Accessing Archives: Teaching with Primary Sources in K–12 Classrooms

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ABSTRACT

With the widespread adoption of the Common Core State Standards, K–12 teachers are required to utilize primary sources as tools to promote inquiry-based learning. This article reports findings from an eighteen-month study that focused on understanding the forms of literacies and knowledge needed to effectively facilitate student learning using primary sources in K–12 school classrooms. The article uses ethnographic data drawn from elementary and junior high teachers to analyze the role of archival literacy in K–12 classrooms and proposes a collaborative knowledge model for primary source–based instruction that introduces the importance of employing professional teaching knowledge to effectively locate, evaluate, and use primary sources to teach.

KEY WORDS

Primary sources, Archival literacy, K–12

Primary and secondary school teachers across the United States are experimenting with innovative strategies for implementing the recently adopted Common Core State Standards (CCSS), a set of national education standards developed by the National Governors Association aimed at reducing educational disparities across states and producing a national accountability system. The CCSS outline new learning goals for mathematics and English language arts and aim to change *how* students learn in the classroom by promoting inquiry-based learning. Whereas teachers previously focused on content mastery, they are now tasked with the responsibility of training students to master reasoning skills, such as critical thinking.

Of the many changes resulting from the adoption of the CCSS, one of significance has implications for the archival field and profession. One of the core principles of the new standards is that teachers must promote analytical skills by moving away from textbooks and toward integrating primary sources into classroom instruction. The shift from focusing on mastering content knowledge to mastering reasoning skills has created an opportunity for archivists to support teachers in using primary sources to teach students critical thinking skills. For instance, archivists can promote student learning by identifying materials that can be used in the classroom to demonstrate critical thinking skills, such as the ability to synthesize information across multiple sources and use documentary evidence to support claims. Thus, archivists have an opportunity to perform archival outreach by communicating and demonstrating the pedagogical benefits of primary sources to K–12 teachers.

This article presents findings from an eighteen-month study that focused on understanding the forms of literacies and knowledge needed to effectively facilitate student learning using primary sources in K–12 classrooms. While mainly focusing on elementary and junior high teachers, the study resulted in a collaborative knowledge model for primary source–based instruction that stresses the role of professional knowledge and is largely applicable to K–12 settings. Part one of the article uses ethnographic data to analyze how the researcher expertise model developed by Elizabeth Yakel and Deborah Torres[1] applies to K–12 teachers as a user group and investigates the role of "archival intelligence" in integrating primary sources into classroom instruction. Part two of the article expands upon the existing researcher expertise model by introducing the role of professional knowledge in effectively locating, evaluating, and using primary sources to teach.

Locating Primary Sources: Redefining the Archival Encounter in a Digital Age

With the passing of the No Child Left Behind (NCLB) Act in 2001, Congress expanded the federal role in public education by tying federal funding to

performance on standardized tests. Consequently, teachers felt pressure to improve students' performance on standardized tests by meeting national academic standards. The fact that nearly every state in the country has adopted the CCSS means that teachers across the United States must learn to integrate primary sources into classroom instruction. For example, an English language arts standard for grades 11–12 requires that students learn to "analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole."[2]

Fortunately, primary sources are not completely foreign to teachers. Textbooks, especially history textbooks, consistently include primary sources along with lessons. Yet, Misty Rodeheaver[3] asserted that in a sample of 1,860 primary sources found in three textbooks, 1,597 (85.86%) of the sources were simply used as "page fillers," meaning that the primary sources were not followed by corresponding questions prompting students to analyze "or otherwise interact with the primary source." Decisions regarding statewide textbook adoptions typically occur at the state level, where the state board of education chooses them from a list of commercial vendors. However, teachers make the decision to use primary sources in a classroom and invest their own professional time and effort to locate records that could serve as effective teaching tools. When teachers make this effort, the records must be grade-level appropriate, applicable to teaching standards, topical, and interesting enough to spark classroom discussion.

Instead of relying on textbooks, teachers are encouraged to locate academically appropriate primary sources to develop standards-based lessons.[4] Unfortunately, teachers struggle with locating primary sources due to the "limited access and availability of primary sources."[5] In response, archivists and school librarians focus on developing multiple avenues for increasing access to primary sources, primarily by digitizing collections and making them accessible online. The push to provide online access to primary sources demonstrates an understanding that most K–12 teachers do not physically visit archives when they are trying to locate primary sources.[6]

Searching for and interacting with primary sources predominantly in an online context requires that the archival profession redefine the reference encounter. Archival reference encounters have traditionally entailed users visiting an archives for an orientation with a reference archivist who provides information on potentially relevant materials and collection strengths. In this scenario, archivists serve as "the sole link between users and records" due to the "complex arrangement of archival records and the procedural difficulties associated with accessing archival materials."[7] Users are not expected to navigate "the complex arrangement of archival records" without the guidance of an archivist.[8]

While archival orientations are useful for familiarizing users with collection strengths and institutional policies, research has found that traditional users of archives do not necessarily prefer "mediated access" to archival holdings; users often prefer to undertake "unassisted research in digital collections."[9] The same applies to teachers who are usually "not concerned about interacting with the archives or manuscript collections as a whole, nor are they explicitly interested in having the students learn about generalized research techniques in archives and manuscript collections";[10] instead, teachers are primarily interested in receiving preselected and digitized primary source sets that can be used to create learning exercises that promote critical thinking skills.

