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The Case for OER in LIS Education

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Abstract

The increasingly high cost of textbooks coupled with the pedagogical opportunities presented by Creative Commons licenses has provided fertile ground for the development of open educational resources (OER) initiatives as an impactful practice for improving student success. Librarians are leading advocates for OER, yet little has been published on how librarians learn about OER or how faculty use OER in library and information science (LIS) programs. For this study, the author surveyed LIS faculty about their awareness and usage of OER as well as the role they imagine for future librarians in open education. LIS faculty, current and future librarians, and those interested in open education can glean insights on the usage of OER from the almost fifty respondents. Approximately half of the respondents regularly use some OER, and the other half have heard of it. Of those who have heard of OER, half of the respondents mention them in their teaching. Respondents believe that future librarians' roles in OER range from traditional librarian roles of finding and providing metadata and curating resources to developing and leading OER initiatives. Given that several organizations offer training and certifications for librarians in OER, LIS programs can help meet this need in a variety of ways.

Introduction

In the United States, librarians play a critical role in open educational resources (OER) initiatives. Frequently, librarians provide campus leadership in OER initiatives. This is both consistent with the library's "rich history of discovering educational materials broadly defined, ensuring access to such resources, and educating others about their use" (Wesolek,

Lashley, and Langley 2018, 4) and an innovative practice that is shifting and expanding the librarian's role in the curriculum. OER are defined as "teaching, learning and research materials in any medium—digital or otherwise—that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions" (Hewlett n.d.). OER offers an alternative to expensive and inflexible commercial textbooks, reduces the cost of curricular materials for students, improves access on the first day as well as beyond the bounds of the course, and provides new pedagogical opportunities.

Recognizing that students need access to assigned textbooks, librarians have collected these materials to create course reserve collections since the nineteenth century (Austin 2012). Course reserve collections make textbooks available for students and are more likely to be checked out than the rest of the collection (Middlemas, Morrison, and Farina-Hess 2012). Developing a course reserve collection presents challenges, as libraries have limited book budgets, insufficient time to process the textbooks, and inadequate space to house the collection. Course reserves present a highly imperfect solution to student textbook access, as these materials are in high demand, the length of check out time is limited (Barclay 2015), and students wait in long lines to access these textbooks. The increasing cost of textbooks also challenges shrinking library budgets—one librarian estimates purchasing every copy of a required textbook for undergraduates would be "a cost approaching $1.9 million University-wide per semester" (Snowman 2017, 43). Commercial textbooks have increased in price by over 1,000 percent since the 1970s (Popken 2015).

Student loan debt in the United States is estimated at $1.56 trillion and is continuing to rise (Friedman 2019). Textbooks contribute to that debt, and therefore any cost savings that can be achieved is important for students. Debt accrual begins in undergraduate programs; those who continue to graduate degrees hold a rising proportion of student loan debt (Delisle, Phillips, and Van der Linde 2014; Looney and Yannelis 2015). Graduate degrees are required for entry in professionalized fields, such as librarianship. Halperin's research shows that 30.6 percent of librarians in her study took out more than $25,000 in loans (2018). This debt disproportionately affects new librarians who struggle due to underemployment issues, such as low pay, temporary and nonprofessional positions, and the need to hold multiple part-time jobs (Allard 2017). Increasingly, librarians report that they cannot achieve their graduate degree unscathed by debt.

Librarians are confronting high debt in their own lives, yet also prominently lead OER initiatives that increase textbook affordability, reduce student debt, and expand access to knowledge. While national surveys have explored general faculty awareness of OER (Seaman and Seaman 2017; Allen and Seaman 2014, 2016), library and information science (LIS) fac-

ulty awareness and use of OER has not yet been examined. In this article, I analyze data collected from a survey of LIS faculty to raise and discuss questions about the adoption of OER in LIS programs and the training of future librarians in open education.

