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10 | **Fostering Assessment Strategies for Digital Pedagogy through Faculty–Librarian Collaborations: An Analysis of Student-Generated Multimodal Digital Scholarship**

Harriett E. Green

INTRODUCTION

What kind of learning occurs when a student creates a digital video log (“vlog”) of interviews and integrates digital footage into their project narrative? How can we assess learning outcomes when a student tells a historical narrative via a website featuring content in five different media formats as well as text?

These are some of the questions being asked by instructors of courses across humanities disciplines, as they increasingly incorporate digital humanities tools and methodologies into their curricula. This transformation in higher education in the humanities reveals a rising emphasis on competencies in digital literacies and has critical implications for librarians in not only the methods of teaching of information literacy, but on a larger scale, the role of librarians in teaching and learning for the humanities. This chapter examines how collaborations that teach digital humanities tools and methodologies facilitate the practice of digital pedagogy and digital literacy outcomes in the classroom for undergraduate and graduate humanities courses. This chapter presents analysis of librarian–faculty collaborations in digital pedagogy through a series of case studies on collaborations between the author and faculty members, and content analysis of a sample of student websites from these case studies. From this analysis, the author considers potential learning outcomes and active assessment tools from these digital pedagogy practices and assessments that promote digital literacy and information literacy integrally with curricular outcomes.

BACKGROUND

There are multiple definitions of digital literacy, but the operating definition for this study is drawn from a 2010 *Digital Literacies* report published by the London Knowledge Lab:

The awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process.¹

As increasingly more materials for humanities are digitized and electronic resources become embedded in humanities research and teaching, it is imperative for students to learn the tools and methodologies for navigating and manipulating digital data for scholarly investigation. The teaching initiatives, learning objects, and analytic tools for digital humanities profiled in this chapter, as well as many other digital tools adapted for educational purposes, all empower students and faculty to build digital literacy skills in creating, analyzing, and preserving digital manifestations of the textual and visual materials they study in their research. As Jones-Kavalier and Flannigan articulate, “Using the same skills used for centuries—analysis, synthesis and evaluation—we must look at digital literacy as another realm within which to apply elements of critical thinking.”² This formulation of digital literacies corresponds with “metaliteracy,” a concept that reshapes information literacy in light of the transformation in teaching and learning with digital resources, tools, and associated competencies.

As defined by Thomas Mackey and Trudi Jacobson, metaliteracy is an overarching framework for integrating information literacy with other literacies such as media literacy, digital literacy, and visual literacy. In a learning environment guided by principles of metaliteracy, the framework provides “an integrated and all-inclusive core for engaging with individuals and ideas in digital information environments.”³ Metaliteracy and digital literacies thus integrate together and provide a convergence where librarians and instructors in digital humanities can critically collaborate on learning outcomes and pedagogical strategies.

Digital pedagogy offers an innovative path to cultivate this suite of competencies for digital literacies in humanities students and scholars. It provides an experiential, discovery-oriented learning environment that uses “electronic elements to enhance or to change to [sic] experience of education.”⁴ Jesse Stommel also notes that “[s]tudents and learners should be central in mapping the terrain of digital pedagogy. Educational institutions should dedicate themselves to supporting this work. . . . Digital pedagogy is less about knowing and more a rampant process of unlearning, play, and rediscovery.”⁵

Digital humanities in the classroom is a rapidly growing area for pedagogical innovations in the humanities, and it has taken diverse forms: in the past two decades, pioneering projects such as the *Walt Whitman Archive*, *Documenting the American South*, and *American Studies Crossroads* served as DH learning environments for graduate assistants as well as large research projects.⁶ Today, a host of studies and teaching initiatives provides diverse models for teaching digital humanities methods and tools to graduate students and undergraduates, such as the Praxis Program at the University of Virginia for graduate students, NITLE seminars on teaching digital humanities in liberal arts colleges, UCLA Digital Humanities Center, the University of Victoria’s Maker Lab in the Humanities, as well as many experimental teaching methods using Zotero, WordPress, Google Earth, or video game software.⁷ The theoretical aspects and implications of digital tools in the humanities classroom have been considered by a number of scholars as well, but few studies have looked at the role of librarians in the teaching and learning for digital humanities.⁸

A number of scholars, such as Posner, Muñoz, and Sula, have considered the role of libraries in digital research workflows.⁹ The role of librarian in collaborating with faculty on digital pedagogy strategies is multifaceted. With the advent of digital humanities centers, media commons, and other library-based initiatives to support digital scholarship—such as the University of Virginia Libraries’ Scholars’ Lab, Emory University Libraries’ Center for Digital Scholarship, University of Illinois at Urbana–Champaign’s Scholarly Commons, Indiana University Libraries’ Scholars Commons, and University of Kansas’s Institute for Digital Research in the Humanities—librarians are explicitly pursuing collaborations. There is a rich and growing foundation of teaching collaborations between librarians and faculty to integrate DH tools and concepts into the undergraduate and graduate classrooms.

