Teaching with Digital Primary Sources:

Literacies, Finding and Evaluating, Citing, Ethics, and Existing Models

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¹ Society for American Archivists Reference, Access, and Outreach Section, "Teaching with Primary Sources," Zotero library, https://www.zotero.org/groups/76402/teaching_with_primary_sources/items/collectionKey/2BKB RTH8.

² Digital Library Federation Assessment Interest Group, "DLF User Studies in Digital Libraries Bibliography," https://docs.google.com/document/d/1AVIT3QImhbcUmoRtZ0hvpvEhpbD9_Eld5bHsa-JNHX24/edit.

Introduction: Teaching with Digital Primary Sources

The ACRL RBMS-SAA *Guidelines for Primary Source Literacy* offers the following definition for primary sources:

Primary sources are materials in a variety of formats, created at the time under study, that serve as original evidence documenting a time period, event, people, idea, or work. Primary sources can be printed materials (such as books and ephemera), manuscript/archival materials (such as diaries or ledgers), audio/visual materials (such as recordings or films), artifacts (such as clothes or personal belongings), or born-digital materials (such as emails or digital photographs). Primary sources can be found in analog, digitized, and born-digital forms.³

The *Guidelines* do not explicitly define digital primary sources, but do note “When speaking of primary sources, a surrogate is often a digital version of a physical source that is housed in a specific collection or repository”⁴ For the purposes of this document, we define digital primary sources as the digitized copies or surrogates of analog primary sources. This document primarily considers digital primary sources. Although much content could also apply to born-digital primary sources, this document does not specifically address them, except when considering data. We also note that there is even less written about teaching with born-digital primary sources.

This white paper seeks to think through the limitations and affordances of teaching, researching, and otherwise working specifically with digital primary sources as defined above. Multiple scholars have argued that digital primary sources are distinct from physical primary sources in myriad ways. Databases perhaps embody a new form of textuality, associated with a new way of reading, which Alan Bilansky terms “digital textuality.”⁵ Similarly, Ryan Cordell suggests that digital primary source collections be understood as “assemblages of new editions, subsidiary editions, and impressions of their historical sources.”⁶ They are not just surrogates for analog primary sources, but as Paul Fyfe suggests, something new and distinctive.⁷ The practice of searching, by which most digital primary sources are discovered, is connected to this new

³ Association of College and Research Libraries Rare Book and Manuscript Section and Society for American Archivists (ACRL RBMS-SAA) Joint Task Force on Primary Source Literacy, *Guidelines for Primary Source Literacy*, 2018, 11-12, <https://www2.archivists.org/groups/saa-acrlrbms-joint-task-force-on-primary-source-literacy/guidelines-for-primary-source-lite-0>.

⁴ ACRL RBMS-SAA Joint Task Force, *Guidelines*, 8.

⁵ Alan Bilansky, “Search, Reading, and the Rise of Database,” *Digital Scholarship in the Humanities* 32, no. 3 (2017), <https://doi.org/10.1093/llc/fqw023>.

⁶ Ryan Cordell, “‘Q i-jtb the Raven:’ Taking Dirty OCR Seriously,” *Book History* 20 (2017): 190, <https://doi.org/10.1353/bh.2017.0006>.

⁷ Cordell, “‘Q i-jtb the Raven;” Paul Fyfe, “An Archaeology of Victorian Newspapers,” *Victorian Periodicals Review* 49, no. 4 (2016), <https://doi.org/10.1353/vpr.2016.0039>.

medium.⁸ Although there is no consensus around how digital primary sources represent a distinct medium, there is growing agreement that they are distinct from analog versions of primary sources.

This may be due to their unknowability; given the size of many digital primary source collections, it can be difficult to assess the completeness and the authoritativeness of the materials contained within, and the contexts of their creation are often erased. Bonnie Mak argues that digital resources project a sense of authority that can close them off from analysis, historicization, and contextualization. Her archaeology of Early English Books Online aims to counter this by analyzing and situating digitizations.⁹ Lara Putnam broadens Mak's focus to assess transnational history's use of digital primary sources, arguing that digital primary sources and the use of search erases the need for contextual information and learning by supplying too many items to actually work with.¹⁰ Other work similarly seeks to return digital primary sources to their histories and contexts and to consider the political, social, and economic implications of the mass digitization of analog primary sources.¹¹

As described below, historians are often uncomfortable with the lack of contextual information associated with digital primary sources and are more likely to work with digital primary sources that feel closer to the analog originals, including through a connection to an authoritative institution. Some have a sense that there is something qualitatively different about digital primary sources, although the field as a whole is less likely to think through the specific limitations and affordances of them. The American Historical Association understands digital primary sources largely as straightforward copies or surrogates, as do the SAA/RBMS *Guidelines for Primary Source Literacy*. This white paper is an attempt to more specifically consider digital primary sources within the context of research and teaching in higher education.

This work builds on the Environmental Scan and Literature Review produced by the previous iteration of the Teaching with Digital Primary Sources Subgroup. It begins with an overview of the various literacies that factor into working with digital primary sources and then considers other issues in finding, evaluating, and citing digital primary sources, emphasizing ethical use. The white paper concludes with existing models of teaching with digital primary sources.

⁸ Ted Underwood, "Theorizing Research Practices We Forgot to Theorize Twenty Years Ago," *Representations* 127, no. 1 (August 2014), <https://doi.org/10.1525/rep.2014.127.1.64>.

⁹ Bonnie Mak, "Archaeology of a Digitization," *Journal of the Association for Information Science and Technology* 65, no. 8 (August 2014), <https://doi.org/10.1002/asi.23061>.

¹⁰ Lara Putnam, "The Transnational and the Text-Searchable: Digitized Sources and the Shadows They Cast," *The American Historical Review* 121, no. 2 (April 2016), <https://doi.org/10.1093/ahr/121.2.377>.

¹¹ Ian Gadd, "The Use and Misuse of Early English Books Online," *Literature Compass* 6, no. 3 (May 2009), <https://doi.org/10.1111/j.1741-4113.2009.00632.x>; Angela McShane, "Digital Broadside: The Upsides and the Downsides," *Media History* 23, no. 2 (April 2017), <https://doi.org/10.1080/13688804.2017.1307099>; Katherine Bode, "Fictional Systems: Mass-Digitization, Network Analysis, and Nineteenth-Century Australian Newspapers," *Victorian Periodicals Review* 50, no. 1 (2017), <https://doi.org/10.1353/vpr.2017.0005>; Fyfe, "An Archaeology of Victorian Newspapers;" Cordell, "Q i-jtb the Raven."

