

Toward Metaliteracy and Transliteracy in the History Classroom: A Case Study Among Underserved Students

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ABSTRACT

In the last twenty years, scholars have reimagined information literacy to better address an overly saturated world of information and the growing participatory culture of Web 2.0. Outside of library and information science (LIS), researchers have promoted transliteracy—the intersection between information, visual, digital, and other literacies—to help students find and assess information. Within the LIS discipline, metaliteracy has provided a foundation to rethink information literacy frameworks, redefining students as creators who produce and share information. Relatively few studies exist, however, on how to leverage literacies in support of student digital scholarship projects. Likewise, digital humanities professors promote metaliteracy in the classroom, yet fewer scholars create digital humanities projects or write case studies about them outside of research institutions, prestigious private colleges, and larger, well-established public history programs. This case study examines a class project for a small undergraduate Introduction to Public History course at Texas A&M University–Corpus Christi (TAMU–CC), a regional university with a comparatively large population of historically underserved students. Working with one archivist, two librarians, and the professor, students established a digital home for the ongoing South Texas Stories oral history project. Through this project, students learned and practiced various aspects of primary source literacy, information literacy, visual literacy, and digital literacy. The authors argue that such digital projects promote both metaliteracy and transliteracy, offering students a holistic learning experience during which they can practice their skills and that these types of projects are feasible at all kinds of institutions, even those with largely historically underserved populations.

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KEY WORDS

Archival literacy, Information literacy, Digital literacy, Metaliteracy, Transliteracy, Digital projects, Omeka, Public history, Hispanic Serving Institution (HSI), Underserved students

In the last twenty years, scholars have reimagined information literacy to better address an overly saturated world of information and the growing participatory culture of Web 2.0. Outside of library and information science (LIS), researchers have promoted transliteracy—the intersection between information, visual, digital, and other literacies—to help students find and assess information.

Relatively few studies exist, however, on how to leverage literacies in support of student digital scholarship projects. With pressing financial concerns and work obligations, students today often rely on community college credit or transferring multiple times. Indeed, 37% of U.S. undergraduate students in fall 2019 were twenty-five years old or older.¹ Given the changing ways that students access higher education, studies that address underserved students, the lack of college readiness, and metaliteracy and transliteracy within the digital humanities will be increasingly important.

In spring 2018, one archivist and two librarians at Texas A&M University–Corpus Christi (TAMU–CC) worked with a professor and a small undergraduate Introduction to Public History class to build a digital home for the ongoing South Texas Stories oral history project.² We argue that such digital projects promote both metaliteracy and transliteracy, offering students a holistic learning environment where they can practice their skills and that these types of projects are feasible at all kinds of institutions, even those with largely historically underserved populations.

Institutional Context

Part of the Texas A&M University system, Texas A&M University–Corpus Christi is a comprehensive regional university and a Hispanic Serving Institution (HSI). As of fall 2018, it had approximately 12,000 students, several hundred of whom were humanities majors, including 156 history majors and minors. The university as a whole predominantly serves the South Texas region, with about 40% of students coming from surrounding counties and 54% of students coming from other Texas counties. South Texas is a predominantly Hispanic region that has suffered from historical education inequalities.³ Therefore, many of our students come from underserved populations; in fall 2018, 48% of students were Hispanic, 33% received Pell Grants, and 20% were first-generation college students. Compared to the rest of the student population, history majors were slightly more diverse. Forty-two percent of history majors received Pell Grants, and 18% were first-generation college students.⁴ This class was representative of the larger history major population. Although these inequities cannot be entirely solved at the classroom level, understanding the academic and nonacademic challenges for underserved students remains central to supporting and encouraging student success.⁵ In this case study,

we show that metaliteracy and transliteracy projects are doable at these types of institutions, despite challenges posed by the lack of available resources.

Literature Review

This literature review argues that a more holistic treatment is needed to inform pedagogical development and that little has been written about digital projects that use these literacies at HSIIs. The two concepts of metaliteracy and transliteracy, taken together, reflect the larger transformation of information literacy in the last twenty years.⁶ The sheer volume of information produced in the digital age, which is “the approximate equivalent of 8.18 million new libraries the size of the Library of Congress,”⁷ as well as the growing participatory culture of Web 2.0 helped give rise to these new pedagogical frameworks. Metaliteracy provided the foundation for revisions to the *Framework for Information Literacy for Higher Education* by the Association of College and Research Libraries (ACRL). The guidelines emphasize metaliteracy as “an overarching set of abilities in which students are consumers and creators of information who can participate successfully in collaborative spaces.”⁸ By comparison, transliteracy focuses not necessarily on students as creators but on their ability to assess and produce across a variety of media: “Transliteracy is the ability to read, write and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio and film, to digital social networks.”⁹ We maintain that projects like the one described in this article provide an opportunity for students to practice and develop mastery in all of these skills.

Despite the growth of literature on transliteracy and guidelines for metaliteracy, relatively few studies exist on how to design and implement such projects.¹⁰ Digital history, digital humanities, and archival studies often encompass both concepts, but pedagogy and case studies from these fields often come from research institutions, prestigious private colleges, and larger, well-established public history programs. Much less has been written on regional public universities with underserved populations. Our experience illustrates that serving these students creates some unique challenges.

Digital projects such as the present case study bridge information literacy, primary source literacy, visual literacy, digital literacy, and general technological literacy.¹¹ Yet, these literacy conversations remain somewhat fragmented, despite calls from within the archives, library, and history professions for transliteracy. To complicate matters further, the compartmentalization of academia in the twentieth century, including the history and library science disciplines, broadened the gap between different types of literacies.¹² Once linked to academic history departments, archival training shifted to library science at the same time that public history programs began to grow in the 1970s.¹³ More recently, public history programs and other digital humanities curricula have fostered a more holistic approach to

information literacy training. In New York University's archives and public history program, Peter J. Wosh, Cathy Moran Hajo, and Esther Katz observed the role of digital technology in transforming archival and public history fields as well as bringing them back together.¹⁴

DIGITAL INFORMATION LITERACY

The idea of "information literacy" has been around since the 1970s,¹⁵ and the concept has morphed since then. The 2015 *Framework for Information Literacy for Higher Education* defines information literacy as "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."¹⁶ Along with transliteracy, the emphasis on metaliteracy is particularly relevant to the project described in this article. The recognition conveyed in the framework that students are not just consumers of information but are also creators and agents within that realm was a significant broadening of the scope of information literacy praxis and has demanded that practitioners, both librarians and teaching faculty, develop new approaches to introducing these concepts to students.

The literature recognizes that new approaches to information literacy should be grounded in specific disciplines. The 2015 Framework for Information Literacy in Higher Education references disciplinarity multiple times, in recognition of the fact that information literacy is not just a generalized concept but also one that must be situated within the context of the knowledge-making activities of a discipline. Collaboration between classroom faculty and librarians is a well-documented strategy for engaging students effectively with information literacy, both generally and in disciplinary contexts.¹⁷ There are also many examples from library and archival literature of discipline-specific information literacy approaches, including some that are particular to the field of history.¹⁸ In all of these studies, the authors stress that there are distinctions of method, types of sources and research tools that make a disciplinary lens essential in scaffolding more advanced information literacy skills for students.