DIGITAL PUBLISHING: PLATFORMS YESTERDAY AND TODAY

Digital humanities research pioneered new modes of publication for the humanities, as a notable percentage of this research was primarily published through online platforms. Numerous works of digital scholarship have been mounted on websites, but with the explosion of Internet use in the past two decades and the exponential growth in online publishing and writing, digital scholars now have a host of options for publishing their works of digital scholarship.

WordPress and Drupal are among the most prominent general-use online publishing platforms used for digital humanities research and teaching. In recent years, however, researchers have developed several other platforms specifically for digital scholarship. While these platforms were developed with professional research publication and scholarship in mind, curricular instruction and digital pedagogy have swiftly emerged as a largely unforeseen adaptation of these tools. Two of the most prominent digital scholarship tools today that were used in these case studies are Omeka and Scalar.

Omeka is a digital publishing software package (<http://omeka.org>) developed by digital humanities researchers at George Mason University's Center for History and New Media. Originating from a Swahili word meaning "to lay out wares," Omeka enables scholars and students to build interactive online exhibitions that display digital content (videos, audio, images, and digitized documents) along with ancillary text. It has been widely used by museums, libraries, archives, and scholars across disciplines for creating digital exhibitions, showcasing scholarly research, augmenting library collections and catalogs, and complementary content for special projects. Omeka has a lightweight web-hosted version (www.omeka.net) that is better suited for classroom use and was used for the case studies in this chapter.

Scalar (<http://scalar.usc.edu>) is an online publishing tool originally developed by the Alliance for Visual Culture at the University of Southern California for the electronic journal *Vectors*.¹⁰ Scalar supports embedded video, audio, and other types of multimedia, along with functionalities for visualizations, annotations, extensive metadata tagging, and direct importation of content from partner media archives such as the Internet Archive, Vevo, YouTube, and Critical Commons, a media archive of fair use content. An on-campus workshop for Scalar with the University of Southern

California's Professor Tara McPherson as the visiting instructor served as the catalyst for the author's collaborations with faculty on employing this tool in the classroom.

WordPress (<http://wordpress.org>) is a widely used open commercial publishing tool that, according to a 2014 W3 Techs web technology survey report, serves as the content management system for approximately 61 percent of the websites on the Internet.¹¹ The web-hosted version of WordPress (www.wordpress.com) has been increasingly used in pedagogical settings as well.¹²

Together, these platforms constitute a thought-provoking approach to building learning infrastructures that critically integrate real-world applications with multimodal, complex methods of teaching and learning.

METHODS

This analysis begins with four case studies of the author collaborating with faculty and instructors to teach digital humanities tools in undergraduate and graduate courses. These courses include a graduate seminar in Library and Information Science, a two-course collaboration with a Media and Cinema Studies faculty member, an undergraduate History seminar, and a three-section undergraduate English and Rhetoric course. Then a content analysis of a selected sample of student projects from these courses is presented to explore the development of digital literacies through the faculty–librarian collaborations to teach digital humanities tools and methodologies.

The content analysis examines a sample of twenty-eight student-generated digital projects and reflective essays drawn both from these courses as well as a History undergraduate seminar's Omeka website for which the author advised. Via content analysis of the student-generated digital content and an analysis of the case studies, this study argues that the documentation and artifacts of student digital scholarship, drawn from a range of disciplines and education levels, offer unprecedented insights into how students develop digital literacies.

CASE STUDIES

To establish the context of these student-generated digital publications, the following brief case studies explain how the process of building sites occurred in each class.

LIBRARY AND INFORMATION SCIENCE

Context

The author collaborated with a Graduate of Library and Information Science instructor who sought to incorporate the digital publishing platform of Omeka into her Public History course. The seminar course was offered online with an on-campus component, and the goals of the course were to teach students how to create research projects from the viewpoint of public historians and information professionals. Omeka.net offered a platform through which these students could share their research with a larger audience.