Evaluating Primary Sources: Negotiating Professional Boundaries

Even if teachers visited archives and consulted with archivists, existing archival reference approaches assume that each party clearly understands his or her role and would be able to clearly communicate across professional boundaries. However, according to Yakel and Torres,[11] inexperienced users lack the information literacy required to successfully locate primary sources in an archival environment. Teachers who have not been trained to undertake historical research often have domain knowledge of the subject being researched but lack the archival literacy to identify academically appropriate materials within a larger body of archival materials that is arranged according to the principle of provenance "as opposed to being categorized according to subject."[12]

Beyond locating materials, teachers must still evaluate the primary sources for relevance to the curriculum, accessibility, ease of use, and the ability to design assessment mechanisms using the materials.[13] The act of locating and evaluating primary source materials depends on the successful sharing of professional expertise between teachers and archivists that is difficult to achieve because teachers are not trained in archival theory and practice and archivists are not trained to appraise materials for pedagogical value. In describing her experience using the Gloria Anzaldúa Papers to develop lesson plans and presentations for fourth graders, Kelly Kerbow Hudson[14] asked, "Who takes primary responsibility for lesson planning?" and "What sort of training will be offered to support archivists and teachers?" These questions reflect an understanding that the collaborations between archivists and teachers require negotiating and refining professional responsibilities. Without a proper understanding of the principles and practices of each profession, both parties are left without fulfilling solutions.

Archival Education Approaches

In response, several archival repositories, especially those in postsecondary academic settings, have developed outreach programs for reaching students and teachers. For example, Barbara Rockenbach[15] presented "aggressive" outreach strategies for encouraging faculty members to use primary sources in the classroom, such as "mining course catalogs and syllabi" to "identify courses that have content related to primary sources housed in [their] special collections and archives." Much of the archival studies research on the pedagogical benefits of primary sources focuses on promoting the use of primary sources among undergraduates in college and university settings.[16] Consequently, the focus on undergraduates as a user group has led archivists and researchers to concentrate their outreach efforts on university professors and instructional librarians at academic libraries.

Furthermore, in both university and K–12 settings, the outreach efforts focus on using primary sources to teach history. For instance, Sammie Morris, Lawrence Mykytiuk, and Sharon Weiner[17] interviewed history department faculty about archival research competencies for undergraduate students to develop a list of research skills that could be incorporated into course designs. Similarly, much of the literature on using primary sources in K–12 classrooms focuses on historical research skills, which are often referred to as "historical thinking."[18] The skills include sourcing, contextualizing, reading closely, using background knowledge, reading the silences, and corroborating.[19]

The limited nature of the outreach efforts and the disciplinary focus on history points to the absence of a model for archival education that addresses the unique needs of K–12 teachers who consult archives for professional purposes and who seek materials to teach across multiple subjects, including math, science, and English language arts. More generally, it can be argued that the field as a whole lacks a formalized model for archival *education*; as Elizabeth Yakel[20] explained, "While archivists mention providing archival researcher education, the content of that education is not presented in great detail."

The lack of a formalized archival education model has prompted researchers to argue for a literacy-based approach that outlines the skills and knowledge needed to successfully and efficiently use archives.[21] Promoting archival literacies among users encourages practitioners to reconceptualize archival outreach from an orientation-based approach that focuses on familiarizing patrons with resources to a literacy-based approach that teaches patrons how to find, evaluate, and use information effectively to solve problems.[22]

For example, when considering the use of primary sources in elementary school classrooms, Anne J. Gilliland-Swetland, Yasmin B. Kafai, and William E. Landis[23] defined archival literacy as both the ability to understand the role of

records in society and the capacity to apply evidence and information-seeking skills when working with primary sources. These skills include the "ability to consider individual documents in the context of record aggregates, make sense out of unsynthesized or unredacted material, consider the circumstances of the document's creation (i.e., asking *who, what, when, why, where*, and *how*), analyze the document's form and nature, determine whether it is an original and which version, and understand its chain of custody." Thus, archival studies scholars such as Yakel and Torres have advocated for the replacement of "one-shot archival orientation" sessions with a "broader and deeper curriculum" that stresses information literacy for primary sources.[24]

This study contributes to research efforts that seek to understand the forms of literacies required to effectively integrate primary sources into K–12 classroom instruction. The study aims to describe key differences among scholarly and professional users of archives and presents a collaborative knowledge model for primary source–based instruction that introduces the role of professional knowledge in effectively facilitating student learning in K–12 classrooms.

Methodology

The methodology chosen for the study is archival ethnography. For the purpose of this study, *archival ethnography* is defined as "a form of naturalistic inquiry which positions the researcher within an archival environment to gain the cultural perspective of those responsible for the creation, collection, care, and use of records."[25] According to this definition, archival ethnography may be practiced in a "variety of environments—any social space where the creation, maintenance, or use of archival records forms a locus of interest and activity."[26]

Archival ethnography aligns with traditional forms of ethnography and allows for an awareness of "the tremendous variation . . . in research subjects and circumstances, and the challenge of studying complex social and cultural phenomena in action."[27] The process of integrating primary sources is not standardized; multiple variations of the process exist, and multiple types of teachers carry out the process using differing practices. Furthermore, the act of teaching is complex and both a heavily structured and unstructured activity. The content taught is heavily structured by state and national standards; however, the *art* of teaching is not codified—it is a tacit communal practice. Thus, teaching practices and philosophies are formed through "tacit communal agreements and professional training."[28]

The emphasis on practices requires that the study focus on "real-life human behavior" "to gain a unique understanding of the context and thought that informs such behavior."[29] Thus, archival ethnography is a suitable methodology for a study of the unstated norms and practices of teachers and their

relationship to the archival processes undertaken as part of classroom instruction, such as locating primary sources for lesson planning.