While a number of articles address library services to Hispanic students, and attitudes of Hispanic students toward the academic library, not many specifically address information literacy. Writing in 2008, Catherine Haras, Edward Lopez, and Kristine Ferry investigated the K–12 library experiences of Hispanic students enrolled at California State University, Los Angeles, and the relationship of those experiences to library use in college. They note increased failure rates for Hispanic college students, remarking, "there are serious implications for the education of Latinos and their retention rates when considering both their use of the library and their research skills, since information literacy informs writing, a core academic

literacy.”¹⁹ Marta Bladek, librarian at the John Jay College of Criminal Justice of the City University of New York, recommends that course-integrated instruction be offered and that librarians should collaborate closely with faculty on instruction to help improve outcomes for Hispanic students.²⁰ John Walsh, who compared two different information literacy teaching methods employed in English composition classes at a community college in Arizona, found that Hispanic students who received orientation to the library or information literacy instruction were more likely to use the library again and also performed better on a test of information literacy skills.²¹

The 2015 Framework for Information Literacy also implicitly includes the concept of digital literacy as the use and creation of information that happens within emerging digital platforms. Digital literacy is broadly described as all the cognitive skills required to perform in a digital environment.²² The concept of digital literacy has evolved from education technology, information literacy, media literacy, computer literacy, and digital policy groups. T. Philip Nichols and Amy Stornaiuolo suggest digital literacy is an assemblage or an intersection of these discourses.²³ Different skills, abilities, and competencies are associated with digital literacy by these many research articles and policy reports that address what it means to be digitally literate and how best to support students acquiring this literacy.^{24, 25} For educators attempting to understand the scope of this concept, the *Digital Literacy in Higher Education* report from the NMC Horizon Project offers a starting point to compare the popular models or frameworks created to map out digital literacy.²⁶

When digital projects complement scholarship, pedagogy, and learning, high levels of digital literacy may be required for student success.²⁷ The library can help students succeed by partnering with discipline instructors to scaffold students’ use of digital collaboration, communication, and curation platforms.²⁸ Increasingly, librarians have specialized skills associated with digital literacy as result of the growth of the digital curation curriculum at information schools.²⁹ Addressing the skills gap of undergraduate students is critical when working with first-generation and lower socioeconomic students. While a little research looks specifically at HSIs, other studies show a greater skills gap in these populations.³⁰ Scaffolding at the project level may help increase digital skills for higher education students, but institutional level assessments and training would help to systematically target this deficiency.³¹

PRIMARY SOURCE/ARCHIVAL LITERACY

In 2017, a joint task force of library and archival science professionals from the Association of College and Research Libraries’ (ACRL) Rare Books and Manuscripts Section and the Society of American Archivists (SAA) published *Guidelines for Primary Source Literacy*, which defines primary source literacy as “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.”³² These guidelines identify and detail discrete areas that constitute archival literacy: analytical concepts, ethical concepts, theoretical concepts, and the practical considerations of researching in an archives and using physical and digital archival resources. Within each area, they list or describe multiple facets that build upon each other; the tiered nature of the standards enables instructors to create scaffolding when teaching archival literacy in their courses.

These standards evolved from conversations about theory and competencies in the 2000s and early 2010s. A good deal of archival science literature during this period discusses what is meant by archival literacy and the nuances of its facets. These theory-based conversations created a shift in how the profession thought about instruction. Additionally, the archival profession’s thinking about literacies and how they should inform instruction has been influenced by parallel conversations in the library science discipline.³³ Merinda Kaye Hensley, Benjamin Murphy, and Ellen D. Swain identify a lack of professional literature with regard to addressing pedagogy for teaching how to use primary sources.³⁴ The archival profession has been working to address this gap,³⁵ but it still exists when considering teaching with primary sources in HSIs specifically and underserved populations. As of August 2021, searches of “hispanic serving institutions” paired with “primary source literacy,” “archival literacy,” and “archival instruction” yield no results in either Library and Information Science Abstracts (LISA) or Library Literature & Information Science Full Text. Searches for HSIs paired with “archival instruction” and “archives” returned results, but none were case studies about teaching with primary sources. There are also some articles about digital projects in HSIs, but none involving teaching with archival materials.

All of the existing case studies except for one at Hunter College, City University of New York, took place at institutions with generally better prepared, largely greater resourced students than those at TAMU–CC. These institutions, except for Hunter College, CUNY, also have significantly higher graduation rates than TAMU–CC.³⁶ Additionally, the discussion of methods for teaching primary source literacy has focused on traditional scholarly outputs,³⁷ which are frequently based on physical means and products, such as document analysis exercises, research papers using primary sources, or processing physical archival collections, instead of digital projects.³⁸ Barbara Rockenbach writes about three case studies at Yale University for which archivists collaborated with professors to integrate primary source literacy into the curriculum through inquiry-based learning, two of which use traditional instructional techniques and assignments.³⁹ Likewise, Hensley, Murphy, and Swain discuss a course regularly taught at the University of Illinois at Urbana-Champaign by an archivist in which students write a paper after engaging in research using primary sources and the efforts of archival staff to incorporate document analysis

exercises into visits from rhetoric classes. They state that these instructional examples “focused on the first dimension of archival intelligence, which is signified by a researcher’s (a) understanding of the use of language in archives; (b) internalization of rules; and (c) a researcher’s awareness and assessment of his or her own knowledge and the knowledge of the archivist.”⁴⁰

The number of case studies about courses requiring students to engage in archival research to create digital outputs continues to increase, as do instructors’ interests in digital methodologies.⁴¹ Having students edit Wikipedia articles after conducting archival research and create digital exhibits, digital timelines, and blog posts are all reflected in the literature more than once. These articles illustrate an expanding view of how archival materials can be used and applied.

The archival literature reflects that the discussions about archival literacy and the pedagogy of teaching with primary sources have evolved greatly and will continue to do so as more digital projects are incorporated into actual practice. Additional case studies focused on institutions with sizable populations of students from traditionally underserved populations, such as HSIs, are needed to gain a better understanding of how digital projects incorporating use of primary sources can increase these students’ archival literacy and how archivists and instructors can better address the challenges faced by these students as they do these kinds of projects.

Goals and Course Design

At Texas A&M University–Corpus Christi, HIST 3370: Introduction to Public History is an upper division course populated almost entirely by junior and senior history majors. For this specific class, the professor’s goals were to provide students with a project-based learning environment that would develop their public history skills (research, communication, collaboration) in a digital environment that would provide an additional layer of career skills. While we know that high-impact practices (HIPs) such as student research can be important for retention, since juniors and seniors comprised the class, the goals and design focused on postgraduation and building their professional portfolios.⁴² The following learning objectives guided course and assignment design:

- Gain a better understanding of the nature of historical scholarship on a public level, and practice skills needed for creating that scholarship.
- Learn more about the variety of issues faced by historians working in the public sector.
- Demonstrate information retrieval skills required for historical research.
- Improve written and oral communication skills aimed at public audiences.
- Become familiar with the *Chicago Manual of Style*.
- Acquire a better grounding in US history, and sharpen the ability to critically analyze a range of historical interpretations and arguments.

With learning objectives in mind, the professor designed a large, semester-long project during which students would build the Omeka site for the ongoing South Texas Stories oral history project. This involved developing metadata for existing oral histories and uploading them to the site as well as researching and writing their own digital exhibits for the site. Specific activities are addressed more fully in the next section. The South Texas Stories codirectors hoped to expand the project in future semesters, envisioning a cocreated archive of oral histories, for which students in various courses would conduct oral histories and/or curate digital exhibits. The assignment represented the pilot for bringing students into the project.

The professor met separately with the archivist and two librarians to plan project activities prior to the semester and subsequently throughout the semester as needed. The team did not map out individual literacies to specific tasks or parts of the project during our planning. Rather, these connections became clear to us as we worked through the project and inspired us to write this article and plan future projects more deliberately.