Other Literacies

Information Literacy

Teaching with digital primary sources intersects with other literacies with well-established bodies of research. In particular, discussions of library instruction, as well as other educational work by information professionals, often center around information literacy. The Association of College & Research Libraries' *Framework for Information Literacy for Higher Education* provides the following definition: "Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning."¹² Aspects of this definition and the *Framework's* six frames ("Authority Is Constructed and Contextual"; "Information Creation as a Process"; "Information Has Value"; "Research as Inquiry"; "Scholarship as Conversation"; and "Searching as Strategic Exploration")¹³ are clearly relevant to the discussions of finding, assessing, ethically engaging with, and citing sources in the following sections of this white paper. However, the *Framework* considers "information" in a very broad sense, so it is useful to look to other work in which information professionals have taken a narrower lens and considered information literacy in specific contexts (e.g. archival records, visual resources, data).

Digital Literacy

The American Historical Association includes "digital literacy" an essential skill for historians but learning outcomes for students focus on knowledge specific to the discipline of history. Digital literacy is "having a familiarity with and facility in navigating and using the Internet," which includes working with Wikipedia and other born-digital sources.¹⁴ The AHA gestures at working with digital primary sources, and at approaching them with a "critical eye," but mostly focuses on using digital primary sources in the classroom.¹⁵ Digital primary sources are generally treated as transparent surrogates for their analog originals as the AHA does not consider digital primary

¹² Association of College & Research Libraries (ACRL), *Framework for Information Literacy for Higher Education* (Chicago: Association of College & Research Libraries, 2015), <http://www.ala.org/acrl/standards/ilframework>, 8.

¹³ ACRL, *Framework*, 12-23.

¹⁴ American Historical Association (AHA), "Digital Literacy," accessed May 29, 2019, <https://www.historians.org/jobs-and-professional-development/career-diversity-for-historians/career-diversity-resources/five-skills/digital-literacy>.

¹⁵ AHA, "Teaching and Learning in the Digital Age: Reconceptualizing the Introductory Survey Course," accessed May 29, 2019, <https://www.historians.org/teaching-and-learning/teaching-resources-for-historians/teaching-and-learning-in-the-digital-age>; AHA, "Digital Primary Sources," accessed May 29, 2019, <https://www.historians.org/teaching-and-learning/teaching-resources-for-historians/classroom-materials/classroom-materials-digitized-primary-sources>. See also the regular "Digital Primary Sources" section in *The American Historical Review* (e.g. <https://doi.org/10.1093/ahr/rhy192>), which identifies freely available online primary source collections.

sources as significantly distinct. The History Discipline Core Competencies and Learning Outcomes considers student engagement with primary sources to be central, but does not include thinking about their formats or containers. This is not entirely surprising, as the document is primarily trying to define the broad goals of the discipline.¹⁶ The AHA does not specifically speak to teaching or learning with digital primary sources.

Archival Intelligence

Authors in archival studies articulate the skill set necessary for students to effectively use primary sources. In conceptualizing what information literacy means in an archives context, Yakel and Torres develop the term “archival intelligence” which has three components: “1) knowledge of archival theory, practices, and procedures; 2) strategies for reducing uncertainty and ambiguity when unstructured problems and ill-defined solutions are the norm; and 3) intellectual skills, or the ability to understand the connections between representations of documents, activities, and processes and the actual object or process being represented.”¹⁷ Subsequent work has included Carini’s (who explicitly builds on Yakel and Torres) standard used in teaching “Primary Source IL [information literacy]” at Dartmouth College, Bahde, and Weiner, Morris, and Mykytiuk’s “Archival Literacy Competencies.”¹⁸ This work largely does not address digital primary sources, though Weiner, Morris, and Mykytiuk include the competency: “Articulate the ways in which using, experiencing, and handling original primary sources differ from digital primary sources (whether born digital or digitized) or other types of facsimiles.”¹⁹

Primary Source Literacy

Most recently, the ACRL RBMS-SAA Joint Task Force’s (2017) *Guidelines for Primary Source Literacy* states this definition: “Primary source literacy is the combination of knowledge, skills, and abilities necessary to effectively find, interpret, evaluate, and ethically use primary sources within specific disciplinary contexts, in order to create new knowledge or to revise existing understandings.”²⁰ The *Guidelines* state that they apply to all primary sources regardless of format,²¹ and do not identify any competencies specific to digital primary sources, though the

¹⁶ AHA, “AHA History Tuning Project: 2016 History Discipline Core,” accessed May 29, 2019, <https://www.historians.org/teaching-and-learning/tuning-the-history-discipline/2016-history-discipline-core>.

¹⁷ Elizabeth Yakel and Deborah A. Torres, “AI: Archival Intelligence and User Expertise,” *The American Archivist* 66, no. 1 (2003): 54, <http://www.jstor.org/stable/40294217>.

¹⁸ Peter Carini, “Information Literacy for Archives and Special Collections: Defining Outcomes,” *portal: Libraries and the Academy* 16, no. 1 (2016): 197-200, <http://doi.org/10.1353/pla.2016.0006>; Sharon A. Weiner, Sammie Morris, and Lawrence J. Mykytiuk, “Archival Literacy Competencies for Undergraduate History Majors,” *The American Archivist* 78, no. 1 (2015): 165-168, <https://doi.org/10.17723/0360-9081.78.1.154>; Anne Bahde, “The History Labs: Integrating Primary Source Literacy Skills into a History Survey Course,” *Journal of Archival Organization* 11, no. 3-4 (2013), <https://doi.org/10.1080/15332748.2013.951254>.

¹⁹ Weiner, Morris, and Mykytiuk, “Archival Literacy Competencies,” 167.

²⁰ ACRL RBMS-SAA, *Guidelines*, 1-2.

²¹ ACRL RBMS-SAA, *Guidelines*, 2.