Research Design

The findings of this study are drawn from the data collected during a two-phase qualitative investigation (see Figure 1). The first phase of the study was nine months of conducting semistructured interviews with ten teachers from six schools. Participants in Phase 1 were recruited based on three criteria. First, participants with *specific* teaching experience using primary sources or a willingness to begin using primary sources were recruited. Second, participants with varying lengths of *general* teaching experience were sought. Third, participants were recruited from different schools and school districts. The purpose of recruiting participants with varying lengths of general teaching experience and from different schools and districts was to acquire a diverse range of data on the beliefs and motivations of teachers who use or are considering using primary sources to teach.

The majority (80%) of the participants represented "experienced" teachers. The adjective "experienced" is used to describe teachers who have five or more years of experience integrating primary sources into classroom instruction and who have taught for over ten years. However, the adjective "experienced" is not used to qualify the teachers' quality of instruction using primary sources; it only refers to the fact that they have multiple years of experience integrating primary sources into K–12 classrooms.

Phase I **Semistructured Interviews**	Phase II **Participant Observations**
• 9-Month Period • 10 Teachers • 4 School Districts • 15 Hours of Interviews	• 9-Month Period • 2 Teachers, 1 School Librarian • 1 Laboratory School • 118 Hours of Participant Observation

FIGURE 1. The research design included two phases.

The second phase of the study was a nine-month participant observation with teachers in their classrooms. Phase II was designed to observe daily activities and collect experience-based information on the forms of implicit and explicit pedagogical practices and archival processes associated with the act of teaching with primary sources. One main participant was a second grade teacher, and two others participated occasionally: a fourth grade teacher and a school librarian. According to Julian Murchison,[30] participant observation can be used to open "avenues to important types of information hard to obtain or access." To obtain implicit experience-based information unique to the education profession and the context of teaching with primary sources, the researcher developed relationships with the teachers and the school librarian over an academic year by regularly participating in the planning of primary source–based student exercises, adhering to classroom norms and schedules, and attending weekly curriculum meetings.

Part I. Beyond Archival Intelligence: K–12 Teachers as Archival Users

One model that emphasizes an archival literacy approach for working with primary sources is the researcher expertise model presented by Yakel and Torres (see Figure 2).[31] The researchers interviewed 28 "expert users" of archives and primary sources to develop a "model of researcher expertise" that outlines "three distinct forms of knowledge required to work effectively with primary sources."
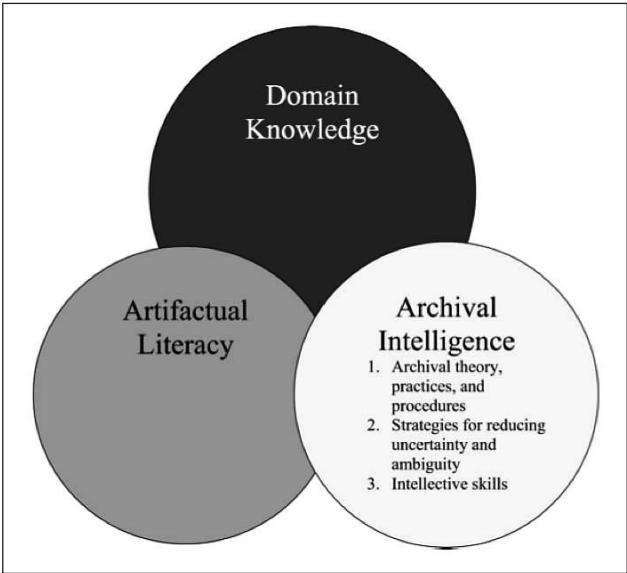

FIGURE 2. The model of researcher expertise outlines three forms of knowledge required to work effectively with primary sources.[32]

These three distinct forms of knowledge are domain knowledge, artifactual literacy, and archival intelligence.

Domain Knowledge

Yakel and Torres[33] described domain knowledge as "subject knowledge" and "an understanding of the topic being researched." Most of the users interviewed by Yakel and Torres "were pursuing academic research projects in different fields of the social sciences" and possessed subject expertise within those fields.[34] For teachers, "domain knowledge" is tied to their comprehension of core concepts in relevant K–12 subject areas, such as English language arts, mathematics, and social studies. The ten teachers interviewed for this article possessed academic degrees in the humanities and social sciences. However, their academic degrees were limited to the undergraduate level, and they did not necessarily possess "subject expertise" on a topic within their undergraduate majors.

Additionally, since 80% were elementary school teachers who are required to teach multiple subjects, they did not have the instructional or planning time to specialize in all subject areas. As one teacher explained, "Nothing's ever easy for teachers, but when you're only teaching history, it's easier to do your standards and use primary sources. But then when you're teaching multiple subjects, you're getting pulled, 'I gotta do health today 'cause I have to turn in this paper, and I have to do this, I have to do that.'"[35]

Also, unlike academic researchers, K–12 teachers do not have the luxury of choosing topics based on their personal interests because their schools require them to follow the California Department of Education content standards. These content standards specify the topics that must be covered in each subject area. As a result of the broad topics, the teachers do not conduct highly focused research in archival environments; instead, they search online archival collections for materials relating to general social studies topics and historical figures using keywords like the "ranchos of Alta California" and "William Mulholland."