Experiences and Project Activities

To build the South Texas Stories digital archives, students in HIST 3370: Introduction to Public History readied digital files and accompanying materials as well as curated two digital exhibits.

In class, students learned oral history best practices and the basics of audio editing. Most of the students had taken a class with the professor the previous semester in which they conducted an oral history project, so the digital exhibit was meant to build on their earlier work and teach them new skills for public history. With this knowledge, they generated access copies of the audio files for use on the site by mixing tracks from the master files, cutting the ends of tracks or raising the volume of the voices as needed, and deriving the appropriate file format. They worked in groups to transcribe two of the oral histories. Finally, using interviewers' notes, they wrote descriptive metadata for each oral history.

From there, students were ready to start researching and creating the digital exhibits. They created two digital exhibits on the Omeka platform: "The Mexican American Fight for Freedom" and "Environmental Narratives of the Coastal Bend."⁴³ These exhibits provided context for previously recorded oral history interviews conducted by the South Texas Stories project codirectors. Students curated a digital exhibit about each theme that provided context to the oral histories by conducting research, writing short histories on subtopics, and finding related images.

For the digital exhibits, students received instruction on a variety of literacies. They applied archival literacy skills when they conducted their primary source research. The class started with an introduction to the project and analysis of digital exhibits created by students at other universities. Students were introduced to the

historical method and a source analysis framework in their textbook, *Introduction to Public History: Interpreting the Past, Engaging Audiences*.⁴⁴ They put that into practice with a trip to Special Collections, where the archivist led a document analysis exercise, provided context about the purpose of archives and how the project was contributing to preserving and providing access to the historical record, and shared information on the department's procedures for use of its materials and basic archival terminology. During the document analysis exercise, the archivist and students discussed how documents in "collections in cultural heritage institutions reflect and reinforce societal power structures."⁴⁵ Additionally, the librarian liaison for the History Department held a class session for the students on searching for secondary sources in databases. Furthermore, the professor offered instruction on useful digital primary source collections. From there, students researched textual sources on their own, with occasional guidance from the professor, archivist, and librarians.

To strengthen the exhibits, students were also tasked with finding images. According to the *Guidelines for Primary Source Literacy*, "Users need to understand the ethical concepts related to applicable laws and regulations, privacy rights, cultural context, donor agreements, copyright, and intellectual property when working with primary sources."⁴⁶ To help address these student needs, the scholarly communications librarian provided class instruction and a research guide about copyright law and licensing, particularly as they are relevant to this project; intellectual property more broadly; and practical techniques for identifying digital images that are in the public domain or free to use under Creative Commons licensing. Most students found images in Special Collections or on Wikimedia Commons. The archivist provided supplemental one-on-one consultations with students during their visits to Special Collections about how donor agreements and copyright impacted their ability to use images from particular collections. This aspect of the project also addressed multiple standards of the ACRL Visual Literacy Competency Standards for Higher Education.⁴⁷

The final step was to start building the site. Library staff created the new site's shell, added student users, and adjusted settings. In this way, the archivist and librarians acted as hosts, partners, and advocates for the student-created digital humanities project—a role that Ying Zhang, Shu Liu, and Emilee Mathews argue is important for LIS practitioners.⁴⁸ After digital archives and metadata instruction from the archivist, students added the audio files, transcripts, and images to Omeka and created descriptive metadata about the oral histories and images. Finally, they uploaded their text and images, working in two groups to build the digital exhibits. Students went through multiple rounds of revisions before and after putting together the exhibits, thereby learning that public history and academia rely on an iterative revision process to continually improve.

The instructors assumed that the students of traditional college age (approximately eighteen to twenty-two) would have a higher baseline level of digital literacy,

since they grew up with computers and the Internet. Instead, we found that many digital skills were lacking within this population. For example, none of the students had used a cloud storage service to back up their files despite the university providing free storage with Microsoft OneDrive, and many were completely unfamiliar with cloud storage services. We seemingly overestimated the technological experiences of undergraduate students in general.

While the class met in a library computer lab for the metadata and site construction days, computing was needed for other class days as well. It was nearly impossible to have students use their own computers on the non-lab days, as a couple of the students did not own computers, some had older models, and one had a Chromebook, which did not support installation of software, including Audacity, the required audio editing software.⁴⁹ When the professor covered basic audio editing with in-class instruction and a workshop, student struggles were compounded by slow wireless Internet on campus, which made it hard to download and upload large files. The professor ended up doing a one-on-one tutorial with about two-thirds of the students outside of class. This worked well but was only possible because the class contained only twelve students. On other parts of the project, working as a class was hard. When creating the metadata for their images during a class session, for instance, the archivist led them through the process field by field. It was difficult to be sure that students worked at the same pace during this exercise.

Outcomes and Assessment

In completing this semester-long assignment, students gained skills in finding and evaluating sources, writing, and applied technology. The Metaliterate Learner Roles document published on metaliteracy.org illustrates the many different roles a learner can perform.⁵⁰ Many of these roles were performed by students during this digital project. Students acted as authors, collaborators, researchers, publishers, producers, and communicators. Students collaboratively created a digital exhibit published on the public web. Students curated oral history content by editing digital audio files, transforming them into different formats, and publishing them in a digital collection. They also reused archival images by finding, assessing copyright, and publishing them on the web. Students performed primary source research and produced written content for the digital exhibit. The entire class worked together to publish their research and their curated content in a content management system (CMS).

These activities required digital literacy or basic and intermediate digital curation and information communication technology (ICT) skills. Students were required to manage files, transform file formats, edit digital audio, work with basic HTML, and work in a CMS to publish content to the Web. The activities also align with aspects of the ACRL *Framework for Information Literacy for Higher Education*.⁵¹

Creating the digital exhibit demonstrates the “information creation as process” frame. Ethically reusing or curating existing content demonstrates the “information has value” frame. The original research done by students demonstrates “research as inquiry.” Working with archival images, oral histories, and primary sources to produce the digital exhibit required archival literacies. In all, the project required metaliteracy to curate and produce the content of the digital exhibit.

Despite the higher workload for such a project and determining we would make changes for future iterations, all involved felt it was worthwhile. After struggling at times throughout the semester, the students felt proud of their work and more confident in themselves, especially after seeing the final product. Hayden, Hernández-Ojeda, and Finkel note that “All of the[ir] students [at Hunter College, CUNY] began to understand how their voices were contributing to efforts to interrogate public memory. Writing, here, became a direct form of activism, as well as an academic exercise.”⁵² Indeed, at a library showcase event over a year later, several students from the class, including one who had graduated, volunteered to discuss the digital exhibits with university donors. As such, future research and assessment might evaluate the effectiveness of assignments in relation to building students’ confidence and the feeling of belonging to a community.

Toward the end of the semester, we decided to develop a postassessment questionnaire to gauge student learning and ask for student feedback on the project (see Appendix). We designed multiple-choice questions about metadata and digital file preservation to indicate if students had retained these digital literacies taught by the archivist. Some questions addressed students’ retention of information and archival literacies and public history fundamentals. For example, students were asked to define peer-reviewed scholarship and to explain why it is important for public historians to rely on primary sources and peer-reviewed secondary sources. Questions such as “Did you find it easier to work on various parts on your laptop in the classroom or in the computer lab?” were designed to help instructors gather opinions about the course logistics. A final question, “How do you think students in future courses could contribute to the STS Omeka site?” allowed students to envision digital curation as a continuing process as well as contribute to the future vision of the site.

