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## The Pedagogical Promise of Primary Sources: Research Trends, Persistent Gaps, and New Directions



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### Introduction

The topic of teaching with primary sources has become increasingly central to discussions of archival literacy and instruction. Professional organizations and associations, such as the Society of American Archivists and the Association of College & Research Libraries, have created guidelines, discussion groups, listservs, and “unconferences” devoted to promoting the educational use of primary sources in classrooms. The rising interest in facilitating learning with primary sources spans across primary, secondary, and postsecondary contexts, and aligns with broader changes in the American educational landscape. Instead of focusing on the mastery of content knowledge, educators are employing engaged learning theories that promote the development of critical reasoning skills, such as identifying evidence and biases within documents (Hendry, 2007), and synthesizing information across primary sources that present different narrative accounts of an event (Morgan & Rasinski, 2012). For university archivists, academic librarians, and special collections professionals, the push toward inquiry-based education has resulted in the need to support faculty and staff who are utilizing primary source analysis as a strategy for teaching students to “engage in questioning, problem solving, active investigation, and critical thinking” (Stripling, 2011, p. 5).

The pedagogical promise of teaching with primary sources has resulted in numerous scholarly and professional articles, as well as several book-length works (Bahde, Smedberg, & Taormina, 2014; Cotton & Sharron, 2011; Hinchliffe & Prom, 2016). However, while the professional and scholarly discussion on teaching and learning with primary sources has been extensive, much of the literature has been limited to descriptive case studies, resulting in a knowledge gap on effective evaluation methods. Given the increasing interest in teaching and learning with primary sources, we argue that this omission necessitates attention. First, we analyze literature on teaching and learning with primary sources, and present research trends that focus on how archivists, academic librarians, and special collections professionals promote student learning. Second, we narrow our focus and delve deeper into the topic of evaluation and identify existing approaches and persistent

research gaps. Finally, we present new directions for research and practice that promote teaching transferable skills, scaffolding learning opportunities, and incorporating evaluative measures into the process of teaching and learning with primary sources.

### Methodology

In order to accomplish a comprehensive analytic review of the literature on teaching and learning with primary sources, we conducted searches in scholarly databases, such as the Web of Science, ArticlesPlus, ProQuest, EBSCO, and Google Scholar. We searched using relevant keywords (“primary sources,” “archives,” “teaching,” “learning”) and restricted the search to English language sources. The database searches were supplemented by consulting existing bibliographies on the topic, such as the one created by the Society of American Archivists Teaching with Primary Sources Working Group and following up on citations in the literature. In August 2016, this systematic review yielded a total of 244 peer-reviewed publications related to teaching with primary sources dating from 1949 to 2016.

We used two different criteria to narrow down the results to the most relevant literature addressing how archivists, academic librarians, and special collections professionals approach teaching with primary sources. Thus, although the fields of education, history, and other disciplines have contributed widely to research on the topic, we chose to exclude literature from these fields and focused on peer-reviewed publication outlets that focus on archives, academic libraries, and special collections contexts. Applying this field-specific filter yielded a bibliography that included 154 works (~63% of initial total).

Next, we applied a secondary filtering criterion by identifying publications that discussed methods used to evaluate teaching and learning with primary sources within these contexts. Evaluation was broadly operationalized as publications involving assessment methods or measurement of factors, such as student learning or satisfaction. In order to ensure that agreement was reached on what constituted “evaluation,” members of the research team reviewed a subset of the identified evaluation literature and participated in a series of open

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discussions until consensus was reached. This iterative process of applying the evaluation filter yielded 74 results, ranging from 1987 to 2016.

## Research trends in the literature

### Academic domains

We analyzed the academic domains represented in the 154 works identified using the field-specific filter for research on teaching and learning with primary sources in archives, academic libraries, and special collections contexts. The most frequent academic domain covered by the literature was history (27%), with most work detailing case studies of educators experimenting with primary sources in undergraduate history and K-12 social studies classrooms (Cook, 1997; Gilliland-Swetland, 1998; Laver, 2003). For example, works detailed collaborations between archivists and history educators aimed at promoting the use of primary sources in the classroom (Kolodny, Zoino-Jeannetti, & Previte, 2009; Schmiesing & Hollis, 2002). In Morris, Mykytiuk, and Weiner (2014), archivists reviewed course syllabi and conducted in-depth interviews with history faculty in order to identify faculty expectations of undergraduates' archival research skills and to develop "practical recommendations" of archival research competencies (p. 394). Several other academic domains were covered in the literature, though the coverage for each domain was limited. Other academic domains covered included English (Mazak & Manista, 2000; Nollan, 2012; Reynolds & Sauter, 2008), religious studies (Studstill & Cabrera, 2010), political science (Rockenbach, 2011), architecture (Kapelos & Patrick, 2012), and radio and television (Gorzalski, 2015).