Yet, it is important to note the teachers' lack of expertise in a particular subject does not signal incompetence. What the teachers lack in subject expertise, they make up with knowledge in the professional domain of teaching. Of the teachers interviewed, more than half (60%) possessed a master's degree in education. They are experts at evaluating materials for teaching potential. They are experts at assessing the reading level of correspondence to decide whether or not their students would be capable of comprehending the materials. They possess a different type of expertise that is necessary for successfully undertaking professional endeavors—an expertise in the domain of curriculum development and instruction. Hence, the role of domain knowledge in effectively finding, evaluating, and using primary sources differs when the user does not

consult an archives for scholarly pursuits. In the case of teachers, while it is beneficial to have "expertise" in a subject, extensive domain knowledge is less important than the ability to combine a general understanding of a topic with professional pedagogical knowledge, such as the skill of selecting grade-appropriate materials.

Artifactual Literacy

Yakel and Torres described artifactual literacy as "the ability to interpret records and assess their value as evidence."[36] Expertise in interpreting and analyzing primary sources is a skill that has become increasingly important with the adoption of the CCSS and the focus on mastering analytical skills that will help students succeed in information-rich environments. For example, a standard in English language arts for eleventh and twelfth graders reads, "Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources." The standard does not specify content, like specific texts or events. In place of content, the standard lists skills like integrating information and recognizing discrepancies.

The ability to interpret records and assess their evidential value requires an understanding of record form and context. As Gilliland-Swetland, Kafai, and Landis[37] explained, interpreting a record requires asking questions about "who, what, when, why, where, and how." Therefore, an interpretation of a primary source could begin by asking, "*What* am I looking at?" Interpreting the formal qualities and structure of a primary source necessitates an understanding of the "nature and syntax of a variety of document types and sources including written, printed, visual, and financial."[38] During the interviews, each teacher was asked to describe a typical lesson using primary sources. In response, one teacher offered to model a lesson on Manifest Destiny using a facsimile of the 1872 painting titled *American Progress* by John Gast:

> Well, we start with a question and we talk about which groups do you see in this painting. We just say, "What do you see?" They should notice Native Americans in the background . . . the miners going there to find gold. The . . . I don't know, whatever else they see.[39]

Asking students to identify "what they see" is the most common type of question teachers ask when having students interpret a primary source. Questions about visual identifications are the most common because 100% of the teachers mentioned using pictures and other visual resources, such as maps, to teach lessons. Although teachers frequently ask students to describe what they see, they predominantly refer to what is represented in the visual

resource (e.g., Native Americans). Teachers rarely ask students to identify the formal qualities of records, such as the text structure of printed materials, or the type of record, such as a facsimile of a painting.

In terms of analyzing the context of primary sources, teachers tend to focus on identifying the creators of the primary sources and do not ask deeper questions about the sources' provenance, such as "their original purpose and function."[40] Reliability refers to a record's ability to stand for the "facts to which it attests" and thus refers to the "truth-value" of a "record as a statement of facts."[41] Assessing the reliability of a primary source requires considering *both* the creator of the record and his or her purpose and procedures for creating the record. For the majority of the teachers interviewed, the reliability or "truth-value" of a record is solely tied to the authority of the creator:

> I always start with a Library of Congress . . . that to me is my most reputable source. . . . I usually Google search and then sift through and look for a reputable source. . . . I'm not using Wikipedia. . . . So if I'm looking up Keith Haring, I'm gonna go to the Brooklyn Museum because I know that that's gonna have better authenticated sources. I'm not gonna use a 12th grader's science report or art report, which is what a lot of stuff is up there.[42]

As this quote demonstrates, teachers often present the content of primary sources as reliable or the "truth" when the records were collected from "reputable" institutions like the Library of Congress. Thus, the reliability of a source is often tied to the reputation of the current custodian of the primary source (e.g., Brooklyn Museum) and not necessarily to the trustworthiness of the original creator.

Although the teachers rely heavily on digitized primary sources, none of them expressed a concern about the possibility of records becoming altered through the creation of digital representations. For instance, a letter may be altered from its original version and rendered incomplete if an archivist accidentally misses a page during the digitization process. In fact, only two of the teachers acknowledged that they were working with surrogates or digital representations of originals. One teacher stated, "Sometimes I'll get an actual primary source and sometimes I get a model of it."[43] Another teacher provided a more nuanced understanding of the difference between a facsimile and an original:

> I'm using a facsimile of a primary source. In our purposes, we don't tell the kids this isn't a true primary source. When I show a picture of the Wright Flyer taking us for his flight, it's a facsimile . . . it is a representation of the original photograph or a map, it's not the real picture. It's a facsimile.[44]

Teachers can design lessons that foster critical thinking skills by asking deeper questions about the nature of the record and the evidence it provides.

As the data presented reveal, the majority of the teachers struggle to think critically about the formal qualities and contextual information of the primary sources they use to teach. While they are able to consider the authenticity of records by ensuring they are drawn from reputable sources, they do not critically consider whether or not the information presented is reliable. Instead of presenting the information communicated by the primary sources as perspectives, the teachers tend to present them as facts or the "truth" simply because they were gathered from large institutional sources.

