be working with photographs to study people who lived it" (April 23, 2008).

Topic specific questions. Both Dillamond and Nessarose employed topic specific questions in iteration_3 to give their students a sense of purpose to the lessons. After describing his lesson's hook, Dillamond claimed,

> Then, I'd have a question, maybe something to contrast poverty now and poverty then or the poor today, how much better or worse the poor today have it. The overall question is how well is our society meeting the needs

> of the poor today. . . . How does government and society today address the needs of the poor. (December 7, 2007)

Dillamond indeed introduced his students to the question as posited above, however, he did not reiterate it throughout the lesson, nor did he assign his students to specifically answer it. Nessarose also designed an activity where her students briefly analyzed the *LBJ* photograph, discussed information she subsequently provided, and formed tentative opinions of the federal government of the era. While enacting the activity, she instructed, "You'll be working with pictures from when people experienced this to form your own ideas (about President Johnson and the War on Poverty) then we'll see if you're right" (April 22, 2008). Nessarose stressed that her students should use the photos to form opinions that would later be reconciled with historical data. While not precisely stating the rationale presented in the educative curriculum materials, Nessarose seemed to be employing what she understood to be important: having students analyze visual data to derive conclusions that later would be tested. While the quote above may not comprise a terribly sophisticated rationale for using visual data or stressing students' visual literacy, Nessarose clearly used visuals near the end of the study much differently from how she did near the beginning. Moreover, here she defended her decisions with information that seems to be paraphrased from, or at least influenced by, the *visual literacy and historical thinking* hyperlink.

Scaffolding more expert thinking. Dillamond and Nessarose each used a hard scaffold to encourage their students to think historically. When planning for iteration_3, Dillamond quickly decided to employ hard-scaffolding, stating, "they can all fill out the forms [data retrieval charts] — just like we've used in the previous lessons" (December

7, 2007). However, when he enacted the lesson Dillamond had not created a data retrieval chart, but instead encouraged his students to answer questions that he posed to them at the beginning of class. The questions were paraphrased from the previous lessons' hard scaffolds, and were also leading students to think historically (e.g., who took the picture and why was it taken). While students were presented with a topic-specific question, the hard scaffolding did not direct their attention to hypothesizing an answer.

While not calling it "soft scaffolding" specifically, in his planning for iteration_3 Dillamond made reference to visiting with each student group to "make sure they're writing down what they're supposed to" (December 7, 2007). It is rather unclear from the quote alone exactly what Dillamond meant by "supposed to." He could be referring to the precise information he wishes students to learn, or he might be simply referring to completing the task as opposed to horseplay, sleeping, or completing other work. His actions and words on December 14, 2007 suggest Dillamond may have meant both, for he visited student groups during their work-time and redirected many of the groups' thinking. Later, during the post-interview on January 11, 2008, Dillamond articulated a rather sophisticated understanding of soft-scaffolding,

> You're letting them take the initiative to express what's in their mind and gently nudging them in the right direction. It's getting them to take information and channel it to produce the outcome you want from them. Yet they still maintain ownership.

And then later, he added,

> It's not just you spoon-feeding them. They are generating things from their head and you're just taking it in a more productive direction. . . That

> reinforced with me the importance to go around and monitor them [*sic*]. Not standing from a distance, but actually engaging them up close to see what their thinking and especially what they're thinking.

These two comments are mostly Dillamond's paraphrasing from the data presented to him through the educative curriculum materials. While his actions might not have exemplified his words, Dillamond had clearly engaged the concept of soft scaffolding and contemplated its utility in his classroom.

The goodwill Nessarose seemed to develop toward hard scaffolding during the study's intervention seemed to culminate in her enacting of the *Poverty in the Modern Era* lesson. As she planned the lesson, she mentioned wanting her students to "have their books open. . . take notes," and "copy notes. . . from the [dry-erase] board" (March 21, 2008). However, while enacting the lesson Nessarose drew her students' attention to the dry-erase board at the front of class and read aloud the four-part task she had written,

> 1. State the name, date, and photographer.
> 2. Explain the photo.
> 3. State how the photograph shows poverty.
> 4. Explain whether or not the Great Society plan would help the people in the photo. Why or why not? (April 22, 2008)

It seems that after ten-months with the educative curriculum materials, Nessarose's notion of anticipating students' difficulties matured into providing guidance concerning the means to discover data -- and perhaps what to do with it thereafter.

There was another instance suggesting that Nessarose began to internalize hard scaffolding as an attempt to help students through a challenging task that they might be

unable to complete if left alone. Earlier in the study when planning for iteration_2, she visited the *data retrieval chart* hyperlink and ventured,

> Now with the data retrieval chart, my students really got into completing it. They all pretty much were able to come up with answers to the questions on the chart. . . They put a lot more work into it than they typically did a regular-day's worksheet. (January 23, 2008)

Criteria for selecting photographs. Early in the study Dillamond and Fiyero articulated a clear criteria for selecting photographs they would use with students: the photograph's clearness, "they'll be able to see these kids over here pretty well," (Dillamond, July 27, 2008) and that the photographic content fit into their previously-made lessons, "we talk about this a good bit, so I'd be sure to use it" (Fiyero, July 31, 2007). At the study's end, Dillamond sourced the *West Virginia* photograph he mentioned,

> So there'll be some good "unanswered questions" there, but there's enough context there that the students can draw valid conclusions from them, so I think I'll include this one definitely and especially what is says the photographer did a lot of documenting of the poor in America and civil rights groups use his photos on Capital Hill to show poverty. (December 7, 2007)

In contrast to clarity, Fiyero elaborated on wanting the photographs she used to "go well together." She continued,

> these (*Mississippi and West Virginia*) because this one (*West Virginia*) isn't what you think of when you think impoverished families in the south

> while this one is (*Mississippi*). And they're in the same year. I'd just challenge what we think to be the norm, again, when we read about sharecroppers in the text we're not just talking about blacks, but whites as well. Just challenging them in what they think of as the norm. (December 12, 2007)

Both of these participants are describing criteria very different from that which they mentioned earlier in study. After months of intermittently encountering the educative curriculum materials both articulated an increased importance to their choices: instead of illustrations of objective facts, they sought to present students with more complex (sometimes challenging) subjective views of the past. Moreover, they mentioned that their students' careful historical thinking, would lead to the discovery of enough information to think meaningfully.

Planned Lessons and Enacted Lessons

Another prominent theme of the participants' experiences interacting with and using the educative curriculum materials was that their planned lessons and enacted lessons differed greatly. Moreover, the disparity between their planned and enacted curriculum seemed to center around the degree of control the teachers were willing or able to relinquish. The educative curriculum materials encouraged the teachers to allow students a greater agency in determining the value they would place on information gathered from the photographs. Students were also to negotiate that information, balance benefits and drawbacks, and then generate responses.

The contrast of the participants' planned and enacted curriculum demonstrates how teachers use resources to *create* their own opportunities to develop their craft. Fiyero

seemed to alter the educative curriculum materials' lessons to better control her classroom and directly deliver the content she believed they needed. Many of her alterations completely subverted the problem-based historical inquiry principles offered by the educative curriculum materials, and seem to greatly diminish her capacity to discern or support her students' historical thinking. Nessarose and Dillamond enacted curriculum that provided considerably more opportunities for their students to think historically, and for them to help their students critically explore the past. However, it would be unfair to omit that these latter opportunities were mostly left unrealized.

Each of this study's participants exhibited this phenomenon to some degree, but Dillamond and Fiyero seemed to have the greatest likelihood to disregard the educative curriculum materials original intent if it seemed to contradict their beliefs. For example, when Dillamond planned the lessons, he readily accepted the suggestions for meaningful group work, particularly regarding groups conversing with each other. However, when enacting the curriculum, Dillamond controlled virtually all aspects of communication — calling on specific students and quieting others, even when they discussed or questioned content related material. In a similar fashion, Fiyero planned to engage her students in an interactive dialogue to explicate the historical photographs, but when executing the lesson she led an informative monologue.

Although less obvious, Nessarose's teaching of the three iterations also illustrates the issues of control and authority. Her comments surrounding both the planning and enacting of the educative curriculum materials demonstrate that she believed her students virtually incapable of learning facts about the past without her explicit and continual direction. For example, when walking around the classroom in an attempt to soft-

scaffold, she routinely answered students' questions directly with what they were certain to accept as a "right answer." Not once did she press students to consider additional evidence, challenge them to think differently, or in any way have them decide an issue for themselves. An underlying element of her tendency may have been unfamiliarity with orchestrating meaningful group work. Nessarose neglected the *multiple intelligences* and *small groups* hyperlinks within the educative curriculum materials and even allowed her students to form their own groups. Ironically, in allowing students to control their group, she made it much more difficult for them to *control* their learning.

In this chapter, I concentrated on analysis from the initial five data slices: the participants' pre-intervention interview, planning and enacting iteration_1, and planning and enacting iteration_2. With the data resulting from those slices I addressed the initial two of the study's research questions: how do social studies teachers *interact with* and *use* educative curriculum materials, and can educative curriculum materials influence teachers' *practice decisions*. I also described the participants in their respective contexts and what I had hoped to accomplish with the curriculum materials when I originally repurposed them, intending them to become educative. The remaining three data slices — planning and enacting iteration_3, and the post-intervention interview — are analyzed more in the ensuing chapter as I address the study's remaining two research questions that concentrate on whether educative curriculum materials help teachers *develop* and *articulate* a professional teaching knowledge as it relates to problem-based historical inquiry. Chapter Six summarizes the investigation and its limitations, offers explanations for the participants' experiences, discusses alternate explanations, and presents possible implications this study may have on the field.

CHAPTER FIVE: DEVELOPING AND ARTICULATING PROFESSIONAL TEACHING KNOWLEDGE

Introduction

In this chapter, I answer the remaining two research questions: can educative curriculum materials help teachers *develop* and *articulate* a professional teaching knowledge as it relates to problem-based historical inquiry. I also discuss the participants in terms of pedagogical change during the study, and whether any teacher may have ended the study any closer to the model espoused by the educative curriculum materials. Whereas the previous chapter concentrated on the participants' pre-intervention interview and their experiences planning and enacting the intervention's first two iterations, this chapter's data analysis concentrates primarily — but not exclusively — on the third iteration and the post-intervention interview. These final two data slices were intentionally designed to afford the participants opportunities to demonstrate and discuss, either implicitly or explicitly, any newly formed professional teaching knowledge that may have been prompted by their participation in the study. Again, this study's educative curriculum materials attempted to promote professional teaching knowledge as it relates to problem-based historical inquiry, and thus I begin the ensuing discussion of any possible development of professional teaching knowledge by describing my impressions of the participant's understandings related to the four research-based principles of

problem-based historical inquiry: learning should be purposeful, connected, active, and structured to encourage success.

PBHI Principle: Purpose

Rather than memorizing information from a textbook or lecture, the educative curriculum materials designed for this study sought to promote lessons that establish a more authentic *purpose*: deep, sustained learning and struggling with problems of the past in order to more meaningfully address problems of the present. Struggling with authentic problems is the underlying rationale for the educative curriculum materials created for this study; moreover, developing professional teaching knowledge as it relates to problem-based historical inquiry gains its motivating civic purpose from this goal.

No participant achieved an insightful understanding that research strongly suggests that struggling with authentic problems of the past better prepares students to more meaningfully address problems of their present. In fact it is difficult to determine to what degree the teachers even understood that goal to be a desired goal of the educative curriculum materials. Still, Nessarose and Dillamond seemed to develop a slight, perhaps superficial, awareness of giving their instruction a clear purpose beyond memorizing information that others have deemed important. Both teachers' understanding seemed manifest in their creating topic specific questions for their respective iteration_3 lessons. Within two minutes of beginning to plan his *Poverty in the Modern Era* lesson, Dillamond stated,

> Then, I'd have a question, maybe something to contrast poverty now and poverty then or the poor today, how much better or worse the poor today have it. The overall question is how well is our society meeting the needs

> of the poor today… I would hook them with something like "how does poor today compare to poor back then?" (December 7, 2007)

Dillamond seemed to broach the problem-based historical inquiry principle without truly grasping its import. During the post-intervention interview when asked a follow-up question concerning the lessons' purposes, he stated, "the purpose of these [educative curriculum materials] is to engage the kids more so than other materials. This goes well out of the way to make sure that they are engaged" (January 11, 2008). Evidently, Dillamond thought that employing a lesson-specific question did little more than engage, or hook, students. This seems consistent with his previous experiences in the study. In both earlier iterations, Dillamond presented his students with the suggested topic-specific questions and posited that their efforts for the day should be directed toward discovering and accumulating information so as to answer it, "okay — here's the question we'll be working on today. Y'all listen and get ready to try and answer it — eventually" (October 24, 2007). However, in neither lesson did he mention the topic specific question after the initial minutes of either class, nor did he assign his students to overtly answer the question. This suggests that he either misunderstood the purpose of the topic specific questions or that he understood them to provide only an interest-grabbing introduction to the lessons.

Nessarose had a similar experience with the problem-based historical inquiry principle purpose and its topic-specific questions. During her planning for iteration_3, after nearly four minutes of examining the photographs and her students' textbook to determine a way to combine the two resources, she said, "I want my students to start forming their own opinions about LBJ and his administration" (March 20, 2008) and

when enacting her lesson on April 22, 2008 she told her class "Yesterday we talked about Kennedy, but today – now – we need to discuss LBJ. . . and I want you to think about his 'Great Society.' You'll be working with pictures from when people experienced it to form your own ideas (*sic*)." While her lesson's topic-specific question was not terribly clear, she attempted to provide her students a reason for studying this particular vignette of the past — gathering data to fashion opinions about Johnson's 'Great Society.'

Earlier in the study, Nessarose had been clearer in using the topic-specific questions. In iteration_1, she continually referenced the topic-specific question, citing it verbatim five times, stressing to her students that they were to use the photos to "think critically about the poor and the organizations to see if they [the organizations] were up to the task" and "what do the photos suggest about the poor and their lives — did society help? Was it enough?" (September 24, 2007). After the lesson, when asked about her use of the topic-specific question, Nessarose said, "It worked today. Kids who never say anything, like [student's name], were actually talking about history and doing quite a good job of it, too" (September 24, 2007). During iteration_2, She asked her students, "Who has the obligation to help people — the government — society in general?" and then added "that's what we're doing with the pictures — figuring out who" (February 15, 2008). However, like Dillamond, she did not formally assign her students to answer a topic-specific question and apparently thought the questions engaging, particularly for students who tended to be uninterested in discussing history.

Engagement was indeed an aspect of the educative curriculum materials presentation of the problem-based historical inquiry principle of purpose; however, it was posited as a means to an end — struggling with problems of the past in order to more

meaningfully address problems of the present. Dillamond and Nessarose seemed to have thought about and specifically employed that particular, albeit rather less significant, rudiment of the hyperlinked information.

Of the three participants, Fiyero devoted the fewest minutes to planning with the educative curriculum materials; one of the few educative aspects she broached was the hyperlink addressing each lesson's purpose. She read and then acknowledged,

> foundational and conceptual knowledge is apart of every goal and course of study, and so we're [the school's social studies department] all geared toward that here. And, of course, civic responsibility is important. It's amazing how many different answers you'll get; and that is really the point. "Why should the government build a fence across the boarder with Mexico?" and someone calls out something ignorant. (September 17, 2007)

The above quote illustrates that Fiyero was at least mildly aware and interested in developing her students' abilities to enter a public debate concerning policy questions. However, this quote also marks the only reference Fiyero made to attempting to promote students' civic competencies through her instruction. She made no indication that she either read the lesson's persistent issue in history or topic-specific question, or visited the persistent issues in history educative hyperlink. Neither did she introduce her students to the topic-specific questions throughout her experiences during the intervention.

When planning her lesson for iteration_3, Fiyero mentioned that she might ask her student questions such as "why do you think they [the photographers] chose to show this family [referring to Mississippi Living Conditions]" and "how was this signed and two

years later there's a protest in welfare?" (December 12, 2007). However, there was no indication that she intended to pose a single, unifying topic-specific question. Later, on January 12, 2008 during her post-intervention interview, when asked about the educative curriculum materials' persistent issue in history and the subsequently derived topic-specific questions for iterations one and two, she explained,

> The Progressive Era and the Great Depression were good, but rather than the Civil Rights Movement, maybe the Cold War. There's a lot of stuff from World War One or The Twenties, or even with World War Two but there's just not a lot of stuff like this [lessons featuring historical photographs]. I have a hard time making connections with the everyday fear of the Cold War. Kids don't have a hard time putting themselves into the Civil Right Movement, but the Cold War is different. They haven't been taught that very much before. So the other eras would have been more helpful. (January 12, 2008)

In the above quote Fiyero illustrated that she did not recognize the thematic element central to the iterations comprising the intervention. Each set of historical photographs attempted to provide teachers with the means to create for their respective students thoughtful explorations of poverty and associated societal responses. The *persistent issues* hyperlink, and the *why only a topic-specific question*? hyperlink embedded within the online lessons referred to the rationale behind this instructional strategy. Aside from the following comment she made in iteration_1, "I like the idea of beginning with having a goal in their minds. . . And I guess I just took that out," the persistent issue in history might not have existed according to Fiyero's planning and teaching of the lessons.