Guidelines do include a learning objective similar to Weiner, Morris, and Mykytiuk's competency related to understanding the difference between originals and copies (learning objective 4E).²² Hauck and Robinson have recently described using the *Guidelines* to structure student projects, which included the use of digitized primary sources, but do not differentiate between digital and analog primary sources.²³

Visual Literacy

The development of models for visual literacy parallels the rise of television and other mass (visual) media over the past fifty years, and eventually expands to include visual literacy on the web. It is a conversation happening in both art education literature and library and archival studies literature, with the latter joining the discussion more recently. Kędra examines several definitions of visual literacy that have emerged over the past fifty years, arguing that students lack visual literacy skills in part due to the absence of a shared definition of what visual literacy is.²⁴ Conway and Punzalan discuss the interplay of visual literacy concepts and archival principles around digitization of archival records, surfacing the distinction between the analog object and the digital copy.²⁵ Several authors discuss authenticity and digital media: Hattwig et al. discuss digital concerns with visual literacy in the context of copyright, credibility, reliability, and ethics²⁶ while Messaris discusses the challenges of determining the veracity of a digital image in the context of increasingly undetectable visual manipulation tools.²⁷ Averignou points to some of the challenges inherent in determining authenticity in the context of image proliferation, reproduction, and manipulation and positions visual literacy in the realm of the digital, specifically discussing what is termed "the Bain d' Images Era".²⁸ Many authors write about how to teach visual literacy in the digital age: Harris examines visual and information literacy standards side-by-side and makes a case for integrating the principles of the two

²² ACRL RBMS-SAA, *Guidelines*, 6.

²³ Janet Hauck and Mark Robinson, "Of Primary Importance: Applying the New Literacy Guidelines," *Reference Services Review* 46, no. 2 (2018), <https://doi.org/10.1108/RSR-03-2018-0025>.

²⁴ Joanna Kędra, "What Does It Mean to Be Visually Literate? Examination of Visual Literacy Definitions in a Context of Higher Education" *Journal of Visual Literacy* 37, no. 2 (2018), <https://doi.org/10.1080/1051144X.2018.1492234>.

²⁵ Paul Conway and Ricardo Punzalan, "Fields of Vision: Toward a New Theory of Visual Literacy for Digitized Archival Photographs," *Archivaria* 71 (2011), <https://archivaria.ca/index.php/archivaria/article/view/13331/14632>.

²⁶ Denise Hattwig, Kaila Bussert, Ann Medaille, and Joanna Burgess, "Visual Literacy Standards in Higher Education: New Opportunities for Libraries and Student Learning," *portal: Libraries and the Academy* 13, no. 1 (2013), <https://doi.org/10.1353/pla.2013.0008>.

²⁷ Paul Messaris, "Visual 'Literacy' in the Digital Age," *Review of Communication* 12, no. 2 (April 2012), <https://doi.org/10.1080/15358593.2011.653508>.

²⁸ Maria D. Avgerinou, "Re-Viewing Visual Literacy in the 'Bain d' Images' Era," *TechTrends: Linking Research & Practice to Improve Learning* 53, no. 2 (March 2009), <https://doi.org/10.1007/s11528-009-0264-z>.

literacies,²⁹ while Schoen offers strategies for teaching students about digital images in the context of a one-shot instruction session.³⁰ Brumberger debunks the myth around "digital natives" using a survey that measures visual literacy. As with many of these articles, visual literacy was measured in interpretive skills from looking at images, not examining version history, origin of image, metadata, or other technical components.³¹ Most of the literature focuses solely on literacy as it pertains to the surface of an image, not the digital-specific aspects of visual literacy, with a few notable exceptions: Messaris suggests a new way of looking at pictures as not "just another language, [but] instead of focusing on the things that make pictures special and unique."³²

Data Information Literacy

A final literacy to consider in the context of digital primary sources is data information literacy. For Carlson, Fosmire, Miller, and Nelson, unlike other literacies that focus on students/researchers as consumers, Data Information Literacy (DIL) is also concerned with "researcher-as-producer" and brings together ideas from "data, statistical, information, and science data literacy."³³ As evident in Sapp Nelson's competency matrix for Data Information Literacy and the literature she references in creating it, DIL focuses largely on teaching students how to manage data they create, although some address working with data derived from outside sources. This body of work on DIL also seems to come mainly from a STEM context.³⁴

²⁹ Benjamin R. Harris, "Blurring Borders, Visualizing Connections: Aligning Information and Visual Literacy Learning Outcomes," *Reference Services Review* 38, no. 4 (November 16, 2010), <https://doi.org/10.1108/00907321011090700>.

³⁰ Molly J. Schoen, "Teaching Visual Literacy Skills in a One-Shot Session," *Visual Resources Association Bulletin* 41, no. 1 (January 2015).

³¹ Eva Brumberger, "Visual Literacy and the Digital Native: An Examination of the Millennial Learner," *Journal of Visual Literacy* 30, no. 1 (Spring 2011).

³² Paul Messaris, "Visual 'Literacy' in the Digital Age," 101.

³³ Jacob Carlson, Michael Fosmire, C.C. Miller and Megan Sapp Nelson, "Determining Data Information Literacy Needs: A Study of Students and Research Faculty," *portal: Libraries and the Academy* 11, no. 2 (2011): 634, <http://doi.org/10.1353/pla.2011.0022>.

³⁴ Megan R. Sapp Nelson, "A Pilot Competency Matrix for Data Management Skills: A Step toward the Development of Systematic Data Information Literacy Programs," *Journal of eScience Librarianship* 6, no. 1 (2017), <https://doi.org/10.7191/jeslib.2017.1096>. Sapp Nelson maps the following research in her appendix "Crosswalk of Five Data Literacy Competency Lists": Carlson, Fosmire, Miller, and Sapp Nelson, "Determining Data Information Literacy Needs;" Jian Qin and John D'ignazio, "The Central Role of Metadata in a Science Data Literacy Course," *Journal of Library Metadata* 10, no. 2-3 (2010), <https://doi.org/10.1080/19386389.2010.506379>; Mary Piorun, Donna Kafel, Tracey Leger-Hornby, Siamak Najafi, and Elaine R. Martin, "Teaching Research Data Management: An Undergraduate/Graduate Curriculum," *Journal of eScience Librarianship* 1, no. 1 (2012), <https://doi.org/10.7191/jeslib.2012.1003>; Javier Calzada Prado and Miguel Angel Marzal, "Incorporating Data Literacy into Information Literacy Programs: Core Competencies and Contents," *Libri: International Journal of Libraries and Information Studies* 63, no. 2 (2013), <https://doi.org/10.1515/libri-2013-0010>; Rene Schneider, "Research Data Literacy," in *Worldwide Commonalities and Challenges in Information Literacy Research and Practice*

While instruction related to the various ways students might use digital primary sources in the classroom is beyond the scope of this white paper, applications in digital humanities instruction certainly require working with students on the skills necessary to successfully manage data in the form of digital primary sources.³⁵

Finding and Evaluating Digital Primary Sources

While little research exists on digital primary source instruction, studies of historians' research practices and digital library user studies provide useful insights for instructors. This section will consider what we already know about how users conduct research from this body of work. This research can serve as a starting point for discussing what students likely do not understand about these collections in order to inform instruction.