However, an important factor to consider is the level of experience teachers have with interpreting and evaluating primary sources as evidence. Before the CCSS were adopted, teachers were not encouraged to stray from the state adopted textbooks. One teacher described the overreliance on textbooks and the difficulty with changing established educational practices:

> Well a lot of teachers were trained with textbooks and Open Court[45] and things like that, where they were told this is the progression of how you teach it, and here is the books you use, and these are the questions you ask, and now it's more open ended, so it's hard for them [to switch to teaching with primary sources].[46]

The comment identifies an area where teachers need further support from archivists who can provide outreach in the form of training workshops and professional development opportunities that focus on the skills necessary for interpreting and assessing primary sources. Teachers need to master these skills themselves before they can be expected to effectively teach with primary sources.

Archival Intelligence

The third form of knowledge outlined by Yakel and Torres[47] is archival intelligence. According to Yakel and Torres, inexperienced users who have not been trained to undertake historical research may lack "archival intelligence" and may struggle to successfully find, evaluate, and use primary sources in an archival environment. Archival intelligence refers to "knowledge about the environment in which the search for primary sources is being conducted, in this case, the archives."[48] Understanding an archival environment would include having knowledge of "archival principles, practices, and institutions, such as the reasons underlying archival rules and procedures, how to develop search strategies to explore research questions, and an understanding of the relationship between primary sources and their surrogates."[49]

When assessing the teachers' "archival intelligence," I began by asking a basic question, "How would you define a primary source?" Below is a sample of the responses to the question:

> A primary source is an original document, or creative work, or artifact.[50]

> It's an actual document or article or artifact, or something that is current to the time it was created. For example, like the Constitution or a statue from Ancient Greece, or a letter, or a diary . . . it's something that was created in the time period.[51]

> An original account or representation of a historical event, or it can be even a contemporary event. Basically, not removed from the original source.[52]

In general, the definitions provided were similar. The teachers interviewed commonly described primary sources as original documents or artifacts created during the time period under investigation. The answers also revealed that the teachers are aware of the different types of primary sources (photograph, map, journal, etc.) available. However, only 20% of the interviewees mentioned the use of contemporary primary sources when studying a current event or process. Most of the interviewees view primary sources as "historical" documentation of past societies, such as "Ancient Greece." Each of the teachers was able to articulate a definition for primary sources, even if they struggle to see them as more than representations of the past.

As the focus shifted from primary sources as objects to a larger discussion on archival principles, practices, and institutions, the teachers began to provide less confident and articulate responses, signaling a lack of "archival intelligence." Since teachers mainly access digitized primary sources through portals designed specifically for them, such as the Library of Congress Memory Project, they receive decontextualized item-level results. As part of the interview, I asked teachers to show me their "favorite resource" for primary sources.

Most of the teachers (80%) navigated to an online archival portal, such as the Online Archive of California and the Library of Congress Teaching with Primary Sources homepage, and demonstrated searching for primary sources. All of the teachers interviewed demonstrated searching for primary sources either by using the text box to conduct keyword searches or by browsing through preselected primary source sets arranged by topic. Not a single teacher used the finding aids that were accessible through the same portals.

As a result, teachers usually work with decontextualized archival items and rarely view an entire collection represented as a whole through a finding aid. Without accessing the finding aid and viewing the intellectual arrangement, teachers do not understand the relationship between the selected primary

source and the other materials in the same *fonds*. Teaching with decontextual-
ized primary sources risks presenting students with incorrect interpretations
and representations of archival materials, especially when dealing with the
records of historical figures whose views on issues often evolved.

Part II. Collaborative Knowledge Model for Primary Source–Based Instruction

The application of the "model of researcher expertise" uncovered several dif-
ferences in the way that teachers approach archival research. Instead of viewing
the teachers' limitations in conducting archival research simply as "problems,"
I developed a collaborative knowledge model for primary source–based instruc-
tion that stresses the importance of teacher expertise (see Figure 3). My model
focuses on three key facets of professional knowledge: pedagogical strategies,
professional practices, and tacit understandings of classroom environments.

By introducing the role of professional knowledge, the collaborative
knowledge model builds upon the Yakel and Torres model and creates a new
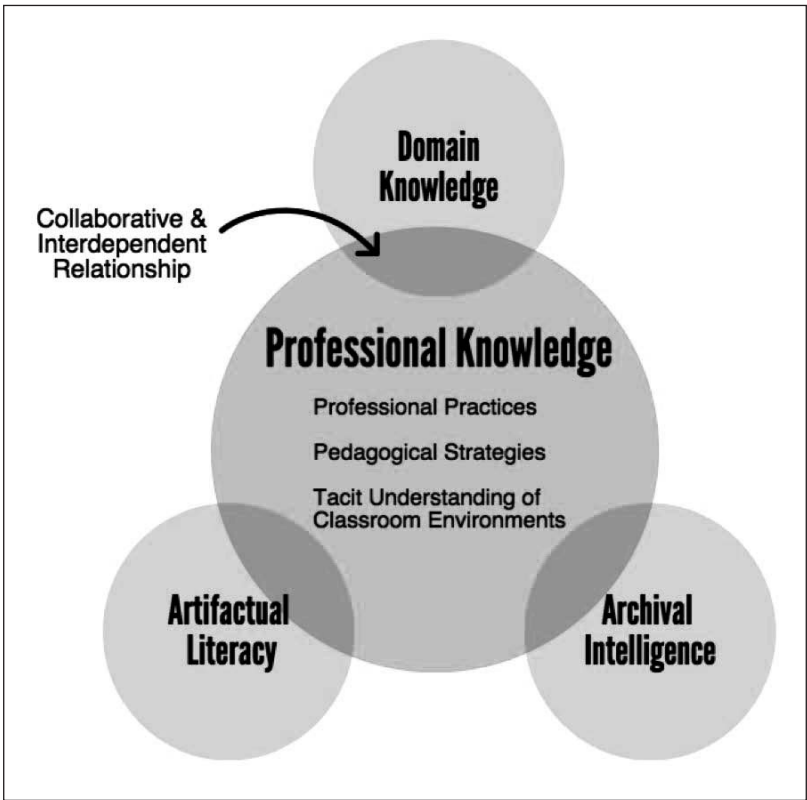

