Teaching Digital Humanities Tools at a Distance:

A Librarian-Instructor Partnership Integrating Scalar into a Graduate Distance Course

Daniel G. Tracy and Elizabeth Massa Hoiem*

As academic library services have transformed to include wide-ranging digital scholarship services, the role of subject liaisons collaborating with instructional faculty has similarly changed to include new teaching opportunities. Beyond traditional issues of information discovery and evaluation, librarians are involved in teaching digital literacy and scholarly communications outcomes. In the digital humanities (DH) this includes instruction in areas such as text mining, GIS, and the creation of digital archives and multimodal web publications.

This paper presents the processes and outcomes of a DH teaching collaboration involving a subject liaison and the instructor for a course on The History of Children's Literature. Students in the course produced a multimodal publication on the platform Scalar related to issues of diversity and inclusion in the history of children's books. This partnership took place in the context of a professional master's degree program in Library and Information Science (LIS) at the University of Illinois at Urbana-Champaign. Like many LIS programs, the one at Illinois has a significant distance student population. Several features of the work on this class, then, are unique in relation to other DH pedagogy contexts. First, the students are themselves information professionals in training, and the learning outcomes include not only learning DH approaches and skillsets but reflection on how they might engage with DH or digital publishing projects in general as a librarian, archivist, museum curator, or other information professional. Second, distance learning poses challenges for learning in the digital humanities due to the lack of an opportunity for an in person "lab" to learn technology.

We, the librarian and instructor partnering on the course, highlight challenges and support mechanisms for teaching digital tools at a distance. We will discuss features of the collaboration and course design: the digital literacy learning outcomes, the choice of the multi-media publishing platform Scalar as the best fit for those outcomes, and their design of the assignment sequence to achieve learning outcomes and assess student learning. We analyze the student outcomes and experience of teaching this course in order to suggest important lessons for librarian-instructor collaborations on digital humanities projects in disciplinary courses and in a distance context. Moreover, these lessons have important implications for the involvement of subject liaisons in digital humanities roles, and also for the education of new information professionals and reskilling of existing professionals to do this work and support the broader transformation of academic library involvement in digital humanities work.

^{*} Daniel G. Tracy is Library and Information Science and Research Services Librarian, Assistant Professor at University Library, University of Illinois, dtracy@illinois.edu; Elizabeth Massa Hoiem is Assistant Professor at the School of Information Sciences, University of Illinois, hoiem@illinois.edu.

Literature Review

There is an increasing literature related to librarian involvement in digital humanities pedagogy, and the involvement of subject librarian partnerships with faculty in particular. Angela Courtney and Diane Dallis, for example, note that 54% of CIC (now Big 10 Academic Alliance) universities have included digital scholarship (a broader term that includes digital humanities) in the responsibilities of reference and subject librarians, and that this dispersal offers a sustainable model for expanded digital scholarship services that builds on existing skillsets.¹ Time for these new activities opens up for subject librarians as reference models shift to require less time on the desk—and, at a large institution like Illinois, from time formerly spent managing spaces of small disciplinary libraries that have since merged.2

Stewart Varner, advocating for this change in liaison roles, notes, "Librarians have already taken steps in this direction by providing instruction for citation management tools....However, many libraries are expanding their mission beyond the collection to embrace their role as productive spaces on campus."3 Harriett Green has described a series of such partnerships and evaluates the projects to provide possible assessment criteria for student multimodal publishing projects using Scalar and Omeka. Her work positions these partnerships in terms of digital literacy objectives. Similarly, Anita Say Chan and Green argue that what is most important in integrating new technologies with undergraduates is the focus on the digital literacy outcomes that students can take to other contexts, not the specifics of the tool (which students may not use again). Others describe projects that teach students the underlying issues and processes in creation of a digital collection from physical source materials.⁵

As Sigrid Anderson Cordell, et al., note, education of graduate students is often missing from the contributions librarians can make to DH pedagogy and research partnerships.⁶ However, there are some examples. For example, Benjamin Fraser and Jolanda-Pieta van Arnhem integrated an Omeka exhibit and mapping project in a graduate course on urban cultural studies focused on Madrid's Gran Vía. What is particularly relevant for our context is their focus on a graduate course in a professional program (in their case, for K-12 education) that has significant disciplinary content to balance with the DH concepts—and in addition as an advanced Spanish class required opportunities for students to continue expanding their language skills. More than any other work on DH pedagogy, they speak to one of the core challenges of DH pedagogy in such a context, "the addition of further competencies into a class that already has multiple and somewhat competing goals," an issue we pursue further.8