Process

The online learning environment necessitated that the LIS graduate students be primarily self-directed in the cultivation of their skills with the digital platform: The author gave a course lecture on digital curation and introduced the students to various methods and tools for digital scholarship and publishing. Then the students engaged with the author and other University of Illinois librarians in a daylong in-person workshop that covered various issues in archival research, digital publishing, and how to use Omeka.net.

The author provided research and tool assistance to the graduate students via the online forums in the Moodle LMS used for the course, telephone reference, and email. The most significant challenge emerged in translating graduate student research into a multimodal digital artifact. The students were familiar and expert in presenting their research in an essay, but digital publication was entirely different in terms of orientation and structure. The students gradually built Omeka.net sites that brought together the archival materials gathered from the University of Illinois Archives, libraries and archives in their home locations, and online materials from digital collections.

MEDIA AND CINEMA STUDIES

Context

The author collaborated with a faculty member on two media and cinema studies courses to teach Scalar to the students as a platform for final research projects. For each course, the students built Scalar sites that displayed their

research on their chosen topic in the area of media ethics and information networks. The initial introduction to the tools was in the form of two-hour workshops for each course that incorporated active and hands-on learning objects such as worksheets that asked the students to think through the search and evaluation process of gathering digital media and how to conceptualize the structure of Scalar. The guiding conceptual framework throughout the sessions was the practice of digital curation and publication.

Process

The assignments that guided the students in building the sites were sharply proscribed. The undergraduates were only slightly constrained by a familiarity with the structure of a standard essay (especially compared to the author's experiences with graduate students in other case studies as well as other courses), but the process of building out the website had to be simplified. To introduce the students to Scalar, the assignments specified how many pages, items, and annotations they had to create to build minimally effective Scalar sites. This framework enabled the students to focus on the research and on finding the best digital content for their research topic.

ENGLISH

Context

A graduate student approached the author as they were seeking to try new teaching styles and methods that engaged digital tools. This student was one of three teaching assistants (TAs) for an introductory composition course focused on the theme of documentary films. The author and TA collaborated to adapt the extremely standardized composition syllabus to incorporate Omeka as a writing platform. This graduate student then spoke with the other two TAs for the course, who also agreed to try using Omeka for the final project assignment in their sections as well.

Process

The TAs collaborated with the author in varying levels of support and engagement with Omeka. The TA who initiated the collaboration with the author arranged multiple workshops for each of the three assignments to guide students through the process of building an Omeka site. The Omeka

workshop structure employed the scaffolding method to build different aspects of Omeka into the required essays. The first essay included uploading items into Omeka, the second essay required students to create a collection from the items they uploaded into Omeka.net, and the third essay incorporated the process of building a page in Omeka that displayed at least one of the items they uploaded. The other two TAs, however, requested that the instruction on Omeka for their sections be condensed into two brief workshops of approximately 30 minutes each.

This incorporation of Omeka into an introductory composition course critically ties into multimodal writing theory and how digital writing tools can enhance students' learning of core composition principles and engagement with writing practices. The reframing of writing as a synthesis between visual evidence and text helped the students build and sustain arguments about their topics. It also allowed students to experience what it means to be researchers, scholars, and digital curators.

CONTENT ANALYSIS

The final projects produced by the students evidenced how they were able to juxtapose digital media with the text (often pulled from their research papers) to reach an effective synthesis of media and text in an online exhibition. A content analysis of the student sites reveals patterns in the creation, structure, and approach to student-generated publications and the key factors that are core to an effectively built digital project.

METHODOLOGY

The author employed a purposeful sample by working with course instructors to compile a list of students from six courses who participated in collaborations between the author and the course instructors to construct final projects on a digital platform. These courses include a graduate course in library and information science, undergraduate English course, three Media and Cinema Studies courses, and an undergraduate seminar in History. The author contacted 155 students for permission to analyze their completed digital projects. Forty-nine students consented to participate. A number of the students' project sites were created by groups. A total of twenty-eight student project sites qualified as objects of analysis for this study. The project sites were built on the web-based digital platforms of Omeka.net, WordPress, and Scalar.

The author conducted a content analysis that examined particular facets of the sites to determine how well the students adapted the digital platform for scholarly use. Recorded indicators included numerical calculations of pages and sections, the numbers of different formats of media, the extent to which various multimedia formats were incorporated, and the number of metadata records, captions, references, and annotations as markers of how effectively the students positioned their work as a scholarly product compared to a simple website.