PBHI Principle: Connected

The educative curriculum materials designed for this study were also constructed with the understanding that experts tend to have larger and more *interconnected* schema that allow them to create more meaningful understandings of complex data. All three participants seemed to respond strongly to the historical photographs' primers, but seemingly for reasons different from those posited in this dissertation. In short, the primers specifically attempted to build teachers' foundational knowledge in an effort to help them create understandings of the past that were more complex and sophisticated. The teachers could then have applied this robust understanding to helping their students' ability to *connect* information in ways that expand the students' conceptual schema. Unlike the other problem-based historical inquiry principles, my discussion of *connected* includes analysis from data collected from iterations one and two.

Fiyero explained in her pre-intervention interview that from planning materials she wanted to "learn more facts" and "understand [content material] better," and as a result be "able to explain things better to students" (July 31, 2007). In fact, at the beginning of the study both Dillamond and Nessarose also emphasized a desire that their respective experiences with curriculum materials would net them supplemental, preferably new and interesting, historical data. Considering that many traditional teaching resources often state their purpose as providing information and explanations, the participants' expectation seems reasonable. For example, *Jackdaw Publications*, arguably the largest educational primary source material company to emphasize historical photographs, includes the following description of their award-winning resources: "Jackdaw[']s] (historical photographs) include detailed historians' narratives. . . written in

logical sequence, they offer carefully compiled research and background information for studying and evaluating. . . and augment retention of information in a variety of disciplines" (http://www.jackdaws.com/t-jackdaws.aspx).

There was nothing in Fiyero's experiences to indicate a connecting of data as described briefly above and more fully in Chapter Three. However, she did demonstrate a strong interest for "learn[ing] more facts." On September 17, 2007, while planning for iteration_1, she flipped through the photograph's primers and charged, "I know I have never seen before this picture of the *Hull House Nursery*. I think it's cool because I can definitely see kids [her students] going 'does that one lady has that many kids'? Then, after reading the primer for nearly thirty seconds, she commented, "Jacob Riis —that's what I'm reminded of with this one [holding up the primer], and his *How the Other Half Lives.*" Here Fiyero connected the primer, and presumably its data, to that which she already knew. While she may have expanded her schema for Progressive Era reforms; in her instruction, Fiyero did not demonstrate any *use* of that richer schema to help her students make their own richer conceptual connections. As it helped her relate new information to something already known, the primer seemed more practical or understandable to her — more than the online educative hyperlinks.

While turning through the hardcopies of the teachers' handouts, Fiyero examined the *Breaker Boys* primer for several minutes and quipped,

> I have this picture in my materials for the Great Depression, which I now know is wrong because of the date. Oh well. . . I want the kids to ask questions like "who are they" and "what do they do" so I need to have specifics like these ready. (September 17, 2007)

Through this self-deprecation, Fiyero demonstrated a historical thinking skill modeled by the primers and encouraged throughout the intervention: sourcing a document. In recognizing that the photograph was made public decades earlier than she had previously thought, her understanding of the era grew. Moreover, in stating "I need to have specifics like these ready," Fiyero indicated that the she considered the data included on the primers to be valuable.

Dillamond explained in his pre-intervention interview on July 27, 2007 that from planning materials he tended to "just [look] for things — different things that will get the kids thinking" and later he added, "it's not *just* getting more facts. . . it's new twists and new insights. But — maybe a few new interesting facts that I've never heard before. Something to share, something to make it fresh." Perhaps it was this inclination toward acquiring data that led Dillamond, as Nessarose did, to visit each of the six educative hyperlinks that concentrated on developing teachers' connectedness of foundational knowledge. Unlike with Nessarose, who often specifically mentioned learning new content knowledge from the educative curriculum materials, with Dillamond it was more difficult to approximate the extent of his developing and connecting foundational knowledge. However, there were a few strong non-verbal indicators to that effect. For example, Dillamond devoted nearly forty of the fifty-seven minutes of his planning to reviewing the primers and discussing them aloud with himself. In addition to this large percentage of time (nearly seventy-five percent), Dillamond's facial expressions (oft-raised eyebrows) and body language (routine nodding) seem to also indicate a thorough entertaining and processing of the primer's information.

Dillamond, however, did make a few comments to further support the claim that he attempted to integrate data from the photograph's primers into his understanding of its era. During his July 27, 2008 pre-intervention interview Dillamond said of the *Coxey's Army* photograph, "and this one — I'm not exactly sure what's going on here, so I guess that's why I'm not even focusing on it very much." However, in September as he planned for iteration_1, he slowly read through the photograph's primer, and then quoted from it extensively in October when he taught the lesson. Also while teaching the lesson, Dillamond made the following comment to his students, "[l]ook here at the Virgin Mary portrait. It says that that typically means 'Catholic.' So, maybe it's a Catholic nursery. I think that's interesting" (October 24, 2007). The "it" Dillamond refers to is clearly the photographic primer for *Hull House* and hints at his reading it rather attentively and integrating it into his understanding of the era and perhaps religious iconography.

Nessarose was the lone participant to highlight factual data on the photograph primers, later telling much of it to her students. To the highlights she occasionally added notes in the margins. For example, on the *Hull House* discussion primer, a circle around the words "poor and needy." She drew an arrow from the circle to a note, "poor = money needy = necessities for life." Her consistent use of the primers, citing information from them while teaching her class, and jotting her thoughts upon them strongly suggest that Nessarose found them informative. Also, the note described above may indicate that in addition to learning specific details of the past she also more clearly defined a few concepts associated with the particular eras addressed in the educative curriculum materials. Nessarose's comments, particularly when planning, complement her use of the primers. For example, toward the end of her iteration_1 planning on September 24, 2007,

Nessarose commented, “the history of the Salvation Army is interesting. I’d never heard that before.” This revelation confirms a statement nearly a month earlier that, “I don’t know this one [*Coxey’s Army*]. I don’t know — we don’t talk a whole lot about it, so — and the *Salvation Army* one and the nursery one [*Hull House*] I’d probably not use those” (August 21, 2007). These comments seem to reveal at least some internalizing of newly-presented knowledge, especially considering that she used all three of the aforementioned photographs in her teaching, again frequently citing the recently highlighted handouts, often using exact phrasing from the primers.

When planning for iteration_2, Nessarose devoted slightly more time to studying the primer for *Migrant Family* than the other four photographs primers. Then, on February 15, 2008 when enacting the lesson, she told her students, “let me share a story I found really neat,” and proceeded to fill nearly twelve minutes with tales of Dorothea Lange and her interaction with Florence Owens Thompson, the migrant family’s mother in the now-famous photograph. The planning and enacting of the lesson strongly suggest an integration of the educative curriculum materials’ historical information into Nessarose’s understanding of meaningful instruction; she clearly used the primer’s data to craft a well-told story. However, this was only part of the primer’s intention.

Promoting teachers’ connecting new foundational knowledge to that which they were presumed to already know was more fully intended to lead teachers to a richer schema of the particular eras of investigation. Like Fiyero in the section above, here Nessarose’s schema of connected data seemed to expand. However, she, too, did not seem to employ their richer schema to help her respective students make their own richer schema.

Again, while each of the teachers demonstrated on several occasions that they used the primers to supplement their understanding of the Progressive and Depression eras, none seemed to connect their knowledge to build more complex models of the past and its issues. Obviously, they did not use their deeper knowledge to engage students in constructing their deeper, more complex, and more sophisticated understandings. Thus, it seemed that the teachers valued the primers not for the reasons they were provided, but rather because they provided specific detail or engaging vignettes that could accentuate pre-existing lectures. Strip-mining the primers for accents did little to advance the teachers' professional teaching knowledge or their understanding of problem-based historical inquiry. Perhaps this again relates to the participants' tendency to remain comfortable and center their attention around what they found familiar.

PBHI Principle: Active

Because they focused on attempts to resolve an authentic societal concern that was likely to be viewed differently by individuals, this study's educative curriculum materials also stressed students being *active* participants in forming and debating their understandings with peers. No teacher seemed to develop a meaningful understanding of why they might encourage their students to socially construct knowledge. In fact, at times throughout the intervention, Dillamond and Fiyero often discouraged their students from publicly debating their conflicting understandings to avoid classroom management issues (e.g., awkwardness, hurt feelings, fighting). Examples of this are when Dillamond yelled over two of his students and said, "no blurt outs. . . save all that noise for later," (September 12, 2007) and when Fiyero's patience ran low during a discussion and she railed, "no, no, not now, too much, no more talking" (October 16, 2007).

At other times, however, the participants seemed to specifically engage students to *prevent* classroom management issues (e.g., disruptions, idleness). Nessarose may have said it best when she referred to the educative curriculum materials as helping her "make [her] class less boring — yet not a party" (September 24, 2007). The teachers seemed to be attempting a delicate balancing act; they tended to want their students to be just active enough so as to avoid certain control issues, but not so active to induce other control issues. Had their students been more active in socially constructing models of the past, the teachers might have been uncomfortable with the increased student agency.

There was no evidence to suggest that the teachers internalized the concept that no one person can alone perceive the complexity of social reality, and that only though discourse and deliberation, can individuals together meaningfully reason about the world. Again, the participants demonstrated no understanding of this collective rationality, socially constructing an understanding of reality. This again may be an epistemological issue like those discussed in the previous chapter; however, in regard to iteration_3, the participants seemed to consider the problem-based historical inquiry principle *active* as the same as engagement. This may be due to their tendency to think of knowledge as being received from external authorities rather than developed internally by individual learners.

PBHI Principle: Scaffolded

The educative curriculum materials were also created under the assumption that all students are capable of higher ordered and more expert thinking if properly supported, or *scaffolded*. Dillamond and Nessarose also seemed to use the educative curriculum materials to develop their understanding of *scaffolded* instruction. Dillamond insisted that

his students “flow through” each step of the data retrieval chart, filling out “each of its empty cells” (November 27, 2007). When planning for iteration_3’s lesson, Dillamond quickly decided to employ hard-scaffolding, stating, “they can all fill out the forms [data retrieval charts] — just like we’ve used in the previous lessons” (December 7, 2007). However, when he enacted the lesson Dillamond had not created a data retrieval chart, but instead encouraged his students to answer questions that he posed to them at the beginning of class. The questions were paraphrased from the previous lesson’s hard scaffolds, and were also leading students to think historically (e.g., who took the picture and why was it taken). While students were presented with a topic-specific question, the hard scaffolding did not direct their attention to hypothesizing an answer.

While not calling it “soft scaffolding” specifically, in his planning for iteration_3 Dillamond made reference to visiting with each student group to “make sure they’re writing down what they’re supposed to” (December 7, 2007). It is rather unclear from the quote alone exactly what Dillamond meant by “supposed to,” he could be referring to the precise information he wishes students to learn, or he might be simply referring to completing the task as opposed to horseplay, sleeping, or completing other work. His actions and words on December 14, 2007 suggest Dillamond may have meant both, for he visited student groups during their work-time and redirected many of the groups’ thinking.

More than did Dillamond, Nessarose insisted that her students follow each step of the data retrieval chart. While she too did not use a formal data retrieval chart during her enacted iteration_3, she took many of the data retrieval chart’s questions and wrote them on her dry-erase board. She then instructed her students to answer them in their

notebooks during the lesson. It seemed reasonable to assume that both Dillamond and Nessarose came to understand that if properly supported, their students could develop the varied skills and rich knowledge needed to be reasoned problem-solvers. The two participants' emphasis on thinking historically may demonstrate that they were attempting to help their students become more expert, disciplinary thinkers. Clearly, they were grasping historical thinking — each mentioning it frequently during their planning and assigning their students to complete its steps when enacting each of the three iterations. It is difficult to say definitively whether this emphasis on thinking historically was a part of a desire to have their students think in a more disciplined way that corresponds more closely to the reasoning of an expert, for the teachers never explicitly used such language.

During his planning, Dillamond mentioned the following about his students' abilities, "I think they can do this well because with this set [of photographs] they really need to tie a bunch of things in" (November 1, 2007). Dillamond then continued,

> I like for the students to wrestle with the information for themselves first, before I come in and help by providing whatever they don't come up with on their own. For example, this is a government intervention as opposed to a private one — and the students may not get that.

In the above quote Dillamond seems to express a desire to have his students think about historical information, however, he anticipates needed to help them extend their thinking to more meaningful levels. His comment "before I come in and help" may reflect Dillamond's entertaining the educative curriculum materials described rationale for soft scaffolding.

Although she visited neither of the two scaffolding educative features, Nessarose devoted several minutes of her planning to an actual hard scaffold: the hardcopy of the data retrieval chart designed for students to complete during the *Poverty in the Progressive Era* lesson. She seemed to recognize rather quickly that the data retrieval chart was unlike the more traditional graphic organizers she typically used in class. She said,

> I'm all about using graphic organizers; I'm not used to this type though. Most of mine are reading guides or flow charts or something like that. This [the data retrieval chart] is different. This is more like "thinking" than just "finding and putting." (August 21, 2007)

Here Nessarose is describing her sense that the data retrieval chart would require more academically from her students than her usual resources. On September 24, 2007, however, when Nessarose consistently referenced and encouraged her students to follow the lesson's data retrieval chart, it was not for its intended purpose. Instead of using the data retrieval chart as static, pre-meditated supports based upon an understanding of where students typically need specific guidance to think more critically, she tended to use it as a classroom management tool. Seeing that many students were not engaged in their assigned photographic analysis, Nessarose announced, "Class — I'm collecting these worksheets [the data retrieval charts] for a grade so work to complete them" (September 24, 2007). Whether she ever intended to employ the hard-scaffold as an analytical tool for students is difficult to support from observing the lesson; however, it is clear that she eventually used it as a means to encourage her students to busily work throughout the class.

Similar to her planning and enacting the lesson for iteration_1, with the educative curriculum materials for iteration_2 Nessarose seemed intrigued with the lesson's hard scaffolding. When planning for the *Poverty in the Depression Era* in January, she toyed with the logistics associated with using a data retrieval chart in her upcoming lesson,

> instead of every one of the students filling-out their own data retrieval chart, I'm thinking about using a "secretary" in the groups. That way they can share their ideas, have one person collect the answers, and not be so concerned in having to write everything down. Last time, I noticed some of the students were so caught up in the actual writing stuff down that they missed out on some discussion. I think that would really help my kids. (January 23, 2008)

In the above quote, she simply assumed value in students completing a data retrieval chart, and articulated wanting to ensure their understanding. In fact, there was no indication that she contemplated *not* using them or their components. However, while she strongly encouraged students to work through the data retrieval charts in their groups during the lesson, she did not specifically address any of its sections, assign the synthesizing activity on its reverse-side, or collect them to offer constructive feedback

The hard scaffolding modeled historical thinking for the students; in completing the data retrieval chart, students were being led to think more critically and historically about the photographs. The online lesson plans also contained educative features to provide teachers with similar cues for thinking more critically and historically about the photographs. These examples of hard scaffolding were the *3-minute short clip* hyperlink of an actual classroom teacher modeling the historical thinking steps. On January 23,

2008, Nessarose clicked one of those hyperlinks, however, her monitor displayed a pop-up window stating that her computer software was unable to play the video. Nessarose clicked her Internet browser's back button and sat re-reading the webpage, running her finger across the paragraph in which the hyperlink was embedded. She then said.

> One reason why I would probably view that clip is that we all have a tendency to teach to our strengths and I would look at that to make sure that I'm not teaching the analysis of the photo from just my perspective and leaving out something. Whoever I'm watching might point out something I didn't mention or something that didn't catch my eye. Yeah, I would do that [view the video clip] to make sure that I'm not presenting just my bias to the students through my presentation.

It would seem that the mere presence of the video prompted Nessarose to bring about this self-exchange or reflection. She is thinking rather profoundly about her tendencies and biases, wanting to present students with a more objectivity. This reflection is the type of reflection that the educative curriculum materials attempted to facilitate.

Much like Nessarose and Dillamond, Fiyero broached the concept of scaffolding and seemed to immediately consider it as material she had already known. Having visited the *data retrieval chart* hyperlink, she then turned directly to the students' handout and cautioned,

> The one thing that did go through my mind as I was first reading this was "how do I get my kids to use specific evidence?" I like that the handout says "cite specific evidence to support your answer", but I can't get them to do that on tests. They just leave that part blank and it's okay that they

> get a seventy [percent]. That's something that all teachers probably struggle with. I feel like I'm pulling teeth when I ask them to "be specific." I do that, but that's something this lesson talks about. (September 17, 2007)

Here Fiyero thought briefly about teaching and learning beyond just her classroom experiences, wondering aloud if other practitioners experience this student-behavior. Ultimately though, she failed to contemplate possible remedies or think meaningfully about causes. Had Fiyero visited the educative hyperlink *scaffolding*, she may have been prompted to think more deeply about ways she could help lead her students to higher levels of thinking. Fiyero did not recognize that the data retrieval chart anticipated that students, left to their own inclinations, would not likely support their thoughts with evidence and therefore called it specifically to their attention to do so. Several minutes later Fiyero visited the *what does soft scaffolding look like in a real classroom*? educative hyperlink; within five seconds she retreated from that webpage and exhorted, "yep, walking around the room to help students, that's really good" (September 17, 2007). This superficial response to a potentially educative interaction with the materials is perhaps indicative of her overall experience: interpreting the educative curriculum materials through the filter of her familiar traditional pedagogy without internalizing or reflection on the underlying rationale.