Even rarer than addressing graduate education is a focus on DH pedagogy in the context of distance education programs. One exception is Green's case study from her analysis of assessment strategies, a partnership that focused on integration of an Omeka exhibit project into a graduate distance education course. 9 More commonly, research on DH pedagogy assumes an in person context, an assumption occasionally made explicit by appealing to the need for students to be in person to work with physical archival materials before moving to the digital context, or to learn collaboration. 10 These assumptions are challenges to library and information science professional education, which has transitioned to a majority distance learning model. If these arguments are correct, LIS programs would have difficulty providing any DH instruction. Yet many of these LIS programs have been deeply engaged with DH since before it broke into more traditional humanities programs. Our paper hopes to build on this engagement by fostering a deeper discussion of what is and is not feasible at a distance for DH pedagogy.

The focus on LIS education is particularly relevant to academic libraries in the current moment. With the shift in subject librarian roles, and the addition of other positions related to digital humanities and scholarly communication, the education and continued development of LIS professionals gain increasing urgency. Courtney and Dallis note professional development and reskilling as a key issue for digital scholarship services at the institutions they surveyed. Nisa Bakkalbasi, Damon Jaggars, and Barbara Rockenbach describe one initiative to train humanities librarians in digital skills. Another, the Digital Humanities Institute for Mid-Career Librarians funded by the Andrew W. Mellon Foundation, has led to a new Association of Research Libraries Digital Scholarship Institute that will have its first cohort in Summer 2017.

At the same time, LIS professional programs are increasingly called to teach scholarly communications, publishing, and digital scholarship in order to prepare future professionals.¹¹ In one recent formulation, Jonathan Senchyne has emphasized the need for LIS programs to deliver this education in a way that balances humanities and LIS knowledge: "Students entering LIS grad programs with the goal of being a DH librarian should seek to leave grad school knowing as much about habits of thought and questioning in the humanities as they know about digital tools."12 His point here is that successful librarian collaboration in DH will require from librarians not only technical knowledge, or even the larger knowledge of DH methods and "soft skills" like collaboration, but also an engagement with approaches to research questions common to the humanities that will help them understand the perspectives of their research and instructional partners outside the library.

The course on The History of Children's Literature we discuss here is a perfect opportunity to enact Senchyne's call for DH in LIS courses that integrate humanistic and LIS approaches, but our experiences also point to the challenges with such work that echo those explored by Fraser and van Arnhem. Simply put: balancing the needs of topical course content (understanding the history of children's literature) with relevance for future LIS career paths, and then including DH competencies such as collaboration, responsible use of multimedia, and multimodal writing strategies—all in a distance context without an opportunity for in-person technology "labs"—stretches a faculty-librarian partnership of this kind. Our paper, then, describes our partnership on learning outcomes, design of the DH assignment sequence and its role in the course, and delivery of instruction in a way that made the most of available time, along with the challenges we faced that will prompt changes to the pedagogy in the next iteration of the course.

Instructional Approach

Over half of students at the iSchool at Illinois complete their master's degree in LIS through the online "Leep program" (formerly LEEP), with synchronous courses that meet once a week via Blackboard Collaborate. The subject librarian regularly partners with iSchool faculty and student affairs staff to ensure systematic information literacy integration in orientation and core courses, with additional involvement in optional courses that have more advanced instructional needs related to information literacy, scholarly communication, and digital literacy. The subject librarian is embedded in these courses in multiple ways depending on instructional needs: these include visits to classes, special discussion forums to answer class-wide questions within the course space, and creation of guides. Prior to the year of this course collaboration, the Leep program included a mid-semester residency week, when students visited campus for in-person instruction, often to tackle difficult technical problems in a lab setting or to directly access library resources and staff. When this residency component was eliminated, librarian partnerships with course instructors evolved to support courses taught entirely in online synchronous sessions with asynchronous discussion forums.

For the History of Children's Literature course, the subject librarian previously supported students in their discovery of resources for a digital publishing assignment. Students created individual webpages that documented the first edition of a historically significant children's book, including its physical appearance, author biography, editions and adaptations, and reception. Face-to-face instruction sessions with subject librarians was a central component of the assignment design, as students who specialize in youth services and special collections delved through databases and periodicals for advertisements, reviews, and biographical materials, often encountering these resources for the first time.