In the postassessment, students illustrated that they had learned valuable skills and literacies. When asked what they found most meaningful, they enjoyed connecting environmental history and Mexican American history to local history and felt they learned a lot about these topics. They also talked a lot about learning digital curation, with one student writing, “I’m not as bad in technology that I thought I was. It’s not that hard after all.” Furthermore, since the project created an online exhibit with students’ names prominently displayed, it made them proud of their work and gave them something to share with their families and add to their résumés. In the postassessments, students shared that they were most challenged

by finding archival and secondary sources, writing (especially directed at public audiences), and working with HTML in Omeka. They also provided thoughtful and helpful suggestions for expanding the South Texas Stories digital archive in the future and for improving the assignment. All of the suggestions received dealt with scheduling and due dates. The students felt rushed during the research phase and the exhibit building phase. They wished for more time to work on the exhibit as a group after team members added their individual contributions.

Analysis and Lessons Learned

For the professor, archivist, and librarians involved, it was a meaningful endeavor both as an engaging class project and as a helpful pilot for the future. Furthermore, the project pointed to some larger implications about teaching, metaliteracy and transliteracy scholarship, and addressing the digital divide. In addition, metaliteracy projects such as this one further the university's vision of student-centered success and career preparation.

This was the first time librarians and archivists at TAMU–CC led a digital multimedia class project of this nature. We felt generally that the project turned out well and that most of the students met learning objectives, but to varying degrees. We also learned a variety of lessons for future projects. Upon reflection, two major themes emerged: planning and preassessment of student skills. Our overall lesson learned, which relates to both themes, was the importance of making sure all our actions in the course were intentional so as to not miss opportunities or provide less student support than needed.

In terms of planning, project “infrastructure” (technology, class sizes, and other practical concerns) could have been dealt with more effectively. Small class size proved essential to the success of this project, but it is often not plausible for larger regional universities. At these institutions, the practicalities of digital projects loom large.

Furthermore, project planning in a collaborative setting offers distinct challenges. Multidisciplinary knowledge lies at the center of successful transliteracy and metaliteracy projects, yet it is often learned through experience. Upon reflection, we realized that we began without having all the connections between pieces in the forefront of our minds. In the future, making sure all our actions in the course are intentional so as to not miss opportunities or to provide less student support than needed seemed critical. In this case study, it would have been helpful for the librarians and archivist to meet with the professor as a group instead of in one-on-one meetings.⁵³ In these meetings, coverage should have been discussed more fully so that team members could have better addressed particular literacies to make the project truly transliterate. For future iterations, we would also rearrange the order of coverage, putting library instruction and secondary source research first, followed

by archival instruction and primary source research, and finally the technical aspects of the project.

Additionally, the team felt that producing more examples and guides for students ahead of time would have helped these novice learners and saved in-class time during the semester. We believe that creating a metadata example, having students work on it outside of class, then finalizing and entering it into Omeka in a quicker lab session would have worked better than trying to lead them through the metadata creation exercise as a group. Likewise, a research guide including instructions on the technological aspects of Omeka that could be used as a reference would potentially have lessened confusion and saved in-class time. Similarly, students did not absorb everything intended from the in-class presentation on copyright and fair use. Therefore, we would consider having the students do a fair use assignment in addition to a class visit by the scholarly communications librarian. Such an assignment would provide the librarian with the opportunity to give individual feedback and really see where students are confused.⁵⁴ Given the multiple elements of curating a digital exhibit, advanced planning, more guides, and more small, hands-on assignments would have better facilitated student learning. Because of the instructors' experiences helping students with copyright and technical confusion, the scholarly communications librarian created a research guide for a different course that was incorporating a digital project for the following semester.⁵⁵

Second, we realized that assessing students' skills, particularly their digital skills, at the beginning and end of the course would enable us to better address their needs and plan for the course more appropriately. However, we also believe our experiences in this course exemplify the digital divides between certain populations. In this case, the holes in the digital literacy skills of the traditional college age students may reflect their largely lower socioeconomic status. Furthermore, the class included some adult students who were either returning to school later in life or attending college for the first time who also lacked many digital literacies. These revelations emphasized the importance of conducting a preassessment of skills, such as a short multiple-choice quiz or a short assignment that gauges students' competency with multiple literacies and technological skills. Furthermore, future research should assess transliteracy adoption at the end of the class.

A future project designed with a preassessment and postassessment would further contribute to pedagogical research about transliteracy and metaliteracy in digital history and public history projects. Those who plan to assign digital projects should not attempt to address every standard for information literacy, archival literacy, and digital literacy. Educators should rather adjust the specific aspects of these literacies and the degrees to which they are addressed based on the nature, needs, and goals of each course.

Conducting a preassessment activity would enable instructors to adjust their lesson plans in pacing and skills taught to better meet student needs. Since students

often are not good judges of themselves, the usefulness of self-reporting is likely to be limited.⁵⁶ Therefore, preassessment questions would need to be crafted with this limitation in mind. Projects that think about research design, including preassessment, prior to the course could enhance the scholarly literature. Hayden, Hernández-Ojeda, and Finkel suggest an additional approach to assessing students' technological competencies during class time through individual assignments. This can be a useful method to ensure that students are paired with peers of a similar level of digital literacy competence during group assignments.⁵⁷ More studies on how students conduct research or that address discipline-specific aspects of metaliteracy and transliteracy and how they are best implemented in the classroom would enrich pedagogy and scholarly understanding in a variety of disciplines.

For students, digital projects incorporating metaliteracy and transliteracy skills have value after graduation. Many information, archival, visual, and digital literacy skills are critically important for students as they navigate today's job market and society. Peter J. Wosh, Cathy Moran Hajo, and Esther Katz observe that digital history is a necessity for public history graduates.⁵⁸ In a survey, their graduates attested to the importance of digital literacy.⁵⁹ Public history professors who have incorporated digital projects into the curriculum have also observed the need for more training.⁶⁰

Furthermore, this case study brings to light larger implications of addressing historical inequalities and the digital divide among underserved students. Public historians also have struggled to address the digital divide. In his case study, Andrew Hurley argues that digital public history projects can help address the persistent digital divide among certain populations.⁶¹ Well-designed public history projects hold the potential to increase digital literacy among students, local community partners, and/or the general public. In our case, a preassessment would have helped consciously address our underserved students and the digital divide. Yet, some larger socioeconomic realities cannot be addressed during a class project or even by an institution of higher education, including unequal access to off-campus, high-speed Internet and computing devices. Despite these drawbacks, a more conscious attempt to serve and to prepare students through digital projects that address metaliteracy and transliteracy could have positive outcomes. More studies, however, remain to be done.

Appendix

Post-project assessment

Name: _____

Digital Exhibit Project Assessment

HIST 4390 (Spring 2018)

What part of this whole project was the most interesting or meaningful to you?
Why?

Why is metadata important?

- A. It helps us identify things.
- B. It helps us find things.
- C. It helps us preserve digital files for the long term.
- D. All of the above.

Which one of the following is NOT helpful in preserving digital files long term?

- A. choosing an open and uncompressed file format
- B. removing spaces and special characters from your file names
- C. making multiple copies and storing them in different locations
- D. putting them on a flash drive and leaving them alone

Describe the purpose of archival files and access files.

Define peer-reviewed scholarship. Why is it important for public historians to rely on primary sources and peer-reviewed secondary sources?

What did you learn about the research process by creating this digital exhibit?

Fix the mistakes in this Chicago-style footnote:

- ¹ Brown, Jen Corrinne. Trout Culture: How Fly Fishing Forever Changed the Rocky Mountain West (Seattle: WA: University of Washington Press 2015), 35.

Did you read the *Introduction to Public History* textbook while working on and writing the exhibit? If so, did you find it helpful?

Did you find it easier to work on various parts on your laptop in the classroom or in the computer lab?