Articulating a Professional Teaching Knowledge

The ultimate purpose of this research study was to examine whether experiences with educative curriculum materials could help teachers articulate a professional teaching knowledge when explaining their pedagogical rationale. While the educative curriculum

materials designed for this study attempted to account for many of the impediments to thoughtful instruction by encouraging dynamic interaction between teacher and curriculum, the participants did not accept that invitation. The participants tended to, as Prawat (1992) found, concentrate their planning efforts on the delivery of a particular lesson, not more substantive concerns such as improving their overall craft. Previous research, much of which is included in Chapters One and Two, has traced teaches' struggles to combine their traditional pedagogies with innovative curriculum (Cohen, 1990; Wilson, 1990); however, in only a few of those studies did the materials attempt to engage the teacher in a participatory relationship. The educative curriculum materials designed for this study attempted to use hypermedia explanations and examples to support teachers' negotiating the integration of their respective existing pedagogy with the persistent issues in history philosophy. In this effort, the educative curriculum materials largely failed.

Participant Change Over The Intervention

It was Dillamond's planned curriculum that differed greatest from the pre-planning, think-aloud protocol to the intervention's third iteration. In August 2007, he used the seven historical photographs to plan a lesson where he would first lecture about the Progressive Era and then place students into small groups to observe in the photographs specific examples of his lecture ("remember when I talked about people living in slums — well, there they are" [October 21, 2007]). Each group was to get a copy of each photograph. The historical photographs were to illustrate the lecture, students were to notice details appearing in the photos, and there was no formal discussion of how precisely students would record data.

Again, six months later during his planning for the third iteration, after having examined the twelve historical photographs, Dillamond first derived a topic-specific question ("I'd start with a question. . . something contrasting poverty then and poverty now."). He then selected a photograph with which he would model historical thinking, and then he selected six additional photographs that he planned to divide among groups of students, one photo to each group. The students were to think historically about the photo ("remember the 'Big Four" steps to really think about these photos") and compile information on a data retrieval chart similar to those used in earlier iterations. Finally, students were to share their findings with the other groups while everyone took notes to better prepare an answer to the topic-specific question.

While Dillamond may have developed some awareness of three of the problem-based historical inquiry principles *purpose, connected*, and *scaffolded* instruction, at the study's end he seemed to simply mimic earlier iterations. There is very little evidence to suggest that he truly internalized the principles' underlying rationale presented via the educative features of the online resources. Considering that developing a more professional teaching knowledge requires such internalization, Dillamond was not the closest to accomplishing the educative curriculum materials goals despite his seeming to plan or enact more educative features.

It was Nessarose who demonstrated more conscious grappling with the educative curriculum materials. Although she planned and enacted fewer educative features and seemed to understand one less problem-based historical inquiry principle, the principles and features she did experience seemed to elicit a deeper, more reflective internal conversation. More than Dillamond or Fiyero, Nessarose attempted to understand and

integrate the educative curriculum materials' instructional strategies with what her experiences, collegiate training, and mentor led her to believe about teaching and learning. Again, the earlier example of Nessarose musing about the video clip ("to make sure that I'm not presenting just my bias to the students through my presentation" [January 23, 2008]) demonstrates her willingness to profoundly reflect about some of the hyperlinks' concepts and desire to present students with a more balanced instruction.

In this chapter, I addressed the study's remaining two research questions that concentrate on whether educative curriculum materials help teachers *develop* and *articulate* a professional teaching knowledge as it relates to problem-based historical inquiry. The ensuing chapter will summarize the investigation and its limitations, offers explanations for the participants' experiences, discusses alternate explanations, and presents possible implications this study may have on the field.

CHAPTER SIX: SUMMARY, LIMITATIONS, AND IMPLICATIONS

Introduction

This study was centered around the following research question: *can educative curriculum materials featuring historical photographs help social studies teachers develop professional teaching knowledge as it relates to problem-based historical inquiry?* To investigate, I created curriculum materials for a one-day, stand-alone lesson introducing poverty in the Progressive Era; I then created additional curriculum materials for a one-day, stand-alone lesson introducing poverty in the Depression Era. Both lessons featured teachers leading their students to use historical photographs in thinking deeply about the past and hypothesizing an answer to a recurring societal concern. The lessons were created online to utilize the Internet's technological possibilities (e.g., pop-up windows and multimedia) to embed educative elements for encouraging teachers to construct more sophisticated understandings of their craft. As the study's three participants constructed a third lesson, concerning poverty in the Modern Era, they were afforded the opportunity to think aloud and perhaps demonstrate any professional teaching knowledge related to problem-based historical inquiry that may have been developed through their use of the educative curriculum materials.

Whereas earlier chapters introduced the investigation, placed it in context of germane literature, described its methodology, and discussed its findings — this chapter

concludes the dissertation with discussions of alternate explanations, the study's limitations, and its implications.

Alternate Explanations

In the previous two chapters, I presented my interpretations of the study's findings that I believe the data supports. Now, prior to a discussion of alternate explanations, I review this study's sub-questions and answers. In addressing *how do social studies teachers who are new to problem-based historical inquiry, interact with and use educative curriculum materials featuring historical photographs* I concentrated on the study's initial five data slices: the participants' pre-intervention interview, planning and enacting iteration_1, and planning and enacting iteration_2. I concluded that social studies teachers' beliefs about teaching, learning, and implementing new curricula are deeply ingrained in their pedagogy and seemed to have guided the participants' interactions with, and use of the educative curriculum materials. During their planning of the iteration's lessons, the participants each freely omitted or ignored aspects of the resources; they also improvised by inserting more familiar or trustworthy aspects when seemingly needed. The teachers' entering beliefs about the goals for teaching secondary social studies as well as their beliefs concerning students' abilities seemed to lead the participants to treat the educative curriculum materials in an à la carte fashion.

I also employed those data slices when answering the next sub-question: *can educative curriculum materials designed to develop problem-based historical inquiry influence teachers' practice decisions?* I concluded that the educative curriculum materials seemed to only modestly affect teachers' classroom decisions. Of the dozens of research-based suggestions, three seemed to resonate with the participants: implementing

a clear introduction to their instruction, positing a topic specific question at the beginning of a lesson, and attempting to scaffold student thinking to become higher-ordered and critical. Not coincidentally, those three suggestions also seemed to most readily fit the participants' already-designed lessons.

I then analyzed the final three data slices — planning and enacting iteration_3, and the post-intervention interview — to address the study's remaining sub-question: *can educative curriculum materials help teachers' articulate a professional teaching knowledge as it relates to problem-based historical inquiry?* I concluded that the educative curriculum materials only slightly helped teachers negotiate the integration of their respective existing pedagogy with the problem-based historical inquiry research-based teaching philosophy, and thus also only slightly helped the teachers articulate rationale steeped in professional knowledge. After many months of intermittently encountering the educative curriculum materials, the teachers' explanations and examples of rationale were only slightly more reflective of problem-based historical inquiry professional knowledge assumptions than they were prior to the study. For example, when discussing their selections of photographs to use in their lessons, instead of illustrations of objective facts, they sought to present students with more complex (sometimes challenging) subjective views of the past. Moreover, they mentioned that their students' careful historical thinking would lead to the discovery of enough information to think meaningfully.

However, explanations for study outcomes that run counter to my analysis of the previous two chapters are possible; these include passive rejection of the materials

educative features, time constraints, syntax of the educative features, and diminishing returns related to the number of hyperlinks embedded within the lessons.

Passive rejection. It is possible that the participants engaged the educative curriculum materials and read them more attentively than I observed. If that were the case, the participants may have rejected the lessons' suggestions without clearly articulating an explanatory rationale in order not to offend the researcher. I was intentionally vague about the creation of the educative curriculum materials designed for this study, never explicitly addressing who may have formulated and uploaded them on the online environment, www.pihnet.org. Still, the participants may have resisted projecting what could have been perceived as an overly critical or negative image. Instead, the teachers may have valued displaying an affirming façade more highly than I anticipated. Although unstated, they could have thought that sounding positive and welcoming of the materials' educative suggestions would help establish and maintain a cordial collegial relationship.

From data collected from earlier in the study, I concluded that the participants each considered the purpose of teaching social studies to be imparting knowledge (e.g., facts, names, dates) — not teaching students the skills needed to create original understandings. For example, on July 31, 2007, Fiyero mentioned, "history is the study of people . . . [and] our textbook, it does a fantastic job of giving us new ideas and things the kids might not have thought of." Similarly, on July 27, 2007 Dillamond stated, "social studies focuses on people and history is the main part of that. There's just so much to cover — there's so much to learn . . . [students] need to be ready for the state test." Nessarose, too, mentioned that social studies classes should concentrate on imparting the

facts to students so that they in turn "will be good note-takers, because they will be going off to college." This belief that knowledge was to be found — not created is likely to have directly impacted the teachers' reading and interaction with the educative curriculum materials. Instead of sifting through the study's materials in an attempt to construct a better understanding of their craft, they tended to mine them for accents to their already-existing lessons. When the educative curriculum materials posited an open-ended issue for the teachers to interpret, they tended to dismiss the feature as confusing or an error in the resource's presentation. Perhaps, because they were not familiar with creating classroom events where students would struggle with historical resources to more deeply understand the past, the teachers dismissed many of the educative curriculum materials' suggestions. In sum, the teachers' traditional beliefs concerning the purposes for teaching social studies, combined with what may have been a desire to maintain a cordial professional relationship, perhaps led the participants to dismiss the curriculum materials' educative features without explicitly criticizing the lessons. They may have implicitly, or passively, rejected the lessons' suggestions for honing their craft.

Time constraints. Teachers' time constraints offer another alternative explanation of my investigation's results. The first possible time-related constraint concerns what the participants considered to be planning sessions longer than their typical experience. Each participant remarked that planning lessons with the educative curriculum materials took considerably longer than did planning with traditional materials. After planning for nearly an hour on September 12, 2007, Dillamond claimed, "I can't remember planning a lesson for almost this long (*sic*)." Nessarose also noted the lengthy planning sessions; in an email exchange, she decided to meet after school as opposed to during her planning

period because “if I’m remembering right, last time took longer than I thought [it would], so maybe we better go with three [o’clock in the afternoon]” (January 18, 2008). Perhaps with teachers’ demanding schedules (e.g., sponsoring clubs, coaching athletic teams) there exists only a small window of opportunity to induce an educative encounter. If the above was the case, fewer and pithier educative features may have made for more legitimate learning opportunities.

Another time-related aspect concerns the considerably lengthy intervals between when the teachers planned and enacted their lessons. Dillamond averaged twenty-eight days between his planning and enacting the lessons, Nessarose averaged twenty-five days, and Fiyero averaged eleven days. This lengthy interval between the planning of the lesson with the educative curriculum materials and their enacting of the lesson afforded the teachers opportunity to revisit the lesson plan alone. This may have allowed for a re-introduction of their traditional dispositions and beliefs into the lesson. Again, the many demands on the teachers’ time may have made planning for the study and enacting the planned lesson more difficult to coordinate.

Syntax of the educative features. Another alternative explanation of my investigation’s results concerns the syntax of the lessons’ educative features. The hyperlinks embedded within the lessons might have contained language that the participants considered to be pedagogical jargon. Had the hyperlinks contained more collegial or amiable language, perhaps the teachers may have been more willing to engage the educative suggestions.

Diminished returns. As Chapter Three described, each of the first two iterations contained nearly thirty educative hyperlinks, respectively. Perhaps that was too high a

number for teachers unfamiliar with educative curriculum materials – or for any teacher. The resources were designed to account for a possible *diminishing returns* scenario by including only very short, presumably manageable textual and multimedia explanations. However, the limited time the teachers devoted to the lessons, and moreover the lessons' hyperlinks, may have deterred them from engaging and internalizing many of the educative features.

With so many educative features embedded within each lesson, perhaps after visiting and interacting with even one or two hyperlinks the teachers were disinclined to visit successive hyperlinked features. Supporting this assertion, all three participants visited many more hyperlinks in the first half of the planning than in the second half. Fiyero visited virtually all of her educative hyperlinks (eight of nine) during the first half of her respective planning sessions; Dillamond visited eight of his thirteen hyperlinks early in his planning sessions; Nessarose also visited seven of her twelve hyperlinks early as well. When combined with the aforementioned time constraints, particularly planning with educative curriculum materials after a full day of teaching students, there may have been too many hyperlinks for the teachers to realistically visit, reflect upon, and internalize.

Limitations

This study contained several limitations: comparability of participants and their respective institutions, minor changes to the locations of data collection, and a slight alteration in analytical lens. While the teachers in this study were all novices regarding problem-based historical inquiry, Dillamond had eight more years of professional service. While I anticipated that Dillamond's additional classroom experience might contribute

more strongly to his decision-making than the other participants, I thought his general unfamiliarity with the problem-based historical inquiry instructional strategies would prove to be a meaningful common denominator with the other participants. Whereas I anticipated that when faced with novel or unorthodox teaching suggestions, Dillamond would follow them more consistently to their original design — he did not. Instead, he seemed to ignore many of the suggestions he was unaccustomed to, and filled the subsequent vacuum in the lesson with activities from his traditionally-formed repertoire.

Yet another complication may have been that two participants taught in schools where morale was high, while the third teacher's school seemed considerably less enthusiastic about teaching and learning. Also, two of the schools where the study occurred were public, while the other was a private, parochial school. These disparities in the participants' environment likely limit the study's sample strength: the participants' locales were quite different from each other, and my findings may represent less typicality than would be desirable.

Because this was a design experiment taking place with practicing classroom teachers, a few aspects of data collection were changed in order to accommodate the teachers' professional needs (e.g., the schools' scheduling of Fall and Christmas breaks, extracurricular obligations). It is possible that occasionally meeting with the teachers in locations different from their classrooms (e.g., public libraries and major-chain bookstores) created circumstances that may have affected their sharing, demeanor, or in any way determined the quality or quantity of their responses.

As the study assumed, the participants were unaccustomed to talking aloud as the planned their lessons. Throughout the planning sessions the teachers repeatedly asked

questions such as Dillamond's "is this ok? Is this what you're looking for?" (December 7, 2007) or Nessarose's "am I talking too much. . . am I unprepared for this?" (March 21, 2008). And although I had developed what I considered to be excellent rapport with the three teachers, they often seemed slightly uncomfortable while planning with the educative curriculum materials — twitchy seating postures, nervous facial expressions, and constantly seeking verbal approval. The presence of a colleague while planning and enacting the lessons may have dissuaded the teachers from acting in their normal manner. Participating in this study surely challenged the teachers' typical routine, as solitude is a consistent characteristic of the teaching profession. Teachers very rarely engage in collegial discussions, much less critiques, of their professionalism (Onosko, 1991).

I developed the study's lessons and ancillary resources by concentrating on ways to employ the tenets of problem-based historical inquiry as means to develop what all other identified studies of educative curriculum materials attempted to do: enhance teachers' content knowledge, pedagogical knowledge, and pedagogical content knowledge. Along with the design of the lessons' materials, my initial data analysis focused only on possible successes and failures of the materials to develop those three aspects of teaching. However, as my analysis deepened, I realized that a much stronger analysis would concentrate on any possible development of the four research-based principles of problem-based historical inquiry. While these principles were implicitly at the heart of my investigation, I needed to make that connection more explicit in the design of the study's materials. Therefore, I reorganized my data analysis to focus more clearly on the four research-based principles of problem-based historical inquiry: purposeful, connected, active, and scaffolded for success. The question remains whether

more explicit attention to the underlying principles in the design of my materials would have produced different results. How this alteration may have affected the overall results of the investigation is impossible to approximate.

Additionally, the participants in this study may have been intimidated by lessons' hypermedia technology and the rather fluid negotiation of multiple computer interfaces. Technology has a tendency to intimidate teachers (Cuban, 2001) and designers should be wary of this tendency and diligently plan for multiple means for teachers to investigate the educative curriculum materials. I may not have anticipated well enough that the appearance of the educative curriculum materials on a computer's interface and internet browser, the tone imparted by the teachers featured in videos, the language of the textual data, the amount of time it would take a teacher to work through the educative curriculum materials, and the law of diminishing returns as it might apply to the educative features could have deeply impacted the educative curriculum materials' effectiveness. While I did not attempt to provide the participants with easy access to additional computer software and applications needed such as Quicktime©, Adobe Reader©, Microsoft Powerpoint©, or Apple Keynote©, no teacher voiced a concern over such access. These technological concerns notwithstanding, the participating teachers in this study did not refute that the online environment was a successful way for them to plan instruction and hone their craft. Still, any tacit apprehension or lack of confidence may have contributed to their understanding of the materials. In sum, the participants' interactions with and uses of the study's materials may reflect more of their familiarity and comfort with either visual imagery or technology than with the educative nature of the curriculum materials

Implications

This investigation has implications for understanding and improving teachers' uses of curriculum as a collaborative partner in shaping classroom events. The educative features hyperlinked within the study's lessons attempted to support teachers and encourage them to reflect more deeply upon their craft.