LITERATURE REVIEW

Textbooks and the LIS Curriculum

Textbooks are extensively used as the most common educational material in American higher education (Issitt 2004; Seaman and Seaman 2017). Textbooks "contain and enshrine underlying norms and values; they transmit constructions of identity; and they generate specific patterns of perceiving the world" (Fuchs and Bock 2018, 1). In 1986, Metzger noted that library education had not generated literature on its own curriculum and "with all of the discussion of ways of teaching and what ought to be taught, the subject of the tools to be used in that work—i.e., primarily textbooks—has been nearly ignored" (469). Between 1987 and 2015, the studies in the review below included surveys of faculty, content analyses of syllabi, or reviews of instructional material. These studies provide some information on LIS textbooks; however, they do not present a comprehensive picture of the textbooks or resources in the LIS curriculum.

The existing research on textbooks in LIS is focused on a particular topic or specialization within LIS. Studies exist in reference and cataloging, as well as specialized courses, such as business information, instruction, knowledge organization, academic libraries, and digital libraries. The three studies in bibliographic control show a variety of sources are in use in the curriculum. Chan's (1987) informal survey on cataloging texts finds that a general textbook is largely used in introductory courses and specialized resources in more advanced courses. Pattuelli examined almost two thousand course readings of introductory-level knowledge organization courses, finding that the *Anglo-American Cataloging Rules 2* manual and the textbook *The Organization of Information* by Arlene Taylor appear most frequently. These studies show an "evolving state of a field that is growing more complex and multifaceted" (Pattuelli 2010, 820). Joudrey (2002) analyzed syllabi of bibliographic control education courses.

In the subject area of reference, O'Connor (2011) found three main textbooks are assigned, *Reference and Information Services: An Introduction, Reference and Information Services in the 21st Century: An Introduction,* and volumes 1 and 2 of *Introduction to Reference Work.* O'Connor noted the challenges of keeping materials up to date in the textbook and the need to accommodate change. Saunders (2015) examined reference syllabi and information literacy/instruction syllabi, as instruction librarians report feeling underprepared for their role. In analyzing instruction and information literacy in the LIS curriculum, Saunders found the assigned read-

ing was typically the relevant chapter in the reference textbook (2015). The most popular textbook in courses was *Information Literacy Instruction: Theory and Practice*, by Grassian and Kaplowitz, which was required in twelve of the twenty-nine courses examined.

In specialized library courses, textbooks are often not required. Business information courses often do not mandate a textbook (White 2004), though some require a course packet. Of the syllabi that required a textbook, only one, *Business Information: How to Find It, How to Use It* (2nd ed.) was listed on four syllabi. An analysis of digital library courses in 2006 showed that while no common set of readings exists, a core set of authors is typically assigned (Pomerantz et al. 2006). In researching courses on academic libraries, Bailey (2010, 36) listed one instance when a textbook is assigned, it can have a "strong influence on many courses" and can be "entirely organized around his chapter progression and many others adopt terminology from his chapter titles."

These studies do not capture the full picture of course materials used in LIS; however, they provide some insight. The research shows concerns over how the courses and texts prepare future librarians for an ever-changing field. The cost of course materials is not examined in these articles, and they do not mention the use of OER.

The Librarian's Role in OER
The values of open and librarianship are so enmeshed that West states, "As an open librarian I find it difficult to tease out the differences between my work in open education and the professional practice of librarianship" (2017, 140). Open education has emerged and evolved beyond its initial status as a trend in academic libraries (Middleton et al. 2014). As Gumb (2019) writes, "In the United States, if your library isn't already knee-deep in this process, odds are the conversation has at least begun, considering that 23 states have passed some form of textbook affordability legislation." Academic libraries across all classifications are considering and developing open education initiatives.

