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Letter from the Outgoing Editor

In May 2025, *C&RL* published the article "Respecting Privacy of Thought in DEI Training," by Kristin Antelman.[1] This letter is in response to correspondence received on the article, including one letter to the editor,[2] an open letter on ACRLog,[3] and social media commentary. On behalf of the journal and myself as Editor, I would like to address questions that have arisen regarding the review process and how this article was published.

The *C&RL* Editor's role involves examining submissions to decide if they get sent to peer review and then sending them to at least two peer reviewers, who then send their comments and recommendation decisions. The Editor selects peer reviewers based on their research and other professional interests within their reviewer profile information. Currently, there are more than 100 peer reviewers for the journal. *C&RL* does not use, nor does it permit its reviewers to use, artificial intelligence of any kind as part of the peer review process.[4] After analyzing reviewer comments and recommendations, the Editor makes the final decision on what gets published.

In the current publication workflow model, *C&RL* Editorial Board members are consulted with the Editor's discretion to draw on their collective expertise in an advisory role and as individual reviewers. The Editorial Board, which "serves in an advisory capacity to the editor on the contents of the journal issues and board members form the core of referees, reviewing manuscripts submitted for possible publication," does not see submissions as they arrive, and they do not make editorial decisions on what gets published.

For increased transparency in communicating this process, I published a 2024 editorial about *C&RL* peer review, which includes the questions that reviewers respond to when reviewing a manuscript.[5] For more details about *C&RL*'s review process, please visit the Author Guidelines Submissions page or the C&RL Guidance for Reviewers LibGuide.

In light of *C&RL*'s editorial processes outlined above, as Editor I take accountability for publishing the article in question. That said, as part of the peer review process with all article submissions, the Editor's decision is strongly influenced by the reviewers' comments. Sometimes reviewers have very different or divergent recommendations. From there, the Editor sifts through the reviewer forms and uses their own input in synthesis to make an editorial decision. After that decision is made, reviewer comments, along with any recommendations that the Editor has for the author, are sent to the author with a publication decision.

In addition to questions about the editorial process, we received comments suggesting or recommending that the article be retracted. To discuss, the Editorial Board, ACRL staff and the current *C&RL* Editor met on June 2 and on June 16. In conversations with the *C&RL* editorial team, we referred to and consulted the Committee on Publication Ethics' (COPE) Retraction Guidelines,[6] and ALA's draft of Publication Ethics for ALA Journals,[7] among other resources and suggestions. I shared the reviewers' decisions and my own for transparency and accountability. Although the Editorial Board members' recommendations were not all in agreement with each other, I used the discussion to make a decision. From discussion and two online platforms for anonymously contributing input, concerns and questions among the Editorial Board and ACRL staff, I decided to not retract the article.

While I do not personally agree with all the author's points, that does not mean that it should not be published, as the role of Editor is not to agree with all author viewpoints but rather to provide an appropriate forum for a wide range of scholarly ideas to be shared with our profession. It was with a sincere, optimistic hope that this article would spur constructive dialogue to openly debate with reason and respect, an opportunity for a larger conversation for self-reflection and awareness of internal biases. I recognize that this letter may not satisfy all readers' questions or concerns about this article, but I can only share how it was published and my own thoughts as former Editor, with the intention of addressing everyone with respect. In the current political environment in the United States, I can see how the argument in this article could be interpreted as anti-DEI in its premise. I apologize to all who have found this article offensive or harmful.

Before this article was published and perhaps even more pressing now, incoming Editor Michelle Demeter, the Editorial Board, and I have been having conversations and working toward changes within *C&RL* to make our editorial processes such as peer review more transparent, equitable, and efficient. Some of these conversations and projects involve the consideration of additional editorial staff positions, ways to improve the peer review process, and ways to make the journal's publication process more transparent for all *C&RL* readers and authors. These changes may involve implementing or changing processes to improve and distribute internal workflows while clarifying to authors and readers the work that is underway. Regardless, these changes will take time, and the incoming Editor and Editorial Board are just getting started. As they make progress, there will be updates, but more importantly, hopefully noticeable changes by authors, reviewers, and readers. Thank you, *C&RL* readers and authors for what you bring to this publication and to our profession.

~ Kristen Totleben
Open Publishing Librarian at the University of Rochester
Outgoing *C&RL* Editor (2022-2025)

Notes

1. Antelman, K. (2025). Respecting Privacy of Thought in DEI Training. *College & Research Libraries*, 86(3), 430–448. https://doi.org/10.5860/crl.86.3.430

2. Smith, E. (2025). Letter to the Editor. *College & Research Libraries*, 86(4), 532.

3. Anonymous (2025 May 27). Open letter to CRL from the academic wing of #CripLib. *ACRLog*. https://acrlog.org/2025/05/27/open-letter-to-crl-from-the-academic-wing-of-criplib/

4. Demeter, M., Ho, A., and Lockaby, M. (2025). Introducing C&RL's Generative AI Policy. *College & Research Libraries*, 86(3), 374. https://doi.org/10.5860/crl.86.3.374

5. Totleben, K. (2024). A Peek into C&RL's Peer Review Process. *College & Research Libraries*, 85(2), 142. https://doi.org/10.5860/crl.85.2.142

6. COPE Council. COPE Guidelines: Retraction Guidelines. November 2019. https://doi.org/10.24318/cope.2019.1.4 © 2019 Committee on Publication Ethics (CC BY-NC-ND 4.0) https://publicationethics.org

7. American Library Association, "ALA CD#32," Virtual, LLX, and Annual Conference Council Meetings." Accessed June 10, 2025, https://www.ala.org/aboutala/virtual-llx-and-annual-conference-council-meetings-0. Please note that ALA Journal Publication Ethics will be published in American Library Association's "ALA Policy Manual." Accessed June 10, 2025. https://www.ala.org/aboutala/governance/policymanual

Letter to the Editor

As a librarian at the University of California Santa-Barbara, I wish to address the publication of the article by former UCSB University Librarian Kristin Antelman.[1] Ms. Antelman criticizes DEI trainings' standardized vocabulary and practices through the lens of "cognitive liberty." I would challenge the application of this term which originated with Duke Professor of Law and Philosophy Nita A. Farahany. Dr. Farahany's work revolves neither around DEI principles nor other advocacy, but rather relates to near-future surveillance via neuroscience.