The educative curriculum materials designed for this study were stand-alone lessons that intended to supplement the teachers' already existing lessons. This may not have been the most effective learning environment in which to employ educative curriculum materials. Had the educative curriculum materials been comprised of several lessons that together made a unit, perhaps the teachers would have been more inclined to utilize the study's materials in a way more consistent with the designer's intent. It is possible that knowing that the educative curriculum materials needed to be fitted into their existing lessons, the teachers were actually encouraged to co-opt the study's materials.

Another implication is that teachers tend to connect only with educative curriculum materials suggestions that very closely resembled their previously-formed, comfortable pedagogy. In the terminology of this dissertation, the participants seemed much more likely to engage those educative features that fit well, and perhaps easily, into their existing *schema.* Curriculum designers who seek to jar teachers' existing philosophies and approaches should consider posing questions (as opposed to statements) that might cause cognitive dissonance. Typically, traditional curriculum materials deliver straight-forward information regarding teaching; if educative curriculum materials are to mediate dynamic interactions between teachers and their planning resources, those resources should introduce a tension, or clash, of ideas. Presenting dissonance-urging

prompts might be an effective venue to introduce or encourage introspection; researchers should acknowledge that causing cognitive dissonance might be the best method for inducing reflection.

Another implication is that planning instruction with educative curriculum materials should introduce teachers to content and pedagogical data in ways that very explicitly encourages them to construct a personal understanding of the materials' themes. In studies such as this, the task of planning instruction remains similar to a teacher's norm, however the resources (educative curriculum materials) are altered significantly in order to encourage educative opportunities for the teachers. The familiarity of the task might cause teachers to overlook the differing purpose of the educative materials. Therefore, teachers may need more specific guidance in using the re-purposed curriculum materials in an *educative* fashion; they may need continual reminding of the educative curriculum materials' objectives. They may also need significant encouragement beyond the questioning prompts within the materials themselves to visit many of the educative features embedded within the materials. An example of this type of explicitness would be for teachers to work with educative curriculum materials in collaborative settings where they could discuss the educative features with colleagues. Also, the teachers could use the educative curriculum materials in more formal professional development settings rather than alone at the end of the day: this may facilitate more thorough internalizing of the educative features.

With teachers' propensity to adapt, improvise, and omit aspects of curriculum resources, the range of variant lessons created from educative curriculum materials is vast. Therefore, it is imperative for the educative curriculum materials designers to

clearly identify the featured themes that comprise the pith of the educative curriculum materials' overall objectives. However, at the same time it is the professional responsibility of teachers, or preferably collegial groups of teachers, to critically examine curriculum resources, entertain the essential suggestions, and assume the role of participant in professional development.

For many teachers, their ideas concerning teaching and learning are private and limited to their personal experiences (Hiebert et al., 2002; Saye et al., 2008), making it uncomfortable to plan with educative curriculum materials that ask teachers to think deeply about the profession in ways different from their norm. Typically the least reflective, novice teachers tend to need specific guidance in making the most informed and thoughtful decisions *for their particular contexts*. Designers of educative curriculum materials should be acutely aware that no curriculum materials should be considered one-size-fits-all or teacher-proof. Educative curriculum materials encourage teachers, particularly those unfamiliar with the professional teaching knowledge modeled in those materials, to consider their planning resources in a participatory fashion. Accordingly, the most successful educative curriculum materials might be those that most clearly help teachers create powerful lessons for their particular students and are closely linked to the features most central to professional teaching knowledge.

Instead of employing the voice of a distantly removed third person, the educative curriculum materials could have attempted a more personal tone by using the second person, plural. For example, in the *response groups* hyperlink within iteration_2, "this strategy is used when a teacher wishes to…," could be rewritten to read "you might consider this strategy if you…" making the educative curriculum materials seem more

like partners collaborating on a project of common interest. Along this line of closely examining the educative curriculum materials' language, the hyperlinks could exclusively feature interest-piquing questions to stimulate teachers and encourage them to visit the hyperlinked data. Again using iteration_2 as an example, instead of simply hyperlinking from the word *hypothesis*, the lesson could feature the following question: *why might you want to have your students draw inferences about today's information*? While lengthier, perhaps the tone and riddle-like wording make the latter educative hyperlink more enticing for teachers.

A final implication is that the educative curriculum materials may have demanded too much cognition from teachers. While many studies have found that problem-based historical inquiry instruction that is enriched with hypermedia substantially increases *students'* cognitive demands, few studies have investigated similar claims for *teachers* (viz., Britt et al., 2000; Hicks & Doolittle, 2008; Saye & Brush, 1999, 2002, 2005, 2007). Additional investigations into educative curriculum materials and their possible influences on teachers would help substantiate either.

Applying the above considerations in a critique of the specific educative curriculum materials designed for this design experiment, what follows are suggested adaptations based on the study's findings. It is not unrealistic to encourage teachers to plan with the educative curriculum materials at a time *other than* after a full day of teaching and coaching. The physical and cognitive demands of a typical day filled with teaching teenagers may have led this study's participants to be less engaged and introspective than they otherwise may have been if better prepared cognitively. For example, a lengthy lesson planning session that followed an exhausting day of teaching

classes and coaching cheerleaders prompted Fiyero's exasperation, "[m]aybe it's just because today was so long and frustrating, but whatever — what am I doing again?" (December 12, 2007). Perhaps planning with the educative curriculum materials in the morning, during a mid-day planning period, or over a weekend afternoon may help increase mental agility, thoughtfulness, and reflection. With fewer educative features, as suggested above, perhaps the planning experience might better fit into one of these alternate times: perhaps more formal professional development and collaborative planning contexts.

In addition to changing teachers' planning context, the educative curriculum materials could include far fewer educative features. Instead of thirty multimedia hyperlinks, perhaps an online lesson could feature five to ten hyperlinks. The fewer hyperlinks embedded in the lesson should be only those truly essential to the educative design of the lesson. The precise wording of the educative features could have been written differently to sound more collegial. Also, the specific choice of presentation media could be made to accentuate the essential educative features; for example, short videos to model historical thinking and soft-scaffolding vignettes are preferable to wordy paragraphs.

Conclusion

This study suggests that educative curriculum materials such as those designed for this investigation and used by its participants may be useful in promoting teachers' reflection about their craft, and more specifically about the four research-based principles of problem-based historical inquiry. While the participants tended to use the educative curriculum materials virtually indistinguishably from traditional resources, they each

visited and contemplated at least a few of the educative hyperlinks. The teachers' story-like narratives of the past tended to become more reflective and their employing of historical photographs slightly evolved from simple illustrations of the past to promoting slightly more higher-ordered and critical thinking. The educative curriculum materials seemed to prompt the teachers' development, albeit rather shallowly, of professional teaching knowledge as it relates to problem-based historical inquiry. For example, two participants developed an understanding of the *scaffolded* principle (introduced primarily through data retrieval charts) which posited that all students are capable of higher-ordered and more critical thinking if properly supported. Also all three teachers seemed to better understand the *connected* principle (introduced via the photographs' primers) which suggested that expert thinkers tend to have larger and more *interconnected* schema that allow them to create more meaningful understandings of complex data

My findings suggest that while the educative curriculum materials may have slightly encouraged the participants to include some progressive teaching strategies into their repertoire, as the intervention progressed and the educative supports waned, the teachers each employed their previously-held traditional dispositions to construct meaning of resources. As strongly suggested in the previous chapter, the teachers only rarely and superficially incorporated ideas and concepts from the educative materials.

However, these findings also suggest that other contributing factors, most notably teachers' beliefs and the educative curriculum materials' logistical design, should be considered as they too necessarily affect the classroom events. If teachers are to use educative curriculum materials as a partner in practice to develop a more professional teaching knowledge, the materials should explicitly target a few specific objectives, and the planning context in which they are used should be both more formal (as are most professional development opportunities) and more collaborative.

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APPENDICES

Appendix A – Email Correspondence Script to Colleagues

Dear (*name*):
Hello - I understand that your time is limited and thus I'll be brief...

I am a social studies teacher at Auburn High School and my research interests are in the "conversation" that novice social studies teachers have with their planning materials. I am specifically interested in what can be done, if anything, to make the materials more useful and meaningful.

My plan is to provide teachers with materials and listen to them "talk aloud" as they plan instruction and then observe them teach that lesson. I would do this three times during the first semester of the next school year, 2007-2008, and interview each before and after the semester.
Do you know of any novice (fewer than five years) teachers that might be interested?
Thanks again for your consideration and time...

Cory Callahan, Ph. D. candidate (A.B.D.)
Auburn City Schools
841 Auburn High School
405 S. Dean Road
Auburn, Alabama 36830

Appendix B – Email Correspondence Script to Potential Participants

Dear (*name*):
Hello - I understand that your time is limited and thus I'll be brief...

I am a social studies teacher at Auburn High School and my research interests are in the "conversation" that novice social studies teachers have with their planning materials. I am specifically interested in what can be done, if anything, to make the materials more useful and meaningful. I was hoping that either you or someone you know might be interested in participating in my study regarding social studies teachers. Your participation, during which all personal information would at all-times be confidential, will include the following:

1) **A pre-interview** where I ask you questions concerning your planning routine. This will be audio-recorded. (July 2007)
2) **Observations** where I actually watch you both plan and implement each of the three 1-day lessons. Also, I will ask you to “think aloud” in the planning stage, so I can get a sense of what you are thinking along the way, but I will not interrupt or impose on your planning or teaching. (August/October/December 2007)
3) **A post-interview** where, again, I ask you questions concerning your planning with the new set of materials. This too will be audio-recorded (January 2008)

Once you know which courses you will be teaching in the fall, then we can think together about the direction we want to go in regard to content.

I would be forever grateful for your participation.

Cory Callahan, Ph. D. candidate (A.B.D.)
Auburn City Schools
841 Auburn High School
405 S. Dean Road
Auburn, Alabama 36830

Appendix C – Lesson Narrative from Iteration_1, the Progressive Era

In the following lesson, students develop foundational knowledge concerning American society during the Progressive Era, and through teacher-modeling, whole-class discussion, and working in small groups, students sharpen their visual literacy and historical thinking skills by examining historical photographs. By lesson's end, students should be able to name, describe, and perhaps evaluate many of the circumstances surrounding poverty and being needy at the turn of the century. Students will also form hypotheses regarding the topic-specific question, around which the entire lesson is constructed.

Introduction (10 minutes): The teacher initiates a seemingly impromptu discussion by asking the class "what comes to mind when I say…poverty?" While students share their thoughts aloud, the teacher negotiates responses and categorizes them into broader themes such as conditions, causes, informal societal responses, and formal attempted remedies. As responses wane, the teacher shares that virtually all societies throughout time have had to think about what responsibilities, if any, society has toward the poor and needy. Connecting all of this to today's lesson, the teacher shares that students will critically analyze historical photographs in an attempt to think more deeply about America at the turn of the century and hypothesize an answer to today's topic-specific question: "How did Progressive Era society address problems of poverty and the needy?"

Transition (5 minutes): The teacher transitions students from the introductory-discussion to the lesson-content by emphasizing that the skills and knowledge comprising this lesson are essential for thoughtful 21st century citizenship: there are, and likely will always be, people, groups, organizations, and corporations who use visual imagery to influence their decision-making, spending, voting, etc. The teacher then states that in today's lesson students will, as "real" historians do, think-historically about a series of photographs, using them as documentary evidence to collect information on and hypothesize about the past. The teacher should define hypothesis: a proposed explanation based on limited evidence – a starting point for further investigation. Thinking historically about these photographs should help students begin to explain the causes of poverty during the early 20th century, the conditions of being poor and needy, what types of people were in need and experienced poverty, and society's responses and their effectiveness.

Photo-Analysis (45 minutes): To each student the teacher distributes a copy of the Data Retrieval Chart (DRC). It is specifically designed for this lesson and students are strongly encouraged to use it for compiling notes. The teacher then explains that examining photographs "historically" differs considerably from looking at them traditionally. The teacher should draw students' attention to the DRC that, by careful design, concentrates students' analysis in each of the following four components of historically thinking:

1. **Source** : Accounting for who created the photograph and why
2. **Context** : Carefully observing the photograph` s particulars (contents, angle, lighting, background, etc.) and analyzing them in light of what else is occurring near that time and place in the past
3. **Corroborating** : Comparing the photograph` s information and messages with other documentary evidence
4. **Thinking deeply** : Reasoning about the photographs to derive a reasoned, meaningful understanding about the past.

Next, the teacher either projects via powerpoint-type presentation or distributes to each student a copy of photograph_one, and shares with them that considering the very challenging and new-to-them nature of historical thinking, the teacher will first model historical thinking for students. In roughly 10 minutes, the teacher expeditiously, though thoughtfully, models the four historical thinking steps, thus providing the data needed to complete the second column of the DRC. Having already studied the photo_one_primer, the teacher "thinks aloud" about photograph_one allowing students to see and hear a successful critical and historical analysis. This may entail treating the questions on the primer (which are same questions on the DRC) as rhetorical questions to ask and answer aloud. The teacher might remind students that while they do not yet have all of the content knowledge to fully analyze the photos, they are to use all they posses and specifically note the "gaps" in their content knowledge – it's an important component of thinking historically to "know what else I need to know". The teacher should answer students' questions concerning photograph_one and thinking historically before continuing.

Then, having already studied the photo_two_primer and the proposed discussion script, the teacher devotes roughly 20 minutes to leading the entire class, as a whole, through the process historical thinking about photograph_two. The teacher continues the powerpoint-type presentation or distributes copies of photograph_two and asks a series of questions. These questions, by design, lead the students through the process of historical thinking, correspond to the DRC, and are the same questions modeled with photograph_one. The teacher should reiterate the purpose for analyzing these photographs: to help students begin to explain the causes of poverty during the early 20th century, the conditions of being poor and needy, what types of people were in need and experienced poverty, society's responses and their effectiveness. During the analysis, students are to complete the DRC's third column.

Next, having already studied the photo_three_primer, the teacher places students into small groups of three or four, projects or distributes copies of photograph_three, and shares that the groups have roughly 15 minutes to work together to think about it historically and complete the DRC's fourth column. Very Important: during the time that student-groups analyze the photograph and complete the DRC, the teacher should move about the room, visit each group, initiate conversations regarding their historical thinking,

and offer specific, individualized feedback. Again, the teacher should reiterate the purpose for analyzing the photographs.

Content Share (15 minutes): The teacher continues the powerpoint-type presentation, projecting a few additional photographs and, because of time constraints, shares only the results from thinking historically about them. Here the teacher adds content knowledge to the students' earlier historical thinking experiences and students are encouraged to collect any additional information not already compiled on their DRC. Thus, students may need additional notebook paper.

Synthesize Findings (10 minutes): The teacher asks the student groups to more formally address the topic-specific question in light of the all the information from today's lesson. The teacher directs the students to complete the back-side of the DRC; the section structuring their hypotheses about the past. The entire front-side of the DRC completed to this point will be helpful to students; however, the fourth row, "Think Deeply", should be especially so. For an optional homework assignment the teacher could ask students to evaluate Progressive Era society in it's addressing of poverty and the needy by having them answer the question at the very bottom of the DRC back-side: "How *well* did Progressive Era society address the problems of poverty and the needy?"

Close (5 minutes): The teacher ends this lesson with a reiteration of how historical thinking and visual literacy have a clear purpose for meaningful 21st century citizenship. The teacher takes the final few minutes of class to recap, or debrief, the lesson; mentioning again the purposes of the lesson and how it's situated into the week, month, and perhaps even the semester plan of studying US history.

Appendix D – Student handout created as a hard scaffold for iteration_1

	photograph_one	photograph_two	photograph_three
1. SOURCE: a. What's the photo's date, title, creator, b. Guess what type of person might have taken this picture and for what purpose. c. Guess was it personal or published, candid or posed, amateur or professional?			
2. CONTEXT: d. Write down what you see in the photograph, listing details such as people you see, what they are doing, what they are wearing, their surroundings, and equipment, etc. e. Next, write down what you think is happening in the photograph. Support the response by clues you have seen and identified above. f. Consider how this image serves as a visual document (record) of the Progressive Era… In what ways does this photo summarize what was happening during then? g. What is the overall message coming from this photograph and it's photographer? h. Which specific details directly support your thoughts?			
3. CORROBORATE: i. How do other photographs seem to relate to the information and messages coming from this one? j. Which others agree? disagree? k. Why might other photos support/refute this one?			
4. THINK DEEPLY: l. What does the photo suggest about the poor and needy during the Progressive Era? What about society's responses to them? m. What details help support your ideas? n. What don't you know that you need to know? o. What questions does this photo raise in you mind? Where could you find the answer to those questions?			