How do you think students in future courses could contribute to the STS Omeka site?

What do you feel like you learned in this project? What would you do differently?

What could I/we do differently?

What was the most challenging or confusing part of the project? What topics should be included on a future Omeka reference guide for students?

NOTES

- ¹National Center for Educational Statistics, "Fast Facts," https://nces.ed.gov/fastfacts/display.asp?id=372#College_enrollment, captured at <https://perma.cc/PP6C-R2W6>. See footnote 50 for other college demographics.
- ²South Texas Stories, "Home," <https://library.tamucc.edu/exhibits/s/sts/page/home>.
- ³For the cultural geography of the region, see Daniel D. Arreola, *Tejano South Texas: A Mexican American Cultural Province* (Austin: University of Texas Press, 2002). For historical educational inequities, see Ricardo Ray Ortegon, "*LULAC v. Richards*: The Class Action Lawsuit that Prompted the South Texas Border Initiative and Enhanced Access to Higher Education for Mexican Americans Living along the South Texas Border" (EdD diss., Northeastern University, 2014); and Teri Flack, "Presentation on South Texas Border Initiatives," <http://www.theeb.state.tx.us/reports/PDF/0592.PDF>, captured at <https://perma.cc/6YTU-QCWA>.
- ⁴TAMU–CC Planning and Institutional Research data request, fall 2018. When looking at national statistics, these groups fall below average in terms of bachelor's degree attainment. In 2017, 34.2% of the population over the age of twenty-five had a bachelor's degree, but only 17.2% of Hispanics. National Center for Education Statistics, Table 104.10, Rates of high school completion and bachelor's degree attainment among persons age 25 and over, by race/ethnicity and sex: Selected years, 1910 through 2017, https://nces.ed.gov/programs/digest/d17/tables/dt17_104.10.asp, captured at <https://perma.cc/R36R-DFNN>. Similar attainment gaps occur for low-income students, with only 51% of Pell Grant recipients receiving a degree compared to 65% of non-Pell Grant recipients. The Education Trust, *The Pell Partnership: Ensuring a Shared Responsibility for Low-Income Student Success* (September 2015), https://edtrust.org/wp-content/uploads/2014/09/ThePellPartnership_EdTrust_20152.pdf, captured at <https://perma.cc/CW49-K3CK>. First-generation students also have both lower enrollment and graduation rates than students whose parents attended some college and students whose parents have a bachelor's degree. One report found that within six years of starting college, 56% of first-generation students received degrees compared to 63% for students whose parents attended some college and 74% for students whose parents had a bachelor's degree. Emily Forrest Cataldi, Christopher T. Bennett, and Xiangli Chen, *First-Generation Students: College Access, Persistence, and Postbachelor's Outcomes*, US Department of Education, Statistics in Brief NCES 2018-421 (February 2018), 8–9, <https://nces.ed.gov/pubs2018/2018421.pdf>, captured at <https://perma.cc/Q74E-V4PE>.
- ⁵See, among others, Jeffrey Sweat et al., "How Does High Impact Practice Predict Student Engagement? A Comparison of White and Minority Students," *International Journal for the Scholarship of Teaching and Learning* 7, no. 2 (2013): 1–24, <https://doi.org/10.20429/ijstol.2013.070217>; and American Association of Colleges and Universities, *A Vision for Equity: Results from the AAC&U's Project Committing to Equity and Inclusive Excellence: Campus Based Strategies for Student Success* (Washington, DC: American Association of Colleges and Universities, 2018).
- ⁶While these concepts overlap, and some scholars have used these terms interchangeably, given their separate origins and connotations, we have chosen to address them as separate.
- ⁷Stephen M. Sloan, "Swimming in the Exaflood: Oral History as Information in the Digital Age," in *Oral History and Digital Humanities: Voice, Access, and Engagement*, ed. Douglas A. Boyd and Mary A. Larson (New York: Palgrave Macmillan, 2014), 177.
- ⁸Association of College and Research Libraries, *Framework for Information Literacy for Higher Education* (Chicago: Association of College and Research Libraries, 2016), <http://www.ala.org/acrl/standards/ilframework>, captured at <https://perma.cc/2KWU-P8XP>. See also Tom Mackey and Trudi Jacobson, "Metaliteracy," Metaliteracy MOOC, metaliteracy.cdlprojects.com/what.htm. The growth of metaliteracy mirrors the rise of knowledge-building pedagogy and computer-supported collaborative learning (CSCL). Both see students as creators. See Marlene Scardamalia and Carl Bereiter, "Knowledge Building: Theory, Pedagogy, and Technology," in *Cambridge Handbook of the Learning Sciences*, ed. R. Keith Sawyer (New York: Cambridge University Press, 2006), 97–118.
- ⁹Sue Thomas et al., "Transliteracy: Crossing Divides," *First Monday* 12, no. 12 (2007): <http://firstmonday.org/article/view/2060/1908>, captured at <https://perma.cc/3RWF-A5CN>.
- ¹⁰Dominique Daniel, "Teaching Students How to Research the Past: Historians and Librarians in the Digital Age," *History Teacher* 45, no. 2 (2012): 261–82, <https://www.jstor.org/stable/23265922>.
- ¹¹Wendy Hayden, María Hernández-Ojeda, and Iris Finkel, "Narrating Memory through Rhetorical Reflections: CUNY Students and Their Archives," *Journal of Interactive Technology and Pedagogy*,