Work on historians' information-seeking behavior in regards to primary sources often focuses more heavily on physical archives, while only briefly touching on digital primary sources. Anderson and Tibbo's work, which focuses on the U.K. and U.S. respectively, describes how historians use both non-digital (including citation chasing, bibliographies, following informal leads, and browsing) and digital tools and methods for locating primary sources.³⁶ Anderson notes that the strength of these non-digital methods is that they provide some form of context and mediation, while Tibbo identifies some hesitance regarding digital tools and methods and "bridging behaviors" that negotiate between the non-digital and digital, such as visiting the website of physical archives. Anderson and Tibbo, however, are both more concerned with the implications for online finding aids rather than for digital primary source collections. Other work echoes the importance of context and concern around the unmediated nature of digital primary sources. Duff and Johnson describe the importance of developing contextual knowledge and building on known sources in negotiating physical archives, while Dalton and Charnigo note uncertainties around the quality of online information, specifically primary sources.³⁷ Malkmus found that many historians use published primary sources in book form for teaching rather than

European Conference on Information Literacy, eds. Serap Kurbanoğlu, Esther Grassian, Diane Mizrachi, Ralph Catts, and Sonja Špiranec, (Berlin: Springer, 2013), https://doi.org/10.1007/978-3-319-03919-0_16.

³⁵ For an example connecting Data Information Literacy to digital humanities, see Brandon T. Locke, "Digital Humanities Pedagogy as Essential Liberal Education: A Framework for Curriculum Development," *DHQ: Digital Humanities Quarterly* 11, no.3 (2011), <http://www.digitalhumanities.org/dhq/vol/11/3/000303/000303.html>.

³⁶ Ian G. Anderson, "Are You Being Served? Historians and the Search for Primary Sources," *Archivaria* 58 (2004), <http://eprints.gla.ac.uk/15781/>; Helen R. Tibbo, "Primarily History in America: How U.S. Historians Search for Primary Materials at the Dawn of the Digital Age," *The American Archivist* 66, no. 1 (2003), <https://doi.org/10.17723/aarc.66.1.b12037011g718n74>.

³⁷ Wendy M. Duff and Catherine A. Johnson, "Accidentally Found on Purpose: Information-Seeking Behavior of Historians in Archives," *The Library Quarterly: Information, Community, Policy* 72, no. 4 (October 2002); Margaret Stieg Dalton and Laurie Charnigo, "Historians and Their Information Sources," *College & Research Libraries* 65, no. 5 (2004), <https://doi.org/10.5860/crl.65.5.400>.

digital primary source collections, as they provide contextual information and secondary analyses. She also found that historians would like assistance with discovering and staying current with digital primary sources due to their siloing, which also leads historians to be conservative in their use of them.³⁸ While this work is valuable, some of it is also rather dated at this point, which may also account for its heightened focus on physical archives. Nonetheless, this does suggest that instruction with digital primary sources should consider incorporating contextual information.

Successfully finding digital primary sources requires students to both understand traditional archival systems and to navigate digital library systems. Consistent with historians' concerns, context may be more or less explicit depending on the design of digital collections, which can range from discovery of items in connection with traditional archival finding aids to search interfaces pulling individual items from across collections.³⁹ These aspects of collection design can contribute unique challenges for teaching primary source literacy in a digital environment. Digital library systems add further complexities. Other researchers have documented the difficulties experienced by users in navigating the portals of the Digital Public Library of America and Europeana, where users encounter a record for the item, as opposed to the item itself, and must navigate links from the portal out to the collections containing the digital objects.⁴⁰ Specifically, some participants in Matusiak's study were confused when they reached DPLA service hubs, struggling with a path that linked them from the DPLA site to the service hub to the object from their search results.⁴¹ These studies suggest that instruction also should include basic knowledge about the structure of digital library systems, so that students know what to expect and how to successfully navigate to their search results.

Studies of historians and other users highlight a number of factors important in evaluating digital primary sources. In Conway's study of "experienced users" researching with Library of Congress digitized photograph collections, participants trusted these sources "based on a complex mix of respect for the Library of Congress as an effective agent of cultural heritage preservation and

³⁸ Doris Malkmus, "Old Stuff for New Teaching Methods: Outreach to History Faculty Teaching with Primary Sources," *portal : Libraries and the Academy* 10, no. 4 (2010), <https://doi.org/10.1353/pla.2010.0008>

³⁹ Jane Zhang and Dayne Mauney, "When Archival Description Meets Digital Object Metadata: A Typological Study of Digital Archival Representation," *The American Archivist* 76, no. 1 (2013), <https://doi.org/10.17723/aarc.76.1.121u85342062w155>; For an example of digital collection design considering the affordances of both these approaches, see Gretchen Gueguen, "Digitized Special Collections and Multiple User Groups," *Journal of Archival Organization* 8, no. 2 (January 2010), <http://hdl.handle.net/10342/3011>.

⁴⁰ Krystyna K. Matusiak, "User Navigation in Large-Scale Distributed Digital Libraries: The Case of the Digital Public Library of America," *Journal of Web Librarianship*, 11, no.3-4 (2017), <https://doi.org/10.1080/19322909.2017.1356257>; Milena Dobрева and Sudatta Chowdhury, "A User-Centric Evaluation of the Europeana Digital Library," in *The Role of Digital Libraries in a Time of Global Change. International Conference on Asian Digital Libraries 2010* eds. Gobinda Chowdhury, Chris Koo, and Jane Hunter (Berlin: Springer, 2010).