Librarian involvement in adoption of OER can range from advocacy and promotion to active support in searching and discovery to developing initiatives and establishing programs (Okamoto 2013; Borchard and Magnuson 2017; Mitchell and Chu 2014; Davis et al. 2016; Salem 2017). The guide *Librarians as Open Education Advocates* argues that librarians are well positioned because they are helpful, serve a multitude of capacities, interact across disciplines, lead in instruction, and advocate for students and faculty. In terms of skills, librarians "can help to locate and organize OER, but they can also navigate copyright concerns, advise on open licensing, and support instructional design around the use of open material" (West 2015). Walz asserts that librarians bring "knowledge and expertise in copyright and licensing, inquiry-based learning, user advocacy, systems

thinking, project management abilities, and expertise in teaching" (2017, 153), highlighting that there is no one model for how librarians engage in open education.

In surveying community college faculty to understand how faculty perceive the librarian's role in OER, Braddlee and VanScoy (2019) find support for roles in discovery, cataloging, and information literacy, as well as recognition of librarians as OER advocates. They found "roles such as policy development, funding OER creation, reward and recognition programs, and creating OER publishing enterprises" were not held in esteem. While literature on faculty awareness of OER is plentiful, no studies specifically examine LIS faculty awareness and attitudes toward OER, nor the role LIS faculty perceive for librarians in OER.

OER Training for Librarians
The literature repeatedly points to the fit of librarians in open education. Noted futurist Bryan Alexander tweeted "#librarians are longstanding heroes in the #OER movement" (@BryanAlexander 2019). This nod to librarians highlights the critical role that they have been playing in OER. Librarians' "extensive understanding of copyright, instructional design, and discovery, combined with our interest in social justice, makes us natural leaders for helping others understand why Open Education matters" (Crissinger 2015). Jensen and West (2015) advise that "the first step to becoming an OER leader is to become familiar with the resources and organizations available to help grow knowledge and experience." Salem (2017) echoes this by recommending that librarians should start with professional development for libraries that have not yet established internal expertise. Many who consider librarians as leaders in open education advocate for training and development for librarians.

Training librarians in open education has increased in popularity as the OER librarian job title has emerged in the library. "The responsibilities of an OER staff person or librarian varies, but often includes working with faculty and students on OER programming and campaigns, research, data management, community building, and knowledge sharing around open education" (SPARC 2019). In an analysis of skills in OER Librarian job postings, Larson (2019) identified fifty-one skills in twenty-four job postings. No standard scope of work exists for open education librarians, though categories of skills include scholarly communication, publishing, instructional design, open education, research, web development, outreach, and general library skills.

For librarians employed in higher education and interested in learning about OER, a plethora of trainings on open education are available. The Open Textbook Network (OTN), Scholarly Publishing and Academic Resources Coalition (SPARC), Creative Commons (CC), and Library Juice Academy (LJA) offer courses and certificates in open education. Most of

these courses are not intended for LIS students, given their price and time commitment. The expectation of these programs is that librarians would be sponsored by their institution and provided support to participate.

The Association of College and Research Libraries (ACRL) has also put out a call to develop an OER Roadshow "to support librarians in finding, using, and developing open educational resources" (Nevius 2019). While most of these trainings are geared toward academic librarians, all librarians can benefit from learning about open education, given the growth of OER in K–12 (Blomgren and McPherson 2018) and peer-to-peer learning that public libraries support (Garmer 2016). This high level of activity of OER curricula for librarians by multiple organizations, including funders, leads to the question, how can LIS programs teach future librarians about OER?

The lack of research on textbooks and assigned course materials in LIS education and the growing librarian's role in OER initiatives, as well as the growing need for librarians to learn about OER, provides opportunity to contribute to the knowledge on this topic. This study begins to address this gap by investigating LIS faculty awareness of OER and the role they envision for future librarians in open education.

Methodology

This study examines master's level LIS instructors' awareness and usage of OER, as well as the inclusion of these in the LIS curriculum. The goal of this research is to understand what role LIS faculty envision for librarians in open education, as well as what skills are needed to fulfill that role. The survey asked demographic information regarding length of time teaching, as well as the degrees attained by the faculty, without including personally identifiable questions. LIS faculty answered questions about familiarity with OER and were asked questions about how they select teaching materials, cost of materials, and how cost weighs in their decision. The survey asked about the role of future librarians in open education and the knowledge and skills needed as open-ended questions, rather than offering from a list of options.

