The Role of Archives and Special Collections in K-12 Instruction
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With the publication of *Studies in Historical Method* in 1896, Mary Sheldon Barnes introduced the “Source Method” of teaching history to secondary educators (Cherry, 2010). In this method, students investigate and develop an understanding of history by interacting with primary sources, documents generated in the period of history students are studying. It was not until 1986, however, that a work in the literature of archives articulated the potential for collaboration between archivists and K-12 educators, when Ken Osborne asserted, “if archives are to realize anything like their educational potential, there will have to be a good deal of joint planning and consultation between archivists and educators” (1986, p. 28).

Over the past thirty years, many cultural heritage organizations, including state archives, the Library of Congress, and special collections library members of American Research Libraries have undertaken K-12 outreach activities (Cherry, 2010; Visser, 2006). Such activities can serve not only as educational outreach but also advocacy opportunities for archives as institutions and archivists as a profession (Dickson & Gorzalski, 2013). This literature review examines archival and special collections outreach for the K-12 audience, providing a rationale and identifying opportunities for such outreach, describing the current landscape of digital K-12 archival outreach projects, offering examples of non-digital K-12 outreach projects, highlighting projects that exemplify integrated and collaborative approaches, and comparing proposed models for future outreach projects.

A Rationale for K-12 Archival Instructional Outreach

Teaching with primary sources dates back to the 19th century (Cherry, 2010); archivists proposed educational partnerships with classroom instructors in the 1970s (Taylor, 1972); and archives in Great Britain and Ireland offered educational services soon after the end of World War II (Chepesiuk, 1983). In spite of these developments, it was not until Ken Osborne wrote his seminal article, “Archives in the Classroom,” (1986) that an author in the literature of archives articulated the benefits to be gained from outreach to elementary and secondary schools and described and classified the types of activities already happening in this arena.

Osborne identifies three potential benefits that archival education outreach might have. First, archives can serve as “an invaluable resource for improving the quality of teaching, especially in the fields of history and social studies” (1986, p. 2). Second, outreach from archives to schools would provide society at large with “a chance to appreciate and to benefit from the evidence and the records upon which its sense of identity and continuity depends” (1986, p. 2). Finally, if archives engage in educational work, they are advocating for themselves, “building and benefitting from the support of a knowledgeable and sympathetic public” (1986, p. 2).

Archives can provide educational outreach in a variety of ways and through many venues, including engaging with researchers and higher education instructors, as well as community education activities. Osborne (1986) proposes, however, that working with schools and teachers provides an excellent place to start with educational outreach. When archivists work with children, the children develop an appreciation of history that contributes to their “search for self-knowledge” (p. 3). In addition, working with a school system provides a focused and narrowly-defined audience, making it easier to develop archival outreach programs than it would be without having a stronger sense of the audience’s situation and needs. The school system offers many affordances that facilitate archival outreach, including a pre-defined curriculum, mechanisms to support professional development for educators, a system of communications, and organized groups of students who are expected to meet specific learning objectives. These affordances support goal-oriented archival outreach activity.

In spite of this great potential for archivists and educators to work together, Osborne identifies two obstacles that might get in the way of this work. First, while archivists and educators might have excellent ideas and intentions, they might lack the resources or mechanisms to carry out those ideas and intentions. Second, educators and their students might not be able to carefully articulate their own archival needs, making it difficult for archivists to meet those needs. Osborne concludes that for archival outreach to K-12 education to be successful, a great deal of collaboration and consultation between archivists and educators is required.

Osborne notes that, as of his writing in 1986, the literature surrounding archives does not include many examples of this sort of work. Instead, he turns to the education literature, especially the education literature of Great Britain, to find these examples. Having identified several examples, he develops a classification of the types of K-12 outreach activities that archives and special collections libraries might undertake. These include the following:

1. Teacher-education projects and activities.
2. Classroom units of instruction on the work and role of archives.
3. Exhibition and visits.
4. Projects involving students in archival research.
5. The production of archives-based teaching kits.
6. The use of students to identify and collect material of interest to archives.
7. The formation of school-based archives.
8. The establishment of organizational linkages between teachers and archivists (Osborne, 1986, p. 15)

In the thirty years since Osborne wrote his article, there has been significant growth in the archives and library literature surrounding K-12 outreach, especially within the past fifteen years (Cherry, 2010). Most of the projects described in this literature fall neatly into the categories Osborne identified; Osborne's classification will prove a useful framework for organizing the discussion of specific archival outreach projects later in this literature review.