⁴¹ Matusiak, "User Navigation in Large-Scale Distributed Digital Libraries," 165-166.

accumulated evidence that its digitization processes are reliable and trustworthy.”⁴²

Chassanoff’s study of digitized image use by historians also touches on trust, stating that “factors such as the reputation of an institution or that an image originated from an archival institution helped establish trust in using that image further,” contrasting with an anecdote about a misidentified image a participant found through Google Image Search.⁴³ As Conway indicates, part of trusting these institutions is trust in their digitization practices. In fact, Conway’s participants using Library of Congress image collections were aware of the importance of choices made during digitization, such as cropping or scanning resolution, as well as whether or not these aspects would impact their ability to use the source for the research question at hand.

⁴⁴ An earlier study by Chassanoff indicates that historians are most comfortable using digital primary source collections when they replicate the physical archive in terms of contextual information, completeness, and authoritativeness.⁴⁵ Her study touches on concerns with selection where “the possibility that certain materials are omitted from an online collection appears to be more of a concern than it is in person at an archives” as well as other issues related to trusting the representation of documents online.⁴⁶ Harris and Hepburn similarly noted historians’ concerns with the stability and authority of digital primary sources.⁴⁷ The ability to evaluate digital primary sources based on an understanding of their collection and digitization, including issues of quality, selection, and representation online, is crucial for students to successfully use digital primary sources.

Other factors are also at play in historians’ evaluation of digital sources. Chassanoff describes historians’ research as nonlinear, employing a variety of digital and non-digital tools and methods.⁴⁸ Kim and Quan-Haase describe how to historians, digital research tools reduce serendipity and eliminate context by emphasizing keyword searching.⁴⁹ Sinn and Soares provide the most thorough and recent look at historians’ use of digital primary sources.⁵⁰ Their work reveals that historians use digital tools and methods for research, teaching, and curriculum

⁴² Paul Conway, “Modes of Seeing: Digitized Photographic Archives and the Experienced User,” *The American Archivist* 73, no. 2 (2010): 454-455, <https://doi.org/10.17723/aarc.73.2.mp275470663n5907>.

⁴³ Alexandra Chassanoff, “Historians’ Experiences Using Digitized Archival Photographs as Evidence,” *The American Archivist* 81, no. 1 (2018): 147, <https://doi.org/10.17723/0360-9081-81.1.135>.

⁴⁴ Conway, “Modes of Seeing.”

⁴⁵ Alexandra Chassanoff, “Historians and the Use of Primary Source Materials in the Digital Age,” *The American Archivist* 76, no. 2 (2013), <https://doi.org/10.17723/aarc.76.2.lh76217m2m376n28>.

⁴⁶ Chassanoff, “Historians and the Use of Primary Source Materials,” 470-1.

⁴⁷ Valerie Harris and Peter Hepburn, “Trends in Image Use by Historians and the Implications for Librarians and Archivists,” *College & Research Libraries* 74, no. 3 (May 2013), <https://doi.org/10.5860/crl-345>.

⁴⁸ Chassanoff, “Historians and the Use of Primary Source Materials.”

⁴⁹ Kim Martin and Anabel Quan-Haase, “The Role of Agency in Historians’ Experiences of Serendipity in Physical and Digital Information Environments,” *Journal of Documentation* 72, no. 6 (2016), <http://doi.org/10.1108/JD-11-2015-0144>.

⁵⁰ Donghee Sinn and Nicholas Soares, “Historians’ Use of Digital Archival Collections: The Web, Historical Scholarship, and Archival Research,” *Journal of the Association for Information Science and Technology* 65 no. 4 (2017), <https://doi.org/10.1002/asi.23091>.

work, but continue to see digital primary sources as less reliable. This lack of confidence, as well as a sense that the original format carries meaning, means that they often prefer to cite physical versions of primary sources. Historians perceive that contextual information is lost with digitization, that coverage and completeness in digital primary source collections can be lacking (and that it is not always obvious what is missing), that digital primary source collections privilege English-language materials and lack diversity in other ways, and prefer digital primary sources and collections that come closest to their physical counterparts or are backed by an authoritative institution like the Library of Congress. Using physical archives provides “field experience” and a sense of community, and history as a field emphasizes the use of original materials. Despite this, Sinn and Soares note that historians appreciate the greater accessibility of digital primary sources, which saves time and effort, and are increasingly citing digital primary sources,⁵¹ contributing to a gradually changing sense of their authoritativeness. Lindquist and Long’s work complements the previous research by focusing more specifically on the use of digital primary sources in teaching.⁵² Primary sources are crucial to history education and the development of historical thinking within higher education. Students appreciate working with them too—they help students feel like they have discovered something, inspire curiosity, and add credibility to their work. There are barriers to using them in the classroom for both faculty and students, however: it can be difficult to locate relevant primary sources, there can be too many results to parse, sources are siloed, sometimes relevant primary sources are not digitized, subject access and metadata are frequently lacking, sources are not transcribed or translated, and students often lack the context to interpret the source or even to develop keywords for searching. Digital primary sources are appreciated for their convenience and broad scope, but need contextual information to be used successfully in the classroom. Database creators should also consider providing more information about the scope, completeness, and origins of digital primary source collections to improve their perceived trustworthiness and to provide further context for students and faculty.

Citing Digital Primary Sources

The importance of accurately citing sources, including digital primary sources, is paramount to good scholarship. Readers should be able to easily find the exact version used based on the citation. While many researchers use digital primary sources in their work, they often cite a related analog source (e.g., a printed source or a manuscript) instead of the digital source actually consulted. However, digitized sources often contain additional information and functionality that render them new editions. Analog sources are often less accessible, both in terms of getting to them and their functionality. Additionally, evidence of the value of creating and making digital sources available is obscured from those undertaking this important work. This robs content creators of the opportunity to demonstrate their impact to funders through

⁵¹ See also Donghee Sinn, “Impact of Digital Archival Collections on Historical Research,” *Journal of the American Society for Information Science and Technology* 68, no.3 (2012), <https://doi.org/10.1002/asi.22650>.