Other questionable applications of sources include a 1961 text by Dr. Jay Lifton which Ms. Antelman fails to correctly cite. The phrase "thought-terminating clichés" tacitly compares DEI initiatives to Lifton's focus on persecution and brainwashing within Maoist China or (if meant to cite the author's 1989 edition) fundamentalist extremists and cults. It becomes impossible to accept the author's attack on DEI principles and methodology in good faith. Advocating for a backwards trajectory in this perilous time for the profession is not only short-sighted. Rather, the article's publication itself smacks of a disingenuous approach to the advocacy principles established by our professional bodies including our flagship organizations of ALA, ACRL, and ARL themselves.

~ Erin Sweeney Smith

Note

1. Antelman, K. (2025). Respecting Privacy of Thought in DEI Training. *College & Research Libraries*, 86(3), 430–448. https://doi.org/10.5860/crl.86.3.430.

Editorial

So Long, and Thanks for all the Fish

This is my last editorial as Editor of *College & Research Libraries* (*C&RL*). My term was from 2022-2025. It has been a privilege, pleasure, and a rigorous learning experience for me to shepherd this journal. Throughout my term, I loved reading, reviewing, sharing and encouraging other colleagues' work, and contributing to our profession's knowledge and conversations. I'm taking this moment to reflect on my experiences as Editor. Many of you know that the phrase "So long, and thanks for all the fish," is from science fiction writer Douglas Adams' *Hitchhikers' Guide to the Galaxy* series. It is a goodbye letter from the dolphins as they leave planet Earth. I'm borrowing it to say thank you and reflect on my past three years as *C&RL* Editor.

Being an editor is rewarding in supporting colleagues in their research—asking questions, giving feedback in constructive, positive ways while keeping an eye out for the big picture regarding the journal. It always involves seeking ways to improve the work processes to facilitate scholarly conversation, dialogue and exchange to encourage and promote professional growth across the profession. Throughout my term, I often imagined (and still imagine) the journal as a living entity that needs care, feeding, and continuous attention for its well-being and improvement. It takes a team of people to keep it in motion.

Thank you to all current and prospective authors, for your submissions and contributing to *C&RL*. Thank you to all of the *C&RL* Editorial Board members for their input, diverse ranges of expertise, manuscript reviews and for those who have served on small subcommittee/task forces for crafting journal policies and guidelines. Among these projects, I want to thank *C&RL* Editor-Designate Michelle Demeter, Editorial Board member Adrian Ho and Book Review Editor Melissa Lockaby for taking the helm for the research, writing and sharing of the *C&RL* Generative Artificial Intelligence (AI) Policy, and to Editorial Board members Minglu Wang and Adrian Ho for their research, survey distribution and resource sharing for C&RL's Data Sharing recommendations. I also wish to express gratitude to Rebecca Croxton, Michelle Demeter, Amanda Folk and Teresa Schultz for their in-progress work to improve the peer review process. Thank you to ACRL staff David Free and Dawn Mueller for their steadfast support, tireless patience, and so much time.

All these people and so many more make the journal progress and the Editor's work is one of many components that make it tick. Meeting and learning with and from so many people in activities such as article submissions, peer reviews, collaborations, policy and guideline-making projects, and multiple other ways has made it all worth it for me. Connecting colleagues with ideas, strategies, other people and new ways of thinking and approaching work helps us all feel more interconnected and strengthens the quality and meaning of what we do in our careers. This thought was my driving motivation and continues to be so in all my professional endeavors.

Throughout this past year, Michelle Demeter, *C&RL*'s incoming Editor, and I met frequently for training, discussion, brainstorming, writing and for so many different conversations. The dialogue and the work that happened whenever we met, I believe has benefited

me just as much if not more than Michelle. A few examples of topics in our training meetings include learning the ropes of *C&RL*'s Open Journal Systems (OJS), sending manuscripts to reviewers for double-anonymous peer-review, reviewing comments and manuscripts to make editorial decisions and a slew of logistical work, communication and tasks. For me, it has been a space for reflecting on the work of maintaining and making changes within the journal's internal processes, policies, staff structure, seeing gaps in which *C&RL* needs more transparency in its internal processes to share with authors and readers.

Just like living beings, a journal does not stop evolving and progressing until it is no longer publishing. As Editor, everything always feels (or felt) like it is consistently in progress, never finished and that it is normal to feel behind. Often, there are no clean starts and stops in the work as the submissions are ongoing and often at various stages of revisions, review or production.

I did this work out of love for my colleagues' scholarly writing, the advancement of ideas, progression of the profession and the endless pursuit of creative, strategic approaches to academic and research librarianship. Personally, and professionally, it was a tremendous experience for growth in which I learned, made mistakes, worked with so many people and had fun. It is always the right time to encourage dialogue and scholarship in the profession to advance all our work and build community.

~ Kristen Totleben

"I Don't Think Librarians Can Save Us": The Material Conditions of Information Literacy Instruction in the Misinformation Age

Amber Willenborg and Robert Detmering

This national qualitative study investigates academic librarians' instructional experiences, views, and challenges regarding the widespread problem of misinformation. Findings from phenomenological interviews reveal a tension between librarians' professional, moral, and civic obligations to address misinformation and the actual material conditions of information literacy instruction, which influence and often constrain librarians' pedagogical and institutional roles. The authors call for greater professional reflection on current information literacy models that focus on achieving ambitious educational goals, but which may be unsuitable for addressing the larger social and political crisis of misinformation.

Introduction

Donald Trump's unlikely presidential victory in 2016 has become inextricably associated with growing public concern about the potentially negative impact of false and deceptive information on democratic society (Allcott & Gentzkow, 2017; Tenove, 2020). While media saturation and political distortion eventually rendered phrases such as "fake news" and "alternative facts" virtually meaningless, ongoing waves of COVID-19 skepticism, QAnon cultism, and 2020 election denialism suggest that various forms of misinformation and disinformation will continue to play a worrisome role in political discourse going forward. Misinformation—defined broadly to encompass disinformation and related concepts—is not a new problem for democracy; however, in today's environment, online social networks facilitate the rapid and widespread circulation of misinformation into the larger media ecosystem, making verification exceedingly difficult and enabling interference in political campaigns and elections (Muhammed & Mathew, 2022; Tenove et al., 2018). Unsurprisingly, as long-time information literacy educators and advocates, many librarians feel professionally and morally obligated to address this crisis.

In recent years, innumerable scholarly works, think pieces, and statements from professional organizations have asserted that librarians have an especially important role to play in helping students and other library users evaluate information sources more effectively against the backdrop of civic discord and online propaganda (ALA, 2017; Batchelor, 2017; Cooke, 2017;

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Eva & Shea, 2018; Fister, 2021a; IFLA, 2018; Jaeger et al., 2021; Musgrove et al., 2018). Succinctly encapsulating what has become the consensus view, Beene and Greer (2021) state, "Librarians are uniquely poised to prepare learners for a lifetime of critical thinking, analytical reasoning, and information literacy" (p. 3). Based purely on the literature, the outpouring of classes, workshops, events, online guides, and other content focusing on fake news and related topics indicates that instruction librarians have largely accepted some measure of responsibility for combating misinformation as part of their efforts to advance information literacy on a broad scale (De Paor & Heravi, 2020; Revez & Corujo, 2021).