Opportunities for K-12 Archival Outreach

Osborne (1986) identified many types of outreach activities used by archives in Great Britain and Ireland, but the potential for undertaking such outreach activities remained untapped in North America until the 1990s with the advent of digital archives (Cherry, 2010); even today, it is often difficult for archives and special collections to identify opportunities for K-12 outreach.

In her 2007 article, "Primary Sources in K-12 Education: Opportunities for Archives," Julia Hendry points out, "educators are writing about archival records considerably more often than archivists are writing about teaching young people." Based on a review of the education literature, Hendry identifies three trends in education that create opportunities for collaboration between educators and archivists. Inquiry-based learning, a student-driven pedagogy that requires students to ask questions and think critically, aligns well with the use of primary sources such as those housed in archives and special collections. By examining documents from a particular time period or created by a particular community, students build their own critical understanding of key themes and concerns affecting that community or era. In contrast with textbooks, which often provide a homogenized view of history aligned with a dominant narrative, the use of primary documents can offer students new perspectives and the opportunity to engage with voices that are frequently marginalized in textbooks (Hendry, 2007; "What's in a

digital textbook?,” n.d.). Additionally, inquiry-based projects might require students to perform original archival research.

In addition to inquiry-based learning, teachers frequently ask students to perform document analysis on primary sources, such as that required by the Document-Based Questions (DBQs) on Advanced Placement history tests or the New York State Regents exam (Hendry, 2007). In these questions, students are provided with an array of facsimiles of primary sources and required to answer essay questions and, in so doing, synthesize information found across the different documents. Finally, Hendry (2007) points out, legislative mandates for high-stakes testing such as the No Child Left Behind Act are likely to increase the number of students required to answer this type of question to all public school students, not just those in New York or enrolled in Advanced Placement courses.

A further development in the time since Hendry wrote her article is the adoption of the Common Core State Standards by forty-two states, the District of Columbia, four territories, and the Department of Defense Education Activity (Common Core State Standards Initiative, 2015b). These standards, which describe what students “should know and be able to do at the end of each grade” (Common Core State Standards Initiative, 2015a), include components that require students to analyze primary sources. As states implement assessments based on these standards, teachers will feel even more pressure to incorporate the use of primary sources into their daily instruction.

Having identified these trends, Hendry (2007) turns her attention to two opportunities the literature reveals for archivists to collaborate with teachers who use primary sources in their classrooms. First, the education literature on primary sources indicates that teachers have difficulty selecting appropriate primary sources and thus often rely on textbooks and teaching kits that do not provide much context for the documents. This creates an opportunity for archivists to assist teachers in finding appropriate resources for their classrooms. Second, the education literature emphasizes the importance of considering bias in primary sources, but leaves aside other more “archival” questions about authenticity, provenance, purpose, and the reason for creating a document in a certain format. This creates an opportunity for archivists to partner with teachers to provide archival instruction that can enrich students’ consideration of the significance of documents.

Hendry (2007) points out several considerations archivists will need to keep in mind to take advantage of these two opportunities. First, regarding assisting teachers with finding primary sources for classroom use, K-12 educators are a unique user group with precise requirements for documents to be useful. Such documents need to align with state curriculum, be able to capture students’ attention, be developmentally appropriate, and be free from concerns over potential copyright violations if teachers need to make copies or distribute the materials via school websites or learning management systems. Second, with respect to providing archival instruction, archivists need to remember that there are several different ways to do so. These might include collaborating with educators on long-term archival projects, participating in local history events, interacting with preservice educators in an academic setting, and providing professional development opportunities for educators.

In her Masters thesis, “Archives and K-12 Education: Opportunities for Collaboration,” Claire Huntley (2013) echoes many of Hendry’s recommendations, but adds a few more. The most unique of these is the idea that by inviting K-12 students and their teachers to visit archives and special collections in person, archivists can provide unique “multi-sensory, hands-on experiences” (p. 47) for students with visual or auditory impairments. The tactile and olfactory

nature of physical archives provide accessibility not available from facsimiles or digital surrogates of documents and objects.