To obtain participants, I distributed the survey through the Association for Library and Information Science Educators (ALISE) listserv and an information literacy listserv (ili-l). The survey was sent through email to program chairs listed on the American Library Association (ALA) website of accredited programs. Chairs were to email the survey to their departments. No incentives were available for participation in the survey, and participants were self-selected.

Data analysis consisted of descriptive statistics regarding respondents' awareness and usage of OER. Two open-ended questions asked about the role future librarians should play in open education and the knowledge and skills needed for future librarians to play that role. These responses

are coded for common themes. Each comment could receive multiple codes, depending on the content of the response.

Results

Fifty LIS faculty initiated participation in the survey. One response was not included because the respondent was a faculty member at a Canadian institution and the study was limited to U.S. LIS faculty. Some respondents chose to skip questions that were not required, so not every question has the same number of responses as participants. Of the forty-three responses to educational level attained, 28 percent have a master's degree, 7 percent are in the process of obtaining a doctorate, and 65 percent achieved a doctorate. Of respondents, 78 percent have been teaching at the master's level for fewer than fifteen years. In assessing familiarity with other open activities, such as open access and open data, 27 percent of respondents reported that they are very familiar and publish their papers and data sets openly; 2 percent were very familiar with open access and open data, but do not publish openly; 65 percent understood the concepts of open access and open data, and reported that they use materials that are published openly; and 2 percent were not at all familiar with open access and open data.

As shown in figure 1, half of the respondents reported using some form of OER regularly in their teaching. In all, 27 percent mention OER in their teaching and 20 percent have heard of OER. Only one respondent (2 percent) had never heard of OER.

Of those faculty who use OER in their teaching, 60 percent were aware of an OER initiative on their campus, and 28 percent were not aware of an OER initiative. The remaining 12 percent were not sure if there was an existing OER initiative on their campus.

Forty-six respondents provided an answer to the role future librarians should play in open education. These were coded thematically to identify most common responses, as seen in figure 2. The most common responses were that librarians should teach faculty about OER and support faculty use of OER, organize and promote OER, and lead the charge on OER.