ANALYSIS

Of the twenty-eight student project sites analyzed, sixteen were created with Omeka.net, three sites were built in WordPress, and eight sites were created with the Scalar platform. In examination of the digital objects incorporated into the sites, an average of 22.61 digital objects were utilized on the student sites (Figure 1). The websites were analyzed for number of still images, videos, audio recordings, scanned documents, and other types of media (e.g., PowerPoint slides, statistical graphs, and Word documents containing students' written essays). The most frequently used type of digital media were still images, at an average of 17.45 images per site. Next most used were scanned documents and articles, with an average of 9.5 per site.

The topics on the student sites ranged widely and included the history of television broadcasting, the Anonymous movement, an analysis of the documentary *Bowling for Columbine*, the antibullying movement, and the history of the Champaign music scene. The success to which they synthesized the media and text into a coherent narrative was dependent, of course, on the course instructor's evaluation of the content. But several indicators and patterns reveal a potential way to measure the extent of coherency.

One prominent indicator was the existence of an opening introduction that explained the topic of the website project: in the sample of student sites analyzed for this study, 73 percent of the sites had opening introductions. The introductions established a core thesis for the website project and the strong statements, such as those shown in Figure 2 of an Omeka.net site.

Another indicator was the number of pages in the site: the average number of pages was 9.25, with the highest number of pages on a site being 33. The author also counted the text blocks written for the sites, and the average number was 15.9 text blocks, with a range across all sites from 5

AVERAGE NO. OF MULTI MEDIA OBJECTS ACROSS STUDENT SITES

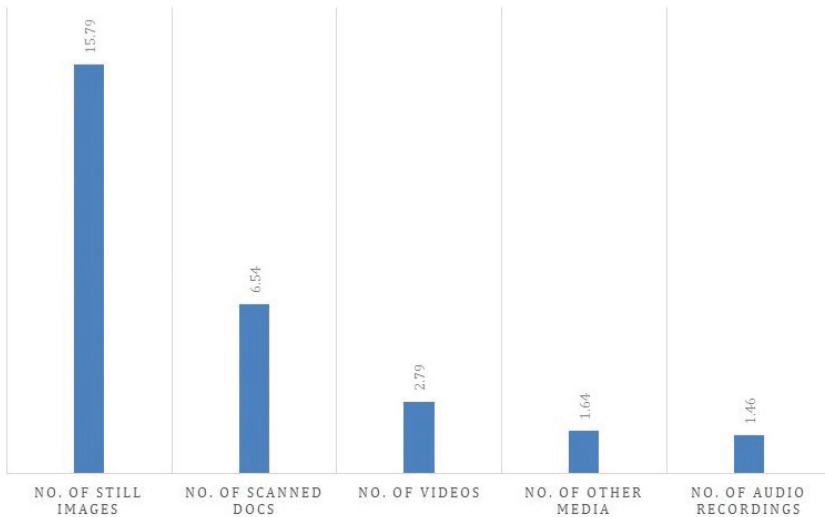


Figure 1. Average number of multimedia objects per type across all student sites.

Project 500 Q ...

:: Browse Items
:: Browse Collections
:: Browse Exhibits

Black Power at Illinois

In the fall of 1968, the University of Illinois launched the Special Education Opportunities Program which brought 568 "poor and disadvantaged" freshman to Champaign-Urbana. The SEOP, also known as Project 500, tripled the number of African American students on campus and triggered changes that reverberate to the present day. Why did such a dramatic event occur? How did it affect what had been a nearly "lily-white" university? What legacies did it leave? This exhibit will explore all of these questions, as well as others.

[ENTER EXHIBIT HERE](#)

Inside the collections, click on any picture of an exhibited item for details. Browse through groups of items by using the menu on the right or the "Next Page" and "Previous Page" buttons at the bottom of each item description.

For more on this topic, see a collection of oral history interviews at the [University of Illinois Archives](#)

Credits

Created by Students in History 386, Public History, at the University of Illinois at Urbana-

[SEPTEMBER, 1968: CHAOS ON CAMPUS](#)

[WHAT WERE THEY THINKING?](#)

[BEFORE 1968: A WHITE CAMPUS](#)

[WHOSE CAMPUS IS THIS?](#)

[LEGACIES: WHOSE UNIVERSITY?](#)

Figure 2. Omeka site for History 386: Public History, spring 2014 semester.

to 43 paragraphs of text. While numbers are not indicative in and of themselves, the depth and detail of a student's work on the website is partially evidenced through the extensiveness of the pages and text.