Digital Archival Outreach Projects

One of the primary ways archives and special collections have facilitated K-12 outreach in the past fifteen years is through the use of digitized collections (Cherry, 2010). Digitized collections enable fast, reliable access to high quality surrogates of archival documents when schools have high-speed internet connections (Huntley, 2013). They allow multiple students to examine one document at the same time, can be integrated into lesson plans or school learning management systems, and, unlike field trips to archives, place most of the financial burden for K-12 outreach on archives rather than schools; since many archives are already engaging in digitization projects with other user groups in mind, this does not add an undue burden for archives. Digital access for K-12 students has benefits for archives as well as educators and students. It reduces wear and tear on original records, doesn't require that archives staff take on the task of interacting with visitors, and can provide a readily demonstrable way that archives serve their community, helping to justify continued funding (Lyons, 2002).

In spite of these advantages, there are some disadvantages to the use of digital collections. Hyperlinks break and digital archival management systems quickly become outdated; large collections might be difficult for users to navigate (Lyons, 2002). Using digitized versions of documents often decontextualizes them (Huntley, 2013; Lyons, 2002). Students, especially elementary school students, might have difficulty understanding the document as a physical object if the digital surrogate is the only version they experience. To mitigate this, teachers must provide additional instruction about archival principles and the life cycles of records. Archivists can assist teachers in providing this instruction by creating online instructional materials or participating in physical or virtual classroom visits (via technology such as Skype). Finally, digitized collections are only an option for schools with the technology to use them. Broadband access and current technology are still not guaranteed in public schools, and this presents an equity issue when archives and special collections are considering how best to serve their communities (Lyons, 2002).

User Needs for Digital Outreach Projects.

In her article, "An Exploration of K-12 User Needs for Digital Primary Source Materials," Anne J. Gilliland-Swetland (1998) explores the intersection of repositories' plans for digitization projects and K-12 users' needs when interacting with digital primary sources. She surveyed historical repositories in Los Angeles and health science-focused historical repositories across the United States to investigate "practices and attitudes of archivists and curators with regard to digitization selection criteria and heuristics" (p. 148). She conducted this survey in the earliest days of archival digitization, so many respondents did not feel equipped to give informed answers to the survey questions. In spite of this, certain patterns did emerge from the data. Respondents considered historians and researchers their primary audience; none mentioned K-12 audiences as a priority. Many respondents were more concerned with digitizing finding aids than with digitizing actual collections.

Gilliland-Swetland reviewed the education literature and also observed and interviewed teachers participating in an ongoing initiative to increase their use of primary sources in the classroom. Based on these activities, the following themes emerged related to K-12 user needs:

- a) learning objectives;

- b) cognitive objectives;
- c) nature of student activities that might address learning and cognitive objectives;
- d) characteristics of resources that can be used to achieve learning and cognitive objectives; and
- e) barriers teachers experience to the use of both digital and primary resources (p. 150)

Teachers indicated that the use of primary sources supported the collaborative, creative instruction they prioritized in learning and cognitive objectives, but that they were concerned that digital access meant losing some of the value of primary sources since students wouldn't be able to "touch history" in the same way that they would if they visited an archive.

Mapping these themes onto digitization practices, Gilliland-Swetland (1998) identified several priorities for including content in digital collections. Content in such collections should have the following characteristics:

- Be free from concern over copyright or intellectual property issues, since teachers need to be able to reproduce materials for large numbers of students.
- Have thorough descriptions that can be navigated both hierarchically and laterally.
- Have exemplary value as evaluated by teachers and students rather than archivists; records such as ticket stubs and grocery lists might have more value to these users than archivists would realize.
- Incorporate a strong visual component.
- Incorporate strong local interest.
- Document "seminal advancements in knowledge" (p. 154).
- Have the potential to be accompanied by corollary materials such as biographies and research articles.

Gilliland-Swetland's work provides a strong foundation for archives and special collections to build on as they decide how to incorporate K-12 outreach materials into their digitization projects.

Examples of Digital Outreach Projects.