As this LIS educator pointed out, "I don't think the librarian's role will be much different than traditional activities, but I do think that we could be stronger advocates for OER as, at its foundation, it is more closely aligned to the principles of librarianship that [*sic*] the current publication model." Few LIS faculty included terms related to locating, identifying, or selecting OER in their free responses, though it seems likely that it was implied in supporting faculty in their adoption of OER. Creation of OER is mentioned in 9 percent of the responses. One respondent viewed the role of librarians in OER creation as follows: "Libraries of all kinds are educative, so there are great opportunities for librarians as creators, introducers to and users of OER."
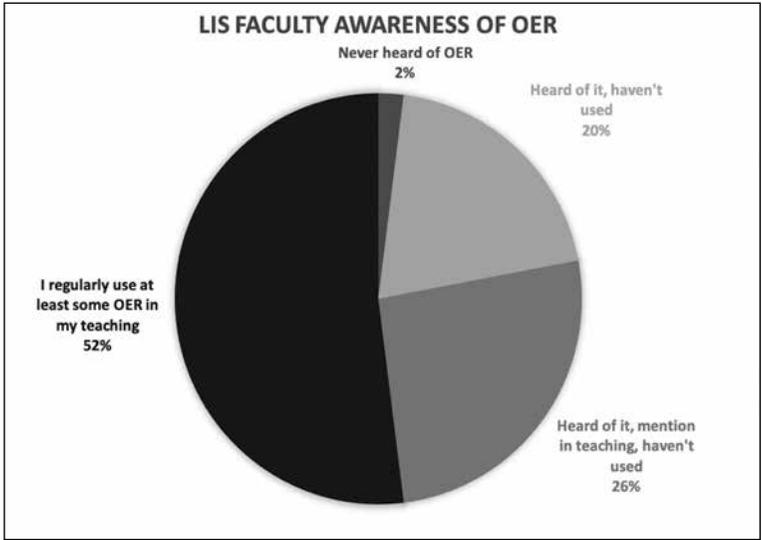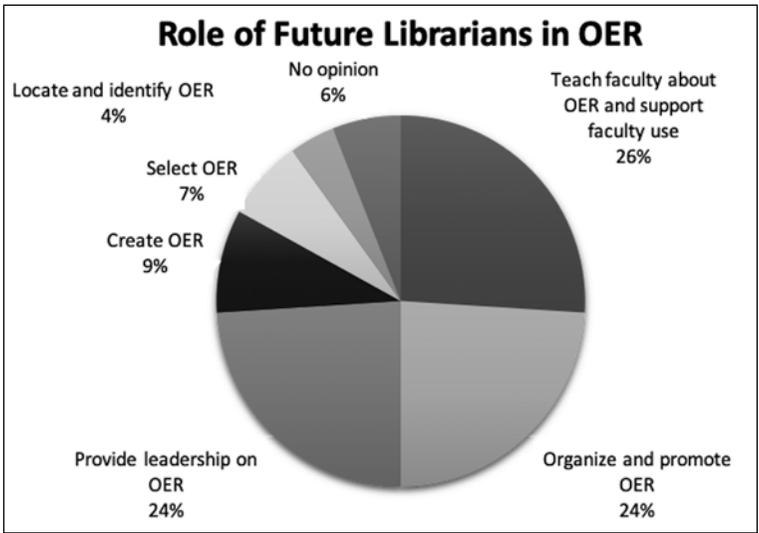
Figure 1. Awareness of OER.

Figure 2. Role of future librarians in OER.

The forty-three respondents generated twenty-three unique knowledge and skills needed for librarians to play a role in open education listed in table 1. The most common response was copyright knowledge, though only one respondent mentioned open licensing. The second greatest response was that the existing librarian skill set was sufficient for a role in open education. Technology skills and knowledge of platforms were also frequently mentioned, along with outreach and collaboration skills with a number of different stakeholders, such as faculty or technology partners. One respondent provided the OER Competency Framework (International Organisation of La Francophonie 2016), which is robust and lists skills for becoming familiar with, searching for, using, creating, and sharing OER. The framework does not explicitly discuss librarianship, but many of these are the same skills listed in the free responses.

One LIS faculty affirmed, "I think we should be a model by making our disciplinary resources open." Another provided an issue and solution to developing potential resources for master of library and information science (MLIS) programs: "One issue I see that given the relatively small population of MLIS students, textbooks tend to be rather expensive. One would think that someone would develop OA [open access] textbooks for MLIS-level courses, but it takes a lot of time and energy to write a textbook for a graduate level course. Maybe an organization like LIRT (for those

Table 1. Librarian knowledge and skills needed in open education.

Skills	Times Mentioned
Copyright/IP	8
Existing librarian skillset	6
Technology skills	6
Awareness of OER	5
Outreach	4
Collaboration	4
Don't know	4
Information literacy	4
Preservation	3
Instructional design	3
Subject-area knowledge	3
Accessibility	2
Pedagogy	2
Digital library	2
Evaluation of OER	2
Locate OER	1
Online publishing	1
Project management	1
Commons philosophy	1
Research methods	1
Content creation	1
Web analytics	1
Publishing models	1

interested in instruction in all types of libraries), could develop OA text-books in 'modules.'"

Discussion

The goal of this study was to ascertain the extent to which LIS educators are aware of OER and how they envision future librarians' roles in open education. The responses provide an entry point for exploration and discussion of LIS educators' awareness of and interest in OER. Two related yet distinct issues are relevant in this discussion. The first is how LIS faculty adopt OER in their courses, which helps alleviate the textbook cost burden for LIS students and potentially raises awareness of OER. The second is how LIS faculty envision the role future librarians play in open education and what skills are necessary to achieve that role.