However, over half of the works (59%) did not explicitly identify an academic domain. Instead, the works referred to broader academic contexts such as "the undergraduate classroom" or "K-12 classrooms." The lack of specificity in this realm may be an effort to appeal to a wider audience; however, based on the academic content presented in the works and the popularity of using primary sources in history classrooms, it may be a sign that history is the assumed and default field. The analysis of academic domains revealed opportunities to incorporate primary sources in areas outside of the humanities and social sciences. Although Gilliland-Swetland, Kafai, and Landis (1999) demonstrated the pedagogical potential of using primary sources like lab notebooks to introduce students to scientific practices, such as observation and scientific note-taking, the use of primary sources as teaching tools in science, engineering, and math fields remains largely underutilized and understudied.

### Publication trends

The earliest work covered by this literature review is Tate's (1949) *The Use of Archives in Education*. In this work, Tate challenged educators to use archival materials in history education and believed that "even a casual or sketchy acquaintance with Archives can do much to broaden and deepen, to enrich and enliven history teaching" (p. 28). Authors continued to publish articles on teaching with primary sources after 1949, resulting in an increase in scholarly and professional attention after 1999 and peaking in 2012 (Fig. 1).

### Topical focus

The 154 works cover a variety of topics that address educational outreach and classroom instruction. In terms of educational outreach, exposing students to the "magical awe" of working with analog archival materials was a key engagement strategy (Bahde, 2011; Schmiesing & Hollis, 2002). Authors described making archives alluring by selecting primary sources that provide "humanizing perspectives for students" such as ephemera (Gardner & Pavelich, 2008, p. 88). Others argued that the "archival encounter" necessitated a *physical* visit to an archive. For

instance, Franklin (1969) asks educators to provide students in history courses basic archival introductions through classroom visits and offers the success of his University of Chicago's "Archival Odyssey" field visit to archives in North Carolina. He highlights the novelty of the archival experience in facilitating student engagement and curiosity regarding their research topics and contends that there was a notable performance gap between students that did visit the archives and students that did not. Taylor (1972) digs deeper into the structuring of the archival encounter, advocating for less structure and for "turning undergraduates loose in the archives" as a way of having them "learn how to learn" (p. 317).

Other studies move beyond advocating for the archival encounter and called for collaborations between archivists, librarians, and educators that would facilitate more effective primary source instruction. Fines (1968) presents resource sharing as an avenue for educators to increase their abilities to integrate primary sources into lessons and identifies a series of archival collections suitable for collaborative educational efforts. His article, in many ways functioning as a call to action, opens the door for further investigation into resource sharing and collaborative work in teaching with primary sources. Similarly, Corbett (1991) argues in favor of educators moving away from relying on textbooks and embracing primary sources as learning tools. More recently, Cotton and Sharron (2011) and Bahde et al. (2014) have addressed the subject of resource sharing by proposing and evaluating hands-on instructional exercises for collaborative instruction.

Another approach to resource sharing involves the presentation of institution-specific cases that detail how archival repositories and special collections libraries designed and implemented archival outreach programs. Yon (1982) examines an academic outreach project undertaken by Bowling Green State University's Center for Archival Collections that involved a refocus of collecting priorities to better engage educators, academic stakeholders, and external funders. Similarly, Frusciano (2002) overviews an outreach effort at Rutgers University, emphasizing the utility of the university's archival collections in education and research in the Women's Studies Department. Hammerman, Kern, Starkey, and Taylor (2006) describe two holiday-related outreach programs designed to encourage student awareness of the University of Chicago's Special Collections Library and the utility of primary sources in their courses of study. Many of these institution-specific cases argue for particular student engagement approaches – ranging from designing interactive tools to stressing the importance of face-to-face meetings. For instance, Robb (2009) overviews the Ohio State University Cartoon Library's Opper Project, an effort to involve political cartoons in the K-12 classroom, and argues in favor of primary source digitization as key to more effective archival outreach. Rockenbach (2011), on the other hand, uses a discussion of three archival outreach programs at Yale University to argue in favor of face-to-face faculty-archivist collaboration as the best means for facilitating collaboration. Nimer and Daines III (2012) draw a similar conclusion in their exploration of outreach programming at Brigham Young University's L. Tom Perry Special Collections Library. Much of these works discuss "lessons learned," such as refined outreach or engagement methods, and provide examples of how archival outreach can look across different institutional contexts.