- no. 14 (2019), <https://jitp.commons.gc.cuny.edu/narrating-memory-through-rhetorical-reflections-cuny-students-and-their-archives>, captured at <https://perma.cc/LP3P-HGLV>. For example, Hayden, Hernández-Ojeda, and Finkel assert in the Assignments section that “in addition to learning new ways to engage with content and enhance their digital literacy, students developed visual awareness through the process of finding appropriate images and media to complement textual content, and sometimes to represent content without text” while completing the assignments in their courses, which combine archival research with digital project outcomes.
- ¹² Rebecca Conard, “The Pragmatic Roots of Public History Education in the United States,” *Public Historian* 37, no. 1 (2015): 112–14, <https://doi.org/10.1525/tpb.2015.37.1.105>.
- ¹³ Conard, “The Pragmatic Roots,” 112–114.
- ¹⁴ Peter J. Wosh, Cathy Moran Hajo, and Esther Katz, “Teaching Digital Skills in an Archives and Public History Curriculum,” in *Digital Humanities Pedagogy: Practices, Principles and Politics*, ed. Brett D. Hirsch (Cambridge, UK: OpenBook Publishers, 2012), 79, <https://doi.org/10.11647/OBP.0024>.
- ¹⁵ Information literacy scholars Patricia Senn Breivik and E. Gordon Gee cite a speech given in 1977 by Lee Burchinal, director for the Division of Science Information of the National Science Foundation, as an early appearance of the phrase. Patricia Senn Breivik and E. Gordon Gee, *Information Literacy: Revolution in the Library* (New York: American Council on Education, 1989), 24.
- ¹⁶ Association of College and Research Libraries, *Framework for Information Literacy*.
- ¹⁷ Neyda V. Gilman et al., “A Faculty-Librarian Collaboration Success Story: Implementing a Teach-the-Teacher Library and Information Literacy Instruction Model in a First-Year Agricultural Science Course,” *Library Trends* 65, no. 3 (2017): 339–58, <http://dx.doi.org/10.1353/lib.2017.0005>; Peg Cook and Mary Walsh, “Collaboration and Problem-Based Learning: Integrating Information Literacy into a Political Science Course,” *Communications in Information Literacy* 6, no. 1 (2012): 59–72, <http://dx.doi.org/10.15760/comminfolit.2012.6.1.118>; Stephanie Sterling Brasley, “Effective Librarian and Discipline Faculty Collaboration Models for Integrating Information Literacy into the Fabric of an Academic Institution,” *New Directions for Teaching and Learning* 2008, no. 114 (Summer 2008): 71–88, <https://doi.org/10.1002/tl.318>; Erin Conor, “Engaging Students in Disciplinary Practices: Music Information Literacy and the ACRL Framework for Information Literacy in Higher Education,” *Notes* 73, no. 1 (2016): 9–21, <http://doi.org/10.1353/not.2016.0087>; Lori Arp, Beth S. Woodard, Joyce Lindstrom, and Diana D. Shonrock, “Faculty-Librarian Collaboration to Achieve Integration of Information Literacy,” *Reference and User Services Quarterly* 46, no. 1 (2006): 18–23, <https://doi.org/10.5860/rusq.46n1.18>; Marcia Rapchak and Ava Cipri, “Standing Alone No More: Linking Research to a Writing Course in a Learning Community,” *Portal: Libraries and the Academy* 15, no. 4 (2015): 661–75, <https://doi.org/10.1353/pla.2015.0054>.
- ¹⁸ Ann Grafstein, “A Discipline-Based Approach to Information Literacy,” *Journal of Academic Librarianship* 28, no. 4 (2002): 197–204, [https://doi.org/10.1016/S0099-1333\(02\)00283-5](https://doi.org/10.1016/S0099-1333(02)00283-5); Patrick Ragains, *Information Literacy Instruction that Works: A Guide to Teaching by Discipline and Student Population*, 2nd ed. (Chicago: American Library Association, 2013); Michelle Holschuh Simmons, “Librarians as Disciplinary Discourse Mediators: Using Genre Theory to Move Toward Critical Information Literacy,” *Portal: Libraries and the Academy* 5, no. 3 (July 2005): 297–311, <https://doi.org/10.1353/pla.2005.0041>; Robert Farrell and William Badke, “Situating Information Literacy in the Disciplines,” *Reference Services Review* 43, no. 2 (2015): 319–40, <http://dx.doi.org/10.1108/RSR-11-2014-0052>; Charles A. D’Aniello, “Bibliographic Instruction in History,” in *Teaching Bibliographic Skills in History: A Sourcebook for Historians and Librarians*, ed. Charles A. D’Aniello (Westport, CT: Greenwood, 1993), 69–94; Jenny L. Presnell, *The Information-Literate Historian: A Guide to Research for History Students* (New York: Oxford University Press, 2007); Hayden, Hernández-Ojeda, and Finkel, “Narrating Memory through Rhetorical Reflections”; Elizabeth Davis, Nancee Reeves, and Teresa Saxton, “From Page to Screen and Back Again: Archives-Centered Pedagogy for the 21st Century Writing Classroom,” *Journal of Interactive Technology and Pedagogy*, no. 14 (2019), <https://jitp.commons.gc.cuny.edu/from-page-to-screen-and-back-again-archives-centered-pedagogy-for-the-21st-century-writing-classroom>, captured at <https://perma.cc/TS5Y-7K73>.
- ¹⁹ Catherine Haras, Edward M. Lopez, and Kristine Ferry, “(Generation 1.5) Latino Students and the Library: A Case Study,” *The Journal of Academic Librarianship* 34, no. 5 (2008): 425, <https://doi.org/10.1016/j.acalib.2008.06.004>.
- ²⁰ Marta Bladek, “Latino Students and the Academic Library: A Primer for Action,” *The Journal of Academic Librarianship* 45, no. 1 (2019): 50–57, <https://doi.org/10.1016/j.acalib.2018.12.001>.

- ²¹ John Walsh, "The Effects of Targeted, Connectivism-Based Information Literacy Instruction on Latino Students Information Literacy Skills and Library Usage Behavior" (PhD diss., University of Arizona, 2013).
- ²² Yoram Eshet-Alkalai, "Digital Literacy: A Conceptual Framework for Survival Skills in the Digital Era," *Journal of Educational Multimedia and Hypermedia* 13, no. 1 (2004): 94, <https://www.learntechlib.org/primary/p/4793>.
- ²³ T. Philip Nichols and Amy Stornaiuolo, "Assembling 'Digital Literacies': Contingent Pasts, Possible Futures," *Media and Communication* 7, no. 2 (2019): 17–18, <https://doi.org/10.17645/mac.v7i2.1946>; Marcus Leaning, "An Approach to Digital Literacy through the Integration of Media and Information Literacy," *Media and Communication* 7, no. 2 (2019): 4–13, <https://doi.org/10.17645/mac.v7i2.1931>.
- ²⁴ See Robin Goodfellow, "Literacy, Literacies and the Digital in Higher Education," *Teaching in Higher Education* 16, no. 1 (2011): 131–44, <https://doi.org/10.1080/13562517.2011.544125>; Jeffrey Kenton and Barbara Blummer, "Promoting Digital Literacy Skills: Examples from the Literature and Implications for Academic Librarians," *Community and Junior College Libraries* 16, no. 2 (2010): 84–99, <https://doi.org/10.1080/02763911003688737>.
- ²⁵ See Maria Spante, Sylvana Sofkova Hashemi, Mona Lundin, and Anne Algers, "Digital Competence and Digital Literacy in Higher Education Research: Systematic Review of Concept Use," *Cogent Education* 5, no. 1 (2018): 1–21, <https://doi.org/10.1080/2331186X.2018.1519143>.
- ²⁶ See Bryan Alexander, Samantha Adams Becker, Michele Cummins, and Courtney Hall Giesinger, *Digital Literacy in Higher Education, Part II: An NMC Horizon Project Strategic Brief* (Austin: The New Media Consortium, 2017), <https://library.educause.edu/-/media/files/library/2017/8/2017nmcstrategicbriefdigitalliteracyheii.pdf>, captured at <https://perma.cc/EU82-HHCG>.
- ²⁷ Klara Nelson, Marcy Courier, and Gilbert W. Joseph, "Teaching Tip: An Investigation of Digital Literacy Needs of Students," *Journal of Information Systems Education* 22, no. 2 (2011): 103–4; Amy Stornaiuolo, Anna Smith, and Nathan C. Phillips, "Developing a Transliteracies Framework for a Connected World," *Journal of Literacy Research* 49, no. 1 (2016): 74, <https://doi.org/10.1177/1086296X16683419>.
- ²⁸ Melissa N. Mallon, "Integrating Digital Literacies in the Curriculum," in *The Pivotal Role of Academic Librarians in Digital Learning* (Santa Barbara, CA; Denver, CO: Libraries Unlimited, 2017), 34–38; Ying Zhang, Shu Liu, and Emilee Mathews, "Convergence of Digital Humanities and Digital Libraries," *Library Management* 36, nos. 4–5 (2015): 371–74, <https://doi.org/10.1108/LM-09-2014-0116>.
- ²⁹ For more information about the development and application of digital curation competencies by library professionals, see Jeonghyun Kim, Edward Warga, and William Moen, "Competencies Required for Digital Curation: An Analysis of Job Advertisements," *International Journal of Digital Curation* 8, no. 1 (2013): 66–83, <https://doi.org/10.2218/ijdc.v8i1.242>; Alex H. Poole, "'A greatly unexplored area': Digital Curation and Innovation in Digital Humanities," *Journal of the Association for Information Science and Technology* 68, no. 7 (2017): 1772–81, <https://doi.org/10.1002/asi.23743>.
- ³⁰ Nicole A. Buzzetto-Hollywood et al., "Addressing Information Literacy and the Digital Divide in Higher Education," *Interdisciplinary Journal of e-Skills and Lifelong Learning* 14 (2018): 77–93, <https://doi.org/10.28945/4029>; Antar A. Tichavakunda and William G. Tierney, "The 'Wrong' Side of the DIVIDE: Highlighting Race for Equity's Sake," *The Journal of Negro Education* 87, no. 2 (2018): 110, <https://doi.org/10.7709/jnegroeducation.87.2.0110>.
- ³¹ Ah Jeong Hong and Hye Jeong Kim, "College Students' Digital Readiness for Academic ENGAGEMENT (DRAE) SCALE: Scale Development and Validation," *The Asia-Pacific Education Researcher* 27, no. 4 (2018): 303–12, <https://doi.org/10.1007/s40299-018-0387-0>; Gamze Öncül, "Defining the Need: Digital Literacy Skills for First-Year University Students," *Journal of Applied Research in Higher Education* 13, no. 4 (2021), <https://doi.org/10.1108/jarhe-06-2020-0179>.
- ³² SAA-ACRL/RBMS Joint Task Force on the Development of Guidelines for Primary Source Literacy, *Guidelines for Primary Source Literacy* (Chicago: Society of American Archivists, 2018), 1–2.
- ³³ Merinda Kaye Hensley, Benjamin Murphy, and Ellen D. Swain note "Librarians, in recent years, have joined archival colleagues in embracing primary sources as an effective and engaging resource for developing students' critical thinking and analytical abilities." Merinda Kaye Hensley, Benjamin Murphy, and Ellen D. Swain, "Analyzing Archival Intelligence: A Collaboration Between Library