⁵² Thea Lindquist and Holly Long, “How Can Educational Technology Facilitate Student Engagement with Online Primary Sources?: A User Needs Assessment.” *Library Hi Tech* 29, no. 2 (2011), http://scholar.colorado.edu/libr_facpapers/38/.

metrics. British History Online makes both an eloquent case in support of citing digital primary sources and also makes it easy to do so.⁵³ The last point is critical if content creators want users to properly acknowledge their resources. Providing citation generators (or at least examples) that include persistent uniform resource locators (PURLs), such as digital object identifiers (DOIs), is an important step in this direction.

Although non-citation of digital—and particularly digitized editions of—primary sources is pervasive, little has been published on this topic in the literature. A valuable contribution that addresses the issue head-on using the example of two important digital primary source offerings, however, is Jonathan Blaney and Judith Siefring's 2017 article "A Culture of Non-Citation."⁵⁴ In addition to discussing reasons for, drawbacks of, and potential solutions to the non-citation of digitized primary sources, the authors clearly acknowledge what is at stake: "In order that scholarly work receive due scrutiny, it is essential that scholars be clear, open and honest about their use of digital resources."⁵⁵ Sarah Werner, in "When is a Source Not a Source?," makes a strong argument for the importance of recognizing that "digital facsimiles are objects in and of themselves—they are not surrogates, but primary sources for our research" to be interrogated and cited in their own right.⁵⁶ She too highlights the culture of non-citation, noting in 2015 that the *Early English Books Online* database had never been cited as a source in the *Shakespeare Quarterly*, despite almost certainly having been used.⁵⁷

The research data community is further along in its efforts to encourage the proper citation of data sets—another type of digital primary source—through the use of DOIs. Bolstered by the efforts of international organizations like DataCite (<https://datacite.org/>) and the Research Data Alliance (<https://www.rd-alliance.org/>), an active and growing community of practice is working to develop standards and infrastructure (e.g., DOI registration) to enable discovery, identification, and citation of research data sets. These efforts make it possible both for data producers to receive credit (in the form of citations) for the data they publish as well as enabling greater research reproducibility by providing standards for precisely identifying and citing data used for secondary analysis.⁵⁸ Persistent identifiers are often assigned to items such as images, videos, or articles in digital repositories. Just as advocates encourage the use of persistent identifiers for citing datasets, they should also be encouraged when citing other digital primary sources. One thing to keep in mind about digital objects is that they may exist within online archival finding aids or other special collections inventories, rather than repositories, in which

⁵³ See: <https://www.british-history.ac.uk/using-bho/citation-guidelines>.

⁵⁴ Jonathan Blaney and Judith Siefring, "A Culture of Non-Citation: Assessing the Digital Impact of British History Online and the Early English Books Online Text Creation Partnership," *Digital Humanities Quarterly* 11, no. 1 (2017), <http://www.digitalhumanities.org/dhq/vol/11/1/000282/000282.html>.

⁵⁵ Blaney and Siefring, "Culture of Non-Citation," 44, <http://www.digitalhumanities.org/dhq/vol/11/1/000282/000282.html#p44>.

⁵⁶ Sarah Werner, "When is a Source Not a Source?," paper delivered at the Stanford Primary Source Symposium: The Phenomenology of the Source, Center for Medieval and Early Modern Studies, Stanford University, November 2015, abstract, <https://hcommons.org/deposits/item/mia:515/>, <http://dx.doi.org/10.17613/M6PG6F>.

⁵⁷ Werner, "When is a Source."

⁵⁸ Thanks to Andrew M. Johnson for this contribution.

case they often do not have DOIs associated with them. To cite these, researchers need to understand how to cite a finding aid, including series, box, and folder number, for example.

Given that accurate citation of sources is the bedrock of sound scholarship, it is imperative that all involved in teaching with primary sources—instructors, librarians, archivists, other content creators—take responsibility for teaching users how to properly cite digital primary sources. Since instructors play a key role in setting the standard for scholarly practice, their buy-in and communication to students that digital primary sources are research objects in their own right and are not substandard to analog primary sources is vital. Since instructors and their librarian and archivist teaching partners are already committed to teaching students appropriate citation practices, guidance on citing digital sources can be easily incorporated into existing instruction programs. The major style guides like the *Chicago Manual of Style*, *MLA Handbook*, and *Publication Manual of the American Psychological Association* all address forms of citation for digital sources. These guides emphasize the principle that the version consulted should be cited, along with a DOI, URL (permalinks preferred), or other identifier that has the potential to lead users directly back to the source cited. As previously noted, if content creators want users to properly acknowledge their resources, they need to make it easy for users to do so. The Library of Congress, for instance, has a site geared to teachers and shows how to cite its digital primary sources in Chicago, MLA, and APA styles.⁵⁹

Ethical Considerations

When teaching with primary sources, we confront ethical dilemmas as we teach histories of violence, engage with our own biases, and make private information public. Digitizing or teaching with digitized primary sources does not change this fact, though some of the conditions around digitization may make us feel less complicit in violence and trauma. Digitization can also introduce new ethical dilemmas as we engage with decontextualized records or put documents online. While our goal may be to diversify, decolonize, and educate, we often run the risk of doing more harm than good. Nevertheless, as almost all authors writing about the subject emphasize, fear of making a mistake is no excuse for avoiding teaching contentious subjects, working with histories of violence, and engaging with the troubled pasts of libraries and archives. As Michelle Caswell writes, we must all teach to dismantle white supremacy in the archives.⁶⁰

We have identified five broad sites where instructors are confronted with ethical decision-making: teaching traumatic content, teaching difficult subjects, undoing legacies of violence, privacy, and access in digital archives. The first two cases refer specifically to the content of the materials being taught. When these materials have the potential to evoke trauma or inflammatory responses on the part of participants, we have an obligation to prepare for

⁵⁹ See Library of Congress, “Citing Primary Sources,” accessed August 9, 2019, <https://www.loc.gov/teachers/usingprimarysources/citing.html>.