While many studies are grounded in specific institutional contexts, others function as general calls for greater archival outreach. These works, primarily structured as calls to action or "stance pieces," work to solidify the archives' position within the university or other institutional community by demonstrating the value of primary sources in education. Osborne (1986) and Greene (1989) argue that archival literacy and instruction should be viewed as a core component of the archival mission and profession. The movement toward prioritizing educational outreach aligns with the recalibration of archival values and the reframing of institutional priorities toward user-centered approaches that impact student learning and demonstrate the value of archives to university administrators (Chute, 2000; Freeman Finch, 1984; Visser, 2003).

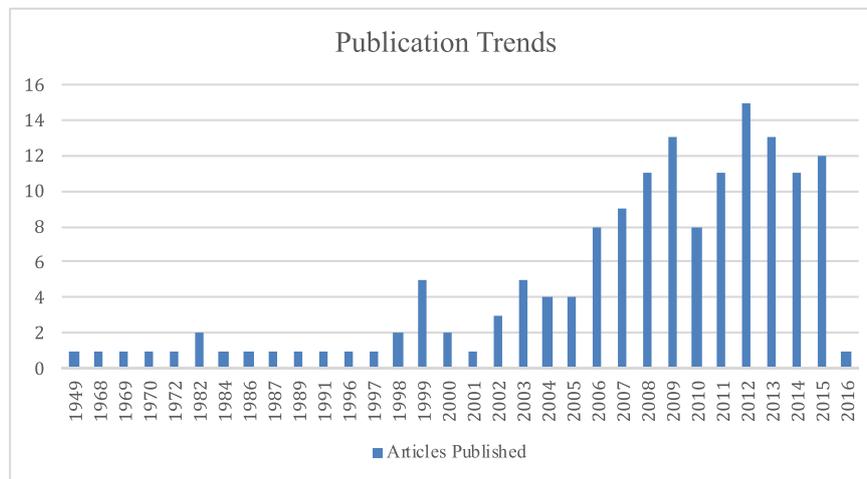


Fig. 1. Publication trends of literature on teaching and learning with primary sources.

Another popular strategy for increasing archival outreach was digitizing archival collections and drawing upon archivists' collection expertise to create primary source sets, defined as curated and digitally-accessible sets of primary sources on particular historical topics. For instance, Craver (1999) offers a guide to online resources for secondary school educators, providing suggested lesson plans and learning outcomes for each primary source set. Along with making primary source sets available online, archival institutions focused on identifying “web 2.0” tools that would enrich students' virtual interactions with digitized primary sources. These tools included augmented reality, semantic portals, and games where students build virtual archives (Armstrong, Hodgson, Manista, & Ramirez, 2012; Lindquist & Long, 2011). However, despite the promise of the Internet, Lyons (2002) offered a critical investigation of the Library of Congress and the National Archives and Records Administration's online primary source repositories. He found that limited computer and internet access and the inability to convey document features on a computer screen served as significant barriers to increasing access to digitized primary sources in K-12 classrooms. Similarly, Mussell (2012) asserted that increasing access to digitized primary sources required more than simply making them available online. He stressed the importance of pedagogical approaches and argued in favor of digital resource literacy education as a component of teaching with digitized primary sources.

As the review of the research trends reveals, the literature on teaching and learning with primary sources consists largely of descriptive case studies that describe student engagement approaches within institution-specific contexts. These engagement approaches are diverse and have led to new understandings of key topics such as the role of digitization in increasing access to primary sources and the role of archivists, academic librarians, and special collections professionals in promoting student learning. However, the research trends also reveal persistent gaps in empirical work, resulting in the need to further expand research approaches and develop methods for collecting data that can support archives and libraries in assessing the effectiveness of engagement strategies, collaborative efforts, and pedagogical approaches.

### Evaluation approaches

Most importantly for the purposes of this paper, approximately 48% of the selected literature on teaching and learning with primary sources discussed evaluation - to varying extents. The evaluation focus included topics such as program effectiveness, educator preparedness and training, and measures of student learning (Fig. 2).

### Evaluation of program effectiveness

The works that focused on program effectiveness frequently presented descriptions and assessments of institution-specific archival outreach activities and initiatives. Archival orientations were one of the most common outreach activities discussed in the literature. Given the prevalence of archival orientations, Daniels and Yakel (2013) set out to measure their impact by surveying 452 students who received a formal orientation to the archives as part of their coursework. The study used four dimensions to operationalize and evaluate impact: valuation of experiences, confidence in conducting archival research, willingness to return, and connection to larger educational goals. One of the important findings described in the study is that students who returned to an archive after an orientation to conduct their own research tended to have stronger feelings of confidence about their research abilities. This finding has significant implications for how archivists and faculty structure student engagements with archival research and demonstrates the importance of continued and independent exposure to archives, beyond archival orientations.