- Instruction and Archives, Communications in Information Literacy," *Communications in Information Literacy* 8, no. 1 (2014): 97, <https://doi.org/10.15760/comminfolit.2014.8.1.155>.
- ³⁴ Hensley, Murphy, and Swain, "Analyzing Archival Intelligence," 97.
- ³⁵ See Christopher J. Prom and Lisa Janicke Hinchliffe, eds. *Teaching with Primary Sources* (Chicago: Society of American Archivists, 2016), which includes information on all facets of instruction including instructional design, logistical concerns, and assessment planning as well as provides templates of lesson plans and document analysis exercises; In 2015, 2016, 2017, and 2018, SAA's Reference, Access, and Outreach Section held an Unconference on Teaching with Primary Sources on the Tuesday before the organization's annual meeting. See 2015, <http://teachwithstuff.org/tps-workshops-unconference-2015aug-saa-conference>; 2016, <http://teachwithstuff.org/tps-unconference-2016aug-atlanta>; 2017, <http://teachwithstuff.org/tps-unconference-2017july-portland>; 2018, <http://teachwithstuff.org/tps-expo-2018august-washingtondc>.
- ³⁶ According to the latest College Scorecard, TAMU--CC's graduation rate for first-time, full-time undergraduate students who graduated within six years was 46%. All other institutions represented in the case studies reference in this section of the literature review have a graduation rate of at least 80%, except Hunter College, CUNY, whose graduation rate is 52%. US Department of Education, College Scorecard, <https://collegescorecard.ed.gov>.
- ³⁷ There are also case studies that show students engaging with primary sources produce "nontraditional," nondigital modes of scholarship, specifically zines. See Davis, Reeves, and Saxton, "Archives-Centered Pedagogy." In Saxton's first-year writing course, the final project was writing and performing reenactments of historical scandals. In Reeves's first-year writing course, students produced two short papers but also two collaborative apazines (amateur press association zines); and Jennifer Needham and Jeanann Croft Haas, "Collaboration Adventures with Primary Sources: Exploring Creative and Digital Outputs," *Journal of Interactive Technology and Pedagogy*, no. 14 (January 2019): <https://jitp.commons.gc.cuny.edu/collaboration-adventures-with-primary-sources-exploring-creative-and-digital-outputs>, captured at <https://perma.cc/7DBK-TBDC>.
- ³⁸ In 2003, Elizabeth Yakel and Deborah Torres defined *artifactual literacy* as the ability to interpret and analyze primary sources and *archival intelligence* as an understanding of archival principles, theory, and practice as well as the skills necessary to apply that knowledge to primary source research. They proposed a user expertise model that stated domain knowledge, artifactual literacy, and archival intelligence as all being needed to work successfully with primary sources. See Elizabeth Yakel and Deborah Torres, "AI: Archival Intelligence and User Expertise," *American Archivist* 66, no. 1 (2003): 51–78, <https://doi.org/10.17723/aarc.66.1.q022h85pn51n5800>; Sammie Morris, Lawrence Mykytiuk, and Sharon Weiner note in their 2014 article that "no standard identifies the archival research competencies college history students should possess." See Sammie Morris, Lawrence Mykytiuk, and Sharon Weiner, "Archival Literacy for History Students: Identifying Faculty Expectations of Archival Research Skills," *American Archivist* 77, no. 2 (2014): 394, <https://doi.org/10.17723/aarc.77.2.j270637g8q11p460>. In a 2015 article, these same authors attempt to address this issue by identifying key archival literacy concepts for undergraduate history majors: accurately conceive of primary sources; locate primary sources; use a research question, evidence, and argumentation to advance a thesis; obtain guidance from archivists; demonstrate acculturation to archives; and follow publication protocols. See Sammie Morris, Lawrence Mykytiuk, and Sharon Weiner, "Archival Literacy Competencies for Undergraduate History Majors," *American Archivist* 78, no. 1 (2015): 154–180, <http://dx.doi.org/10.17723/0360-9081.78.1.154>. This article addresses important theoretical concepts while also creating a bridge to practical application for a long-standing patron base of archival usage and instruction. The idea of tiered archival literacy skills is present in all three of these articles as well as the *Guidelines for Primary Source Literacy* and *Teaching with Primary Sources*.
- ³⁹ One case study incorporates document analysis exercises; a second incorporates research using primary sources and requires a written report as a final product. See Barbara Rockenbach, "Archives, Undergraduates, and Inquiry-Based Learning: Case Studies from Yale University Library," *American Archivist* 74, no. 1 (2011): 295–311, <https://doi.org/10.17723/aarc.74.1.mml4871x2365j265>.
- ⁴⁰ Hensley, Murphy, and Swain, "Analyzing Archival Intelligence," 97.
- ⁴¹ For example, in their article "Collaboration Adventures with Primary Sources: Exploring Creative and Digital Outputs," Jennifer Needham and Jeanann Croft Haas report that "many faculty have expressed interest in using digital humanities methods to provide opportunities for students to share research as an alternative to the traditional research paper." They describe two courses at the University of