At the same time, while there appears to be general agreement that librarians should involve themselves in teaching students to identify misinformation, there is controversy surrounding the nature of that involvement. For example, librarians have been criticized for their apparent lack of engagement with research from other disciplines regarding the psychological and emotional dimensions of misinformation, specifically cognitive biases such as motivated reasoning, as well as imperfections in human memory, that can lead people to cling to false beliefs, even after they have been corrected (Sullivan 2019). Librarians have also been called out for their reliance on checklist heuristics that stress evaluating the superficial features of web sources in isolation, rather than thinking critically and holistically about sources in relation to one another (Beene & Greer, 2021; Faix & Fyn, 2020; Lor, 2018; Ziv & Bene, 2022). The popular "CRAAP Test" (Blakeslee, 2004) is perhaps the most notable—and now increasingly notorious—example of this problematic checklist approach. Additionally, to more fully understand how librarians and other educators are teaching students to evaluate information, several researchers have conducted content analyses of library and university websites (Bangani, 2021; Lim, 2020; Wineburg et al., 2020; Ziv & Bene, 2022). This body of scholarship consistently shows that such websites emphasize outdated, inadequate, and counterproductive evaluation guidance, as opposed to what Ziv and Bene (2022) refer to as "networked interventions," (i.e., proven techniques such as lateral reading that focus on evaluation within the context of the larger web) (p. 917). Although providing a certain level of insight into the instructional approaches employed by librarians and offering fully justifiable critiques of those approaches as they appear online, these studies are necessarily limited by their dependence on websites, which, divorced from the context of lived experience, may ultimately tell us very little about how librarians actually teach their students about misinformation.

As valuable as they are, these existing critiques of the library profession's handling of the misinformation crisis mostly fail to consider the material conditions of instruction librarianship, those professional and organizational dynamics that influence and often constrain this work. There is a lack of nuance and detail regarding the day-to-day experiences of librarians and the motivations behind the pedagogical choices they make. The present study, then, begins to address this gap in the literature through an in-depth, qualitative investigation into academic librarians' instructional experiences in relation to the misinformation crisis, the various strategies and methods they utilize with students, and the individual and institutional challenges they navigate along the way. Using semi-structured phenomenological interviews, the study explores the following research questions:

- What strategies do academic instruction librarians use to teach students to evaluate information and identify misinformation?
- What challenges do academic instruction librarians experience in teaching students about misinformation?

- How do academic instruction librarians envision a path forward for teaching information literacy in an age of misinformation?

It is hoped that the findings will extend and enhance conversations about the roles librarians are playing in teaching and promoting evaluation skills and help the profession move forward in a time of potential democratic peril.

Literature Review

Academic librarians have a longstanding professional investment in teaching evaluation skills in connection to their work as information literacy educators and advocates. O'Connor (2009) has shown that librarians have been closely associating evaluation skills with information literacy and democratic citizenship since the modern information literacy movement began in the mid-1980s. This interest in teaching students how to evaluate information and identify authoritative, trustworthy sources has continued unabated through the publication of widely influential professional documents, including the Association of College and Research Libraries' *Information Literacy Competency Standards for Higher Education* (2000) (*Standards*) and its eventual successor, the *Framework for Information Literacy for Higher Education* (2016) (*Framework*). Predating the appearance of contemporary online social networks such as Facebook and Twitter (now known as X), the *Standards* point to evaluation as a foundational component of information literacy, warning that, in a technologically rich society, "unfiltered" information of an "uncertain quality" threatens the development of an "informed citizenry" (2000, p. 2). Likewise, the current *Framework*, which offers a more nuanced approach drawing on threshold concepts from the field of education, rather than a "prescriptive enumeration of skills," refers to a "dynamic and often uncertain information ecosystem," with librarians presented at the forefront of teaching the critical evaluation of information in various contexts (2016, p. 7). In keeping with this conception of information literacy, source evaluation has been a consistent topic of discussion and debate in the library literature for many years, reinforcing this particular instructional role for librarians, despite evolving views on the most suitable pedagogical methods and tools (Angell & Tewell, 2017; Mandalios, 2013; Meola, 2004; Ostenson, 2014).

While this focus on evaluating information has been well-established in information literacy circles for decades, a renewed and more pronounced concern with evaluation has emerged in response to growing fears surrounding the circulation of deceptive content within the media ecosystem, especially on social networks. Such content can be categorized in various ways, based in part on the intention behind creating or sharing it, but "misinformation" frequently serves as a collective term for all forms of false and misleading content (Ha et al., 2021; Southwell et al., 2018; Wardle, 2020). The public at large became increasingly aware of misinformation as a serious threat to social stability in the wake of "fake news" controversies and online propaganda campaigns connected to recent elections as well as the COVID-19 pandemic. Though by no means a new research topic in fields such as psychology and communications, scholars across disciplines have noted the detrimental influence of misinformation, including so-called fake news, on democratic norms and health outcomes (Gisondi et al., 2022; Lee, 2019; Monsees, 2023; Rocha et al., 2023). With public anxieties regarding a misinformation crisis at peak levels, many librarians have embraced the opportunity to reinvigorate their professional identity as information literacy educators and, in particular, advance their role in shaping an informed democratic citizenry by teaching evaluation skills that seem more important than ever before (Batchelor, 2017; Beene & Greer, 2021; Cooke, 2017; Eva &

Shea, 2018; Jaeger et al., 2021; Musgrove et al., 2018). The tenor of much of this literature is that there is a political and moral imperative for librarians to play a lead role in countering misinformation, with the very foundations of democracy potentially at stake. For instance, Batchelor (2017) calls teaching critical thinking about information a "professional and civic obligation" for librarians, presenting it as "essential to democracy" (p. 143).