NARA and the Library of Congress. In the years since Gilliland-Swetland's (1998) research, many archives and special collections libraries have incorporated outreach into their digitization projects. The National Archives and Records Administration website includes both digitized records and lesson plans to accompany them; the Library of Congress provides similar resources via its American Memory website and Teachers page (Hendry, 2007; Lyons, 2002). Lyons (2002) reviewed both of these websites, as well as some state and university archives' digital collections, and compared their historiographical and pedagogical approaches. Lyons found that these archives were not living up to their potential to represent marginalized narratives; while all of the websites he examined included sections on African-American history, none of them included resources about lesbian and gay history and only the NARA website included resources about women's history.

In comparing NARA and the Library of Congress site, Lyons (2002) found that the former reinforced patterns of history teaching found in textbooks, focusing on military history, presidents, and the United States Constitution, requiring students to read a lot of expository text and providing a limited selection of documents, as well as failing to offer students guidance in exploring the rest of the NARA collections. Only 25% of the lesson plans on the Library of Congress site, by contrast, focused on these more traditional historical topics; the rest explored

such diverse topics as “conservation, transportation, social welfare programs, children 100 years ago, and American Indian reservations past and present” (p. 30). Most of the resources on the site focused on heavy use of primary sources rather than expository text; the site also asks teachers and students to consider themselves creators of records that will one day have archival value.

State archives and collaborative digitization programs. Kevin Cherry (2010) performed a concept analysis of “the online resources developed and by state archive agencies and collaborative digitization programs for the use of the K-12 classroom” (p. 496), coding these resources according to which “historical thinking skills they seek to develop while also analyzing the various historical actors revealed in the primary sources and the formats of those sources” (p. 497) and examining how the resources contextualize these primary sources for classroom use. Cherry’s exploration of historical thinking skills is comprehensive and outside the scope of the present literature review; this review will focus on his findings related to contextualizing resources for the classroom and the unique opportunities presented by primary sources as opposed to textbooks.

Examining 99 state archive websites, Cherry (2010) found that 24 of them offered a total of 596 lesson plans using primary sources. Six sites offered more than 69% of the lesson plans. Cherry concludes that while many archives are making digitized collections available for K-12 classroom use, few are actually providing a context for how to use those collections in the K-12 environment. Many of these materials seemed to be part of an isolated project rather than part of an ongoing plan for K-12 outreach. Cherry found that traditionally marginalized populations such as minorities, women, and children were represented in the lesson plans and associated primary sources, but they are usually represented as being acted upon rather than as being historical agents themselves.

Cherry (2010) identifies three contextualizing practices state archives might use with K-12 outreach materials: curriculum indicators, explanatory and supplementary materials, and materials that explain how working with primary sources relates to “doing history.” Cherry also emphasizes that resources can take either an authoritative tone, suggesting that history happened in one specific way and glossing over the interpretive nature of historical work, or a tone that is more metadiscursive, emphasizing the interpretive nature in choosing to explore a certain historical era or topic using a particular set of evidence. Curriculum indicators act as metadata that helps educators identify resources relevant to a particular set of curricular standards; Cherry found that eleven of the 24 sites explored utilized this type of metadata, but that none of the sites utilized it in a way that indicated teachers were expected to actually navigate resources according to curricular alignment. Resources were most likely to be organized topically or chronologically. Only one site included explanatory and supplementary materials with students as the primary audience; all others only included materials intended for teachers. Such materials usually included teaching suggestions, discussion questions, vocabulary lists, assessments, and background material. Only six of the twenty-four sites included information about how to use primary sources in the classroom and the difference between teaching with primary sources and teaching with secondary sources.

The Louisiana Purchase. Laver (2003) describes a collaborative project between Louisiana State University and K-12 educators, funded by the Institute of Museum and Library Services, in which materials from the Louisiana and Lower Mississippi Valley Collections (LLMVC) in the LSU Special Collections and the New Orleans City Archives in the New Orleans Public Library were digitized and made available on the web for K-12 educators to use.

As Laver points out, “simply making this material available on the web is not enough. If you build it, they do not always come” (2003, p. 37), so LSU convened an advisory board consisting of the liaison between the university and the East Baton Rouge Parish School Board, as well as three teachers, one each at the elementary, middle, and high school levels.