⁶⁰ Michelle Caswell, “Teaching to Dismantle White Supremacy in Archives,” *The Library Quarterly: Information, Community, Policy* 87, no. 3 (2017), <https://doi.org/10.1086/692299>.

these outcomes and to minimize harm.⁶¹ When working with students to digitize materials, this means being aware of the ways that processing materials for digital dissemination, describing materials using metadata, and incorporating materials into digital platforms can be traumatic or painful.⁶² Whether we are digitizing documents or working with pre-digitized materials, this also means being aware of the ways that digital platforms can decontextualize primary sources and glorify violence. Using practices drawn from trauma-informed pedagogy can help us to think about and prepare for these consequences in order to maximize educational opportunities while minimizing harm.⁶³

The third case, undoing legacies of violence, refers to the importance of helping participants understand the ways that digital structures of information are not neutral, and especially how they might reflect a legacy of white supremacy, colonialism, and imperialism in archives and libraries.⁶⁴ In making these structures visible, we also have an opportunity to instruct participants on how we can build more equitable information structures. When teaching participants to use digital collections, for example, we can draw attention to the limitations and biases of descriptive metadata and teach students how to read digital information structures as rhetorical devices.⁶⁵ When instructing in the creation of databases and repositories, we can introduce descriptive categories designed to undo archival silences and correct for discriminatory language.⁶⁶

The fourth category, privacy, refers to the rights of students, archival subjects, and the users of digital collections to have their information protected online, and to have equal access to digital materials. For students, a primary concern is the right to anonymity, credit, and compensation. The Student Collaborators' Bill of Rights, a co-authored document published by the UCLA

⁶¹ Lovisa Brown et al., "Desegregating Conversations about Race and Identity in Culturally Specific Museums," *Journal of Museum Education* 42, no. 2 (Apr. 2017), <https://doi.org/10.1080/10598650.2017.1303602>.

⁶² Michelle Caswell and Marika Cifor, "From Human Rights to Feminist Ethics: Radical Empathy in the Archives," *Archivaria* 81 (Spring 2016); Jessie Loyer, "Indigenous Information Literacy: nêhiyaw Kinship Enabling Self-Care in Research" in *The Politics of Theory and the Practice of Critical Librarianship*, eds. Karen P. Nicholson and Maura Seale (Library Juice Press, 2018).

⁶³ Janice Carello and Lisa D. Butler, "Potentially Perilous Pedagogies: Teaching Trauma Is Not the Same as Trauma-Informed Teaching," *Journal of Trauma & Dissociation* 15, no. 2 (March 2014), <https://doi.org/10.1080/15299732.2014.867571>; Janice Carello and Lisa D. Butler, "Practicing What We Teach: Trauma-Informed Educational Practice," *Journal of Teaching in Social Work* 35, no. 3 (May 2015), <https://doi.org/10.1080/08841233.2015.1030059>.

⁶⁴ For example, Safiya Umoja Noble, *Algorithms of Oppression* (New York: New York University Press, 2018); Erin Baucom, "An Exploration into Archival Descriptions of LGBTQ Materials," *The American Archivist* 81, No. 1 (spring/summer 2018), <https://doi.org/10.17723/0360-9081-81.1.65>; Leah Rosenberg, "Refashioning Caribbean Literary Pedagogy in the Digital Age," *Caribbean Quarterly* 62, no. 3 (2016), <https://doi.org/10.1080/00086495.2016.1260282>.

⁶⁵ Jessica Enoch and Pamela Van Haitsma, "Archival Literacy: Reading the Rhetoric of Digital Archives in the Undergraduate Classroom," *College Composition and Communication* 67, no. 2 (2015), www.jstor.org/stable/24633856.

⁶⁶ For example, Marisa Elena Duarte and Miranda Belarde-Lewis, "Imagining: Creating Spaces for Indigenous Ontologies," *Cataloging & Classification Quarterly* 53, no. 5-6 (2015), <https://doi.org/10.1080/01639374.2015.1018396>.

Digital Humanities program, provides clear guidelines on how to ensure that students are being protected in the creation of digital projects.⁶⁷ In the case of archival subjects, even when copyright law allows for the digital distribution of an image or document, there may be reasons to protect the privacy of the individuals who created or are represented in the documents. Some examples might include personal histories of people who are still living; records that give information about health or illegal behavior; and documents associated with Indigenous communities whose beliefs prohibit their distribution.⁶⁸ It is also essential that we are attentive to the ways that digital platforms collect private information from users and that we take care to protect participants from unwittingly giving their information away.⁶⁹

Finally, equitable access refers to the ability of people to access and engage with digital records. This may mean using minimal computing practices to ensure accessibility for those without expensive hardware or software.⁷⁰ It may mean designing platforms and repositories that meet ADA accessibility standards. And it may mean including multilingual content. It is important to be aware of the accessibility needs of students and other participants and adjusting activities accordingly.

Examples and Existing Models of Teaching with Digital Primary Sources

In general, a useful starting point for instructors with a desire to use digital primary sources in a lesson plan is to take a look at existing models that have worked in other projects or classrooms. This often comes in the form of an internet search, past experience or knowledge of other digital projects, or talking with an instructional designer or librarian. Particularly for introductory or survey courses, examples of successful projects can help initiate ideas and plans for the specific content of a course. Teaching with digital primary sources has been a

⁶⁷ Haley Di Pressi, Stephanie Gorman, Miriam Posner, Raphael Sasayama, and Tori Schmitt, with contributions from Roderic Crooks, Megan Driscoll, Amy Earhart, Spencer Keralis, Tiffany Naiman, and Todd Presner, "A Student Collaborators' Bill of Rights," *HumTech*, June 8, 2015. <https://humtech.ucla.edu/news/a-student-collaborators-bill-of-rights/>.

⁶⁸ For examples, see Kim Christen, "Does Information Really Want to be Free? Indigenous Knowledge Systems and the Question of Openness," *International Journal of Communication* 6 (2012), <https://ijoc.org/index.php/ijoc/article/view/1618/828>; Jane Anderson and Kim Christen, "'Chuck a Copyright on it:' Dilemmas of Digital Return and the Possibilities for Traditional Knowledge Licenses and Labels," *Museum Anthropology Review* 7, no. 1-2 (Spring-Fall 2013); J.J. Ghaddar, "The Spectre in the Archive: Truth, Reconciliation, and Indigenous Archival Memory," *Archivaria* 82 (Fall 2016), <https://archivaria.ca/index.php/archivaria/article/view/13579>.