Given this perceived obligation, methods and strategies for teaching students about fake news and other types of misinformation have become pervasive in the library literature. In a systematic review of recent literature in this area, Revez and Corujo (2021) highlight a variety of instructional practices among librarians, including the creation and/or use of specific evaluation tools, infographics, and websites; the development of news literacy workshops and tutorials; and the cultivation of partnerships with journalists. De Paor and Heravi (2020) discuss similar practices, such as online guides and news literacy programming, and encourage librarians to collaborate with faculty to promote information literacy on a broader scale and to ground this work in the larger body of research on the psychology of misinformation. Indeed, there is now widespread agreement that librarians need to acknowledge the limitations of their disciplinary knowledge, to learn more about the complexity of belief in misinformation from other fields, and to implement more informed pedagogies to address misinformation (Elmwood, 2020; Faix & Fyn, 2020; Lor, 2018; Rush, 2018; Sullivan, 2019; Tripodi et al., 2023). Moreover, online library resources featuring the CRAAP Test and other outdated, checklist-based models of evaluation have received substantial criticism for failing to incorporate more dynamic and evidence-based approaches, including reading techniques associated with research from the Stanford History Education Group (Lim, 2020; McGrew et al., 2019; Wineburg & McGrew, 2017; Wineburg et al., 2020; Ziv & Bene, 2022). Taken as a whole, the literature up to this point suggests that, despite a self-professed expectation that they do so, librarians may lack the expertise to design and deliver effective educational content aimed at combating misinformation.

On the other hand, very few studies have examined the lived experiences of librarians in relation to teaching about or addressing misinformation. In the public library realm, qualitative research has shown that staff members generally understand the psychological and social complexities of misinformation, but they face several challenges in working with patrons, including a lack of time and resources, as well as a lack of confidence in their expertise and a reluctance to engage with controversial political topics (Young et al., 2021). Despite such challenges, researchers have asserted that public library staff have an opportunity to become leaders in this area through closer collaboration with academic experts and members of the communities they serve (Tripodi et al., 2023; Young et al., 2021). In the academic sector, research has primarily examined how teaching faculty view the library's potential role in educating students about misinformation. While faculty vary in their perceptions of librarian expertise, they do not appear to be working regularly with librarians to address misinformation with their students and may not recognize how librarians could support this work, indicating a need for greater library outreach (Alwan et al., 2021; Saunders, 2022). This situation may be exacerbated by curricular models that place librarians in a subservient role, such that faculty expectations drive the content and timing of information literacy instruction (Alwan et al., 2021).

These kinds of contextual factors suggest promising directions for further research on librarian engagement with the misinformation crisis, particularly from the perspective of

librarians themselves. In a recent survey of academic librarians, Saunders (2023) found that nearly all respondents have concerns about misinformation and that a substantial majority teach news literacy skills or other material on misinformation. However, Saunders (2023) also points to multiple challenges associated with teaching these skills, including the complicated psychological elements of misinformation and the significant contextual limitations of the one-shot model. From this vantage point, the present study–perhaps the first of its kind–builds on the existing research through phenomenological interviews that highlight the thoughts, emotions, and experiences of librarians as they navigate a treacherous misinformation landscape and their own identities within it.

Methods

The purpose of this study was to examine the experiences of academic instruction librarians who teach students about source evaluation and misinformation. To that end, a phenomenological approach, which seeks to understand the shared experiences of those involved in a particular phenomenon, was taken to better understand the lived experiences of librarians teaching information literacy in an age of misinformation (Fought, 2018). The study examined the strategies librarians use to teach students to evaluate information and identify misinformation, their challenges with teaching about misinformation, and how they envision a path forward for teaching information literacy in the misinformation age.

This study was approved by the authors' Institutional Review Board in January 2022, after which the authors recruited participants via ALA Connect discussion boards. In February and March 2022, the authors conducted semi-structured interviews (see Appendix A) with the twenty librarians who responded to recruitment messages for a study focusing on how academic librarians teach students to evaluate information and identify misinformation. Participants self-selected as full-time academic librarians with job responsibilities in information literacy instruction who teach students about evaluation; interviewers confirmed these participant characteristics during the interviews.

Sixteen participants identified as female, two identified as male, one identified as female/nonbinary, and one identified as female/agender. Participants ranged in age from 27 to 76 years of age. Nineteen participants identified as White and one participant identified as Hispanic. Length of employment as a professional librarian ranged from one year to forty-two years, with twelve years average in the field. Participants were currently employed at a range of public and private associates, baccalaureate, masters, and doctoral-granting institutions across the United States, and the FTE of participants' institutions ranged from 1,200 to over 100,000 students.

The authors conducted semi-structured interviews via phone or video conferencing software. While a detailed interview protocol was created by the interviewers, these questions served only as a guide; interviews tended to be more conversational between the interviewer and participant, and follow-up questions were directed by participant responses. The length of these conversations varied among participants but averaged one hour, the allotted time scheduled for the interview. To avoid influencing and limiting participants' responses, the authors did not define "misinformation" for participants but asked them to think broadly about misinformation and associated concepts like disinformation, propaganda, and fake news. The authors recorded, transcribed, and analyzed the interviews. The authors separately reviewed all interview transcripts for themes relevant to the research questions, then collaborated to compare their analyses and determine common themes across interviews. Once

common themes were identified, the authors collaboratively reviewed transcripts to code for participant quotes specific to each theme. Respondents are identified with pseudonyms throughout this paper to maintain anonymity.

Results

Strategies for Teaching Evaluation

In One-Shot Instruction

The first research question examined the strategies academic instruction librarians use to teach students to evaluate information and identify misinformation. Most participants discussed their strategies for teaching evaluation within the context of one-shot instruction sessions. In contrast to the previous findings that CRAAP is ubiquitous in teaching evaluation (Wineburg et al., 2020; Ziv & Bene, 2022), participants consistently derided the CRAAP Test as an outdated method of information evaluation not suited for the current information environment. Instead, participants most commonly described teaching evaluation skills through networked approaches like lateral reading, updated evaluation frameworks, and critical thinking activities.

Over half of participants expressly discussed the concept of "lateral reading," an increasingly popular technique involving researching outside a given website to assess its credibility (Wineburg & McGrew, 2017). As Fraser stated:

> I have one or two examples prepared of websites and I ask students, what else can we find out about a particular website by doing a little bit of basic web searching? And it's pretty incredible, at least in my experience, how engaging that is for students. Much more so than giving them a checklist.

Librarians found that lateral reading provided a method for teaching evaluation without taking a one-size-fits-all approach and while engaging students in the nuances of the online information ecosystem.

While most participants described CRAAP as outdated and ineffective for teaching evaluation skills, several librarians instead utilize updated evaluation frameworks to provide guidance to students in evaluating information. Librarians discussed how frameworks like SIFT, ACT UP, and IF I APPLY can be useful to students in the context of a one-shot session, but also described the limitations inherent in these acronyms. Raquel uses a framework in her teaching and explained these pros and cons:

> I would say they're helpful tools as far as breaking apart this really big conversation about how to evaluate something … That it's maybe easier to remember something like ASAP. On the flip side, they can feel limiting and prescriptive to students. And so they're not evaluating maybe as much in context of what the source is, particularly as misinformation gets more mature, it starts looking closer to real information. So I think [frameworks] can be helpful, as long as you're really emphasizing like this is one tool, it's not a checklist.