Regarding the Progressive Era, what do the photographs AS A GROUP suggest to you about…

1) the causes of poverty

2) the conditions of being poor and needy

3) who (what type of person) was in need and/or experienced poverty

4) society's responses (formal and informal)

5) effectiveness of those responses:

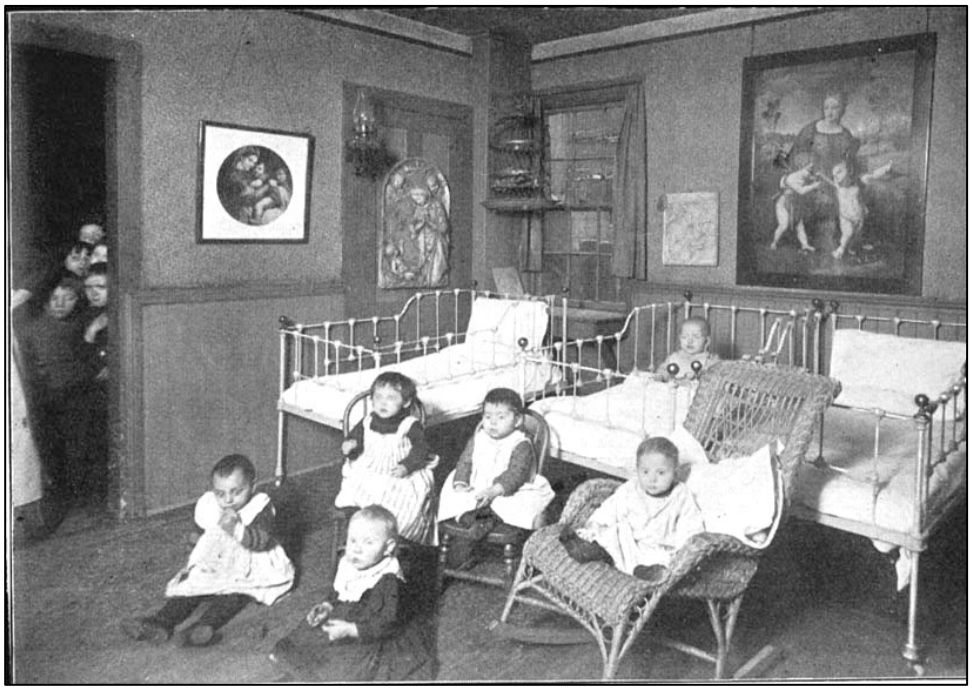
HOMEWORK (ON ANOTHER PIECE OF PAPER): HOW WELL *DID PROGRESSIVE ERA SOCIETY ADDRESS THE PROBLEMS OF POVERTY AND THE NEEDY?*

SUPPORT YOUR REPSONSE WITH SPECIFIC EVIDENCE FROM TODAY'S LESSON…

Appendix E – The Series of Historical Photographs for Iteration_1

Lewis Hine. (1909). *Breaker Boys, Hughestown Borough Pa. Coal Co.*

Unknown photographer. (1895). *Hull-House Nursery*.



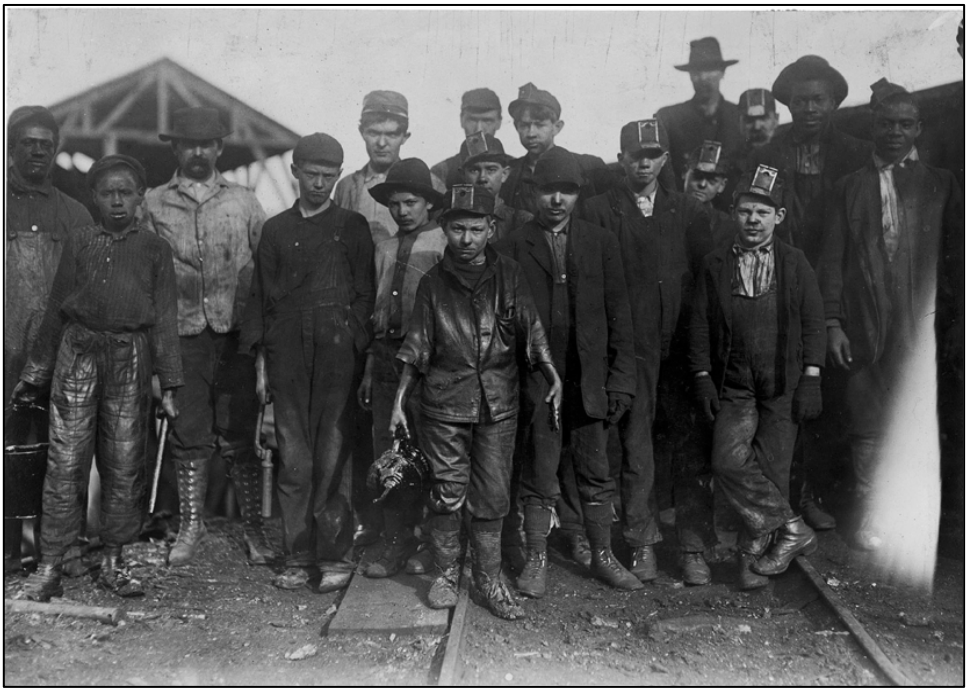
Joseph Byron. (1905). *A Dead Horse*.

Unknown. (1894). *Coxey's Army on the March*.

Walter Faulk. (1907). *Salvation Army*.

Jacob Riis. (1888). *Italian Immigrants in New York City*.

Lewis W. Hine. (1910). *Henry "Shorpy" Higginbotham, Bessie Mine, of the Sloss-Sheffield Steel and Iron Co., near Dora in Jefferson County, Alabama.*



Lewis Hine. (1909). *Breaker Boys, Hughestown Borough Pa. Coal Co.*

SOURCE

a. What is the photo's date, title, and creator? 1909, Breaker Boys, L. Hine
b. Guess what type of person might have taken this picture and for what purpose? Lewis Hine used his camera to capture poverty in New York City. He published a collection of social reform photos that he hoped would encourage people to "exert the force to right wrongs". He was especially critical of the country's lack of child labor laws.
c. Guess was it personal or published, candid or posed, amateur or professional? Published, posed, and professional.

CONTEXT

d. What do you see in the photo, (details, people, action, surroundings, etc.) Four young boys standing outside…all wearing overcoats, hats, and gloves…all missing buttons…They all look tired, dirty, sad, depressed, hopeless…a taller, maybe older person in the background… the boy second from the right has an open coat and no turtleneck…
e. Next, what you think is happening in the photograph. Support the response... The boys look like they've been working really hard at a dirty job (faces and clothes) and are now on a break (standing outside, unbuttoned coats, hats pulled-up somewhat). They are sad and depressed (faces, posture). The person in the background may be timing them (looking).
f. Consider how this image serves as a record of the Progressive Era…Boys from poor families were often put to coal mining work around the age of eight. They worked 16 hours, year-round, in "breakers", huge coal-processing factories. "Breaker Boys" sat in a step-like manner and with nimble fingers separated rock and dirt from coal after it had been mined. The factories were filled with much coal dust and the boys often wore goggles, glasses, or bandannas for protection. Machinery was always noisy and dangerous from revolving wheels, crushers, screens and the rushing coal. Old coal miners, having contracted black lung or other disabilities, worked above ground as bosses, using whips to force breaker boys to work….This photo was during industrialization that included the rise of electrical, petroleum, steel and especially coal industries. Mass production of consumer goods from these industries served the needs of a rapidly urbanizing population and provided employment …Coal, a domestic fuel for residential heating in hand-fired stoves and automatic stoker furnaces, burned long, hot, and "clean". It delivered high energy per its weight making it a lucrative business during America's industrialization and urbanization of the early 1900s. In most societies, virtually all children worked in agriculture on the family farm. During this time, many children moved from farm work to factory work. Poor families in coal regions, needing wages earned by Breaker Boys, put their sons to work in the mines before learning to read and write. Some, Hine included, considered this child exploitation.
g. What is the overall message? Breaker Boys are treated as adults. They have no chance to better themselves. Child labor is unfair and unjust. A moral society must save them. Hine used the emotions associated with protecting innocence to motivate, even shame, society into acting in support of child labor laws
h. What specific details support…thoughts? The filthy and unhappy faces of the Breaker Boys staring out.

CORROBORATE/THINK DEEPLY

i. How does it relate to other photos (evidence)? *Breaker Boys* (*BB*) relates to *Hull House Nursery* (*HHN*) in that they both feature children in very desperate situations…both have kids being "overseen" by an elder…both exhibit remedies to societal problems (poverty and being in need).
j. Which others agree? disagree? *HHN* delivers a different message: *HHN* "says" this humane remedy works – support it! *BB* "says" this remedy is inhumane and unfair - do something to stop it.
k. Why might other photos support/refute this one? Different audiences perhaps, *BB* seeks to motivate a protest, *HHN* seeks support.
l. What does this photo suggest about the topic-specific question? Some advocated putting kids to work, labor-intensive jobs, as a way to eliminate poverty. Some considered stability (money and food), although shortening their lives and perhaps perpetuating poverty, was better than nothing.
m. What details help support your ideas? The boys' hopeless look…they look resigned to a life of filthy drudgery and in need of help.
n. What else do I need to know? Where there any serious public demonstrations at the time, or is the idea of resentment a modern thought?
o. What questions does this photo raise in my mind? Would a Breaker Boy likely think in terms of running away for a better life? Are there any published biographies or breaker boy narratives? What protections, if any, did the boys have? Did they consider themselves as adults?

Appendix F –Teacher Primer for the First Photograph of Iteration_1

Unknown photographer. (1895). *Hull-House Nursery.*

SOURCE

a. What is the photo's date, title, and creator? 1895, *Hull House Nursery,* ?

b. Guess what type of person might have taken this picture and for what purpose? Someone wanting others to see what life is like in this house, someone wanting to remember these kids, this room, etc.

c. Guess was it personal or published, candid or posed, amateur or professional?) private?, posed (kids looking at the camera?), amateur?

CONTEXT

d. What do you see in the photo, (details, people, action, surroundings, etc.) Several kids, under four of five years old, in a room or house…all Caucasian-looking…two sitting on the floor, three in chairs (two wooden, one wicker), one in a crib, and five huddled in the doorway…all look well-dressed (aprons, overalls, dresses, shoes), clean (faces), and well-groomed (hair)…two empty cribs, all three cribs look rather unsafe-kids might fall out or squeeze through the sides…two paintings on the walls (religious? angels and Virgin Mary?)...a carving or metalwork on the left wall, it may be on a closed door not in use (again maybe religious?)…in the very left portion of the photo there seems to be a woman standing in the doorway, wearing an apron, the huddled kids might be following her…a propane lamp on the closed door on the left wall…everything in the room is clean and tidy, no dirt or stains or diapers or anything out of place…no toys…

e. Next, what you think is happening in the photograph. Support the response... It looks like the kids have been dressed and placed in a photo-friendly arrangement, they might be preparing to have a story read to them or to learn a lesson…

f. Consider how this image serves as a record of the Progressive Era…In 1880, in Chicago, Jane Addams founded the "Hull House", literally a house (place) that provided social, educational, and artistic opportunities for children (orphans) and working-class adults (mostly recent European immigrants). Volunteers taught classes in literature, history, art, domestic activities (sewing), held free concerts, and offered free lectures on current issues. Its facilities included a night school for adults; kindergarten classes; clubs for older children; a public kitchen; an art gallery; a coffeehouse; a gymnasium; a girls club; a swimming pool; a book bindery; a music school; a drama group; a library; and labor-related divisions. Hull House was well known for its success in aiding American assimilation. The objective of Hull House, as stated in its charter, was: *"To provide a center for a higher civic and social life; to institute and maintain educational and philanthropic enterprises, and to investigate and improve the conditions in the industrial districts of Chicago."* Hull House was named for Chicago real-estate magnate Charles Hull. Whose home had once been a fashionable part of town, but by 1889, when Addams was searching for a location for her experiment, it had descended into squalor partly due to the rapid and overwhelming influx of immigrants. Hull House attracted many female volunteers who later became prominent and influential reformers who advocated legislative social reforms at the city, state and federal levels, addressing issues such as child labor, women's suffrage, and immigration policy (Progressive agenda). Hull House was a private philanthropic effort.

g. What is the overall message? If society (Hull Houses) provides skills and knowledge to assimilate poor and needy immigrant children into American culture, they can rise from squalor and become productive citizens.

h. What specific details directly support…The well-dressed and seemingly happy children being overseen by (presumably) a woman. Everyone and everything looks tidy, controlled and happy (clean, organized).

CORROBORATE/THINK DEEPLY

i. How does it relate to other photos (evidence)? *Hull House Nursery* (*HHN*) relates to *Breaker Boys* (*BB*) in that they both feature children in very desperate situation. Both have kids being "overseen" by an adult, both exhibit remedies to the societal problem of poverty and being in need of considerable help.

j. Which others agree? disagree? *HHN* displays children being treated "as children" with a chance for social and cultural mobility. *BB* differs in that regard. Also, *BB (likely)* displays Americans, *HHN* (likely) displays immigrant children

k. Why might other photos support/refute this one? Their messages differ: *HHN* "says" this humane remedy works – support it! *BB* "says" this remedy is inhumane and inherently unfair - do something to stop it.

l. What does this photo suggest about the topic-specific question? Some advocated an education and skill-building as the proper remedy for social problems. This way is humane, fair, and just

m. What details help support your ideas? The cleanliness and orderliness of the house give an impression of benevolent, compassionate control

n. What else do I need to know? Did these immigrant children really have a better chance to rise from the squalor of their inner-city lives?

o. What questions does this photo raise in my mind? Are there any published biographies or success stories of children, not volunteers?

Appendix H – Teacher's Script for the Second Photograph

Unknown photographer.
(1895). *Hull-House Nursery*.

Classroom discussions tend to be both spontaneous and somewhat predictable. Below is a series of questions designed to illicit specific responses from students, and in the process, guide them through the four steps of thinking historically about photograph_two. Teachers are encouraged to add, skip, blend or in any way amend the questions if it seems appropriate from the flow of the discussion.

This script may bring forth a meaningful exchange between students and teacher in an effort to begin to explain the causes of poverty during the early 20th century, the conditions of being poor and needy, who (what types of person) was in need and or experienced poverty, society's responses (formal and informal), and also the effectiveness of those responses. During the analysis, students are to complete third column of the DRC.

***After an initial 90 seconds of silent, individual examination*…the teacher asks (T): Who are these children, whose children might these be, why are they there?**
To which the students likely response (S): The kids could be siblings at their home, but their ages are too close together to realistically be in one immediate family (although families were big back then). They could be attendees at a day-care type facility; as the word "nursery" in the photo's title suggests. The kids' parents may have to work, no one able to stay-at-home; maybe the have no parents – orphans.

T: Who is the woman on the far, far left (standing in the doorway)? Why is she there, what does she do?
S: The day-care worker watching over the children, changing diapers, reading books, feeding, etc. She may be getting paid to watch the kids while the parents are working.

T: Do the wall decorations suggest anything to you about what's going on? Is it fair to assume from the wall paintings that the children are being introduced to any specific themes or types of teachings?
S: The day-care is probably church-based, maybe Catholic because of the visual representation and emphasis on angels and Mary, the Virgin Mother of Jesus. Maybe it's government-funded; the date of the photo is 1895 and the church-state debate may not have been as heated back then – nothing like the 10 Commandments debate in schools and government buildings now. Certainly, the day-care seems interested in modeling and imparting Christian morals, ethics and ways.

T: Guess some other types of teachings and information to which these kids might be introduced?
S: Being a day-care, maybe traditional schooling for those aged children (3 or 4 years old): letters, numbers, very basic mathematics, the fabled stories of America's past (Washington and the apple tree), singing folk songs. Probably a lot of reading stories.

T: What kind of sense do you get about these children and the building regarding socio-economic status?
S: The kids look like their dressed the same, or at least very similar. They appear clean (clothes and faces). The cribs are very simple. There is no noticeable mess, but there are also no toys. Nothing suggests "rich and famous", but then again nothing suggests "poor and needy" either…maybe somewhere in the middle, but closer to lower socio-economically because of the spartan décor.

T: Putting it all together… what's happening in the photo? Does it bring positive or negative feelings?
S: The children have been dressed and placed in an arrangement where they are all facing the same direction. They might be preparing to have a story read to them or to learn a school-type lesson. Positive…whatever is really happening, it seems orderly and clean. The children look well cared-for, safe, and for the most part, happy.

T: Guess what type of person might have taken this picture and for what purpose?
S: The photographer may have been a parent taking a keep-sake photo, although cameras were rather costly then and these kids and this day-care seems on the low-end. Maybe it was a promotional picture that the day-care would have used in an advertisement to get more parents to enroll their kids….that would mean the photo was intended to display good things about this day-care, which is rather unclear from the photo.

T: Does it make more sense for this photo to have been personal or published, candid or posed, amateur or professional?
S: The awkward angle of the photo and the random grouping of kids make it seem amateur. Although the kids are looking at the camera, they are not "squared up" to it so as to get each of their faces, also the cluster of kids and woman standing in the door could have easily been removed from the viewfinder (or asked to step outside the room for the photo), thus candid seems right. Again, cameras were not as common in 1895, but there is little reason to have this picture as-is unless is was professional. In a personal photo, the kids would have been made the focus of the photo, or room itself would have been the focus. Currently, neither seem the focus – however a professional would have (presumably) made better decisions about what to focus on to make it more clear to the viewer.