⁶⁹ Erin Glass, "Ten Weird tricks for Resisting Surveillance Capitalism In and Through the Classroom . . . Next Term!" *HASTAC*, last modified December 27, 2018, <https://www.hastac.org/blogs/erin-glass/2018/12/27/ten-weird-tricks-resisting-surveillance-capitalism-and-through-classroom>.

⁷⁰ Alex Gil, "The User, the Learner and the Machines We Make," *Minimal Computing*, last modified May 21, 2015, <http://go-dh.github.io/mincomp/thoughts/2015/05/21/user-vs-learner/>.

component of library and discipline-specific instruction for decades at some institutions, with countless lesson and project plans created along the way. Whether an upcoming project involves creating a new digital collection or critically engaging with primary sources that have been available for years, it is quite possible that there has been a similar project already created from which one could learn. These decades of projects and lesson plans are incredibly valuable to both new professionals and those that have been working in the field for years, and it is important that they be shared and used.

The question, “Where do I begin?”, though, can be a tough hurdle to overcome, no matter what the project. Furthermore, with a project focusing on digital primary sources, that question can encompass many components. Where do I find the primary sources? Are they already digitized? What digital tools should I use? Can students tackle this in a semester? These are all questions that can pop up while thinking through the idea of a digital project in the classroom. Where does an instructor begin?

More resources are currently available to those looking for ideas than one might suspect. In 2016, Amy Chen published an article in *Archive Journal* suggesting cultural heritage institutions include assignments relating to their specific collections. Furthermore, Chen includes important tips and guidance throughout the article, such as “Consider the needs of your students and the amount of time you can allocate to a lesson when choosing which digital resources and approaches to use.”⁷¹ This advice is beneficial to the creation of a successful project, especially in the early stages.

Chen refers to another good starting point, the Brooklyn Historical Society’s TeachingArchives.org.⁷² This website is the result of a three-year grant, and includes documentation, articles, and examples related to students working with archival materials, both analog and digital, although does not seem to be adding content anymore.⁷³ Furthermore, the Library of Congress and National Archives also offer lesson plans based on their collections.⁷⁴ While many of these plans are focused on K-12, they also provide a launching point for the development of projects at the undergraduate level or with local collections. There are also discipline-based sites, such as the American Historical Association’s, which is compiling open access digital primary source collections, but does not include lesson plans or other teaching materials.⁷⁵

There are also project showcases, which show how digital tools can be used for specific projects. Omeka, a popular content management system often used for digital primary source projects, offers a showcase of projects using the tool on its website. While these showcases offer an excellent glimpse of digital possibilities, it would be beneficial to include project

⁷¹ Amy Chen, “Methods to Use Digital Resources to Teach Primary Sources,” *Archive Journal*, last modified January 2016, <http://www.archivejournal.net/?p=6554>.

⁷² Chen, “Methods to Use Digital Resources.”

⁷³ Brooklyn Historical Society, “Exercises,” *TeachArchives*, accessed October 22, 2018, <http://www.teacharchives.org/category/exercises/>.

⁷⁴ Chen, “Methods to Use Digital Resources.”

⁷⁵ American Historical Association, “Digital Primary Sources,” accessed October 2018, <https://www.historians.org/teaching-and-learning/digital-history-resources/digital-primary-source> S.

documentation or other helpful information for those interested in building a similar project.⁷⁶ In fact, when sharing the final product or a lesson plan for any project that involves the use of digital tools, the inclusion of technical documentation is an essential part of the package. The technical implications of a specific digital tool can certainly strongly influence the decision to use it in a project, and even if an instructor wants to undertake the challenge, clear documentation could certainly assist others in planning a project timeline.

Finally, the recently released *#DLFteach Toolkit: Lesson Plans for Digital Library Instruction* is a welcome addition to the resource pool for instructors searching for lesson plans and other ideas. A resource from the Digital Library Federation's Digital Library Pedagogy Professional Development and Resource Sharing Subgroup, the *Toolkit* is defined as "openly available, peer-reviewed collection of lesson plans and concrete instructional strategies."⁷⁷ The group also currently provides an environmental scan and resource list of other places that instructors might find useful lesson plans and examples.⁷⁸

The resources listed above are useful starting points for librarians and instructors who are looking for models and examples of teaching with digital primary sources. The variety in examples is important as well, since some instructors may just be looking to see what is possible, others may be looking for complete technical documentation on a project, and still others may want to see what has been done with a specific collection. One of the best methods for learning from existing models may be to actively build in time within the project planning phase to browse the many resources of examples that are available and could lend insight to a new project.

Final Remarks

While this white paper highlights a few existing resources which offer excellent starting points, more work is needed to support instructors in various aspects of teaching with digital primary sources. We aim to begin addressing this gap and to generate further conversation. As a first step, we brought together relevant work by librarians, archivists, historians, and others we felt could provide guidance on teaching with digital primary sources. From searching for sources in the early stages of the research process to correctly citing them in the end product as well as addressing ethical considerations in all this work, we found existing research that, whether or not directly addressing digital primary source instruction, provided useful insights.

⁷⁶ Omeka, "Showcase," accessed November 2018, <https://omeka.org/classic/showcase/>.

⁷⁷ Digital Library Federation Digital Library Pedagogy Professional Development and Resource Sharing Subgroup, *#DLFteach Toolkit: Lesson Plans for Digital Library Instruction* (2019), <https://dlfteach.pubpub.org/toolkit>.

⁷⁸ Digital Library Federation Digital Library Pedagogy Resource Sharing and Professional Skills Development Group, "Environmental Scan," accessed May 2019, https://docs.google.com/spreadsheets/d/12ZfXU75H_xGVvLv-EDTI3-k7vmgFgc-NxLdWaFRqqBY/edit#gid=493330965.

In a previous project, the Teaching with Digital Primary Sources subgroup found little existing research and guidance on teaching with digital primary sources.⁷⁹ However, based on our own experiences and discussions with colleagues, we know that many librarians and other educators are doing considerable work in this area of instruction. More can be done to understand and learn from ongoing work. We hope that future projects might document and build upon successes as well as roadblocks and lessons learned, and even continue the conversation toward defining core competencies for teaching digital primary source literacy.

⁷⁹ Digital Library Federation Digital Library Pedagogy Group, Teaching with Digital Primary Sources Subgroup, “Teaching with Digital Primary Sources: Environmental Scan and Literature Review,” <https://osf.io/a2vcf/>.

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