Beyond teaching lateral reading and updated frameworks, librarians described a multitude of creative lessons and activities that they use in one-shot instruction to get students

thinking critically about evaluation. Hannah provided instruction for a class themed around confederate statues and had students look at sources like social media, news, and scholarship on the topic to compare creation processes and strengths of each resource. Rayna teaches a lesson on fake news where students work in groups to answer critical guiding questions about a source's audience, purpose, and evidence and use sticky notes to place their source on a spectrum from less to more credible. Daisy gives students an online scavenger hunt to investigate the validity of sources from Google Scholar and Wikipedia. It is clear from librarians' descriptions of their strategies for teaching evaluation that their approaches in the classroom move far beyond the oversimplified checklist approach found on many university websites.

Beyond the One-Shot

While all participants confirmed that they address evaluation skills during one-shot instruction sessions, few talk explicitly about misinformation in that context. Librarians devoting the most time to teaching about misinformation do so by expanding instruction beyond the one-shot in the form of custom tutorials and guides, standalone workshops, and semester-long courses.

Several librarians have built online content that addresses timely misinformation topics. Abbi created a module on spotting misinformation using lateral reading, while Jennice's library has a misinformation tutorial and a fake news guide. Fraser described his library's disinformation guide, which contains "a mixture of videos and links that can be used whether they're students, not students, whatever. It's sort of got three very basic things: what is misinformation, how do we identify it, and what's misinformation being used for?" Librarians creating these guides and tutorials are often doing so to fill a need for students and faculty that they do not have the capacity to address in the context of one-shot instruction.

Librarians are also expanding their reach beyond the one-shot by offering standalone workshops on misinformation. Lee teaches several workshops each year on media literacy and misinformation, while Kate, Simone, and Sandy also host misinformation workshops targeted at various audiences of students, faculty, and the general population. Librarians were transparent about the deficits to this model of instruction, with Sandy stating, "Usually it's not a really large number of people attending these. But I would say actually the majority is faculty and staff. And often they seem to be looking at ways they can integrate this into their own teaching." Other librarians echoed this sentiment that workshops might not attract a large audience, but they are still a valuable way of bringing together stakeholders for conversations on an important topic.

Librarians doing the most robust work specific to misinformation are doing so in the context of credit-bearing courses. Hannah teaches a semester-long course on fake news in her university's Media Studies department, while Hayley teaches a one-credit class that dedicates multiple sessions to fact-checking and disinformation. Sierra highlighted the benefit of dedicating an entire course to practicing evaluation and discussing misinformation:

> Everything that I do is talking about evaluating resources. So it's all building up until we get to the end where we really start talking about misinformation and fake news. But everything I do is like look at it, evaluate it. So we're starting to build skills almost into every session that I teach so it becomes a reoccurring habit.

When given the time and space, or when actively carving out their own opportunities to expand efforts in this area, librarians feel they can provide meaningful instruction around misinformation.

Challenges to Addressing Misinformation

The second research question delved deeper into the challenges librarians experience in teaching students about misinformation. Contextual challenges regarding the limits of one-shot instruction were the most common theme, while librarians also expressed personal concerns related to their own feelings about and knowledge of misinformation.

Contextual Challenges

Unsurprisingly, contextual challenges related to the limitations of the one-shot model of library instruction were commonly described by participants. Instruction librarians simply do not have time to teach about misinformation in a meaningful way. As Jason stated:

> In fifty minutes, you can maybe have students do one thing, but to get some type of enduring, meaningful, lasting learning in fifty minutes or even in seventy-five? And let it be about something as sophisticated and charged as misinformation or disinformation? No. The way to do it is not to do it in a one-shot.

Librarians were skeptical about the value of a single instruction session as a tool for addressing misinformation.

Participants also frequently described faculty expectations of one-shot instruction as a limitation to doing more with misinformation. Fraser said he has received pushback from instructors for "focusing a little too much on misinformation in a one-shot, that they'd much rather have their students learn advanced database searching techniques." Many librarians echoed this feeling that teaching faculty expect one-shot instruction to only address database searching and scholarly sources and that straying from these expectations would harm their teaching relationships or stray too far from the primary purpose of a course-integrated instruction session.

A final challenge related to the one-shot and to concerns about time and faculty expectations was the necessity to meet students' immediate academic needs. Sandy discussed this need to help students succeed in their coursework: "The majority of classes I offer are tailored to an academic research assignment. And so when I do those types of sessions, misinformation is not a primary focus. We're often focusing largely on library resources." Some librarians, like Rayna, also stated that students are not engaged with conversations around misinformation and find more value in traditional research help: "When we ask students what's the most important thing they learned, they almost never talk about evaluating information. They kind of focus on the things that they think are going to be most applicable to their research assignment."

Personal Challenges

Beyond the contextual limitations of one-shot instruction, librarians described several personal challenges that inhibit them from addressing misinformation in their teaching. These personal challenges include professional angst around the enormity of the misinformation crisis, a perceived lack of expertise on misinformation topics, and discomfort in addressing potentially charged topics with students and faculty.

The theme of professional angst was pervasive among participants throughout these interviews, especially when discussing the challenges of teaching about misinformation. Librarians in this study are overwhelmed by the misinformation problem and expressed anxiety and distress about its societal implications and librarianship's ability to combat the issue. Participants like Sandy described a sense of paralysis tied to their personal responsibility to tackle misinformation, and many librarians, like Simone, feel demoralized by the lack of a clear path forward for the profession:

> Everybody recognizes it's a problem and wants to do something about it, but what do we do? And I think that's where everybody feels like we've been thrown into a pool. And we're in the deep end. Anybody have any water wings? I need a floatie. And nobody really has that floatie.

Participants were also skeptical about their ability to address misinformation due to their own perceived lack of expertise on the topic. Some participants, like Hannah, described how librarians are taking up a mantle that they are unprepared for and need to "understand the limits of our expertise" around misinformation. Similarly, Kate believes librarians should defer to other misinformation experts:

> I don't think librarians can save us, if that makes sense. We're not situated and we're not in many places respected enough or given enough time, nor do I think we really have the background to be the most effective people to do this.

Other participants described an obligation to do this work despite a lack of expertise, like Francesca:

> As much as I feel like sometimes I don't know enough to be teaching this, I don't see any other group that this is their position to be teaching people about misinformation. I think that librarians are actually the best poised to be continuing to teach about this.