Since students would have fewer opportunities to dig through the library in-person in the new Leep model, the course instructor wanted to reimagine a new digital publishing assignment that would transform the online classroom from a liability into an asset by focusing on learning outcomes such as collaborative writing and multimodal publishing that took advantage of widely available digital collections. Nonetheless, the lack of an in person session also meant there would be no opportunity for a "lab" session with the library to learn and troubleshoot the technology in person. For example, in Green's discussion of her collaboration with an instructor on integration of an Omeka project into a distance course, which occurred in the same LIS program a few years earlier, the technical portion of the instruction took place on one of the former in-person days.¹³

The instructor approached the librarian before the semester began to consult about what kind of digital publishing tool would work best for the revised assignment. In addition to working in groups, the instructor wanted students to build towards a collaborative public resource that could be expanded by successive classes of students, ensuring that student work remained current and accessible while simulating a work environment where LIS professionals partner with researchers on an ongoing digital project. Since this public resource would likely include documents or photographs of archival materials, selected and curated by students, the instructor and librarian considered a blog or Omeka before settling on Scalar, a multimodal publishing platform that several other Illinois instructors had recently used for collaborative projects in face-to-face courses.

The instructor and librarian first determined the learning goals that would guide the assignment design. These included understanding the landscape of DH publishing, experience with collaboration on a DH project, and consideration of issues related to multimodal writing such as responsible use of multimedia and alternate forms of organizing work beyond traditional essays. In addition to balancing technical and social learning objectives, the instructor wanted to raise the confidence of all students in their ability to teach themselves new tools as their profession evolves, regardless of the student's prior negative or positive experiences with similar technology. In past teaching experiences, the instructor found that groups working on digital publishing assignments allocate one student to build the website, usually the person already most comfortable with technology, which only exacerbated the divide between tech-savvy and tech-anxious students in a program where all students needed opportunities to engage with technology. The instructor needed to introduce distance-learning students to a potentially counterintuitive tool without monopolizing class time needed to cover other course material. The challenge was to scaffold the assignment so that distance students could work through Scalar individually outside of class, while maintaining enough trouble-shooting support to prevent students' anxiety and build confidence across the board.

Here the librarian's prior investigation of Scalar use on campus, and additional conversations with campus colleagues, were especially helpful. Anticipating friction points for new users, the librarian suggested that students generate some text and annotated images in advance, then use a self-paced tutorial to explore what the tool could do, before working in teams on their project. Accordingly, the instructor created an assignment with three main phases (see Figure 1).

First, students discussed assigned readings on diversity in children's literature (the topic the instructor chose for the public resource). They wrote blog posts on how voices are marginalized in the historical record through omission and inaccurate representation in historical fiction and history textbooks, as well as through flawed selection processes in publishing, award committees, and literary canonization. Students brainstormed topics for the project and self-selected into six groups, where they generated a short amount of text and gathered a few media items related to their topic. This initial discussion grounded the DH project in humanist scholarship and contemporary social justice movements of interest to youth services librarians such as the "We Need Diverse Books" campaign.

FIGURE 1 Project scaffolding across the semester

Phase 1: Explore the project topic

- Students discuss background readings.
- Students select topics and groups.

Phase 2: Build individual books

- Students draft text, select media items, write annotations.
- Librarian gives the first I-hour in-class workshop.
- Students create individual pages using self-paced tutorial.
- Librarian gives a follow-up I-hour in-class workshop.

Phase 3: Create group projects

- Groups combine their visions, upload their media.
- Groups draft pages in the class Scalar book.
- Instructor provides feedback.
- Groups revise their projects.
- Editor links the projects together.