T: What's the overall message of the photo?
S: (answers will vary considerably, but see the next prompt for guidance as to furthering the discussion)

T: What if I told you that In 1880, in Chicago, Jane Addams founded the Hull House, literally a house (place) that provided social, educational, and artistic opportunities for children, mostly orphans and those from poor, recent European immigrant, and working-class families. Volunteer workers taught classes in literature, history, art, and domestic activities (like sewing and cooking). Hull House was well known for its success in aiding American assimilation….what would you *then* think was the overall message of this photo?
S: Some advocated an education and skill-building as the proper remedy for social problems. This way is humane, fair, and just. The cleanliness and orderliness of the house give an impression of benevolent, compassionate control. It was a promotional picture that Jane Addams and the Hull House people would have used in an advertisement to get more support, financially, to continue their efforts to reform education and treatment of immigrant children

T: How does this photo and its message relate to the *Breaker Boys* photo?
S: *Hull House Nursery* relates to *Breaker Boys* in that they both feature children in very desperate situation. Both have kids being "overseen" by an adult, both exhibit remedies to the societal problem of poverty and being in need of considerable help. Their messages differ: This photo "says" this humane remedy works – support it! *Breaker Boys* "says" this remedy is inhumane and inherently unfair - do something to stop it.

T: What questions does this photo raise in your mind?
S: Where there many Hull Houses? How successful were they really in assimilating the immigrant children? Did these immigrant kids really have a better chance to rise from the squalor of their inner-city lives? Did they have a better chance than the poor American kids working in the Pennsylvania coal mines? Were minority kids admitted in these houses?

Joseph Byron. (1905). *A Dead Horse*.

SOURCE

a. What's the photo's date, title, & creator? 1905, *A Dead Horse, Joseph* Byron
b. Guess what type of person might have taken this picture and for what purpose? Joseph Byron, NYC immigrant gained fame photographing Broadway using his new idea: a "flash". Then used a flash to capture slums of Lower East Side at night…to help make known and change the squalor and plight of the poor.
c. Guess was it personal or published, candid or posed, amateur or professional?) professional, published, posed (kids looking at the camera)

CONTEXT

d. What do you see in the photo, (details, people, action, surroundings, etc.) nine kids within in a few feet of a dead horse…the kids seem to be playing, or talking in a deep gutter – not the least interested in the dead horse…most are looking and one is pointing at the camera…two boys standing are wearing overalls…the kids' clothes look simple: shorts, light jackets, all have shoes…two have hats…the small child to the right of the street lamp is wandering alone…the smaller boy standing on the left holds a stick and has a box to his left…big puddles of *something* in the middle of the cobblestone road although it doesn't look rainy…dilapidated wooden wall behind the kids with a ratty poster…a dirty, forgotten, poor section of town…an gas (electric?) street lamp…five cars in the background …several adults on the street looking at a building…
e. Next, what you think is happening in the photograph. Support the response... This seems to be an ordinary day in the lives of these kids – no one is ogling the horse, they don't seem slightly out-of-sorts, this is apparently normal. The kids are playing in a street gutter, where sewage and waste would be flowing out of the city. No one seems to be watching after the kids, they are unattended.
f. Consider how this image serves as a record of the Progressive Era If an ordinary day for immigrant children in NYC is playing in sewage and near a dead, rotting horse, then life for immigrants and their children was filthy, dangerous (disease), unpleasant and likely to be short. Also, there seem to be advocates for the poor. Byron is making these problems known. Joseph Bryon and his son Percy are recognized among the few famous muckraking journalists, of their time. Jacob Riis is another, better known perhaps, example. This photo seems to refute the belief that status quo was successfully identifying and solving society's problems. Byron, and other muckraking reformers, tried to focus public attention on the greed, neglect and economic self-interest of the upper class wealthy as causes for squalor conditions. They often argued that political rhetoric was empty talk promoting the interests of big-business industrialists. American urbanization and subsequent waves of immigrants turned parts of cities into heterogeneous-ethnic-enclaves (so called Chinatown, Little Italy, Polishtown, etc.), some even more populous than even the largest cities in their homeland.
g. What is the overall message? Without progressive intervention, the immigrant population, particularly the children, will be left to suffer and die in filthy conditions…the "land of opportunity" who called for the world's "tired, poor, huddled masses" (Statue of Liberty; Emma Lazarus' poem *The New Colossus*) must do more to protect and provide for those poor and needy. This is a call to act: citizens are to get involved and push for change, now.
h. What specific details directly support…the ordinary nature and demeanor of children playing in a deep sewage gutter within in a few feet of a dead horse and puddles of (presumably) sewage. This would cause mass outrage today – as it did when published in 1905 – and would motivate concerned people to act in protection of the children.

CORROBORATE/THINK DEEPLY

i. How does it relate to other photos (evidence)? *Dead Horse (DH)* relates to both *Hull House Nursery* (*HHN*) *Breaker Boys* (*BB*) in that they all feature children in very desperate situations. They all call for citizen action; to support progressives
j. Which others agree? disagree? *HHN* and *BB* both have kids being "overseen" by an adult, but *DH* has kids completely unattended…both *BB* and *DH* display problems of society, while *HHN* displays an attempted remedy… *BB (likely)* displays Americans, *HHN* and *DH* displays immigrant children
k. Why might other photos support/refute this one? While their messages slightly differ, all three attempt to make the case that "humane remedies for inhumane conditions are not only needed they actually work – if good citizens support them! Again, they are all calls to support the progressive movement.
l. What does this photo suggest about the topic specific question? Byron (and Riis to a greater degree) are truly responsible for bringing these conditions to mass public attention, including politicians who felt compelled (genuinely and from public pressure) to make substantive improvements to help the poor and needy.
m. What details help support your ideas? Children playing in a deep sewage gutter within in a few feet of a dead horse and puddles of sewage.
n. What else do I need to know? Is this squalor and filth indicative of the immigrant experience in the inner-city? Is this ordinary or exceptional? What is happening outside the mega-cities of NYC, Chicago and mining regions?
o. What questions does this photo raise in my mind? Where are the African-American children? To what degree are they experiencing poverty and being in need? Is anyone advocating for them?

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Appendix J – Teacher Script for the Final Four Historical Photographs of Iteration_1

	*Coxey's Army on the March* (1894)… Jacob Coxey, himself a populist (champion the rights of "ordinary poor persons"), lead a march 500+ person march from Ohio to Wash, D.C. to protest the US government. They wanted the federal government to create jobs for citizens because the US was then (1893) in the middle of the *Panic of 1893*, the worst economic depression until that time in US history. Coxey's "army" sought to rid society of poverty by asking the federal government to create jobs (building bridges, paving roads, etc.) especially in this financially depressed era. However, there was very little helpful response from then President Grover Cleveland (his second non-consecutive term) and Congress (the 1894 mid-term elections was a Republican, known to be financial conservatives, landslide). The wagons, horses, bikes, and walkers indicate various socio-economic strata, and the women, African-Americans, and kids indicate various demographics completing the march. The marchers were eventually arrested in D.C. for trespassing on federal lands.
	*Salvation Army* (1907)… The famous Salvation Army Christmas Red Kettles for collecting donation from private citizens walking the public streets (of Chicago in this case). The Salvation Army is a non-military, overtly religious, Christian (Methodist) evangelical organization. Its founders chanted "Soap, Soup and Salvation", and hand a military structure (generals, uniforms, flags, etc.). After relief efforts after the 1900 Texas hurricane and the 1906 California earthquake, the Salvation Army grew rapidly. Women were very active in the religion and its charitable efforts. The Salvation Army was soliciting the general public for charitable, philanthropic contributions.
	*Italian Immigrants in New York City* (1888)… Jacob Riis, a famous muckraking photo-journalist (searching out and publishing scandalous information) took this photo. *Italian* depicts Italian immigrants in a yard on the crime-ridden Jersey Street in New York City. Riis called this the worst slum. "New Immigration" brought Catholics and Jews from Southern and Eastern Europe who differed greatly from the Anglo-Saxon Protestants of "Old Immigration". Italian immigrants got a lot of public attention, partly because they kept coming at such a tremendous rate, and because they chiefly remained in NYC. US demographic changed considerably, ethnic enclaves in US cities were often larger than major cities in immigrants' homelands "new immigrants" were unskilled, illiterate, unaccustomed to American culture, and poor…and tended to fall into the same situation (life of poverty in a slum) in the U.S. as their situation in their homeland from which they emigrated U.S. streets being "paved with gold" was not entirely wrong. U.S. poverty may have been better than poverty elsewhere including: a more vibrant economy, active charitable organizations and federal government that worked to better the immigrant's situation, state-sponsored education land for purchase, unlike in other nations where land was controlled by the landed-aristocracy, and space to move around in to find new work, a new community, and perhaps a new home
	*Shorpy Higginbotham* (1910)… Lewis Hine, also a famous muckraking photo-journalist, took this photo. Remember him from the 1st photo? He actively sought change in child-labor laws, by using his camera to educate the mass public to the injustices of unfettered capitalism. These children and adults carrying bucket of grease to slather the train-tracks and make smooth the ride for cars of coal moving from these Alabama mines to other parts of the nation. Poor children who formerly worked on family farms were (due to industrialism) put to work in these mines. African-Americans and Southerners were also affected by poverty, although not all poor and needy people were coal miners. Because of rapid industrialization and urbanization, the coal-mining lifestyle affected most segments of society. Birmingham, Alabama was the industrial center of the South home to major industries: coal, iron, and steel. Again, not all poor and needy people were coal miners. Again we see why there seem to be so few parents at home with their children, they too are at work in the factory or mine…sometimes with their children. The American idea of family structure is changing.

Appendix K – Problem-Based Historical Inquiry (PBHI) Objectives of Iteration_1's Educative features

Lesson hyperlink	PBHI Educative Objective	Medium
multiple intelligences	***Active*:** Introduce the theory of Multiple Intelligences that posits seven different kinds of "intelligence" existing in humans: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal.	Text
visual literacy and historical thinking	***Purposeful*:** Introduce visual literacy as the ability to critically analyze and interpret imagery through recognizing conventions, concepts, and interpretive approaches visual imagery uses to communicate arguments and messages. ***Structured*:** Introduce historical thinking as a framework for reading documents as evidence, and piecing together evidence trails to reason about and draw informed conclusions about the past.	Text
three part strategy	***Active*:** Introduce cognitive apprenticeship where the teacher *first* demonstrates to novices (students) how to complete challenging tasks, *then* allows novices to then attempt some sub-skills while offering advice, and *finally* gives increasing responsibility to novices until eventually they become as skilled as the expert.	Text
Why is this type of lesson worth the time and effort?	***Purposeful**:* Explains and reinforces the idea that teachers can organize their instruction of history around fundamental, enduring questions that confront societies throughout time and across cultures, and that students can develop rich historical understandings about the past and the complexity of historical interpretation to make informed judgments.	Quicktime® video
10 minutes	***Connected*:** Offers suggested times, but suggests that teachers must accept agency to decide when to extend, stop, or interrupt any specific activity.	Text
impromptu discussion	***Purposeful***: Introduces that grabbers often engage students and encourage participation, and that the first few minutes of each lesson are often when students decided whether it is going to be worth their time and effort.	Text
persistent issues	***Purposeful*:** Introduces the Persistent Issue in History framework for instruction that gives history context, continuity, and purpose as students wrestle with a fundamental issue in a given historical instance and connect that instance to its broader societal context in ways that deepen students understanding of the challenges of democratic life.	Text
Why only a topic-specific question?	***Purposeful*:** Explains that because this is a one-day, add-on lesson, students will not have enough time to fully explore a persistent issue. While they will begin to develop foundational knowledge, clarify key concepts, and confront conflicting claims, students will not be able to use ample historical evidence to defend solutions to an ethical, problematic issue as it has arisen in the past.	Text

transitions	***Active*:** Suggests that transitions are in-between times that segue one classroom activity to another, and where student-participation may ebb. These times provide students the opportunity to continue, begin or perhaps stop participating.	Text
How does authenticity play into this lesson?	***Purposeful*:** Introduces authentic intellectual schoolwork as rigorous Construction of Knowledge, grounded in the Disciplined Inquiry of the subject, and have Value Beyond School for students. It consists of more than the ability to do well on an academic test, it requires students to think at high-levels (develop robust understandings instead of superficial memorization) and results in meaningful products, instead of completed exercises contrived only to exhibit minimal academic competence.	Text
scaffolding	***Structured*:** Introduces Data Retrieval Charts as a type of educational scaffolding, teachers` attempts to provide support-structures getting students to higher stages or levels of thinking. Also explains the differences in hard and soft scaffolds (fixed supports that anticipate general difficulties and dynamic, situation-specific aids to help learners, respectively).	Text
Why use historical photographs?	***Active***: Explains that because they tend to forge their thoughts, beliefs, and values from photographs, accepting them as unerring, objective, value-free recordings of reality, students need to develop skills to thoughtfully reflect on the information and messages of visual imagery.	Text
Short movie	***Connected* and *Structured*:** Demonstrates a teacher employing the "habits of mind" of thinking historically about a photograph and reading it as documents as evidence, piecing together evidence trails to reason about and draw informed conclusions about the past. Also, develops foundational knowledge by providing explanations constructive to deep historical understandings of the Progressive Era.	Quicktime® video
Photographic primers	***Connected**:* Develops foundational knowledge by providing explanations constructive to deep historical understandings of the Progressive Era and about the complexity of historical interpretation. Also, clarifies key concepts, confronts conflicting claims, and begins to use historical evidence to defend solutions to an ethical, problematic, and recurring persistent societal issue.	Text with photograph
Script of final four photographs	***Structured**:* Reinforces how to employ the historical thinking "habits of mind" as related to each photograph. Demonstrates reading the photos as documentary evidence, piecing them together to reason about and draw informed conclusions about the past.	
Why small groups?	***Active*:** Suggests that because groups (committees, teams, social organizations, etc.) play a significant role in our pluralistic society, small groups of nearly five students can allow students to effectively help each other and for students who are shy to participate.	Text

What does soft scaffolding look like in real classrooms?	***Structured*****:** Demonstrates the art of fostering dynamic, *just-in-time*, and situation-specific soft scaffolding. Portrays an interactive conversation between a teacher and students as they actively and effectively complete historical analysis.	Quicktime® video
recommended	***Purposeful*****:** Suggests that by assigning the homework, students will interpret the historical photographs as a *means* to a reasoned decision-making about enduring ethical questions and social problems which will help develop certain *habits of mind* that will serve them well in making decisions about similar issues in *the present* and *the future.*	Text
hypothesis	***Purposeful*****:** Introduces that hypothesis forming and testing, a basic step in inquiry-based teaching where teachers facilitate students asking and answering key social studies questions, encourages higher order thinking skills, divergent and creative-thinking, and closely resembles way *real* social scientists (economists, historians, geographers, political scientists, etc.) conduct research.	Text
multimedia presentation	***Connected*****:** provides a means to project the photographs and thus help students develop deep historical understandings and about the complexity of historical interpretation.	multimedia presentation

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Appendix: L – Lesson Narrative from Iteration_2, the Depression Era

In this lesson, students use multiple intelligences to develop content knowledge concerning American society during the Depression Era. Through a two-part teaching strategy of modeling and response groups students sharpen their visual literacy and historical thinking skills as they examine historical photographs. At lesson's end, students should be able to name, describe, and evaluate many circumstances surrounding social conditions, migration patterns and consequences of the 1920s and 30s Depression Era. Students will also form hypotheses regarding the topic-specific question , around which the entire lesson is constructed.

INTRODUCTION (10 minutes):
The teacher initiates a seemingly impromptu discussion by asking the class what should be the response to people who go bankrupt – unable to pay their debts? While students share their thoughts aloud, the teacher negotiates responses and categorizes them into broader themes such as conditions, causes, informal societal responses, and formal attempted remedies. As responses wane, the teacher shares that virtually all societies throughout time have thought about what responsibilities, if any, society has toward the poor and needy. It's truly a persistent issue in history.

Connecting the discussion to today's lesson, the teacher shares that students will critically analyze three historical photographs in an attempt to think more deeply about America at the turn of the century and hypothesize (proposed explanation based on limited evidence - a starting point for further investigation) an answer to today's topic-specific question: *How did Depression Era society address problems of poverty and the needy?* Thinking historically about these photographs should help students begin to explain the social conditions, migration patterns and consequences of the 1920s and 30s Depression Era.

TRANSITION (5 minutes):
The teacher then transitions students to the lesson-content by emphasizing that the skills and knowledge comprising this lesson are essential for truly thoughtful 21 st century citizenship: there are, and likely will always be, people, groups, organizations, and corporations who use visual imagery to influence students ` decision-making, spending, voting, etc. The teacher then states that today students will, as real historians do, think *historically* about three photographs, using them as evidence to collect information and hypothesize about the past.

PHOTO-ANALYSIS (55 minutes):
To each student the teacher distributes a copy of the data retrieval chart, the **Student Handout** . It is specifically designed for this lesson and students are strongly encouraged to use it for compiling notes. The teacher then explains that examining photographs *historically* differs considerably from looking at them traditionally. The teacher should draw students` attention to the DRC that, by careful design, concentrates students` analysis in each of the following four components of historically thinking:

1. **Source** : Accounting for who created the photograph and why
2. **Context** : Carefully observing the photograph` s particulars (contents, angle, lighting, background, etc.) and analyzing them in light of what else is occurring near that time and place in the past

3. **Corroborating** : Comparing the photograph` s information and messages with other documentary evidence
4. **Thinking deeply** : Reasoning about the photographs to derive a reasoned, meaningful understanding about the past.