A final personal challenge described by participants involved feelings of discomfort around engaging students in potentially politically charged discussions. For some participants, the possibility of pushback from students was enough to deter them from attempting nuanced misinformation conversations. Rhylee is careful to choose examples for class that she deems neutral because "there's always the chance that I have a student in the class who's very sold on their opinion and wants to argue with me." Several others echoed that they consciously choose apolitical examples that do not address controversial topics like vaccines or climate change. Additionally, some participants recounted actual experiences with student pushback, like Simone:

> In a class, I had a *New York Times* article, and an older male student started going on and on, very loudly and belligerently, about why would I use the *New York Times*? It's fake news, what's my agenda? And it was very uncomfortable. I was

> completely unprepared for that. Now I just don't use the *New York Times*. I mean, they've scared me. My students have scared me into the things I use and the way I teach, to tell you the truth.

Envisioning a Path Forward for Information Literacy Instruction

The third and final research question explored how academic librarians envision a path forward for teaching information literacy in an age of misinformation. Participants described necessary internal changes related to their own teaching, and shared ideas for learning from and collaborating with external researchers and practitioners to move forward.

Internal Changes

Many librarians discussed their vision for working within the confines of the one-shot since this model of information literacy instruction continues to be standard in academia. Participants were hopeful that they could make one-shot instruction more impactful in the future by flipping instruction. Caroline described her ideal one-shot scenario:

> It might be more of a hope or a delusion, but that there will be less focus on finding information and that maybe that can shift more with flipped instruction and offload a lot of stuff to online where it can be more of a Q&A in class and we can focus more on those critical thinking skills that will impact students outside of just that class and that assignment.

Several librarians agreed that, while flipping instruction does involve some buy-in from instructors, it would be the simplest change necessary to get more value from the one-shot.

Participants also called for a general shift in academic librarians' focus when it comes to teaching information literacy. Librarians expressed concerns about the focus on teaching database searching and worried that we are not preparing students for the real world of information they will encounter after college. Raquel said:

> Beyond a two-year degree or a four-year degree, so many students are never going to write a research paper again or use a library database again. So using Boolean operators is great, but that's not particularly a lifelong skill for most of our students. But critical thinking certainly is.

Indeed, many librarians described a future where information literacy instruction would focus more on Google and the everyday information experiences of students rather than information literacy for academic research.

Finally, several participants called on academic instruction librarians to propose credit-bearing information literacy courses. Rayna described the way these courses could benefit students far more than one-shot instruction for a research assignment:

> I think librarians are really pushing to have credit-bearing courses at their institutions and I think that's a really positive trend because we're able to engage more deeply in information literacy as a discipline and less as a service that we're

> providing to students and faculty. So I think that's a trend that can also help with evaluation because we can dedicate more time to talking about that, especially how it affects students' daily lives because it's not necessarily associated with academic research.

Participants believed that dedicating more time and resources to information literacy instruction in the form of credit-bearing courses could provide more meaningful opportunities for teaching about misinformation. Taken as a whole, comments from participants suggest that the content and instructional methods associated with the one-shot need to be revised to adequately address misinformation.

External Changes

Beyond envisioning a path forward for their own teaching, participants also expressed ideas related to external partnerships. Because of their limited time with students, several librarians stressed the importance of collaboration with teaching faculty to make topics like misinformation and evaluation a part of everyone's work, like Sandy:

> I think my ideal would be that I would have stronger connections with faculty across departments, that there would be more conversations going on and more collaboration thinking about how to integrate some of this material into those courses and curricula.

Sandy and other participants also described collaborations outside of academia being an important move forward:

> I would really like to see more collaboration happening between universities and high schools, middle schools, and out into the community. That it doesn't just get isolated within higher ed, but that there's much more community building, getting to the relevance of this to everyone.

Related to the lack of expertise on misinformation felt by some participants, librarians like Rayna also described learning from other disciplines as a path forward in our information literacy work:

> There's a lot of research outside of LIS that's also related to information literacy that talks about information practices and how people in different careers or hobbies interact with information literacy. So I think that's a really positive research trend that's kind of outside librarianship but can still inform our instruction.

Participants believed that librarians should prioritize learning from fields like psychology and journalism by reading outside of the library science literature and incorporating knowledge from other disciplines into their instruction work.

A final path forward voiced by some participants moved beyond what librarians alone could do with information literacy instruction. Librarians like Kate envisioned a world in

which librarians lead an urgent call to action around information literacy involving government, business, and other stakeholders:

> I really think that combating misinformation and also preparing people to be better skeptics of misinformation really needs to be a larger-scale effort and something that has a system of pieces that are moving together. And so that involves working with government and tech in order to provide that. So I would love to see advocacy at that level that could maybe inform what some of those players in outside spaces are doing.

Other participants believe there is too much pressure on librarians to fix things, and Simone called on another authority to take the lead:

> Somebody in academia, maybe AAC&U, will come up with some kind of directive and say we need to be more comprehensive with this. Because what I think about information literacy is that everybody owns it, so nobody's accountable for it.

These findings indicate that participants are aware that librarians cannot combat the misinformation crisis without connecting with educators, researchers, and organizations outside the library profession.

Discussion

The purpose of this study was to explore the thoughts, emotions, and lived experiences of academic instruction librarians teaching about misinformation. Findings related to librarians' instructional approaches and challenges to teaching about misinformation reinforce much of the existing literature, while providing new insights and nuanced perspectives through semi-structured interviews. Participants in this study feel professionally obligated to address misinformation while simultaneously acknowledging the limits of their expertise and the constraints of their position, leading to feelings of professional angst around this dichotomy. Participants were consistently critical of checklist approaches and often teach evaluation in nuanced ways that emphasize networked interventions and critical thinking, despite the findings from previous research (Lim, 2020; Wineburg et al., 2020; Ziv & Bene, 2022). However, participants remain limited by the one-shot model in terms of time, faculty expectations, and student needs, hindering their ability to play a more significant role in misinformation education. Unlike previous research, this study moves beyond analyzing university websites or describing how teaching faculty view the library's role in misinformation and considers the on-the-ground experiences of librarians teaching information literacy in an age of misinformation. This research reveals the material conditions of academic instruction librarianship, exposing a fundamental tension librarians experience: the moral and professional obligation to address the misinformation crisis, and the larger dynamics that render fulfillment of that obligation nearly impossible.

So, can librarians save us from misinformation? Based on the results of this study and coupled with previous research, the answer seems to be no. Or at least, not without changing the material conditions of instruction librarianship that limit and constrain librarians' role.