FIGURE 3. The collaborative knowledge model for professionals focuses on three key facets of professional
knowledge.

knowledge base that better describes the various forms of knowledge needed by teachers who are integrating primary sources into classroom instruction. For the purpose of this study, a *model* is defined as an "explicit interpretation of one's understanding of a situation" and a "description of entities and the relationships between them."[53] The collaborative knowledge model represents a descriptive interpretation of the multiple forms of scholarly and professional knowledge necessary for integrating primary sources into classroom instruction.

Furthermore, the collaborative knowledge model for primary source–based instruction simultaneously describes the expertise needed by teachers who play the roles of "teacher as researcher" and "researcher as teacher." Since integrating primary sources requires that teachers find, evaluate, and teach with primary sources, the model brings together the knowledge needed to successfully navigate an archival environment *and* the knowledge needed to productively teach with primary sources. The result is a new knowledge model that describes the full range of expertise needed by teachers who are attempting to integrate primary sources into classroom instruction.

Although the collaborative knowledge model builds upon the work of Yakel and Torres, it also departs from their model in two significant ways. First, the proposed knowledge model places professional knowledge (instead of scholarly knowledge) at the center and describes its main role in guiding teachers through the process of integrating primary sources into classroom instruction. Second, the proposed knowledge model positions scholarly and professional knowledge in a collaborative relationship and contends that the forms of knowledge create two types of expertise—researcher and teacher—that are interdependent and necessary for integrating primary sources into classroom instruction.

"Teacher as Researcher" and "Researcher as Teacher": Valuing Professional Knowledge

Professional knowledge is defined as the "body of knowledge and skills which is needed in order to function successfully in a particular profession."[54] Professional knowledge is a form of general knowledge that relates to those working in a vocation that requires specialized educational training, including architects, accountants, nurses, and lawyers. The collaborative knowledge model recognizes that many types of professionals consult archives for non-scholarly purposes and contends that professional knowledge heavily structures their research activities. Although professionals rely on forms of scholarly knowledge to navigate archival environments, they are ultimately conducting research through the lens of a professional. Professional knowledge serves as a frame of reference that greatly affects how professionals find, evaluate, and use

primary sources. Thus, the collaborative knowledge model stresses the importance of professional knowledge by placing it at the center of the model.

The popularity of accountability measures has extended beyond standardized student testing to the professionalization of teachers. To ensure that skilled teachers are placed in classrooms, teachers must enroll in an accredited teacher education program and earn a professional certification. Professional teacher certifications imply that a "knowledge base for teaching" exists that represents "a codified or codifiable aggregation of knowledge, skill, and understanding . . ." that can be mastered and demonstrated.[55] Much scholarly debate focuses on which particular knowledge and skills create a competent[56] practitioner.[57] The adjective "competent" is used in literature from the field of education to describe teachers who master professional teaching competencies or skills in a particular grade level or subject area. While there are many interpretations of what being a "competent" teacher entails, experts widely agreed that being a successful educational practitioner requires multiple forms of knowledge, some that can be taught and others that must be acquired through experience. This article focuses on the specific facets of professional knowledge that pertain to teachers who are finding relevant primary sources, evaluating them for evidence, using them to teach, and assessing their impact on student engagement and learning.

Facets of Professional Knowledge for K–12 Teachers

Professional Practices

The first facet of professional knowledge is an understanding of the standard policies and procedures for "how things are done" in the teaching profession. A relevant question dealing with professional practices is "*What* am I *required* to teach?" Thus, knowledge of professional practices includes being well versed in the academic standards governing what teachers should teach, such as the CCSS. Understanding "how things are done" occurs through a familiarity with explicitly stated and implicitly understood professional practices.

An example of explicitly stated professional practices is outlined in the California Department of Education's "Standards for the Teaching Profession," which details the professional roles and responsibilities for teachers in public school classrooms. Standardized professional practices, especially academic standards, are omnipresent in classrooms, and the practice of teaching with primary sources is no exception. One teacher with twenty-six years of experience has watched standards come and go and described the pervasiveness of academic standards and their effect on teaching with primary sources:

> The Library of Congress put together all these great lesson plans, but now somebody has to start looking at lesson plans that are more supportive of the Common Core . . . the standards are so important . . . a lot of teachers complain, "Oh the standards, the standards, standards." Yes, every time you teach your lesson . . . somebody walks in and they wanna know what standard are you teaching. There really is that focus on standards. They're here to stay. So now, what can we do to support those standards that are gonna require teachers to look at primary sources? First I need to know what are primary sources? How are they different from secondary sources? And then the next thing is where can I find these sources that are gonna support my curriculum? My grade level? And then, how do I do this?[58]

The quote reveals that although teachers are aware that Common Core State Standards "are here to stay," they do not necessarily feel well prepared to implement them. The teacher expresses needing further training in the fundamentals of teaching with primary sources, such as understanding the differences between secondary and primary sources and knowing where to find primary sources.