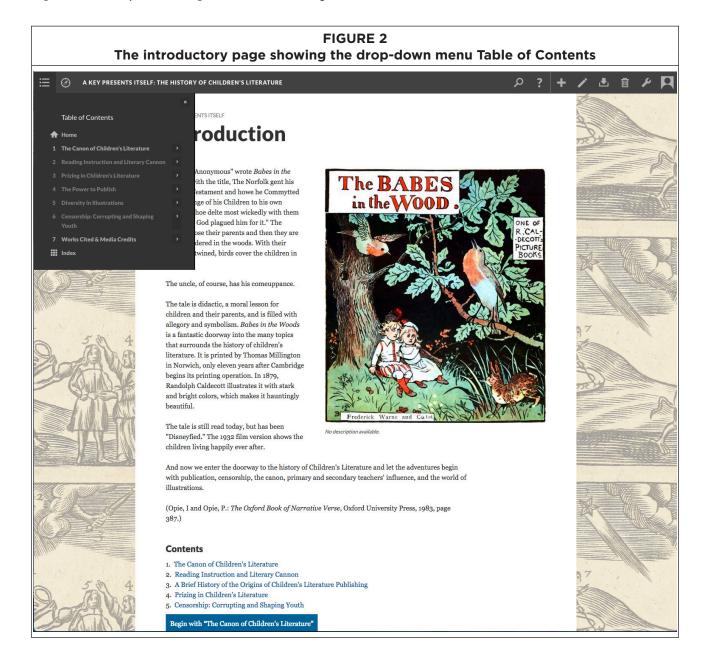
Students write individual reflections.

In the second phase, the librarian visited class and introduced Scalar within the broader context of digital humanities projects, and discussed intellectual property issues that students needed to keep in mind for use of digital materials. That week students used the tutorial to create their own individual books, supported by a course blog for posting problems. This tutorial taught not just the technical functions of Scalar but a creation process appropriate to Scalar that would evade frustrations encountered by students of colleagues on campus. Students reconvened the following week with the librarian, who addressed common technical problems and lead an exercise on Scalar paths, during which students mapped out ways to connect the six projects together into a single book. Here the goal was to get students engaged in the organizational issues in Scalar that diverge from traditional academic writing.

In the third phase, students compared their individually created books with group members and discussed the different choices they made in organizing content, then built a single collaborative page that incorporated their best ideas. With instructor feedback, students revised and expanded their group pages into a final product. One student who was designated the project editor linked the six group projects together into a single book.

Outcomes

The final Scalar book produced by the students joined each group project through a central path that began with an opening page (created by the student editor) and followed successively through the six topics: 1) selection and canonization, 2) K-12 reading instruction, 3) prizing, 4) publishing and power, 5) diversity in illustration, and 6) censorship, and concluding with a works cited page. Although the path itself was linear, a user could select another topic (or the works cited) at any time from a table of contents, accessible through a pulldown menu in the upper left (see Figure 2). The six topics each had their own path, which allows the front page of each project to include a list of links to all of its pages, again allowing users to proceed linearly or to select content. The illustration group pursued a more elaborate organization by creating a separate sub-path within their project that explored diversity in several picture books (see Figure 3).





While students were much more experimental with imagining nonlinear organization during the path exercise in class, they ultimately used Scalar's paths to suggest an all-inclusive linear path that allowed many additional access points to the same content. Since students often expressed discomfort with editing the work of their peers, one interpretation of this choice is that students feel reluctant to hierarchize access to the work of their peers by indicating that users might skip one project. The organization strategy chosen by the students for a class project reflects a compromise between anticipating a hypothetical reader's needs, experimenting with the tool's affordances, and respecting all contributions equally. For this reason, allowing students to brainstorm other organization strategies and to create their own pages first was important because students were more willing to experiment with nonlinear writing during those low-stakes exercises.

In the final product, students experimented more enthusiastically with multimedia and visual design. They including videos, downloadable books, images, and links to other web resources, and they shaped their user's visual experience by using background images and an opening splash page for the six topics. One group used Scalar's annotation feature (which allows commentary applied to sections of an image) to annotate books arranged on a timeline, essentially creating a timeline feature that Scalar has since added in a recent update. Selecting and annotating media items, and juggling these items in Scalar (where media are also pages), proved one of the most challenging aspects of the assignment, and an area where students could use more instructor support.

When class time is stretched thin, instructors may feel hesitant to use Scalar over a more familiar or intuitive tool. We found, however, that pushing all of the students outside of their comfort zones with an unfamiliar platform had its advantages. A student familiar with "Weebly and Wordpress as publishing tools" reflected on the experience, "when it is a publishing tool that none are familiar with it makes it an equal challenge for everyone.... you can work together to learn how to utilize all that is available," while another student with "very little (read as no) experience working with digital formats" explained, "having someone else say they could not figure it out either was reassuring when I went to ask any of the instructors for help." A record of earlier "versions" (which Scalar logs for each page) show that most groups still nominated one or two students to create their combined page and conduct major revisions, but all of the students completed coherent individual books using the self-paced tutorial, and several students who began the project with trepidation expressed pleasant surprise in their ability to make something. One of the most successful aspects of the assignment, therefore, was that students gained confidence and advanced their familiarity with digital publishing regardless of where they started.