The teachers collaborated and consulted with LSU Special Collections staff in three ways: developing lesson plans based on the digital collection; making suggestions on the collection’s usability, image quality, content, and value-added information that would assist them and other teachers in preparing lesson plans; and helping in training other teachers to use the digital collection to prepare lesson plans and class activities. (p. 37)

This example fully realizes Osborne’s ideal of collaboration between archivists and educators.

Based on this experience, the LSU digital projects librarian learned several lessons that might make future projects of this type more effective. Archival materials are often more suitable for older students than for younger students; teachers offered input as to how elementary school students might best use the archives, including interacting with more pictorial works than text-based works and finding items of high interest to children. Participants in this project found that teachers needed to be educated about the types of materials available in the archives, how to navigate the archives to find these items, and vocabulary typically used by librarians and archivists to describe materials. Related to this, the librarian on the project found that teachers and students had unique needs for the description of documents, and that finding aids and metadata records offered the opportunity to provide rich context that would not be available from digital surrogates of the documents themselves alone. Finally, the librarian learned that involving teachers very early in the planning process for projects such as this would likely mitigate challenges such as identifying developmentally appropriate materials for inclusion in the project and asking teachers to develop lesson plans based on the collection before the collection was complete.

Barriers to Use of Digital Outreach Projects.

While many archives and special collections libraries have embraced digital archives as a method of K-12 outreach, educators still experience obstacles to the use of such archives. Anne McClusky (2003) surveyed seventeen experienced social studies educators about their use of primary sources in the classroom, the information technology resources available to them in their schools, and their perceived barriers to the use of digital primary sources. Most participants used primary sources frequently and felt that they were high-value resources for classroom use. The three most-frequently cited barriers to the use of primary sources were standardized testing, pressure to conform to curricular standards, and classroom time constraints. Most teachers used the internet for personal research and planning, but few used it with their students during class time. The limited availability of technology resources and teachers’ unfamiliarity or discomfort with technology both contributed to this.

McClusky (2003) asked teachers how these barriers could be mitigated. They offered several suggestions. Chief among these were the provision of lesson plans like those in the resources Cherry (2010) examined and tools for access and retrieval of such resources. Other studies have also found that teachers have difficulty identifying relevant primary sources in digital archives and using finding aids to access primary sources (Garcia, 2015; A. J. Gilliland-Swetland, Kafai, & Landis, 1999, 2000; Lyons, 2002). Students also had difficulty navigating finding aids (Besser et al., 2003).

Two studies (Besser et al., 2003; Pattuelli, 2011) offer models for how K-12 teachers and students can collaborate with archives to enhance access to digitized primary sources via user studies. Besser and colleagues (2003) designed a usability test in which fourth grade and twelfth grade students were asked to find specific images in the Online Archive of California using an existing finding aid in the spring of 2002; in the fall of the same year, a different set of students in the same grades used a prototype finding aid for the same task, in order to compare the effectiveness of the original finding aid to the prototype. Besser and colleagues found that the prototype was more effective than the original finding aid, but that neither finding aid provided as much contextual metadata as students would have liked. This study provides an example of how archives might design user studies to ensure their outreach projects are meeting students' needs.

Pattuelli (2011) collaborated with classroom teachers to build a domain ontology for organizing cultural heritage resources. A collection of digital primary materials from the University of North Carolina at Chapel Hill university library called "Tobacco-Bag Stringing" (TBS) served as the knowledge domain for the development of the ontology. The collection featured digitized photographs and descriptions of individuals and families impacted by Roosevelt's Fair Labor Standards Act. A prototype ontology was developed using the Methontology ontology engineering process, an "iterative process based on evolving prototypes" (Pattuelli, 2011, p. 316). The original process doesn't involve end users, but Pattuelli added two steps to the process:

- a preliminary user study conducted in the form of personal in-depth interviews and
- a user-centered evaluation of the ontology model performed before the formalization stage. (p. 316-317)

In the preliminary user study, Pattuelli (2011) found that teachers generally had a positive disposition to the use of technology in the classroom, needed to be able to find materials quickly, based their lesson planning and resource searches on curricular standards, found that visual materials engaged students more effectively than textual materials, considered topicality a key descriptor and way to identify the relevance of materials, needed to be able to contextualize materials for their students, and needed to be able to make connections between students' lives and the lives of the historical individuals they studied.