A second commonly utilized outreach activity is the development of course materials and activities such as digital primary source packages and web guides. Gandy (2012) described a multimedia outreach program from the Oregon Historical Society that developed a digital primary source package and video series for use in high school courses on Oregon history. The program used teacher feedback to evaluate interest in the source package and video series. The teacher feedback helped improve the content of the video series and greatly contributed to the program's success and adoption by media specialists in the Portland Public School system. Archer, Hanlon, and Levine (2009) highlighted a web guide designed to specifically teach students about primary sources, convey useful research techniques, and provide information on available collections at the University of Maryland. The researchers evaluated the effectiveness of the web guide using student pre and post questionnaires, talk alouds, and usability testing software. The evaluation of the web guide had mixed results and revealed that the resource needed to be improved to further support students in understanding the scope and definition of primary sources.

A third commonly utilized outreach activity is the development of programs that directly engage faculty with the aim of supporting the use of archival materials in courses. For instance, Wosh, Bunde, and Blacker (2007) detailed a collaborative effort between archivists, faculty, and graduate students to design and implement an undergraduate digital history course. The study evaluated the success of the course and collaboration through a shared reflective process that synthesized the perspectives of a history professor, graduate student assistants, and an undergraduate student. The reflective process used by the study

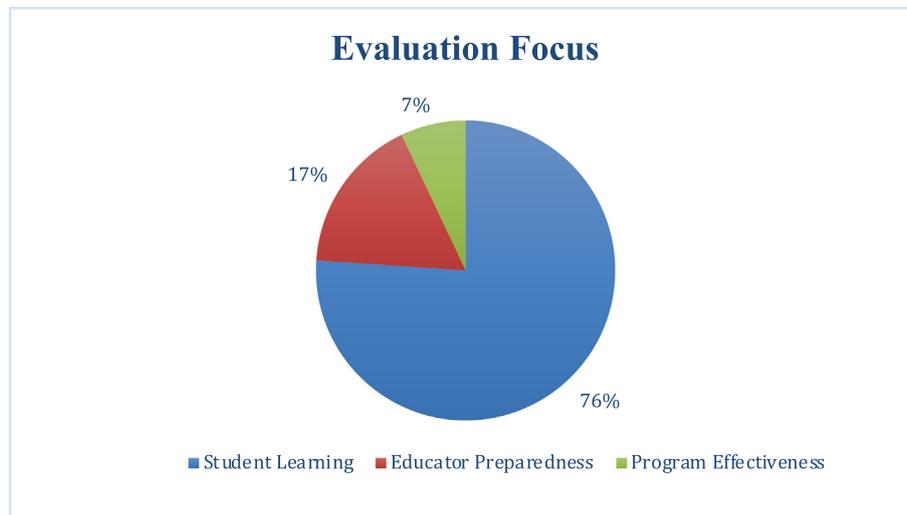


Fig. 2. Evaluation focus of literature on teaching and learning with primary sources.

facilitated a deep investigation of the experience of faculty-archivist collaboration and resulted in concrete areas for improvement such as the need for better communication and coordination between archivists and faculty, a more detailed understanding of administrative issues at the University Archives, and the importance of cultivating students' archival intelligence. In another example, [Malkmus \(2010\)](#) collected 627 online survey responses and 25 follow-up interviews from history faculty to better understand how they use primary sources in courses. The evaluation of how faculty use primary sources to teach provided outreach archivists with information on key points of potential contact (freshman survey courses, sophomore historical methods courses, and upper division sub-field courses), as well as information on the differences in engaging faculty and students from liberal arts college versus a large research university.

#### Evaluation of educator preparedness

The works that focused on educator preparedness often referred to educators' abilities to effectively implement different archival education activities, such as their success at engaging students during archival outreach sessions and their ability to clearly communicate learning objectives to students ([Garcia, 2015](#); [Gilliland-Swetland et al., 1999](#); [Laver, 2003](#)). The educators predominately included archivists, special collections librarians, academic librarians, K-12 teachers, and faculty. For instance, [Gilliland-Swetland et al. \(1999\)](#) and [Garcia \(2015\)](#) used interviews and observations to evaluate how active partnerships between K-12 teachers and information professionals impact teachers' abilities to locate and integrate primary sources into lesson plans. Similarly, [Laver \(2003\)](#) composed an advisory panel of K-12 teachers and used peer evaluation and surveys to assess trainees abilities to navigate digital collections and develop lesson plans using digitized primary sources.