Another question, though, is *should* librarians save us? Are these aspirations beyond librarians' abilities and professional circumstances, and are they losing sight of a clearer, albeit more narrow, instructional mission? Given the endless conversations, research articles, and think pieces about librarians' role in misinformation, it seems like a professional reckoning is necessary to move the profession forward: librarians must either accept their position within the organization and come to terms with their supporting role in misinformation education, or push past the boundaries of a model that is directed by faculty expectations and limited by time and make it their professional obligation to become experts on theory and pedagogical techniques for teaching about misinformation. Indeed, for many librarians, the status quo appears to be untenable as a conducive environment for addressing the complex psychological, social, and political problems associated with misinformation on a broad scale.

If librarians choose the first path–leaning into the status quo–all is not lost. Information literacy instruction has evolved for decades based on the changing needs of students and society, and it is clear from this study and from previous research that librarians can and do contribute to educating about misinformation in small ways through their teaching. While most librarians are not equipped to play more than a supportive role because of the limits of the one-shot, their own expertise, or other organizational and professional factors, librarians are still doing important work within their wheelhouse of teaching evaluation, a small yet valuable piece of preparing students to encounter and question misinformation. Clearly, focusing on finding and evaluating information is not sufficient to solve the misinformation problem (Fister, 2021b), but that does not negate the fact that college students need to find and evaluate information for their assignments. If librarians choose to work within the confines of their material conditions, it could be a disservice to students to spend a one-shot session diving into the nuances and complexity of misinformation, ultimately leaving students without the tools to succeed in their coursework. If librarians remove the weight of the misinformation mantle that they have placed upon themselves, they could alleviate professional angst about librarianship's ability to change the world and instead focus their energy on the narrower but still important mission of contributing to students' academic success.

The alternative path is more complex. If librarians want to take greater responsibility for combating misinformation, they must change the status quo, fundamentally altering the material conditions of instruction librarianship. Within their organizations, librarians would need to stop lamenting about the ineffectiveness of the one-shot model and rebuild information literacy programs from the ground up, shifting the focus from traditional academic information literacy instruction to instilling a broader understanding of information systems, as described by Fister (2021b). The one-shot model is simply not the avenue for these aspirations; librarians would need to develop and teach information literacy courses addressing misinformation topics like some of the participants in the present study, requiring them to hone their expertise in misinformation theory and pedagogy by looking to other fields and learning from the research and practice of journalists, psychologists, sociologists, educators, and others. The profession would need to collectively agree on this shared endeavor, to update library school curricula, provide interdisciplinary professional development offerings, and ultimately to work toward development of information literacy as an academic discipline with a coherent focus in order to facilitate more robust collaborations with other disciplines around misinformation (Webber & Johnston, 2017).

In reality, the profession as a whole cannot simply choose one path or the other, and individual librarians are always in the process of shaping their professional circumstances in response to contextual factors; however, there is clearly a need for greater reflection on the relationship between misinformation and current information literacy models, specifically the suitability of such models for achieving ambitious educational goals. Given the experiences of librarians in the present study, as well as the pedagogical and professional challenges highlighted in the existing literature, the library profession is long overdue for this kind of reflection.

Conclusion

This study provides valuable and in-depth insight into the strategies academic instruction librarians use to teach students about evaluation and misinformation, the challenges they face in this instruction work, and how they envision a path forward for teaching information literacy in an age of misinformation. The authors recognize the limitations of this research. Nineteen of the twenty participants identified as White, and sixteen participants identified as female; experiences teaching about misinformation, especially challenges associated with discomfort engaging with students about misinformation, might be vastly different among members of underrepresented demographic groups. All twenty participants self-selected to be interviewed for this study, so their interest in, knowledge of, and experience with teaching about misinformation may not be representative of the typical instruction librarian. While experiences of staff and faculty librarians were not differentiated, these statuses could play a role in librarians' experiences of autonomy over the content of their instruction and their ability to engage in misinformation conversations with students and teaching faculty.

As noted by Sullivan (2019), among others, future research should move beyond simply describing librarians' strategies for teaching about misinformation and instead assess the efficacy of specific instructional methods. The present study makes it clear that librarians are employing various methods but that there is uncertainty around their impact. Interdisciplinary research between librarians and other academics interested in misinformation is also necessary to account for the complexity of this issue and facilitate the development of more effective pedagogies. The profession should also explore and report on alternative models for designing, organizing, and implementing information literacy instruction. Such models would need to take into consideration not only the content of instruction but also the administrative structure of academic libraries within higher education institutions. Findings from this study show that librarians face numerous challenges because their instructional models are overly dependent on the faculty and curricula of more traditional academic departments. Researchers might investigate whether library instruction departments need to operate and organize themselves in a manner similar to other academic units on campus. Finally, the present study as well as the existing body of research on this topic make clear that many librarians feel obligated to address misinformation in their work and that responsibility for remedying this societal problem is tied to their professional identities. However, this study did not explicitly ask participants to address *why* they feel personally or professionally obligated to combat misinformation. Future research could more directly investigate librarians' motivations for continuing to teach about misinformation, especially given the significant contextual and personal challenges to doing so described in this study.

With fake news sounding more and more like a quaint term from a simpler time, and online culture continuing its inexorable mutation into an AI-generated hellscape of deepfake deception, the library profession appears to be at a crossroads regarding the misinformation crisis. Whether we can save anyone will surely depend on our ability to face the reality of our professional circumstances, build new models and partnerships across disciplinary communities, and evolve as educators.

APPENDIX A: Interview Questions

Professional Variables

- What is your job title?
- How long have you been employed as a librarian?
- What did you major in as an undergraduate student?
- Where did you obtain your undergraduate degree?
- Where did you obtain your Master of Library Science degree?
- Are there any other degrees or training you have?
- Do you have any specific training in teaching?
- How many classes do you teach in an academic year?
- Which description is the best fit for your institution type? [multiple choice]
    - Doctoral University
    - Master's University/College
    - Baccalaureate College
    - Associate's College
    - Other—Please Describe
- Is your institution public or private?
- What is the approximate FTE of your institution?