Pattuelli (2011) developed an ontology for the TBS collection based on the results of this user study. A key feature included using the text of the North Carolina Standard Course of Study curricular standards to generate vocabulary to be used in the ontology. Fourteen social studies teachers participated in interviews and tests designed to evaluate the ontology's coverage of relevant concepts, structure and granularity, and language. Teachers indicated that the ontology successfully captured and represented their needs and that they perceived it as useful for their information-seeking process. Pattuelli's study provides a model for archives and special collections that wish to collaborate with teachers to organize their digital collections to facilitate use in the K-12 environment.

Other Examples of K-12 Archival Outreach

While digital outreach projects have proliferated widely among archives and special collections in the past fifteen years, several more traditional outreach activities exist that fit within Osborne's (1986) classifications; some of these activities combine traditional outreach with the use of digital primary sources. A few of these will be discussed briefly here.

Teacher-Education Projects and Activities.

One of the primary ways archives and special collections can engage in outreach is through professional development opportunities for teachers. Kolb (1988) describes one such project, a summer institute “sponsored by the Harvard Graduate School of Education and funded by the National Endowment for the Humanities” (p. 46) in which high school teachers explored the Schlesinger Library at Radcliffe College to engage with historical materials on the subject of women’s history. Participants were asked to develop curriculum units or lesson plans focused on women’s history in the Progressive Era and to incorporate archival materials into their plans. The documents used in these plans gave voice to working-class women, a population often overlooked in history textbooks.

A large-scale teacher-education project is the Library of Congress’s Teaching with Primary Sources program (Diekema, Leary, Haderlie, & Walters, 2011). In collaboration with school districts, universities, and libraries, this program provides funding for workshops both at the Library of Congress and regionally. Diekema and colleagues offered a workshop in collaboration with the Teaching with Primary Sources program, but incorporated resources not just from the Library of Congress’s American Memory collection but also from collections provided by regional cultural heritage institutions such as the Mountain West Digital Library. They found that workshops of this nature must not only introduce teachers to collections, but should also offer help with information-seeking and organizing materials, inspire teachers to consider educational innovation and the impact working with primary sources can have on students, and increase teachers’ expertise in working with technology.

The Formation of School-Based Archives and Classroom Units of Instruction on the Work and Role of Archives and.

While Osborne (1986) suggests that instruction in the work and role of archives is a potential avenue for outreach, little work has been done in this area. Most archival outreach offers instruction in document analysis without drawing attention to the actual work that archivists do (Dickson & Gorzalski, 2013). One exception is when students are asked to create or contribute to archives housed at their own schools.

Fernekes and Rosenberg (2008) describe one such program in which University Special Collections and University Archives collaborated with The Hunterdon Central Regional High School Archives. Archivists from Rutgers served as consultants for the development of policies and processes for the high school archives; they also offered instruction during field trips to the Rutgers archives and served as independent reviewers for high school students’ archive projects, offering feedback on how to improve and foster further development of the high school archive program. In addition to serving as an opportunity for students to learn about archival work, the school archives provide a valuable collection of primary sources for use in the school’s social studies classrooms.

Diana Sanderson (Sanderson, 2009), archivist for Warren-Wilson College, offers a similar model for a combination of instruction in archival processes and the creation of a school archive. Working with students at “The Asheville School, an independent boarding and day high school” (p. 92), she introduces students to key archival concepts such as provenance, finding aids, and preservation. She then engages students in a discussion of the types of archival projects they might take on over the course of a school year and works with them to implement those projects.

The Production of Archives-Based Teaching Kits.

Before digital archives became popular, archives-based teaching kits were one of the most common methods of archival outreach (Taylor, 1972). One example of such a kit is the *Canada's Prime Ministers* educational kit, a kit designed to profile resources from Canada's National Archives that were included in an exhibit of the same title (Cook, 1997). The kit was a collaborative effort between an archivist, a university educational consultant, and a classroom teacher. The kit included reproductions of primary sources, literature based on these primary sources, and lesson plans. This print-based kit was released at the time when digital archives were just becoming popular, and mitigated some of the equity issues that existed at that time surrounding accessibility of technological resources in schools. The kit was distributed via the Canadian Daily Newspapers Association and on demand from the National Archives. While the Canadian Daily Newspapers Association offers workshops, Cook (1997) does not specify whether teachers who received the kit from the association also attended workshops that provided guidance on using the kit.