Other studies examined preparedness of college and university faculty ([Morris et al., 2014](#); [Wosh et al., 2007](#)). [Morris et al. \(2014\)](#) interviewed faculty and analyzed course syllabi to evaluate their approaches for teaching core archival research skills; the research resulted in a list of archival literacy competencies for undergraduate history majors that was further evaluated in a follow-up study by [Weiner, Morris, and Mykytiuk \(2015\)](#). The follow-up study utilized surveys to assess differences in agreement on the competencies among history faculty, archivists, and librarians. Unsurprisingly, the respondents did not fully agree on the archival literacy competencies that should be mastered by undergraduate history majors; 39% (n = 48) of the total respondents agreed that undergraduate history majors should master all

of the competencies on the list, while the rest of the respondents suggested adding or deleting competencies from the list. Nonetheless, the results of the study contributed a list of fifty-one competencies to guide history faculty, archivists, and librarians in improving undergraduate history education.

The inclusion of archivists and librarians in the [Weiner et al. \(2015\)](#) study exemplifies evaluation approaches that recognized the importance of preparing information professionals to meet the instructional needs of students. While most of the literature discussing educator preparedness focused on faculty and K-12 teachers, there were several notable examples that highlighted the instructional role of information professionals, including archivists ([Krause, 2010](#)), museum professionals ([Williams, Wavell, Baxter, MacLennan, & Jobson, 2005](#)), and library and special collections professionals ([Tomberlin & Turi, 2012](#)).

#### Evaluation of student learning

The literature related to the evaluation of student learning largely focused on three evaluation areas: mastery of content knowledge, attitudes and dispositions, and acquisition of skills. In these studies, the students targeted were predominately K-12 and undergraduate learners; however, outliers included studies on promoting skills like inter-generational communication between senior citizens and K-12 students ([Adams, 1987](#)) and performing educational outreach to adults ([Miller, 2012](#)).

#### Content knowledge

Studies that focus on student acquisition of content knowledge were primarily concerned with using primary sources to teach students facts or concepts related to a given subject or content area. Several of these projects drew from the collaborative expertise of educators, special collections librarians, and archivists to determine the scope of covered content and types of primary sources to be included in lessons ([Kolodny et al., 2009](#); [Miller & Montoya, 2013](#)). The content area most commonly covered in the literature was history, both at the K-12 and undergraduate level. For instance, [Lehman \(2014\)](#) proposed teaching K-12 students about historical topics by integrating primary sources into lesson plans and offering educators sample content that addresses state-mandated learning objectives. Other content areas included English ([Mazak & Manista, 2000](#); [Nollan, 2012](#); [Reynolds & Sauter, 2008](#)), religious studies ([Studstill & Cabrera, 2010](#)), political science ([Rockenbach, 2011](#)), architecture ([Kapelos & Patrick, 2012](#)), and radio and television ([Gorzalski, 2015](#)).

At the primary and secondary level, Cook (1997) described a collaborative initiative between an archivist, educational consultant, and teacher aimed at creating a multi-level educational toolkit that would teach students about Canadian history. Drawing on resources from the National Archive, the team created a toolkit that focused on the history of Canada's Prime Ministers, a topic mandated in Canadian history courses. The study described conducting field testing of the educational toolkit to evaluate its usefulness for teachers and provided a sample student worksheet for evaluating student acquisition of content knowledge on the responsibilities of Prime Ministers; however, the study did not provide details about how the field tests were conducted and analyzed nor details on how to assess student responses on the worksheets.

At the postsecondary level, universities and colleges implemented undergraduate courses that utilized primary sources to teach students local history. Miller and Montoya (2013) presented a cross-disciplinary program that introduces students to the history of Los Angeles through exposure to a variety of primary sources relating to topics such as local architecture and the history of Chicanos in Echo Park. The project used an online survey of faculty and teaching assistants to evaluate what the students gained through engagement with special collections materials and found that the respondents believed the students gained a knowledge of library facilities and experience conducting primary source research. In this case, the evaluation of student learning was conducted through capturing the perspectives of the educators (faculty and teaching assistants), but the study did not provide details on evaluation conducted directly with the students.

As the examples provided demonstrate, while studies discussed student acquisition of facts or concepts related to a given subject or content area, details on the forms of evaluation implemented was scantily provided. Studies often did a great job presenting sample resources, including lesson plans and activities which could be utilized by educators. However, discussion of clear learning objectives and their relationship to evaluation metrics for quantitatively or qualitatively measuring students' acquisition of content knowledge was rarely discussed in detail.