MODELING: Next, the teacher either projects via **Multimedia Presentation** or prints-out slides from the presentation and distributes to each student a copy of photograph_one . Considering the very challenging and new-to-them nature of historical thinking, the teacher then models historical thinking. This 3-minute video clip of a teacher thinking historically about this photo may be helpful to teachers as they prepare this modeling-activity.

Ina few minutes, the teacher expeditiously, though thoughtfully, models the four historical thinking steps, thus providing the data needed to complete the second column of the DRC. Having already studied **Teacher Handout 1** the teacher *thinks aloud* about photograph_one allowing students to see and hear a successful critical and historical analysis. This may entail treating the questions on **Teacher Handout 1** (which are same questions on the DRC) as rhetorical questions to ask and answer aloud.

The teacher might remind students that while they do not yet have all of the historical knowledge to fully analyze the photos, they are to use all that they posses and specifically note the gaps in their content knowledge, it's an important component of thinking historically to know what else one needs to know. The teacher should answer student questions concerning photograph_one and thinking historically before continuing.

RESPONSE GROUPS: Next, the teacher places students into small, heterogeneous groups of three or four, continues the multimedia presentation or distributes copies displaying photograph_two . The teacher then shares that students, in their groups, have roughly 7-10 minutes to think about it *historically* and complete the appropriate DRC column. It's very important that during the time student-groups analyze the photograph and complete the DRC, the teacher soft-scaffold (move about the room, visit each group, initiate conversations regarding their historical thinking, and offer specific, individualized feedback).

Following these 7-10 minutes, the teacher then gathers the whole-class' attention for students to share their group's respective observations, conclusions, and thinking historically. Specifically, the teacher asks a group to begin sharing their findings, and then asks several other groups to respond – thus developing a conversation to help all students discover and create a meaningful understanding of the photo. Having negotiated responses and kept the conversation focused, the teacher then adds content knowledge and corrects mistaken assumptions to the students' historical thinking experiences. Students are encouraged to collect all information not already on their DRC, and thus may need additional notebook paper. The teacher then assigns student-groups to complete the exact same tasks and routine with photograph_three , photograph_four , and photograph_five . Again, it is vital that during the roughly 7-10 minutes that student-groups are analyzing each photograph and completing the DRC, that the teacher moves about the room, visits with each group to initiate conversations regarding their historical thinking, and offers specific, individualized feedback to each.

SYNTHESIZE FINDINGS (10minutes):
The teacher asks the student groups to more formally address the topic-specific question in light of the all the information from today's lesson. The teacher directs the students to complete the back-side of **Student Handout** (the DRC); the section structuring their hypotheses about the past.

The entire front-side of DRC completed to this point will be helpful to students; however, the fourth row, *Think Deeply* , should be especially so. A recommended homework assignment the teacher should, at the end of class, assign students to evaluate the Depression Era society in its addressing of poverty and the needy by having them answer the question at the very bottom of the DRC back-side: How *well* did Depression Era society address the problems of poverty and the needy?

CLOSE (5 minutes):
The teacher ends this lesson with a reiteration of how historical thinking and visual literacy have a clear purpose for meaningful 21st century citizenship. The teacher may wish to take the final few minutes of class to recap, or debrief, the lesson; mentioning again the purposes of the lesson and how its situated into the week, month, and perhaps even the semester plan of studying US history. Perhaps even mentioning the first lesson of this sort, where students thought historically about photographs of the Progressive Era and how students are truly refining their skills of *Historical Thinking.*

Appendix M – Student Handout Created as a Hard Scaffold for Iteration_2

1. SOURCE: a. What's the photo's date, title, creator, b. Guess what type of person might have taken this picture and for what purpose. c. Guess was it personal or published, candid or posed, amateur or professional?	Photograph_one	photograph_two	photograph_three	photograph_four
2. CONTEXT: d. Write down what you see in the photograph, listing details such as people you see, what they are doing, what they are wearing, their surroundings, and equipment, etc. e. Next, write down what you think is happening in the photograph. Support the response by clues you have seen and identified above. f. Consider how this image serves as a visual document (record) of the Depression Era… In what ways does this photo summarize what was happening during then? g. What is the overall message coming from this photograph and photographer? h. Which specific details directly support your thoughts?				
3. CORROBORATE: i. How do other photographs seem to relate to the information and messages coming from this one? j. Which others agree? Disagree? k. Why might other photos support/refute this one?				
4. THINK DEEPLY: l. What does the photo suggest about the poor and needy during the Depression Era? What about society's responses to them? m. What details help support your ideas? n. What don't you know that you need to know? o. What questions does this photo raise in you mind? Where could you find the answer to those questions?				

photograph_five	**Regarding the Depression Era, what do the photographs AS A GROUP suggest to you about…**
1. SOURCE:	**1)** the causes of poverty
2. CONTEXT:	**2)** the conditions of being poor and needy
3. CORROBORATE:	**3)** who (what type of person) was in need and/or experienced poverty
4. THINK DEEPLY:	**4)** society's responses (formal and informal) **5)** effectiveness of those responses:

HOMEWORK (ON ANOTHER PIECE OF PAPER): ***HOW* WELL *DID DEPRESSION ERA SOCIETY ADDRESS THE PROBLEMS OF POVERTY AND THE NEEDY?***

Support your response with specific evidence from today's lesson…

Appendix N – The Series of Historical Photographs Used in Iteration_2.

Dorothea Lange. (1935). *Migrant Family*.

Unknown. (October 24, 1929). *Outside sub-treasury building steps across from the New York Stock Exchange*

Unknown. (1932). *Breadline of New Yorkers.*

Lewis Hine. (1933). *Some of the Men Working on Norris Dam (Tenn. Valley Authority)*

Unknown. (1932). *Bonus March on the Capital*.

Appendix O – Teacher Primer for the First Photograph of Iteration_2

Dorothea Lange. (1935). *Migrant Family.*

SOURCE

a. What is the photo's date, title, and creator? 1935, *Migrant Family,* Lange

b. Guess what type of person might have taken this picture and for what purpose? Lange, photographer for federal Farm Security Admin. 1935-1940, documented (interviewing and photographing) rural poverty and exploitation of sharecropping farmers and migrant laborers. She was hired to record the effects of the depression and inform the govt. (FSA) about the efforts to solve the economic crisis and remedy poverty and desperation.

c. Guess was it personal or published, candid or posed, amateur or professional? Published, posed?, and professional.

CONTEXT

d. What do you see in the photo, (details, people, action, surroundings, etc.) five people – an older (age 40?) woman, mother, and four children (ages 12, 9, 7. 1?)…very raggedy and old blankets sewn together to form a make-shift tent held together by rope and long sticks…one open and one closed suitcase…a rickety rocking-chair that one of the children is sitting/leaning on…a desolate rural area in which the people are currently residing (squatting?)…trash and empty cups to the left of the tent…the clothes of the kids and woman are dirty and torn…their facial expressions suggest severe displeasure and unhappiness….they seem to be alone – no other families…

e. Next, what you think is happening in the photograph. Support the response...I think these people comprise a very poor family who live in a desolate area. They may be living in this tent because they have been kicked out of their home. They may be waiting for the chance to move to an area with (hopefully) more opportunity. *If* they are moving, they have no formal transportation other than their feet, and they have much to carry if so.

f. Consider how this image serves as a record of the Depression Era… American farmers prospered during WWI, supplying the Allies with corn, wheat, and vegetables. During the 1920s, farmers borrowed heavily from banks to pay for new, technologically advanced equipment that helped them become more efficient, produce more goods than ever, and this eventually ended in vast surpluses of crops they could not sell, or sell only for a very low price. As farmers failed to sell their surplus crops, they became unable to repay their bank loans, including their mortgages; many defaulted on loans and some lost their farms to bank foreclosures. In 1929 many banks collapsed under the pressure of farmer's ongoing economic problems…Making matters worse, farmers in the mid- and southwestern United States were hit with a drought so severe that soil turned into dust sweeping the plains in black clouds. The region was known as the Dust Bowl, and farmers left it in droves. Altogether, over one million families lost their farms between 1930-34.

g. What is the overall message? Farmers fleeing the Dust Bowl typically headed west to California in search of jobs and land. Migrating farmers were often referred to as "Okies," due to the Oklahoma origin of many refugees. Unable to afford decent housing, many families lived in makeshift shacks and shanties outside cities. Poverty and desperation was harsh and brutal.

h. What specific details support…thoughts? The woman in the photo is Florence Thompson, a 32-year old, mother of 7 who was migrating from the Dust Bowl to California. In 1960, Lange said: *I saw and approached the hungry and desperate mother, as if drawn by a magnet. I do not remember how I explained my presence or my camera to her, but I do remember she asked me no questions... She told me her age, that she was thirty-two. She said that they had been living on frozen vegetables from the surrounding fields, and birds that the children killed. She had just sold the tires from her car to buy food. There she sat in that lean-to tent with her children huddled around her, and seemed to know that my pictures might help her.*

CORROBORATE/THINK DEEPLY

i. How does it relate to other photos (evidence)? j. Which others agree? Disagree? *Breadline* is similar as they portray the effects of the depression, however, the men in *Breadline* are very well dressed…*TVA* is also rather rural while the others are urban…*Bonus March*, *Sub-treasury*, and *TVA* display active crowds while *Migrant* shows only one passive family.

k. Why might other photos support/refute this one? The purpose of this photo is to display the effects of the depression, it has a clear point.

l. What does this photo suggest about the topic-specific question? Clearly some intervention was needed, families (women and kids specifically) were literally starving and miserable.

n. What else do I need to know? How was this photo used by the FSA? How *exactly* did this family become poor?

o. What questions does this photo raise in my mind? What interventions, if any, did this family try/receive and why did they fail? Where are the others?

Appendix P – Teacher Primer for the Second Photograph of Iteration_2

Unknown Photographer. (October 24, 1929). *Outside sub-treasury building steps across from the New York Stock Exchange in New York*

SOURCE

a. What is the photo's date, title, and creator? 24 Oct 29, *Outside sub-treasury building steps across from the New York Stock Exchange, NY*

b. Guess what type of person might have taken this picture and for what purpose? Reporter? Not a passerby as cameras were not as prevalent in 1929

c. Guess was it personal or published, candid or posed, amateur or professional? Published, candid, and professional.

CONTEXT

d. What do you see in the photo, (details, people, action, surroundings, etc.) A large structure in the center with several columns, surrounded by other large structures…the center building (with a statue in front) is likely to be home to important business, maybe a bank or government-type facility…there are hundreds of people standing in front of the building in the street…there are several cars among the crowd…although the crowd seems rather calm, there is a policeman on a horse in the bottom left…virtually all of the people in the picture are well-dressed…

e. Next, what you think is happening in the photograph. Support the response.... The mean are "rushing" to the area surrounding the stock market to simply investigate the rumors of market collapse. On 24 Oct 1929, investors flooded the New York Stock Exchange with sell orders in an attempt to get rid of their stocks. Stock prices soon plummeted, and investors starting losing large amounts of money. While the bankers managed to pump some much-needed cash back into the failing market, they ultimately could not prevent its continued fall. On 28 Oct, investors again rushed the stock exchange and sold their stocks at a loss of over $4 billion. On 29 Oct, known as "Black Tuesday," orders to sell at any price swamped the stock market. In a matter of hours, people lost fortunes it had taken an entire decade to make. One distraught president threw himself off the ledge of a New York hotel after his company's stock fell from $113 to $4. By the end of Black Tuesday, investors had lost $16 billion. Great Depression had officially begun with October's end and the stock market in ruins.

f. Consider how this image serves as a record of the Depression Era… Americans in the "Roaring '20s" were earning more money than ever before and spent it on luxury goods (radios, refrigerators, automobiles). The U.S. stock market was at an all-time high; 1927 many economic analysts and business executives claimed the stock market was the key to prosperity and citizens invested as much as they could. Speculation, where a person/organization makes a risky investment in hopes of making a quick, large profit, was widespread in the 1920s. Traders at stock exchanges around the country, particularly the New York Stock Exchange on Wall Street, whipped themselves into a frenzy of buying and selling. As rampant stock speculation drove stock prices higher and higher, some economic analysts predicted that the market was headed for a fall; they warned that stock prices could not continue to rise at such an inflated rate and that the prices were far exceeding most stocks' actual worth. Analysts' warnings that the stock market could not continue indefinitely made some investors nervous; in 1929 many investors began selling their stocks while they could still get a high price for them.

g. What is the overall message? There is a panic associated with the stock market and these men are very, very concerned. This is a foreshadowing of the confusion and disaster that the Great Depression is sure to bring.

h. What specific details support…thoughts? The crowd of people appears to be very restless and unsure – there is no apparent "leader" of the men, they don't appear to be listening to any one particular person, etc. Yet, something has drawn them out into the streets and caused the confusion.

CORROBORATE/THINK DEEPLY

i. How does it relate to other photos (evidence)? j. Which others agree? Disagree? *Breadline* also depicts well-dressed, affluent men…while also portraying crowds, *Bonus March* and *TVA* show organized responses to the depression while *Sub-treasury* is a spontaneous reaction to a cause.

k. Why might other photos support/refute this one? The purpose of this photo is to display the sudden confusion from a major cause of the depression.

l. What does this photo suggest about the topic-specific question? Clearly the economy in America was fail. Businesses and families who invested (nearly 30%) were on the verge of collapse and misery.

n. What else do I need to know? How was this photo used…maybe in a newspaper? How *exactly* did this day/event end for these men – protest, clam, chanting, etc.?

o. What questions does this photo raise in my mind? What interventions, if any, did the government try in earlier market crises ??

Appendix Q –Teacher Primer for the Third Photograph of Iteration_2

Unknown photographer. (1932). *Breadline of New Yorkers waiting to be fed.*

SOURCE

a. What is the photo's date, title, and creator? 1932…*Breadline of New Yorkers waiting to be fed…?*

b. Guess what type of person might have taken this picture and for what purpose? It seems to be rather unbalanced and random, without anyone looking directly (or indirectly) at the camera…

c. Guess was it personal or published, candid or posed, amateur or professional? Published, candid, and amateur.

CONTEXT

d. What do you see in the photo, (details, people, action, surroundings, etc.) a very long line of men (30?) are in line awaiting self-serve soup…all of the men in line are very well dressed, and they are even wearing hats…the man behind the table, in the position of serving the soup, is wearing a long black robe-like outfit with a white collar…the line of men flows downstairs into a building labeled "St. Peter's Mission"…the men in line are only getting a bowl of soup…the canisters look to be worn, old and well-used…it seems to be an urban setting and the title names New Yorkers…

e. Next, what you think is happening in the photograph. Support the response... The men are poor, unemployed and getting a free meal from the Church. The name of the mission, St. Peter's, and the wardrobe of the server, the cossack, suggest the church is Catholic, maybe Episcopal.

f. Consider how this image serves as a record of the Depression Era… By 1933, many Americans lost their savings in bank failures and 25 percent of the labor force was unemployed (millions more worked only part-time). Having lost their savings and their jobs, people from all walks of life were homeless, hungry, and without hope of finding work. People turned to soup kitchens, bread lines, and shelters for meals and warmth. Before 1933, however, only local relief agencies and charitable organizations, such as the American Red Cross and Churches, were able to offer public assistance. Many cities improvised public relief programs, which were usually inadequate, temporary, and poorly funded. Some states disqualified those on relief from voting; others would provide families with relief only after they sold their property for groceries. As people's diets deteriorated, malnutrition became common.

g. What is the overall message? While help was offered and accepted by many, much more help was needed – especially in larger cities. Landlords everywhere evicted families who could no longer afford to pay their rent. Many families lived in crowded, unheated tenement apartments with other families to save money. Others resorted to sleeping in doorways or on park benches. It may be suggested that the financial crisis and associated social problems needed federal attempts at a "rescue" from the Great Depression. Something needed to be done "promptly, fearlessly, and generously." Those in most need were the "the forgotten, the unrecognized but the indispensable units of economic power…the forgotten man at the bottom of the economic pyramid."

h. What specific details support…thoughts? The well-dressed New-Yorker men appear very humble as well as hungry. Hats in hands and seemingly asking permission (specifically the man in the center) for a bowl of soup. The faces of the men shown in line are hardened, saddened, and hopeless. It also appears that the two large canisters will not be enough to feed the entire line – will the men then be left without, or is there more inside the mission?