Modeling our partnership between a librarian and an instructor was itself educational for students, who may find themselves in such roles. Several students credited their success to the librarian's tutorial, while others reflected that they would create such a resource themselves when teaching similar tools. "I consider myself to be fairly web- and computer-savvy," one student confessed, "and I needed to follow this tutorial step by step to get anywhere in Scalar. Scalar is not intuitive, and it wasn't easy to remember how to do things when I came back to it after a few weeks." While students sometimes wished they could have in-person help, they valued the trouble-shooting blog, where they posted problems to peers, and received help by email (or occasionally by phone) from the instructor and the librarian. Despite reservations about Scalar's learning curve, many students speculated on future contexts in public and academic librarianship where they might use it, especially to create a professional-looking product with a scholarly design.

Discussion

This first semester successfully explored what a resource of this kind could potentially include, how it might look, and what topics most energize our students. But working with Scalar also has a learning curve for instructors and librarians. This project benefited from the librarian's previous partnerships in other courses; but the instructor also consulted with another professor using Scalar in a face-to-face undergraduate seminar, who emphasized (rightly so) that any long-term project of this kind needs to build slowly towards its goal, since even with careful planning, the product of one semester is not professional quality. For instance, in some cases our students used media for illustrative purposes without enough analysis to justify fair use, with video posing the most common challenges in this regard. Although this problem was quickly apparent, one instructor is hard-pressed to comment on 100+ media items uploaded by students. One way to manage this is to delegate oversight to a student team tasked with mastering fair use and alerting students to problems with their media use. In future semesters, the instructor expects to create groups with these specialized skills to help the project progress towards professional quality while providing opportunities for students to explore particular digital publishing skills in-depth and share what they learn with peers.

We concluded that students need more brief in-class lessons and practice to target issues such as fair use beyond the guidance provided in this iteration of the course. Students themselves reported that they want more in-class time to coordinate with group members, and they wanted groups to report to one another so that they could gain energy and inspiration as they go. Adding more in-class instruction, however, exacerbates the problem we share with Fraser and van Arnhem, where including new digital humanities outcomes may encroach upon class time needed to meet the course's primary learning objectives in history and literature. Furthermore, students who enroll for a course on the history of children's literature may feel exasperated if a digital project, regardless of its practical relevance to their profession, appears to divert too much focus from what they expected to learn. In the next iteration of the course, the instructor plans to extend the time scheduled for the course by thirty minutes, a scheduling option allowed by the iSchool program, in order to incorporate more of these opportunities for hands on activities and collaboration. The instructor will keep discussion of literature readings within the regular two hours, using the remaining time for project meetings and instruction, so that students can meet with peers or address particular skills without feeling that the material competes with other course components.

We might see the challenges of time in DH pedagogy as an extension of issues in the experience of library instruction, where negotiation of learning outcomes and time spent on information literacy in partnerships with faculty has been a core push to correct for problems in the "one-shot" model of library instruction. DH technologies and concepts, like search strategies, are often competing for time with other course content. Like search strategies as well, they are likely to fail if they are sequestered into a quick workshop on technology that doesn't involve a more integrated approach with a clear tie into assignments. Echoing Chan and Green, students need to engage with the concepts rather than learning technology as a forgettable add-on.

Nevertheless, these time issues may be even more extreme for librarians teaching DH than for information search and evaluation strategies. Indeed, at least some instruction on search strategies is still needed for the specific context of the archival materials students use. While Courtney and Dallis highlight subject liaison involvement as a way of scaling digital scholarship services, it may need to be acknowledged that digital scholarship instruction for liaisons may not scale to the same degree as information search and evaluation has in the past. A very small number of classes could quickly eclipse the time investment of twice as many more traditional instruction engagements. Moreover, subject liaison skillset expansion has evolved quickly, and new responsibilities may outstrip the time freed from other activities—digital scholarship itself includes a number of competencies and overlaps with areas such as scholarly communication and data management. Liaisons, though, need not tackle this alone, and their ability to scale up these services may be greatly enhanced by the ability to bring in and partner with new functional specialists in libraries where they exist alongside liaison services.