#### *Attitudes and dispositions*

Studies that evaluated attitudes and dispositions focus primarily on student confidence and engagement. For example, Lee Roberts and Taormina (2013) designed three special collections library workshops utilizing learner-centered instruction to impact students' research behaviors and attitudes. The study integrated post-instruction surveys to evaluate student and faculty overall satisfaction with the library workshops. Survey responses revealed that both faculty and students reported greater excitement over the opportunity to conduct research at Special Collections. Duff and Cherry (2008) proposed archival orientation sessions as a means for combatting student archival anxiety and used pre and post surveys to demonstrate an increase in student archival satisfaction and self-esteem. Similarly, Daniels and Yakel (2013) utilized a survey instrument to measure the impact of formal orientation sessions on a range of student dispositional responses to archival orientation sessions, including willingness to return, reduction of archival anxiety, perceived value toward reaching educational goals, and perceptions of skills development.

While some studies focus on reducing counterproductive dispositions, such as archival anxiety, others aim to increase desired attitudes and dispositions such as student motivation, engagement, and creativity. Several studies discussed the "magical awe" experienced by students during initial archival encounters and endeavor to measure the impact of archival engagement on student motivation, participation, and overall attitudes (Bahde & Smedberg, 2012; Mitchell, Seiden, & Taraba, 2012; Schmiesing & Hollis, 2002). Waters (2012) described the Glasgow School of Art's archival resources and their utility in art education, highlighting perceived increases in student creativity and advocating for further development of program evaluation measures.

Fewer studies focused on educator attitudes and dispositions. For instance, Gilliland-Swetland et al. (1999) examined elementary-level educators' dispositions and attitudes toward teaching with primary sources. Using educator interviews, the authors demonstrated the benefits of educator-archivist partnerships in facilitating educator engagement and student learning.

#### *Skills*

The largest subset of the evaluation literature on student learning examined how teaching with primary sources facilitated the acquisition of individual skills or skill sets among learners. A large majority of the literature outlined disciplinary skills, defined as analytical skills considered to be integral to learning within specific academic domains. Of the disciplines covered, English and history courses were the most popular contexts for developing disciplinary skills among undergraduate and K-12 students. For example, Mandell and Malone (2007) argued that using primary sources in history classrooms taught students to "think like historians" and gave them opportunities to acquire key historical inquiry skills. The definition of historical inquiry skills varied by study and included: contextualizing historical events; using primary sources to corroborate claims; distinguishing between primary and secondary sources; evaluating the physical characteristics of primary sources; and developing historical empathy, among many others (Bahde et al., 2014; Carini, 2009; Hendry, 2007). Other studies, albeit fewer, focused on disciplinary skills related to academic domains like English literature and composition (Mazella & Grob, 2011; Mazak & Manista, 2000). Gorzalski (2015) addresses "non-humanities" students specifically, arguing in favor of the pertinent and crucial technical and source literacy skills students can develop in archives beyond general research skills in history and the humanities, such as critical thinking, problem solving, and decision making (145–146).

In addition to disciplinary skills, authors considered the skills required to develop archival literacy, generally defined as user expertise navigating archives and analyzing primary source materials. Yakel and Torres (2003) outlined three distinct forms of archival user expertise - domain knowledge, artifactual literacy, and archival intelligence. Other authors have built upon the notion of archival disciplinary literacies and have coined phrases like "thinking like an archivist" to describe skills closely related to artifactual literacy and archival intelligence (Krause, 2010; Yakel, Conway, Hedstrom, & Wallace, 2011). For example, Dickson and Gorzalski (2013) advocated for "demystify[ing] the profession" and strengthening students' "archival intelligence" by designing educational outreach opportunities that expose them to archival work and practice. Hensley and Murphy (2014) further contributed to work on archival intelligence by integrating knowledge of archival theory, language, and rules into instruction and evaluating the impact of students' instructional experiences on their research process through a survey and interviews.

While some works framed skills as disciplinary and context specific, other studies argued that teaching with primary sources is an effective method for promoting more general "lifelong critical thinking skills" (Ruffin & Capell, 2009). For example, Robyns (2001) argued in favor of integrating critical thinking skills into a historical research methods course at Northern Michigan University. He encouraged archivists to "widen their role as educators" and accept the responsibility of ensuring the acquisition of critical thinking skills as a key learning outcome of archival instructional programs (p. 364). As demonstrated, the literature related to student learning focused on outcomes related to the mastery of content knowledge, the development of positive attitudes and dispositions, and the acquisition of individual skills or skill sets. While these learning outcomes are diverse and important, we propose expanding the pedagogical potential of teaching and learning with primary sources by promoting transferrable skills and incorporating scaffolded learning opportunities.