CORROBORATE/THINK DEEPLY

i. How does it relate to other photos (evidence)? j. Which others agree? Disagree? *Migrant* is similar as they portray the effects of the depression, however, the men in *Breadline* are from an urban setting (NYC) and very well dressed…*Bonus March* and *TVA* depict crowds linked to secular, government intervention while *breadline* shows religious, private efforts.

k. Why might other photos support/refute this one? The purpose of this photo seems to be to display the effects of the depression, others concentrate on causes. Also this photo portrays a long line of well-dressed, urban, men experiencing the aftermath of financial ruin; other photos single out other groups for display (women, children, farmers, migrants, etc.)

l. What does this photo suggest about the topic-specific question? Clearly some intervention was needed, men (presumably families too) were literally starving and miserable and in need of help to survive another day.

n. What else do I need to know? How was this photo used…by the church to advertise, or evangelize? In a newspaper to illustrate an article? Passerby?

o. What questions does this photo raise in my mind? Where are the women and children? Are the men expected to attend service (Mass) in return for the meal? Where do the sit (eat), or are the expected to go elsewhere to eat?

Lewis Hine. (1933). *Men Working on Norris Dam (Tenn. Valley Authority)*

SOURCE

a. What is the photo's date, title, and creator? 1933. *Men Working on Norris Dam (Tenn. Valley Authority).* Lewis Hine

b. Guess what type of person might have taken this picture and for what purpose? Hine is a well-known photographer who…

c. Guess was it personal or published, candid or posed, amateur or professional? Published, candid, and professional.

CONTEXT

d. What do you see in the photo, (details, people, action, surroundings, etc.) There are hundreds (200?) men standing, all facing the same direction…a river flows behind the men…a partially-constructed building is on the riverbank…the men are dressed in "work-clothes" and many of them are dirty or muddy…It seems to be daytime

e. Next, what you think is happening in the photograph. Support the response... These men are the workers who are constructing the building on the riverbank. They may also be involve in the structure crossing the river (bridge?)…the men seems to be on break – or listening to "assignments/orders"

f. Consider how this image serves as a record of the Depression Era… After his 1932 presidential victory, FDR's administration experimented with long-term economic reform even as it scrambled to provide people with short-term relief. One of the most notable pieces of reform legislation enacted during the Hundred Days established the Tennessee Valley Authority (TVA). The TVA built dams along the powerful Tennessee River that harnessed the river's flow to generate cheap electrical power. It also erected numerous electrical power plants in Alabama, Tennessee, Kentucky, and other states in the Tennessee Valley. As a result, local private utility companies—whose prices were typically excessively high—found themselves competing with the federal government for customers. Thanks to the TVA, some of the nation's poorest citizens were finally able to afford electrical lights and power to operate their farm machinery….FDR really departed from Hoover-ism when he revived a World War One Wilson scheme, and extended it, to provide cheap power for the Tennessee Valley. Muscle Shoals mark the point at which the Tenn. River plunges 134 feet into northern Al., creating rocky stretches of fierce shallow water for 35 miles.

g. What is the overall message? The Wilson Dam was used to provide vast quantities of cheap power to the fury of private sources, which had traditionally overcharged. The TVA rate as $2 to 2.75 cents a Kw-hour, against a national average of $5.5. This began the industrial and agricultural transformation of a huge area. It was also a spectacular piece of engineering-the flood-control system is so well designed that the turbulent Tennessee River can be shut off instantly like a tap. The project thus received intense national and international coverage, all of it favorable, which persuaded many that state capitalism worked and that it was all FDR's idea…In addition, the long-term benefits of dams and electricity production included flood control, new factories and jobs, and an influx of professionals to serve economically revived rural areas….

CORROBORATE/THINK DEEPLY

i. How does it relate to other photos (evidence)? j. Which others agree? Disagree? Whereas *Migrant* and *Breadline* portray harsh effects of the depression, *TVA* reflects an attempt to help mitigate those effects…*Bonus March* and *TVA* depict crowds linked to secular, government intervention while *Breadline* shows religious, private efforts…Both *Migrant* and *TVA* are products of two of the most well-know American photo-journalists who sought fame through expose…

k. Why might other photos support/refute this one? The purpose of this photo seems to be to display the effects of the depression, others concentrate on causes. Also this photo portrays a long line of well-dressed, urban, men experiencing the aftermath of financial ruin; other photos single out other groups for display (women, children, farmers, migrants, etc.)

l. What does this photo suggest about the topic-specific question? Clearly some intervention was needed, men (presumably families too) were literally starving and miserable and in need of help to survive another day.

n. What else do I need to know? How was this photo used…by the church to advertise, or evangelize? In a newspaper to illustrate an article? Passerby?

o. What questions does this photo raise in my mind? Where are the women and children? Are the men expected to attend service (Mass) in return for the meal? Where do the sit (eat), or are the expected to go elsewhere to eat?

Appendix S –Teacher Primer for the Fifth Photograph of Iteration_2

Unknown Photographer. (1932). *Bonus March on the Capital.*

SOURCE

a. What is the photo's date, title, and creator? 1932. *Bonus March on the Capital.* ?

b. Guess what type of person might have taken this picture and for wh purpose? A participant of the march or a reporter covering it

c. Guess was it personal or published, candid or posed, amateur or professional? Published, likely candid, and likely professional.

CONTEXT

d. What do you see in the photo, (details, people, action, surroundings, etc.) Several hundred people [some with signs reading 'No Pay – All Stay'] standing on the steps of a large building…the building on the far left is the Capital in Washington D.C. This seems to be a protest-movement that people took to the nations capital.

e. Next, what you think is happening in the photograph. Support the response... A near-riot protest of the federal government. The date of the photo places the event in the middle of the depression, perhaps in an attempt to persuade the president or congress to act.

f. Consider how this image serves as a record of the Depression Era…The political left, which had been crushed, discouraged, and ignored in the 1920s, sniffed the breeze of ruin and began to revive. In 1932 it organized a campaign on behalf of army veterans demanding a 'War Bonus.' A 'Bonus Expeditionary Force' of 20,000 was recruited, persuaded to 'march on Washington,' and set up a shantytown camp in the middle of the city. It was ugly, pathetic, highly political, and, in a horrible way, photogenic; in short, excellent far-left propaganda…

Congress flatly refused to provide more money. Hoover, whose policy on the issue was identical to F. D. Roosevelt's when the issue was revived in 1936, ordered the camp to be dispersed on July 28. The police said they could not handle it. So troops were called in under the cavalry commander Major (later General) George S. Patton. Both General MacArthur, then Army Chief of Staff, Major Dwight D. Eisenhower, played minor roles in the messy episode which followed. Photographs and newsreels did not bear out the assurances by the War Secretary Patrick Hurley that the army treated the Vets 'with unparalleled humanity and kindness.' A War Department official inflamed tempers still further by calling the Vets 'a mob of tramps and hoodlums with a generous sprinkling of Communist agitators.' No episode in American history has been the basis for more falsehood, much of it deliberate. The Communists did not play a leading role in setting up the camp but they organized the subsequent propaganda with great skill. There were tales of cavalry chargers, of the use of thanks and poison gas, of a little boy being bayoneted while trying
ve his pet rabbit, and of tents and shelters being set on fire with people,
ding women and children, still inside.

ROBORATE/THINK DEEPLY

i. How does it relate to other photos (evidence)? j. Which others agree? Disagree? Whereas *Migrant* and *Breadline* portray harsh effects of the depression, and *TVA* reflects an attempt to help mitigate those effects, *Bonus March* depicts a crowd protesting the secular, federal government intervention while *Breadline* shows religious, private efforts…Both *Migrant* and *TVA* are products of two of the most well-know American photo-journalists who sought fame through expose…

k. Why might other photos support/refute this one? The purpose of this photo seems to be to display the effects of the depression, others concentrate on causes. Also this photo portrays a long line of well-dressed, urban, men experiencing the aftermath of financial ruin; other photos single out other groups for display (women, children, farmers, migrants, etc.)

l. What does this photo suggest about the topic-specific question? Clearly some intervention was needed, men (presumably families too) were literally starving and miserable and in need of help to survive another day.

n. What else do I need to know? How was this photo used…by the church to advertise, or evangelize? In a newspaper to illustrate an article? Passerby?

o. What questions does this photo raise in my mind? Where are the women and children? Are the men expected to attend service (Mass) in return for the meal? Where do the sit (eat), or are the expected to go elsewhere to eat?

Appendix T – Follow-up Email to the Participants

Dear (name):

First, THANK YOU for all of your time and effort so far! Our research project is nearing the halfway point and, again, I am appreciative beyond words of you and your participation in my dissertation study. I eagerly anticipate my next visit to (city) to observe you planning with the Great Depression online lesson.

I have been thinking a lot about our time together, and am wondering if I might be putting too much pressure on you to *initially* read-through and *initially* react to the online materials while I am across your desk observing and taking notes. Perhaps this is a bit too intrusive as compared with your normal planning routine.

What do you think about this: would it be better for the next lesson (the Great Depression with Historical Photographs) coming up in a few weeks, if I waited to visit with you until *after* you've had the chance to read-and-work through the lesson independently, without me. That way, when I come to visit you, then you could just *re-view* the materials with me and give me a *re-evaluation* of those impressions and thoughts you've made concerning the usefulness or futility of the lesson and its hyperlinks? Does this sound like a better scenario? If not, please let me know. I am truly trying to make the process and your participation, easier.

I propose this because, as I listened to our planning session and read-over the notes I took during that time, I've noticed that there are a number of hyperlinks within the online materials that have gone "unvisited". You're not alone. For example, no one participating in this study seems to have visited the Progressive Era lesson's hyperlink 3-Minute Movie, a Quicktime short video of a teacher actually thinking-historically about the photograph. I am particularly interested to see if this "Teaching Tip", and all the other hyperlinks, might be helpful for real-teachers in a real-classroom.

Many, many thanks…

Cory

Also, I'll be emailing again soon to coordinate a time that's best for you to think-aloud with the Great Depression lesson using historical photographs.

Appendix U – Problem-Based Historical Inquiry (PBHI) Objectives of Iteration_2's Educative features

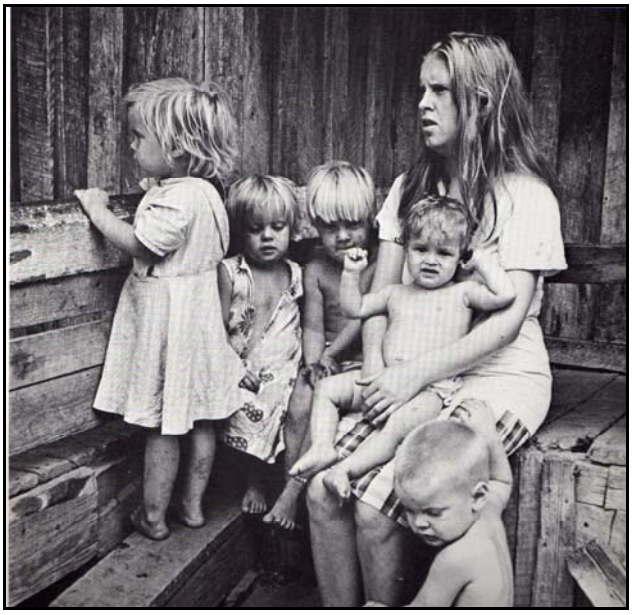
Lesson hyperlink	PBHI Objective of the educative feature	Medium
Response Groups	***Active*****:** Explains the strategy of individual, small group and eventual large group deliberation, and that because citizens inevitably define "the common good" differently, students who are soon to join participatory democracy, need meaningful experiences in working in heterogeneous groups to practice consensus decision-making regarding social problems.	Text
selecting photographs	***Active*** and ***Purposeful*****:** Explains that effective teachers tend to select around five engaging photos that work together in presenting students a well-rounded treatment of the past, and that when students think historically about the photos, they should "discover" enough information to begin thinking meaningfully about a persistent issue in history.	Text
short movie	***Connect*****:** Demonstrates a teacher employing the "habits of mind" of thinking historically about a photograph and reading it as documents as evidence, piecing together evidence trails to reason about and draw informed conclusions about the past. Also, develops foundational knowledge by providing explanations constructive to deep historical understandings of the Depression Era.	Quicktime® video
Photographic primers	***Connect*****:** Develops foundational knowledge by providing explanations constructive to deep historical understandings of the Progressive Era and about the complexity of historical interpretation. Also, clarifies key concepts, confronts conflicting claims, and begins to use historical evidence to defend solutions to an ethical, problematic, and recurring persistent societal issue. ***Structured*****:** Reinforces how to employ the historical thinking "habits of mind" as related to each photograph. Demonstrates reading the photos as documentary evidence, piecing them together to reason about and draw informed conclusions about the past.	Text with photograph
multimedia presentation	***Connect*****:** provides a means to project the photographs and thus help students develop deep historical understandings of the Depression Era and about the complexity of historical interpretation.	multimedia presentation

Appendix V – The Series of Historical Photographs for Iteration_3

Eugene Richards. (1960). *Chicago Apartment*.

Unknown. (1963). *Living conditions of Mississippi families*.

Al Clayton. (1963). *West Virginia family*.



Unknown. (13 May 1963). *The Poor People's March*.

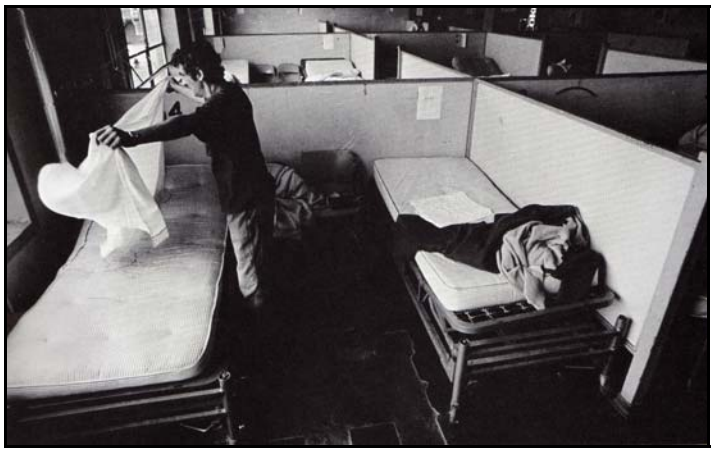
Arnold Sachs. (Aug. 20, 1964). *Lyndon Johnson signs the "War on Poverty" bill into law*.

Ann Carey (1965). *Sister Ann teaching disadvantaged students in Selma's Jesuit school*.

UPI-Bettman photographer. (1966). *Protest of Cuts in Welfare Benefits*.

Unknown. (1968). *Legal Services Unit, Los Angeles*.

Unknown. (1971.) *Long Island Homeless Shelter*



Unknown photographer. (1972). *Food coupons*.

Unknown. (1972). *The VISTA program at work in Little Rock, Arkansas*.

Unknown. (1975). *Homeless Veteran*.

Appendix W – Interview Guide for Data Point One to occur in July 2007

Pre-intervention Interview

1. Why did you decide to be a teacher? Why Social Studies?

2. How do you define 'social studies"? Why should we teach social studies to secondary students?

3. How do you explain your style of teaching? What is your pedagogical approach?

4. What are your expectations for students when they leave your room at the end of the semester?

5. What is your personal planning routine? Where, when and how do you typically plan classroom events?

6. What kind of curriculum materials do you find most helpful? Why?

7. When you use curriculum materials how do you decide what pieces to use and how to employ them in the classroom?

8. How do you go about becoming a better teacher?

<u>Think-aloud Prompts</u>
"I would like you to examine these photographs and think aloud as you plan how you would use them in the classroom with students. You are free to use all, none, or some of them – literally whatever you would normally do while planning for your students. Normally, you would probably do this by thinking to yourself silently, but I would like you to talk out-loud so that I can get a sense of what you are thinking about as you plan instruction".

"What are you thinking now"?

What is a purpose for using photographs?
How would you likely use a photograph in class with students?
What would it mean for a photograph to "work" with students?
Which one do you think would "work" best with students? "work" least?
What response from students would you hope to experience in a lesson using these photographs?

How many of these would you likely use in a lesson?
How long do you think you would spend in the lesson per photograph?
What do you want students to "do" with or to the photograph?

Appendix X – Interview Guide for the brief, Pre-instruction Interview

1. What are your overarching goals for this lesson?
2. What knowledge or skills would you like the students to leave the room with?
3. Right now, how would you describe your confidence level (regarding the possible success of this lesson)?

Appendix Y – Interview Guide for the Brief, Post-instruction Interview

1. Did your students leave the room with the knowledge and skills you wanted them to have?
2. What did you particularly like/dislike about the lesson?
3. How close was the outcome of your teaching to what you had imagined would occur?
4. What would you like to have done differently?

Appendix Z – Interview Guide for the Post-intervention Interview

1. Assuming that you use historical photographs in future lessons, how would you go about selecting the ones to include in your instruction?

2. Among other things these educative curriculum materials concentrated on
1) persistent issues,
2) centering instruction around topic-specific questions, and
3) historical thinking about photographs.
Can you take one of those and discuss your thoughts concerning it?

3. These materials also concentrated on the following:
1) cognitive apprenticeship,
2) authentic intellectual work, and
3) scaffolding students during instruction.
Can you take one of those and discuss what your thoughts concerning it?

4. How would you describe your experiences with these educative curriculum materials as compared with experiences with other social studies resources?

5. Some teachers have expressed that lessons like these are not worth it – too much teacher time and effort for too few results from student– other teachers disagree. Do you have any thoughts on the issue?

6. Do you have any advice for teachers who, in the future, will be planning instruction with these exact same sets of materials?