Other professional practices are not explicitly stated in the form of standards and implicitly understood. For instance, the sharing of lesson plans and instructional materials between experienced and inexperienced teachers is a common practice, but it is rarely mandated or explicitly supported by administrators. The practice stems from the tradition of pairing new and inexperienced teachers with "master" or "mentor" teachers who provide modeling and guidance. Knowledge of professional practices is important when teaching with primary sources because teachers need to be familiar with the academic standards that require their use and how to develop the particular pedagogical skills needed to use them effectively.

Pedagogical Strategies

The second facet of professional knowledge is an understanding of effective pedagogical strategies for teaching with primary sources. While this facet of professional knowledge could be a subset of professional practices, I have chosen to separate them based on the understanding that pedagogical strategies are not necessarily concerned with *what* should be taught and *when* as outlined by the profession (via academic standards) and are instead concerned with *how* to teach. Thus, a relevant question for teachers considering pedagogical strategies could be, "*How* do I teach with primary sources?" When teaching with primary sources, teachers should consider the pedagogical strategies that would best promote artifactual literacy and other analytical skills. One teacher described his consideration of pedagogical strategies and use of modeling:

> I think children learn by looking at things. If you're teaching somebody how to write a letter, you show them the letter format and you write a letter, you model it in front of them. Also you could use a primary source and show what a letter looks like and identify the parts. So it's the use of modeling but with an actual letter—an actual primary source.[59]

Of the three facets of professional knowledge discussed, the development of pedagogical strategies receives the most scholarly attention. Educational researchers recognize that moving away from secondary sources and teaching with primary sources requires a set of analytical and pedagogical strategies that teachers may not be familiar with. As a result, educational researchers have developed "frameworks" and "best practices" for teaching with primary sources. For example, David C. Ensminger and Michelle L. Fry [60] developed the conceptual framework for Primary Source–Based Instructional Practices (PSBIP) that includes six instructional practices: illustration, association, utilization, examination, incorporation, and interpretation. Regardless of the specific instructional practices used, teachers should possess the ability to select the pedagogical strategies that will best allow them to use and adapt primary sources as instructional tools.

Knowledge of Classroom Environments

The third facet of professional knowledge is an understanding of the "*situation* in which [teachers] must teach," which includes a "knowledge of the actual classroom, school, and community in terms of its ethos, demands, and constraints."[61] Knowledge of the classroom environment is a form of situational and contextual knowledge that is acquired through experiences working in a specific environment and community. A teacher's situational and contextual understanding includes being aware of the different elements that contribute to the formation of a classroom environment, such as the students, instructional schedule, and physical layout. Understanding a classroom environment or being able to "read a classroom" is a form of tacit knowledge that further develops with experiences, and its tacit nature means that the teachers did not discuss or verbalize what they implicitly know in the interviews. As Lee Shulman explained, "Practitioners simply know a great deal that they have never even tried to articulate."[62]

Even without articulation, the teachers' knowledge of what would work in their classrooms was evident throughout my observations. They exhibited knowledge of students that surpassed their documented academic records. For example, when planning a small group activity that would require students to use primary sources to represent the lives of important figures, mainly facsimiles of historical photographs, one teacher grouped students based on their

documented academic records (struggling students paired with high-achieving students) and other experience-based knowledge he had of the students' interests, behaviors, and relationships. He did not group two male students together because they had experienced a conflict in the library. He grouped two students together to study Georgia O'Keeffe because he knew they were "artistic." By the end, the teacher had students grouped by factors that were apparent to him but not to someone without contextual knowledge of the classroom. Ultimately, teachers use their knowledge of the classroom environment to make moment-by-moment decisions about their teaching that significantly affects what and how the students learn using primary sources.

Collaborative and Interdependent Knowledge Relationships

The description of the three facets of professional knowledge that are unique to teachers—pedagogical strategies, professional practices, and tacit understanding of classroom environments—adds specificity to the general concept of "professional knowledge" and contextualizes how professional knowledge shapes the decisions of teachers who are integrating primary sources into classroom instruction. In addition to representing the importance of professional knowledge, the proposed knowledge model positions scholarly and professional knowledge in a collaborative and interdependent relationship.

Although the proposed knowledge model places professional knowledge at the center, the forms of scholarly and professional knowledge overlap to illustrate that each form of knowledge does not work in isolation. Scholarly and professional forms of knowledge interact in a collaborative relationship and create a blended way of knowing and understanding the process of integrating primary sources into classroom instruction. The particular intersections of professional and scholarly knowledge create new types of knowledge that are unique to the contexts and professions under study.

For example, when teachers combine their artifactual literacy with their professional knowledge of pedagogical strategies, they develop a blended way of understanding the process of evaluating primary sources. They are concurrently evaluating a primary source based on its evidential *and* pedagogical value. As teachers undergo the process of interpreting primary sources and assessing their value as evidence, they are considering whether or not the primary sources offer the opportunity to model the interpretive process and whether the evidence provided by the primary sources sufficiently addresses an academic topic in a way that students can grasp and learn.