## New directions for research and practice

### Promote transferable skills

The results of the analytic literature review revealed that educators and archivists discussed teaching with primary sources primarily within the disciplinary context of undergraduate history and K-12 social studies courses. Narrowly situating archival literacy and instruction within these disciplines contributes to a limited understanding of the pedagogical potential of teaching with primary sources. While focusing on diversifying the disciplines to include areas such as mathematics and biology is a worthwhile cause, we advocate for moving away from disciplinary silos. Instead, we encourage educators and archivists to diversify learning objectives to include more transferable skills - those that “have the greatest mileage, the greatest sustaining power, the greatest generative or regenerative capacity and the widest application” (Bridges, 1993, p. 47).

According to Bridges (1993), transferable skills are those that cut across “different cognitive domains or subject areas” and that can be applied “across a variety of social, and in particular employment, situations” (p. 45). These skills include general ones like interpersonal communication, time and data management, collaborative working techniques, as well as concrete applications like the ability to use a table of contents (or perhaps in the archival case a finding aid) to extract relevant material from a text (Bridges, 1993, p. 45). For example, McCoy (2010) contended that primary source analysis could be used as an innovative way to develop core research methods, as well as an opportunity to increase usage statistics in “an environment where quantifying your value and services has assumed increasing importance” (p. 60). He described a program at DePaul University designed to “reverse traditional methods” by asking students to view primary sources as the basis for developing research questions, rather than as of evidence to answer research questions. He collected 133 student-self assessments that were qualitatively analyzed to examine how this unique approach impacted students' creativity and use of primary sources in research papers. While developing research questions is a skill that could be transferred across contexts, McCoy heavily focused on the skill within the context of undergraduate history courses and concentrated on collaborating with history professors.

However, it is important to note that stressing transferable skills does not mean ignoring the importance of disciplinary contexts and content. Rather, we encourage archivists and educators to 1) identify and integrate transferable skills into learning objectives, which may or may not be grounded in a particular discipline; and 2) explicitly have students reflect on how the skills acquired throughout the process of learning with primary sources are applicable and transferable across other disciplinary, professional, and personal contexts. Although not an exhaustive list, our review identified concrete transferable skills, such as the ability to manage information (Schlitz & Bodine, 2012), the capacity to effectively communicate information (Robb, 2009), the ability to successfully find a variety of research materials (Hensley & Murphy, 2014), and the capacity to critically examine different forms of information (Carini, 2016; Mazella & Grob, 2011). Focusing on transferable skills that students can use in a variety of educational, professional, and personal settings can demonstrate the wider value of teaching with primary sources.

### Scaffold learning opportunities

The literature review also revealed that students' “archival encounters” tended to occur during brief, one-time visits to an archive or through exposure to a limited set of pre-selected primary sources. As a result, engagement and learning opportunities tended to remain at straightforward questions and activities, such as asking students to identify “what they see” in a historical photograph and using primary sources as “attention-grabbers” at the beginning of lessons. Instructors

generally failed to return to them as students' knowledge progressed. Thus, although primary sources have proven effective tools for sparking classroom discussion or practicing visual identification, there remains an opportunity to integrate primary sources into instruction using a scaffolded approach that offers students opportunities to practice skills that gradually increase in complexity and difficulty throughout a lesson or series of lessons.

There are a variety of theoretical constructs, multi-staged models, and hierarchical models for designing learning outcomes that can serve as guides when developing scaffolded lessons. Vygotsky's (1978) zone of proximal development is a useful theoretical construct for designing a range of activities that are pedagogically appropriate for what learners can accomplish independently, and what they can achieve with instructor guidance or peer support. For example, when developing a lesson on document analysis for novice learners, educators may consider a range of activities, such as visual identification questions that can be answered independently, collaborative (peer-to-peer) analysis of historical context, and guided (instructor-led) analysis of artifactual qualities. As learners gain more experience and practice with these skills, their abilities to complete activities independently will strengthen, allowing educators to continue increasing the complexity and sophistication of the types of skills that can be taught.

Additionally, educators can draw from various multi-stage models that describe how learners move from novice to expert. For example, Dreyfus and Dreyfus (1986) provide a 5-stage model that describes learners' levels of expertise as novice, advanced beginner, competent, proficient, and expert. Alexander (2003) offers the Model of Domain Learning (MDL), a simplified 3-stage model that describes students' development in terms of acclimation, competence, and proficiency/expertise. There are many other multi-stage models that can serve as guides when developing lessons that consider student growth and development. However, rather than discuss them in detail, we highlight these two models to demonstrate approaches that view learners' knowledge and skills as evolving and in a state of development. Thus, rather than designing lessons that remain stagnant and require only novice-level skills, educators might include a range of activities that build upon one another and increase in difficulty. For instance, when teaching research skills, such as developing effective keyword searches, lessons may include educator modeling through sample keyword searches (novice), guided keyword searching on a shared topic (competence), and eventually move onto the formulation of independent keyword searches based on a self-selected research topic (expert).