Adams (1987) offers an example of a teaching kit paired with classroom volunteers who lived through the historical experiences represented by the documents in the kit. The "Past and Future Coming Together" project presented national history in a local context for students in St. Louis, Missouri. The designers of this project viewed senior citizens as living primary sources who could bring history to life for students in a way that document facsimiles alone could not. The sponsors of the project, however, did not provide significant instruction to teachers and senior citizens in how to use the primary source teaching kits with students, and thus found that the project did not meet all of its goals.

Integrated and Collaborative Approaches

The K-12 archival outreach activities that are perhaps the richest incorporate multiple approaches. Dekydtspotter and Williams (2013; 2014) describe their approach to teaching elementary school students about the medieval book and illuminated manuscripts at the Lilly Library at Indiana University. They collaborate with elementary school teachers on a multi-step process. First, they meet with teachers to collaboratively plan instruction. Next, they send a packet of activities to teachers that help students develop relevant vocabulary and the sense of the book as historical object. A few weeks later, they visit the classroom and provide archival instruction, reinforcing concepts from the teaching kit. They also introduce students to important information they need to know in advance of a visit to the Lilly Library, including behavioral expectations and the types of activities they can expect when they get there. Finally, students and teachers visit the library, where they engage in a variety of interactive activities such as exploring existing materials and creating their own new materials.

Projects involving primarily digital materials offer opportunities for collaboration between archivists and educators, as well. Robb (2009) describes The Oppen Project, in which the Director of The Ohio State University Cartoon Library and Museum, the Director of the OSU Harvey Goldberg Center for Excellence in Teaching, and the Director of the Goldberg Center's History Teaching Institute collaborated with "classroom teachers to select appropriate cartoons and to develop curricula that would be practical and useful" (Robb, 2009, p. 78) in a project to bring editorial cartoons into the K-12 classroom as primary sources. Teachers attended workshops where they were asked to develop lesson plans using the editorial cartoons; these teachers also served as a user group to provide feedback on introductory and supplementary materials. After receiving feedback from project staff, the teachers revised the lesson plans; the

final plans were published on the project website for other teachers to use. After promoting and publicizing the collection, the project team conducted a survey of users beyond the initial collaborating teachers and gathered valuable feedback that they intend to use to iterate the project further.

Perhaps the most robust example of an integrated and collaborative approach to K-12 archival outreach in the literature is that of the University of California-Los Angeles Digital Portfolio Archives (DPA) Project (A. J. Gilliland-Swetland et al., 1999, 2000; Kafai & Gilliland-Swetland, 2001) in which UCLA collaborated with two elementary school teachers to incorporate primary scientific sources into classroom activities. The teachers, researchers, and archivist for the UCLA History of Medicine collection collaborated to select materials from the Donald Ryder Dickey Collection for digitization and use in the classroom and design instructional experiences related to these materials. Dickey was a naturalist who documented the environs of Southern California through extensive field work. Students participated in a field trip to the History Medicine library to view the Dickey Collection, visited the Ballona Wetlands to compare their current state with that documented in the Dickey Collection, and engaged in a variety of classroom activities related to these experiences and materials.

The researchers found that the richest learning experience for the students and the most stimulating teaching environment for the teachers were provided through a combination of composite and comparative activities (for example, through both the wetlands field trip and visit to the historical repository), through application of a variety of ways to access and experience the primary sources (for example, by viewing the originals in their repository as well as using digitized copies and transcriptions in the classroom), and by use of supporting materials in a variety of media to re-create historical context or by use of historical vignettes to illustrate personal biographies (for example, the historical film clips of early twentieth-century Los Angeles and the article about John Muir). (Gilliland-Swetland et al., 1999, p. 110)

The DPA project provides a potential model for extensive collaboration between classroom teachers and archivists.

Proposed Models of K-12 Archival Outreach

While the literature offers several practical examples of archival outreach, these seem to be developed primarily in isolation and without attention to the development of replicable outreach models. Some scholars have proposed specific models for future archival outreach. These models will be discussed in this section.