LIS faculty in this survey were a self-selected group who responded to a survey explicitly about OER in LIS. Approximately half reported using OER in their courses. Further research could illuminate which OER are assigned or if courses are taught as "zero textbook cost" without a cost to students. The agency of faculty in choosing materials can also be limited by curriculum committees or adjunct status. Future studies on any of the assigned materials in LIS courses, from commercial textbooks to course packs to OER, would provide insight into the curriculum librarians in the United States.

In describing the role that LIS educators envision for future librarians in open education, LIS faculty align OER with skills that are currently taught in LIS programs, though not specifically about OER. For example, LIS students learn advanced search skills, but not necessarily about the existence of OER repositories. LIS faculty imagine future librarians educating faculty about OER; however, it is unclear when librarians learn about OER. The skills enumerated by LIS faculty that future librarians might need to play a role in open education have tremendous variation, which aligns with the idea that there is no one model of how a librarian engages in open education. This wide range and the four responses of "don't know" and six responses of "existing skill set is sufficient" indicate challenges for how future librarians might prepare for a career as an OER librarian or engage faculty about OER.

OER and LIS Educators

The literature review for this study reveals a surprising lack of conversation about OER among LIS educators. Few studies discuss the texts assigned in LIS education. None of the articles on the textbooks and other assigned materials in LIS courses include any discussion of selection, evaluation, or cost. The focus tends to be about how the curriculum prepares, or in many cases does not prepare, LIS students for their future work. The studies do not examine how students access these textbooks. The curriculum is discussed extensively within the literature, but not the lived experience

of the students with these textbooks. As Lanclos explains, the lived experience is the "phenomenological experience of being a person" (2016, 240). Ethnographic approaches to the experience of LIS students could provide insight into how future librarians experience the LIS curriculum.

Envisaging Teaching with OER in the LIS Curriculum
LIS faculty face barriers to teaching with OER, particularly that no LIS OER textbooks currently exist, though one is in development. However, OER exist in similar fields, such as education, instructional design, and computer science, and these OER textbooks could be revised or remixed for the LIS curriculum. Additionally, OER are more than textbooks and materials such as journal articles; open access monographs can and should be evaluated for teaching and learning. This section provides suggestions for how LIS faculty might engage in open education to highlight existing courses using OER, diversify curricular materials through the use of OER, and create and update OER.

Raising Awareness of OER. Teaching with OER could provide a method for raising awareness of open education for future librarians. LIS faculty can increase understanding of OER without introducing a new course or changing the curriculum. LIS faculty already teaching with OER can add a simple statement to their syllabus highlighting the CC license or public domain status of their assigned readings. Faculty adopting OER in other disciplines can write similar syllabus statements, and LIS faculty can adapt or remix those statements as appropriate. Santa Ana College provides this suggested syllabus statement:

> This course uses digital course materials designed using Open Educational Resources (OER), high-quality, openly licensed educational materials, rather than a traditional textbook. You can access all readings, videos, quizzes and other activities through our course site on Canvas. (http://rsccd.instructure.com)
>
> Our course materials were created and assembled by [Insert Faculty Name] and funded by the [Select one—Santa Ana College Student Equity Grant, Achieving the Dream OER Degree Initiative, or Zero Textbook Cost Degree Grant]. Santa Ana College is committed to student access and excellence. You will not have any additional cost for textbooks. Extra care and effort was involved to assure access to high-quality affordable materials. I am interested in your experience using these materials and welcome your feedback in an anonymous survey at the end of the course and at any time during the course of this class. (n.d.)

This statement provides guidance for students on what OER is, why it was chosen, and how it will affect their class. It shows the care the faculty has given by developing these materials and informs the class that they will have a survey for feedback at the end of the semester. LIS faculty already teaching with OER can adapt this statement for their class needs and raise awareness of OER for LIS students.