Another set of critical factors in determining the rigor and intellectual depth of students' sites as artifacts of scholarship was found in the completeness of metadata, references, and citations, as well as the inclusion of annotations. Of the sampled student sites, 27 percent of the student sites included metadata for their digital objects, while 55 percent had extremely sparse to no metadata at all. Metadata is a critical element of digital collections and projects, and the Scalar and Omeka platforms provide easy forms for completing metadata records for each uploaded digital object. In this case, however, while the author provided basic introduction to all students on the concept and need for metadata as a form of "citation" for their scholarly work, the assignment instructions often de-emphasized metadata in favor of ensuring that the students simply posted content correctly. The students who took the time to provide complete metadata arguably demonstrated a commitment to building an intellectually rigorous digital project.

Traditionally formatted citations and references as well as hyperlinks were the other form of sourcing, yet only 27 percent of the sites listed even partial citations throughout the site or in a reference list. Annotations that augmented digital media embedded on the site were a less frequent form of sourcing and enhancement on the sites and 23 percent utilized annotations. The most frequent use was in Scalar, which includes functionality for applying annotations to videos, and this was required as part of the students' assignments.

These chronicled characteristics of the websites are individual elements that only begin to formulate the value of the site as a coherent synthesis of media and text, but the ways in which the students handle these elements reveals key clues into their learning processes.

DISCUSSION

Learning Environments and Outcomes of Digital Pedagogy

This analysis of student scholarship leads us to consider potential learning outcomes for digital literacies that can be promoted through the infusion of digital humanities tools in the course work of humanities courses. The

student-generated digital projects in this sample used for the study varied in disciplines, course requirements, and topical depths, and yet they exhibit key characteristics for the ways in which students construct and collaborate on digital projects. A useful framing of this learning process and the new types of agency that students gain in this course environment is viewing students as what Jentery Sayers characterizes as “context-providers.”¹³ As “context-providers,” the students build digital sites that articulate new syntheses of knowledge and provide new ways of viewing topics and subject areas. The report of the Visible Knowledge Project, a recent multi-institutional study “on collaborative investigation of learning, inquiry, and new technology,” argues that students engage in three types of learning when building work with new media technologies:

- *Adaptive* learning includes the acquisition of “skills and dispositions . . . which enable them to be flexible and innovative in their knowledge.”
- *Embodied* learning emerges in how the students engage emotional and social aspects in addition to cognitive learning in ways that highlighted the “sensual and emotional dimensions of working with multimedia representations of history and culture.”
- *Socially situated* learning reveals how working with new media technologies pushes students “beyond mere knowledge acquisition to a way of thinking, acting, and a sense of identity.”¹⁴

In light of these findings, we begin to see that students are invested with more agency in their learning environment, and achieve learning outcomes for digital literacies that are oriented toward playfulness, “tinkering,” and experimental learning.¹⁵

The ways in which students exhibit their skills and knowledge via their digital projects necessitates a method of analyzing and assessing their work for competencies in not only subject content, but also digital literacies. As noted earlier, digital literacies are marked by the competencies of people to utilize digital tools and resources to “construct new knowledge, create media expressions, and communicate with others”; as such, this is a process that excavates “the constantly changing practices through which people make traceable meanings using digital technologies.”¹⁶ Building on this definition, Julia Gillen and David Barton suggest four pathways for developing digital literacies:

- Enhancing cognitive development and assessment practices through curriculum interventions that make use of new affordances of digital technologies;
- Supporting learning communities to work collaboratively in problem solving and the coconstruction of knowledge;
- Working collaboratively in a multidisciplinary team to create useful, practical tools; and
- Increasing authenticity and overcoming access issues.¹⁷

This framework of digital literacies development complements metaliteracy objectives. It places “an emphasis on active production and sharing of new knowledge through technology” and provides an “an integrated and all-inclusive core for engaging with individuals and ideas in digital information environments.”¹⁸ The digital pedagogy practices pursued in the case studies presented in this chapter sought to develop and promote these literacies through instructional design that incorporated experimentation and a newly collaborative approach in instruction. Four potential outcomes correlate to development of metaliteracy and digital literacies through these collaborative teaching practices:

- *Discover and evaluate digital content for information and interactive usage.*
Students learned how to research effectively and gather a variety of digital content that they imported into the digital platform for analysis and/or publishing. A media and cinema studies student from China noted that he/she discovered unanticipated information sources during the research process on Tiananmen Square protests, saying “I found huge amounts of information that I do not know when doing the research, for example, like the contemporary periodicals like Youth Forum and The World Economic Herald.” The students incorporated information literacy skills that enabled them to then take the next step of building critical digital projects.
- *Develop scholarly critique skills via synthesis of visual and textual content.*
On all of these platforms, students wove together multimedia content in such a way as to build rich scholarly explications of their topic. Whether doing digital writing in Omeka or for the class scholarly journal in WordPress, the students developed skills in creating multilayered scholarly documents that drew on multiple sources and merged them together into a coherent whole.