Notes

- 1. Angela Courtney and Diane Dallis, "Models for Partnering with Faculty and Supporting Digital Scholarship," in Supporting Digital Humanities for Knowledge Acquisition in Modern Libraries, ed. Kathleen L. Sacco, Scott S. Richmond, Sara M. Parme, and Kerrie Fergen Wilkes (Hershey, PA: Information Science Reference, 2015), 86–106, 91.
- The process of merging disciplinary unit libraries at Illinois (and elsewhere) is described in several chapters of a recent book on the topic: Sara Holder and Amber Lannon, eds, Difficult Decisions: Closing and Merging Academic Libraries (Chicago, Illinois: Association of College and Research Libraries, 2015). http://docs.lib.purdue.edu/purduepress_ebooks/33/
- Stewart Varner, "Library Instruction for Digital Humanities Pedagogy in Undergraduate Classes," in Laying the Foundation: Digital Humanities in Academic Libraries, ed. John White and Heather Gilbert (Purdue University Press Books, 2016), 205-222, p. 208. http://www.thepress.purdue.edu/titles/format/9781557537515
- Harriett Green, "Fostering Assessment Strategies for Digital Pedagogy through Faculty-Librarian Collaborations: An Analysis of Student-Generated Multimodal Digital Scholarship," in White and Gilbert (2016), 179-203. Anita Say Chan and Harriett Green, "Practicing Collaborative Digital Pedagogy to Foster Digital Literacies in Humanities Classrooms," EDUCAUSE Review (October 2014): n.p. Accessed January 28, 2017. http://er.educause.edu/articles/2014/10/practicing-collaborative-digital-pedagogy-to-fosterdigital-literacies-in-humanities-classrooms.
- 5. Sigrid Anderson Cordell, Melissa Gomis, Alexa L. Pearce, and Justin Joque, "Filling the Gap: Digital Scholarship, Graduate Students, and the Role of the Subject Specialist," in Sacco et al. (2015), 67-85. Janet Bunde and Deena Engel, "Computing in the Humanities: An Interdisciplinary Partnership in Undergraduate Education," Journal of Archival Organization 8, no. 2 (2010): 149-59. http://dx.doi.org/10.1080/15332748.2010.519993

- Cordell et al., "Filling the Gap."
- Benjamin Fraser and Jolanda-Pieta van Arnhem, "A Collaborative Approach to Urban Cultural Studies and Digital Humanities," in White and Gilbert (2016), 151-178. For another example, see: Kathleen A. Langan and Ilse Schweitzer VanDonkelaar, "Moderating a Meaningful DH Conversation for Graduate Students in the Humanities," in Digital Humanities in the Library: Challenges and Opportunities for Subject Specialists, ed. Arianne Hartsell-Gundy, Laura Braunstein, and Liorah Golomb (Chicago: Association of College and Research Libraries, 2015), 19-38.
- Ibid, 167.
- Green, "Fostering Assessment Strategies."
- 10. Julianne Nyhan, Simon Mahony, Melissa Terras, "Digital Humanities and Integrative Learning," Integrative Learning, ed. Daniel Blackshields, James Cronin, Bettie Higgs, Shane Kilcommins, Marian McCarthy, and Anthony Ryan (London: Routledge, 2015), 235-47. Paul Fyfe interestingly explores options for networks of classes that communicate only, but the in person nature of the individual classes remains a core foundation for what he describes: "there are few more important questions to argue than why we continue to meet our students in person." Paul Fyfe, "Mid-Sized Digital Pedagogy," in Debates in the Digital Humanities 2016, ed. Lauren F. Klein and Matthew K. Gold (University of Minnesota Press, 2016), 104-117.
- 11. For publishing and scholarly communicate, see: Maria Bonn, "Tooling up Scholarly Communication Education and Training," College & Research Libraries News 75, no. 3 (2014): 132-135. http://crln.acrl.org/content/75/3/132. Alix Keener, "Library (Publishing) School: Training and Competencies for the New Publishing Professional," Journal of Electronic Publishing 17, no. 2 (2014): n. pag. http://dx.doi.org/10.3998/3336451.0017.206.
- Jonathan Senchyne, "Between Knowledge and Metaknowledge: Shifting Disciplinary Borders in Digital Humanities and Library and Information Studies," in Klein and Gold (2016), 368-376, 373.
- 13. Green, "Fostering Assessment Strategies," 186.