The concept of OER could be introduced in many ways in the LIS curriculum. For example, LIS students in cataloging and bibliographic control courses can practice cataloging of OER. This can introduce students to OER and add records of open textbooks, which will add to the discoverability of OER and increase available metadata for OER. In instruction courses, LIS students can create, remix, or adapt available lesson plans for library instruction. Their lessons can be shared with practicing librarians through repositories and adapted for local context. This could help to train future librarians in developing open practices. Van Allen and Katz (2019) discuss how a similar assignment functions in a teacher education course.

In teaching about OER, LIS faculty need not start from scratch. CC, for example, openly licenses their training materials. These resources have a CC Attribution license, meaning that others are free to retain, reuse, revise, remix, and redistribute these materials, as long as they provide proper attribution to the original materials. A module on OER and open education could be added to a course or included as supplemental material for LIS students interested in the topic.

Creating and Updating OER. The challenge of dealing with out-of-date materials appears prominently in the LIS textbook studies. OER provides the advantage that openly licensed materials can be modified and updated at any time. LIS faculty would not need to wait for a new edition or assign additional resources to address current issues in librarianship. OER empowers faculty with greater control of the course, as they can draw from a variety of sources rather than be limited by one textbook author.

OER can be created by LIS faculty, LIS students, practicing librarians, others interested in librarianship, or a combination of all of these. One such project is a collaboration between two librarians and a LIS faculty member who received an Institute of Museum and Library Studies leadership grant to develop an open textbook on scholarly communication. This text will include sections on open access, open data, open education, and open science and infrastructure (OER+ScholComm n.d.). LIS faculty will be able to adopt, adapt, and remix this text in a number of courses to provide relevant and current information on LIS engagement in scholarly communications.

Social Justice and Open Education. OER enables the customization to develop inclusive textbooks. Lambert (2018) proposes redefining open education through a social justice lens as "the development of free digitally enabled learning materials and experiences primarily by and for the benefit and empowerment of non-privileged learners who may be underrepresented in education systems or marginalised in their global context." She suggests that the dimensions of social justice applicable to OER are redistributive, recognitive, and/or representational justice. These dimensions propel OER beyond economics to social and political justice. Lam-

bert asks, "How 'open' is the textbook for marginalised learners if indigenous, Hispanic and learners of colour are invisible inside the textbook and perhaps invisible in the whole curriculum?" Given the whiteness of LIS and difficulty in recruiting those with a marginalized identity (Hathcock 2015), OER could provide a pathway to represent and promote diversity in LIS. While OER is not a magic wand, it can amplify voices in ways that are unlikely in commercial textbooks. Open education should not seek to re-create the current textbook model and its inequities. Further research could examine how current LIS textbooks include librarians with marginalized identities.

Limitations
Limitations to the conclusions in this study exist due to the uncontrollable variables within a research study. Survey responses based on personal willingness to participate can lead to self-selection. The low number of responses presents challenges in fully understanding the landscape of OER and its use by LIS faculty. The study design does not provide for generalizable results. LIS faculty were not asked if they still assign a commercial textbook, and so the OER assigned could be ancillary to the assigned textbook. Hopefully, this study can help to inform the direction of future research and promote greater discussion of how LIS faculty can teach about and with OER.

CONCLUSION
Teaching with OER provides economic benefits for students and potentially larger benefits for librarianship as a profession. While it may not be possible for faculty to directly impact the cost of the MLIS, they do have control over the cost of required course materials. Addressing the cost of materials could provide some relief for students entering a low-paying profession who have incurred high debt.

The proliferation of open education initiatives and OER librarian positions as well as the development of OER trainings for librarians demonstrate the need for future librarians to learn about OER. Teaching with OER and modeling open practice in LIS programs can accomplish these goals while reducing LIS student debt and engaging future and current librarians in the creation of materials and developing an awareness of OER among future librarians.

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