- *Engage in a collaborative learning environment.*

The students worked in WordPress, Omeka, and Scalar in collaborative environments and were able to engage in their peers' work from our initial teaching workshops to the end products with required peer review.

- *Build authentic transferrable skills and digital tool competencies through experiential learning.*

The creation of Omeka, WordPress, and Scalar sites opened students' eyes to the possibilities for the reach of their scholarship and emboldened students to take their research beyond the classroom and realize the potential for the skills and digital literacies they attained. As one student stated, "After learning these skills, I have been able to transfer them to my other classes and other activities. They frustrated me a lot at times and have a need for a little improvement, but overall they taught me a lot and helped tie in with other themes of media literacy in my other classes."

These outcomes reveal how the experimental ethos of digital pedagogy translates into an innovative learning environment that enables the students to engage in different modes of learning. Assessment of the students' progress toward these outcomes is then the next critical step in digital pedagogy.

Assessment Strategies for Student Projects on Digital Literacies

Assessment of digital literacies in the humanities must take into account the influences of technology on the students' research and writing practices as they create digital projects. Kathleen Yancey notes:

Technology isn't the villain; but as a tool, technology is not innocent. It is both shaping and assessing the writers whose work we want to assess—and not only in word-processing software. . . . Online, assessment is ubiquitous, and yet we do not often observe its effects.¹⁹

This quote encapsulates how assessment is essential to the use of digital tools in course work and, as such, how digital literacy outcomes frequently intersect and/or align with information literacy and disciplinary outcomes in a various ways.

When evaluating student work for learning outcomes oriented toward digital literacies, there are a range of pedagogical approaches and assignment formats. For the courses and assignments examined in this study, we

employed the “scaffolding” method—a constructivist approach to instruction “designed to provide a scaffolding or support for initial learning” via a sequence of assignments that “build gradually toward a more refined and complex understanding of the concept.”²⁰ The series of assignments developed around Scalar and Omeka guided the students in building their projects on the digital platforms.

In carrying out these assignments, the students built a type of portfolio on the digital platforms as they displayed their work on the courses’ group websites before building their own websites. Portfolio assessment theory thus can, in part, reveal some insights into strategies for assessment of student-generated digital projects as composites of their work toward building digital literacies.

Within the significant amount of literature on portfolio assessment, scholars consider how to evaluate web-based portfolio work, frequently termed e-portfolios. Bret Eynon argues for the power of e-portfolios in college curriculum and learning, noting that e-portfolios enable a scaffolding approach to teaching and “support embedded pedagogy and situated learning, using multimedia authoring tools to build student engagement in learning.”²¹ Chris Trevitt and Claire Stocks note that a portfolio can also provide authenticity to assess student learning and progress that other types of assignments do not.²² E-portfolios also provide a strong conduit for assessment; Yancey argues that e-portfolios “provide opportunity for formative assessment in deep and extended ways,” as students display in e-portfolios how “they use multiple systems of representation to map learning in new ways . . . students also help faculty learn about how learning actually works such that we all understand learning in new ways.”²³ In many studies, rubrics are a critical piece of assessment for portfolios: Chi-Cheng Chang and colleagues examine the viability of rubrics for student self-assessment of electronic portfolios, and studies of web-based portfolios for arts also examine the use of rubrics as a way to assess student work by instructors and the students themselves.²⁴ Portfolio assessment critically employs rubrics as a way of evaluating how well the work meets the desired standards.

Megan Oakleaf explains that the value of rubrics lies in how they “allow students to understand the expectations of their instructors,” and how they “provide direct feedback to students about what they have learned and what they have yet to learn.”²⁵ The clarity of rubrics also enables students to

engage in qualitative self-evaluation, as the rubrics emphasize “understanding rather than memorization, ‘deep’ learning rather than ‘surface’ learning.”²⁶ This sustained learning process promoted by rubrics ties directly into the ways in which digital literacies focus on the holistic and continual skill building that students engage in with each new iterative experience.