Lastly, educators can draw from hierarchical models that classify cognitive skills into levels of complexity. Bloom's Taxonomy (1956) is a widely-used model that classifies cognitive skills into six levels: knowledge, comprehension, application, analysis, synthesis, and evaluation. A revised version of the taxonomy (Anderson et al., 2001) uses the “action words” remember, understand, apply, analyze, evaluate, and create to describe the six levels of complexity. These hierarchical models have been valuable tools for designing learning outcomes that consider subject matter content *and* the cognitive processes that students should be able to accomplish with that content (Krathwohl, 2002). For primary source-based lessons specifically, education scholars Ensminger and Fry (2012) have created the Primary Source-Based Instructional Practices (PSBIP) framework, a descriptive conceptual framework that helps educators apply Bloom's (1956) taxonomy and the revised taxonomy of cognitive processing (Anderson et al., 2001) to the creation of primary source instructional activities and learning outcomes. Instead of creating learning outcomes that only focus on the acquisition of content knowledge, educators can strengthen primary source lessons by ensuring that they incorporate activities that challenge students to practice higher-order skills such as evaluation and synthesis. For example, students can analyze multiple primary sources, synthesize their analytical findings into claims or arguments to create a case, and present evidence from the primary sources to support their claims.

We recognize that implementing a scaffolded approach that offers students opportunities to practice increasingly complex skills can be time and resource intensive. However, the need to develop archival outreach programs that promote the acquisition of a range of cognitive skills is key to demonstrating the wider pedagogical value of primary sources, a value that extends beyond the walls of an archive or a history classroom. We present these theoretical constructs and models as starting points for designing archival outreach and education programs that are pedagogically informed and incorporate diverse learning outcomes.

#### *Incorporate evaluative measures*

Our analytic review found that archival literature on teaching with primary sources has addressed a wide range of learning outcomes, including promoting mastery of content knowledge, encouraging attitudinal change through positive archival encounters, and facilitating the acquisition of important skills and skill sets. Yet, despite these diverse examples of learning outcomes, we have also identified a gap in effective evaluation methods and argue that a more nuanced approach to evaluation is needed to fully assess the impact and pedagogical value of teaching with primary sources. We need more formal evaluation approaches that measure the impact of teaching with primary sources and whether or not the curriculum and activities are facilitating students' progress toward the acquisition of transferable and higher-order skills that can be used in multiple contexts. As Krause (2008) explained, "Assessment of learning is an important part of any pedagogical approach because it provides feedback about what knowledge has transferred to the learner as well as the impact and effectiveness of the instruction" (p. 248). He surveyed 208 archives professionals and found that instruction is a key professional responsibility (66.3% of those surveyed offer more than five instruction sessions a year). Still, only one-quarter of the archival repositories represented in the survey utilize formal evaluations to measure the effectiveness or impact of instructional sessions. Krause (2008) ultimately concluded that archivists "are not getting the feedback they need to assess the effectiveness of their efforts and the impact it is having on users" (p. 258).

Bahde and Smedberg (2012) similarly identified a knowledge gap on effective evaluation methods and provided an overview of assessment techniques including questionnaires and surveys, fixed choice tests, out-of-class assignments, citation analysis, rubrics, and observational assessment. A few examples of these assessment techniques include: Daniels and Yakel's (2013) use of a survey instrument to measure the impact of formal orientation sessions on 452 students; Krause's (2010) use of a rubric and pre and post-tests to assess four archival literacy skills; Duff et al.'s (2010) creation of the Archival Metrics Toolkits which included questionnaires for student researchers and teachers that evaluated factors such as the impact of archival orientations, students' confidence level, and students' use of repositories and archival materials; Bean and Anderson' (2012) development of assignments and a corresponding collection analysis worksheet that evaluated students' abilities to answer document-based questions. Yet, despite these important contributions, formal evaluation methods continue to be underutilized in teaching with primary sources and any tools developed are often not shared in the broader community.

#### **Conclusion**

Our analytic literature review has found a significant increase in attention to teaching with primary sources. This can be seen as the culmination of decades of efforts to increase the accessibility and reach of primary sources. As we have shown, the vast majority of articles have discussed implementing different types of programs for teaching with primary sources. Our conclusion is that particularly for transferable skills, in which we are most interested, no model for developing curriculum or evaluation tool exists. Therefore, future work will focus on

developing and testing a model to assess transferrable skills. We hope that archivists and special collections librarians can build upon this analytic overview of existing research on teaching and learning with primary sources by creating the next generation of programs that will adopt scaffolded approaches that lead learners to expertise.

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