Pittsburgh where students categorized materials from Archives and Special Collections using tags they developed and then situated the materials in a digital timeline. Additionally, they describe a student researcher who conducted research in a hidden collection and created data visualizations. See Digital Humanities Application and Independent Student Research and Digital and Creative Outputs sections; C. L. Nimer and J. G. Daines III wrote a case study about their development and teaching of a course at Brigham Young University in which they required students to present on archival history, conduct archival research, write a research paper and methodology responses, and participate in an online reading blog. See C. L. Nimer and J. G. Daines III, "Teaching Undergraduates to Think Archival," *Journal of Archival Organization* 10, no. 1 (2012): 4–44, <https://doi.org/10.1080/15332748.2012.680418>; Barbara Rockenbach discusses students curating digital exhibits using primary sources from Yale's Special Collections and Archives; Pamela VanHaitsma outlines "a pedagogical approach in which students simultaneously examine traditional archival materials from the past and create new online archives of related materials from their lives." See Pamela VanHaitsma, "New Pedagogical Engagements with Archives," *College English* 78, no. 1 (2015): 34–55, <https://www.jstor.org/stable/44075096>; Wendy Hayden, María Hernández-Ojeda, and Iris Finkel describe having students at Hunter College, City University of New York, conduct archival research and share their findings using content management systems and digital timeline software, "Narrating Memory through Rhetorical Reflections," Introduction; Rebekah Fitzsimmons and Suzan Alteri describe a course at Georgia Institute of Technology in which undergraduate students conducted archival research and two of their products were a blog post and a Wikipedia article. See Rebekah Fitzsimmons and Suzan Alteri, "Possibly Impossible: Or, Teaching Undergraduates to Confront Digital and Archival Research Methodologies, Social Media Networking, and Potential Failure," *Journal of Interactive Technology and Pedagogy*, no. 14 (January 2019), <https://jitp.commons.gc.cuny.edu/possibly-impossible-or-teaching-undergraduates-to-confront-digital-and-archival-research-methodologies-social-media-networking-and-potential-failure>, captured at <https://perma.cc/4HCV-P3S9>; Ariella Rotramel, Rebecca Parmer, and Rose Oliveira share their experiences at Connecticut College working with a course in which students edited Wikipedia articles after conducting archival research. See Ariella Rotramel, Rebecca Parmer, and Rose Oliveira, "Engaging Women's History through Collaborative Archival Wikipedia Projects," *Journal of Interactive Technology and Pedagogy*, no. 14 (January 2019), <https://jitp.commons.gc.cuny.edu/engaging-womens-history-through-collaborative-archival-wikipedia-projects>, <https://perma.cc/TQ2S-9J3X>; Elizabeth Davis's course at the University of Georgia "asked students to use rare books from the collection as inspiration for an innovative digital textual design concept" and then to create a digital exhibit, Davis, Reeves, and Saxton, "From Page to Screen and Back Again."

⁴² For HIPs and retention, see Sweat et al., "How Does High Impact Practice Predict Student Engagement?," 1–24.

⁴³ Omeka is an open-source web-publishing platform, omeka.org; For more on Omeka as a digital humanities platform, see Linda Rath, "Omeka.net as a Librarian-led Digital Humanities Meeting Place," *New Library World* 117, nos. 3–4 (2016): 158–72, <https://doi.org/10.1108/NLW-09-2015-0070>.

⁴⁴ Cherstin M. Lyon, Elizabeth M. Nix, and Rebecca K. Shrum, *Introduction to Public History: Interpreting the Past, Engaging Audiences* (New York: Rowman and Littlefield, 2017), chs. 1–2.

⁴⁵ SAA-ACRL/RBMS Joint Task Force on the Development of Guidelines for Primary Source Literacy, 3.

⁴⁶ SAA-ACRL/RBMS Joint Task Force on the Development of Guidelines for Primary Source Literacy, 3.

⁴⁷ Association of College and Research Libraries. *ACRL Visual Literacy Competency Standards for Higher Education* (Chicago: Association of College and Research Libraries, 2011), <http://www.ala.org/acrl/standards/visual literacy>, captured at <https://perma.cc/SJF3-HPK8>. The ACRL standards define visual literacy as "a set of abilities that enables an individual to effectively find, interpret, evaluate, use, and create images and visual media." Additionally, they articulate the importance of visual literacy skills as "equip[ing] a learner to understand and analyze the contextual, cultural, ethical, aesthetic, intellectual, and technical components involved in the production and use of visual materials." The digital project in this course explicitly addressed standards 1, 2, 3, 4, and 7.

⁴⁸ Zhang, Liu, and Mathews, "Convergence of Digital Humanities and Digital Libraries," 372.

⁴⁹ For more information, see <https://www.audacityteam.org>.

⁵⁰ Trudi Jacobson, Tom Mackey, and Kelsey O'Brien, "Metaliterate Learner Roles," *Metaliteracy*, 2018, <https://metaliteracy.org/ml-in-practice/metaliterate-learner-roles>, captured at <https://perma.cc/4R9M-TV23>.

- ⁵¹ Association of College and Research Libraries, *Framework for Information Literacy for Higher Education*.
- ⁵² Hayden, Hernández-Ojeda, and Finkel, "Narrating Memory through Rhetorical Reflections," Assignments section.
- ⁵³ For a larger discussion of the challenges in collaboration, see Zhang, Liu, and Mathews, "Convergence of Digital Humanities and Digital Libraries."
- ⁵⁴ See Alston Cobourn, "Spreading Awareness of Digital Preservation and Copyright via Omeka-based Projects," *Assignments: The Journal of Interactive Technology and Pedagogy*, (March 2016): <https://jitp.commons.gc.cuny.edu/spreading-awareness-of-digital-preservation-and-copyright-via-omeka-based-projects>, captured at <https://perma.cc/YVN3-LFZA>. Cobourn's Appendix 1 outlines three possible versions of a fair use assignment. Another option would be to require each to have a private copyright-related consultation with the archivist or librarian to talk through these issues as related to their image.
- ⁵⁵ Edward Warga, "HIST 4350—Narratives of World War II in the Pacific: Building a Digital Exhibit," Bell Library Research Guides, 2018, <https://guides.library.tamucc.edu/c.php?g=884064&cp=6352688>. The research guide includes information on resources for scholarly research, technical documentation about building a digital exhibit, and copyright.
- ⁵⁶ Don Latham and Melissa Gross, "What They Don't Know CAN Hurt Them: Competency Theory, Library Anxiety, and Student Self-Assessments of Their Information Literacy Skills," in *ACRL Thirteenth National Conference, Baltimore, Maryland, March 29–April 1, 2007*, 277 (Chicago: Association of College and Research Libraries, <http://www.ala.org/acrl/sites/ala.org/acrl/files/content/conferences/confsandpreconfs/national/baltimore/papers/277.pdf>, captured at <https://perma.cc/YV9R-CNS2>. This article cites competency theory, which "predicts that students with a high level of information literacy skills are more likely to question their ability to perform, while students with a low level of skills are more likely to overestimate their ability."
- ⁵⁷ For an example of the work being done to assess digital literacy skills in students, see Younghee Noh, "A Study on the Effect of Digital Literacy on Information Use Behavior," *Journal of Librarianship and Information Science* 49, no. 1 (2016): 26–56, <http://dx.doi.org/10.1177/0961000615624527>; also see the Librarian Collaboration section of Hayden, Hernández-Ojeda, and Finkel's article for information on how assessing students' technological competencies during class time through individual assignments can be a useful method to ensure that students are paired with students of a similar level of digital literacy competence during group assignments.
- ⁵⁸ Wosh, Hajo, and Katz, "Teaching Digital Skills in an Archives and Public History Curriculum," 80.
- ⁵⁹ Wosh, Hajo, and Katz, "Teaching Digital Skills in an Archives and Public History Curriculum," 94.
- ⁶⁰ Allison C. Marsh, "Omeka in the Classroom: The Challenges of Teaching Material Culture in a Digital World," *Literary and Linguistic Computing* 28, no. 2 (2013): 280, <https://doi.org/10.1093/lc/fqs068>. Interestingly, Marsh also described being "shocked" that her public history students had "little interest in the digital world as part of their professional training" (279).
- ⁶¹ Andrew Hurley, "Chasing the Frontiers of Digital Technology: Public History Meets the Digital Divide," *Public Historian* 38, no. 1 (2016): 88, <https://doi.org/10.1525/tph.2016.38.1.69>.

ABOUT THE AUTHORS



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