For instance, in a lesson on dating official documents, the teacher searched for a primary source that could represent a diploma to teach students about the formal qualities of official documents. When assessing primary sources, he used

his own artifactual literacy skills to search for specific formal qualities common to official documents, including emblems that authenticate them (seals), signatures, and dates. Moreover, once he found a diploma with the desired artifactual qualities, he also assessed whether or not the seal was prominent enough to be used as an exemplar in a lesson and whether or not the diploma clearly stated the name of a university or college that the students recognized to help them comprehend that a diploma is an official document that certifies an academic degree.

In this case, the teacher chose a diploma that belonged to his grandmother and used additional pedagogical strategies, such as having the students make personal connections with the diploma based on their prior knowledge of the teacher's grandmother (she comes up frequently in lessons). Once he engaged the students with personal connections, he modeled how to interpret official documents and assess their authenticity. Therefore, the teacher combined the ability to assess a primary source for evidence with the ability to assess its pedagogical value to carefully select a primary source that could be used to teach a variety of skills and content.

Interdependent Relationship

When scholarly and professional forms of knowledge are combined, they bring together two types of expertise—research and teaching. I model the relationship between research and teaching expertise as interdependent because the absence of one results in the inability to effectively find, evaluate, and use primary sources in teaching. A person with only research expertise would be capable of finding primary sources in an archives, but he or she would not possess the professional knowledge needed to develop suitable lesson plans. Similarly, a person with only teaching expertise would be capable of choosing engaging pedagogical strategies for teaching with primary sources, but would lack the ability to navigate an archival environment well enough to find the most appropriate primary sources for a given lesson. Thus, in addition to describing a collaborative knowledge base, the proposed model asserts that research and teaching expertise are interdependent and that teachers rely on both forms of expertise when integrating primary sources into classroom instruction.

During my observation of an "Inquiry Committee" meeting, I watched six teachers discuss the process of integrating primary sources into classroom instruction through a group exercise. After some discussion, the teachers settled on four main discussion questions:

1. Why should we use them?
2. What do I need?
3. Where do I get them?
4. How do I use them?

For thirty minutes, I observed six teachers fill out responses to the questions on yellow chart paper using colored markers. They bumped into each other. They excitedly shouted out suggestions to others across the room. One teacher walked over to the question, "How do I use them?" and wrote, "We introduce a study or concept, build background knowledge and common experience." She then switched to the question, "What do I need?" and wrote "Knowledge of standards (Common Core, Next Generation Science Standards)." Finally, she walked over to the question, "Where do I get them?" and added the names of online archival portals ("Calisphere") and suggested that teachers "verify source for veracity."

This example illustrates the interdependent relationship between professional and scholarly knowledge. The teachers could not properly address how to teach with primary sources without drawing from both research and teaching expertise. First, the teacher used her knowledge of pedagogical strategies and professional practices to suggest using primary sources to build background knowledge. Next, she used her knowledge of professional practices to suggest using primary sources according to the CCSS. Last, she used her knowledge of archival environments and artifactual literacy to suggest specific online archival environments and remind teachers to "verify source[s] for veracity." As she jumped from one piece of yellow chart paper to the next, she effortlessly switched between her knowledge of teaching and researching.

Conclusion

Unlike previous user studies that focus on historians and genealogists,[63] the collaborative knowledge model for primary source–based instruction focuses on professional users consulting archives for nonscholarly activities—K–12 teachers consulting archives for the purpose of integrating primary sources into classroom instruction. Additionally, a considerable amount of the previous archival studies research on the use of primary sources in classrooms has been limited to descriptive accounts of how particular archives deal with the issue of archival outreach to K–12 students; Peter Carini[64] described these accounts as "this is 'how we do it in our shop' style of article(s)." This article diversifies the scholarly research on archival users by using a model building approach to study professional users and the nonscholarly use of archival materials.

By proposing a knowledge model that positions scholarly and professional knowledge in a collaborative and interdependent relationship, I aim to describe the full range of expertise needed by teachers attempting to integrate primary sources into classroom instruction. The collaborative knowledge model supports a holistic approach that does not compartmentalize scholarly and professional knowledge and skills. In the past, the archival orientation approach focused

solely on archival practices and policies; while teacher professional development, such as primary source institutes, focused primarily on pedagogical aspects ("best practices") of integrating primary sources into classroom instruction. Focusing only on one form of knowledge resulted in ineffective attempts to find, evaluate, and use primary sources in K–12 classrooms. Teachers who attend a traditional archival orientation will learn to find primary sources, but they may not be familiar with appropriate methods of finding the optimal primary sources for their lesson or how to source them effectively. Likewise, teachers who attend primary source institutes will learn relevant pedagogical strategies, but they may leave not knowing how to find and evaluate primary sources in archival environments. Thus, the proposed collaborative knowledge model stresses the importance of bringing scholarly and professional knowledge into communication to create a holistic approach for integrating primary sources into classroom instruction that draws from research and teaching expertise.

Notes

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[33] Yakel and Torres, "AI: Archival Intelligence," 52.

[34] Yakel and Torres, "AI: Archival Intelligence," 62.

[35] Interview #2, 04:52.

[36] Yakel and Torres, "AI: Archival Intelligence," 52.

[37] Gilliland-Swetland, Kafai, and Landis, "Integrating Primary Sources," 92.

[38] Carini, "Archivists as Educators," 48.

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44 Interview #1, 21:06.

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46 Interview #1, 20:31.

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