A Collaborative Knowledge Model for Primary Source-Based Instruction.

Many of the examples of K-12 archival outreach described in this literature review involve collaboration between archivists and educators. These experiences typically, however, treat archivists as experts and teachers as learners. Garcia (2015) proposes a model that, rather than seeing teachers' lack of archival expertise as a limitation, sees their wealth of pedagogical expertise as a strength. The model is founded on the concept of "professional knowledge," "a form of general knowledge that relates to those working in a vocation that requires specialized educational training" (Garcia, 2015, p. 160). In Garcia's collaborative knowledge model, a professional archive user, such as a teacher, brings their own expertise and professional goals to bear when determining how to use the archive. A teacher's knowledge professional knowledge interacts with her knowledge of the domain she teaches, her artifactual literacy, or understanding of how to work with archival objects, and her archival literacy, or understanding of how to

navigate archives themselves. Garcia observes that archival outreach targeted at teachers often targets artefactual literacy and archival literacy, but does not value teachers' existing professional and domain knowledge, or does the opposite, targeting pedagogical strategies for using primary sources without providing guidance in how to work with archives and the artifacts they contain. Garcia's model proposes that all four of these types of knowledge (professional knowledge, domain knowledge, artefactual literacy, and archival literacy) interact and professional development archival outreach programs should address all of these, both valuing and enhancing teachers' professional knowledge.

A Collaboratively Constructed Framework for the Teaching of History Thinking Skills.

Keeping in line with his focus on historical thinking skills, Cherry (2010) proposes a framework in which educators, cultural heritage workers such as archivists and special collections librarians, Web developers, and historians develop a content-agnostic framework for teaching history thinking skills using an online tool. Rather than focusing on specific eras or sources, this framework would include types of inquiry-based activities that could be used with a variety of primary sources to explore a multitude of historical topics. The team developing this framework should provide contextualizing materials for the historical thinking skills and examples of how to work with specific primary sources, both as a historian and as an archivist or librarian. This content would cover not only document analysis but also issues of preservation, curation, description, and access.

Developing Archival Competency as Archival Outreach.

Cherry's model (2010) incorporates instruction about the work of archivists into its framework, but Dickson and Gorzalski (2013) make this the focus of their proposed model of archival outreach. Dickson and Gorzalski point out that most archival instruction focuses on document analysis or interpretation of primary sources, while little incorporates the actual work that archivists do. They propose an outreach model that incorporates archival competency, teaching students not just about how to interpret documents but also about the work that archivists do. Such a model expands outreach so that it is not only service, it is also advocacy. They use the guidelines offered by the Society of American Archaeologists as a model and suggest that the Society of American Archivists could create a similar model.

Dickson and Gorzalski (2013) offer an experience at The History Center in Diboll, Texas, as an example of this model in action. Students visit The History Center in tour groups. Once there, they learn about the difference between archives and libraries, the difference between primary sources and secondary sources, and the notion that human activity creates records of enduring value. Students on the tour not only engage in document analysis, but also consider matters of format and preservation, such as how changing ways of recordkeeping over time can give us information about the past and common preservation issues and how archivists address them. Dickson and Gorzalski include issues of digital preservation in their model; at The History Center, students are asked to consider the records they themselves create and learn about basic digital preservation tasks such as backing up files.

Conclusion

Archives and special collections can reach K-12 audiences through a variety of methods. These include traditional teaching kits, face-to-face outreach activities, and digital outreach activities. Both cultural heritage organizations and the K-12 community can benefit from this sort of activity; working with archival records enriches students' education, bringing history to life and promoting the inclusion of marginalized voices, while working with educators and

students gives archivists and special collections librarians the opportunity to advocate for their organizations and ensure their work is appreciated by future generations. To ensure the most benefit for both sides, cultural heritage workers should plan their outreach activities in collaboration with educators. They should take into account unique user needs such as curriculum alignment and developmental appropriateness. They should keep in mind that educators have rich professional knowledge to offer when collaboratively developing outreach projects and that students can benefit not just from learning how to interpret records, but also how to preserve and maintain them. Collaborative outreach projects that take the unique circumstances of the K-12 environment into account both allow cultural heritage organizations to fulfill the service component of their missions and to articulate their own value.

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8

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