For assessment of digital projects, a number of approaches are emerging in how to approach digital or “multimodal” texts and this is especially evident in the area of rhetoric and composition studies. Yancey notes that the composition of multimedia projects is marked by diverse types of “coherence”:

Digital compositions weave words and context and images: They are exercises in ordered complexity—and complex in some different ways than print precisely because they include more kinds of threads. As important, because the context for digital compositions is still so new and ever emerging, these texts tend to live inside the gaps, such that the reader/reviewer/responder is a more active weaver, creating arrangement and meaning both, and, I think, participating in a Bakhtinian creation of textual prototypes. In other words, we don’t have a final definition of many of these texts—and perhaps we never will.²⁷

Yancey proposes an assessment approach that focuses on the arrangement of the multimodal content within the work and how well it conveys the coherence of the work:

1. What arrangements are possible?
2. Who arranges?
3. What is the intent?
4. What is the fit between the intent and the effect?²⁸

In this vein, Cheryl Ball argues that the ways in which the modes of a multimedia text—defined as “the semiotic elements such as video, graphics, written text, audio, and so on that a designer uses to compose multimodal or new media texts”—work together are critical to the readability and meaning-making of a new media work.²⁹ Madeleine Sorapure argues for an assessment approach that involves examining the relations between the different modes used in a digital project, noting “the narrow question of the relations between modes is, I believe, essential in understanding not only how

a multimedia text coheres but also how it creates meaning.”³⁰ Jody Shipka establishes that students should also be critically engaged in the assessment process through the process of creating reflective documents called “Statements of Goals and Choices” that require students to “attend to the impact of their writerly choices as well as to the visual, material, and technological aspects of their texts and practices.”³¹ These strategies all have the aim of extracting the meaning and complexity of the multifaceted nature of digital works. But rubrics can reveal insights into the digital scholarship produced by students by breaking down and atomizing the various stages and aspects of the learning and development process.

For an instruction environment oriented around digital literacies as “the constantly changing practices through which people make traceable meanings using digital technologies,” an ideal assessment rubric enables both instructors and librarians to evaluate various competencies aligned with digital literacies as they are facilitated by the use of digital humanities tools and platforms.³² Rubrics for digital scholarship can measure the students’ work and progress in a complex, holistic fashion, as Rina Benmayor demonstrates in her rubric that evaluates students’ digital writing projects by three defined modes of “narrative or embedded theorizing,” “applied theorizing,” and “critical theorizing.” Benmayor notes:

In most Scholarship of Teaching and Learning rubrics, there is an implied linear progression from novice to expert learner. However, my evidence leads me to resist that progression and to posit instead a more complex usage of theorizing strategies. . . . The rubric calls my attention to the unruliness of theorizing and the need for a quantum approach to the evidence, looking at different medium-specific instances of theorizing rather than using a single linear measure of achievement.³³

This complexity and holistic approach is also evident in Ball’s accounting of her development of rubric criteria for assessing students’ multimedia web texts, as she worked with her students to synthesize a series of previously created multimedia assessment rubrics developed by Kuhn et al., Warner, and Dewitt and Ball into six criteria for their course.³⁴ Ball notes that in this process of rubric development, she learned that assessment of multimedia scholarship is wholly contextual and fluid:

As my understanding improves regarding how webtexts move through authors' and editors' and publishers' processes and as I expand my theoretical understanding of multimodal composition (i.e., writing) teaching, my pedagogy changes and so must my assessment criteria. This is why my values system for assessing webtexts may not, cannot, will not necessarily be yours.³⁵

In light of the growing body of research literature that contemplates how we might evaluate student-generated digital projects, rubrics hold rich potential as tools for evaluation, particularly in how rubrics stretch beyond simple criteria and express the values and outcomes of a scholarly community.

Daniel Callison argues, "Rubrics are texts that are visible signs of agreed upon values. They cannot contain all the nuances of the evaluation community's values, but they do contain the central expressions of those values."³⁶ In this light, a rubric can be a valuable contribution to the scholarly communities that are implementing digital pedagogy, because rubrics are a step toward the coherence and normalizing of shared expectations for student scholarship produced on digital platforms.

In the case studies presented in this study, the author engaged with faculty and instructors throughout in discussions of student work and, for select courses, contributed to the initial assessment. This experience builds on a growing strategy of librarians and faculty collaborating to build course- or discipline-specific assessment rubrics for information literacy through analysis of student assignments and the curricula.³⁷ From the analysis presented in this study, Table 1 displays a potential rubric for assessing digital literacies via student-generated websites.

The preliminary rubric displayed in Table 1 is based on the types of projects that the students generated and the characteristics exhibited across the projects. The four levels of competencies range from the "Needs Improvement" criteria, which indicate that the site shows little to no effort was expended in the desired areas, to the "Excellence" level, which indicates a high mastery of the digital resources and demonstrated intellectual rigor in synthesizing digital media and text into a scholarly project. The five areas of focus—use of visual media, written content, use of sources, structure and organization of site, and coherence of online presentation—are the critical areas that can be evaluated both quantitatively and qualitatively by the instructors for outcomes in digital literacies. This

preliminary rubric uses a linear form of assessment, but other aspects can be incorporated to explore the coherence and complexity of the students' digital work.

CONCLUSION

As more and more humanities courses incorporate digital tools into their curriculum, librarians have numerous opportunities to become engaged in digital pedagogy and collaborate with faculty in diverse ways. The growth in digital humanities as a field of study and research approach means that humanities students will need to be taught and trained in the many available diverse digital tools, methodologies, and resources. As such, there are manifold ways in which librarians and instructors can collaborate around digital pedagogy. As these collaborations grow, we move toward promoting experiential, creative modes of learning in our students that must engage all of us in the pedagogical practices. As Howard Rheingold writes:

We must develop a participative pedagogy, assisted by digital media and networked publics, that focuses on catalyzing, inspiring, nourishing, facilitating, and guiding literacies essential to individual and collective life in the 21st century.³⁸

Digital scholarship in the classroom is becoming increasingly prominent and, together, librarians and instructors can collaborate on pedagogical strategies and assessments to achieve learning outcomes for the new literacies needed for this digital age.

NOTES

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Table 1. Rubric for digital literacies.

	Needs Improvement	Acceptable	Good	Excellent
Use of Visual Media	<p>Uses too few objects (less than one per page) or too many objects.</p> <p>Relates to the topic only superficially or not at all.</p> <p>Has no citations or captions.</p>	<p>Meets requirements of at least one media object per page.</p> <p>Relates to the topic of the site.</p> <p>Provides basic captions and/or citations.</p>	<p>Uses media objects on each page.</p> <p>Selects multiple types of media objects.</p> <p>Media objects are closely related to the topic and enhance the text.</p>	<p>Selection of media objects is diverse.</p> <p>Presents the media objects in a critical context: displays the media in an innovative layout with thoughtful juxtapositions.</p> <p>Connects media to each other and critical ideas.</p> <p>Integrates annotations and advanced features.</p>
Written Content	<p>Provides minimal to no information about the site and/or displayed media.</p> <p>Material is not original—text copied wholesale from another resource.</p> <p>Contains erroneous spellings and grammar.</p>	<p>Writes basic descriptions to provide information and context for visual media.</p> <p>Spelling and grammar are moderately clean.</p>	<p>Writes longer sections of text that provide detailed descriptions, explanations, and/or context.</p> <p>Spelling and grammar are mostly clean.</p>	<p>Writes multiple paragraphs that provide in-depth information and/or context for the media objects and site topic.</p> <p>Critically evaluates and contextualizes the media objects in light of the topic.</p>

<p>Use of Sources</p>	<p>No sources are cited in any way. Has been copied and pasted without attribution.</p>	<p>Uses only the number of sources required for assignment. Mentions the author and work in-text or includes basic citations of authors and works.</p>	<p>Uses multiple types of resources. Provides sourcing for media objects as well as textual sources. Provides citations for all sources used.</p>	<p>Integrates sources throughout the text and media for the site. Provides full citations for all media objects as well as textual sources. Provides detailed citation information and links to all sources used.</p>
<p>Structure and Organization of Site</p>	<p>Has no structure in the form of paths, exhibition, or collections.</p>	<p>Uses basic structure of one book with multiple pages.</p>	<p>Connects all book pages into a path.</p>	<p>Builds a complex, critical structure for book with multiple paths. AND/OR Connects media and annotations to pages and paths.</p>
<p>Coherence of Online Presentation</p>	<p>Provides no clear connections between media objects and text, and/or between pages of site.</p>	<p>Can follow basic structure of site; all elements connect to the topic.</p>	<p>Focuses on topic of site; all pages and media elements connect to topic. Pages and paths flow well narratively.</p>	<p>Provides a critical and tightly written narrative on a topic that is easy to follow. Media objects and text are closely integrated to advance site's narrative. Site is structured with multiple paths and sections to present differing facets of the topic.</p>

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