Current Practices

- Describe your job responsibilities related to information literacy and/or instruction? (e.g., teaching one-shots, teaching for-credit courses, creating instructional videos/modules, etc.)
- What percentage of your total job duties would you assign to your responsibilities related to information literacy and/or instruction?
- What percentage of your job duties related to information literacy and/or instruction relate to teaching one-shot instruction sessions?
- What level of students do you normally teach? (e.g., lower level, upper level, freshmen, etc.)
- What academic subject areas do you normally teach information literacy for?
- What role do you think librarians currently play in preparing students to distinguish trustworthy information from misinformation?
- Describe your approach to a typical instruction session. What general topics do you tend to cover with students?
- In a typical instruction session, how much time, if any, do you devote to teaching students evaluation skills?
- What techniques, strategies, or activities do you use to teach students how to evaluate information?
- What challenges, if any, do you face in teaching students how to evaluate information?
- In a typical instruction session, how much time, if any, do you devote to teaching students about Google and/or Google Scholar?
- What techniques, strategies, or activities do you use to teach students about Google and/or Google Scholar?
- What challenges, if any, do you face in teaching students about Google and/or Google Scholar?
- In a typical instruction session, how much time, if any, do you devote to teaching students about Wikipedia?

- What techniques, strategies, or activities do you use to teach students about Wikipedia?
- What challenges, if any, do you face in teaching students about Wikipedia?
- In a typical instruction session, how much time, if any, do you devote to talking to students specifically about misinformation?
- What techniques, strategies, or activities do you use to talk to students about misinformation?
- What challenges, if any, do you face when talking to students about misinformation?
- What are your thoughts on evaluation frameworks like CRAAP, SIFT, etc.?
- Outside of instruction sessions, what types of instructional tools does your library provide to students to learn more about evaluating information and/or identifying misinformation? (e.g., LibGuides, videos, etc.)
- Do the instructional tools your library provides match the techniques/strategies/activities you use in instruction sessions to teach about evaluating information/identifying misinformation?
- Since you first began teaching as a librarian, have your instructional techniques, strategies, or activities changed as a result of misinformation?
- Do other librarians at your institution play a role in teaching students to evaluate information and/or identify misinformation? Do conversations about these topics happen among librarians at your institution?
- What methods do you use to stay up to date on current practices of instruction librarians related to teaching students how to evaluate information and/or identify misinformation?
- In your current experience, what role do teaching faculty at your institution play in teaching students about evaluating information and identifying misinformation?

Moving Forward

- What do you think are the general trends in the direction that information literacy instruction is headed?
- What, if anything, do you think could be done with the one-shot instruction session to better prepare students to navigate a world of misinformation?
- What can librarians do beyond one-shot instruction to prepare students to navigate a world of misinformation?
- In an ideal world without teaching faculty expectations, what content should librarians focus on in one-shot instruction sessions?
- Do you believe database searching is an important skill for all students to learn in an instruction session? Why or why not?
- How can librarians prompt teaching faculty and other members of the higher education community to play a role in teaching students to evaluate information and identify misinformation?
- What role, if any, does information literacy instruction play in democratic citizenship?

Demographic Variables & Wrap-Up

- What is your age?
- How would you define your gender?
- How would you define your race or ethnicity?
- Is there anything else that I didn't ask and you'd like to discuss, or any questions you have for me?

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The Data Science and Digital Scholarship Fellowship Program (DS²F): A Library-Based Model for Addressing Curricular Gaps in Data-Intensive Training and Digital Pedagogy

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The University of Arizona Libraries has conducted a pilot implementation of a year-long Digital Scholarship and Data Science Fellowship (DS²F) to address increasing interest in digital and data-intensive scholarship among graduate students. This article provides details regarding the model for the fellowship program; a description of the pilot implementation; an assessment of the program; and recommendations for libraries interested in adopting a similar approach at other academic institutions. While the program may not be fully adaptable within all academic contexts, DS²F represents a cost-effective and transferable model for graduate student engagement in digital scholarship and data science.

Introduction

Across disciplines, increased interest in digital and data-intensive scholarship creates a largely unmet need for critical training in technical skills. To address that need, librarians from the University of Arizona Libraries developed a model that provided career-relevant professional development opportunities while also affording campus-wide training through a library-based graduate fellowship program focused on building an interdisciplinary cohort of doctoral students from across campus. This paper discusses two iterations of the year-long Digital Scholarship and Data Science Fellowship (DS²F), which were implemented first in 2020 and again in 2022. The goal of the paper is to provide details regarding the model for the fellowship program; a description of the pilot implementation and iterative adjustments made between cohorts one and two; an assessment of the program; and recommendations for libraries interested in adopting a similar approach at other academic institutions. While the program may not be fully adaptable within all academic contexts, DS²F represents a cost-effective and transferable model for engaging graduate students in extracurricular teaching and learning in support of digital and data-intensive research.

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Literature Review

The rapidly evolving technological landscape creates a growing need for digital and data skills across academic disciplines. For example, text data mining (TDM) is growing in popularity in the humanities and social sciences. Several powerful tools for TDM are available in the Python programming language, yet many colleges and universities have few opportunities for students outside of traditional computer science programs to learn how to program (Feng et al., 2020; Hannay et al., 2009; Prabhu et al., 2011). Also in demand are skills to leverage "big data" resources, including cloud computing and machine learning. Given the growing interest in skills development in these areas, demands for training often outstrip available training opportunities. Many technological, computational, and digital resources are evolving at a pace too rapid for traditional college curricula to keep up, leaving many scholars to "learn on their own" (Theobold & Hancock, 2019). Furthermore, the evolution in such digital and computational applications is likely to continue outpacing strategies for formal curricular integration, given that the development of new courses and programs can take years to complete. The failure to meet these training needs leaves graduate students underprepared for future scholarly endeavors (e.g., Barone et al., 2017; Davenport et al., 2019; Federer et al., 2016).

Extra-curricular efforts to address the training gap are underway, although there are considerable opportunities for growth in this area. For example, short-format workshops as offered by The Carpentries provide an entry point for data and computational skills (Baker et al., 2016; Wilson, 2016). Briefly, The Carpentries (https://carpentries.org) is a global non-profit organization that offers skills development workshops to support efficient and reproducible research. Such workshops include discipline-specific and discipline-agnostic approaches, with an emphasis on training audiences on how to solve problems as they arise. The long-term impact of the "bootcamp" format is unclear (Feldon et al., 2017), and there remain significant opportunities for intermediate-level training following such novice-level training as Data, Software, and Library Carpentry workshops (Williams & Teal, 2017). Scholars seeking to enhance their skill set often lack the necessary support to translate and apply their introductory knowledge to real-world research projects.

This landscape, where formal graduate curricula are generally outpaced by demand for the latest skills, highlights the importance of self-directed learning. Self-directed learning has been established as an effective strategy to support life-long learning (Bergamin et al., 2019; Boyer et al., 2014; Morris, 2019). Self-directed learning is not synonymous with guidance-free learning, which is less effective than instruction that includes guidance for learners (Kirschner et al. 2006). Self-directed learning is important for the development of computational and digital skills, across disciplines (e.g., Bobkowski & Etheridge, 2023; Lawlor et al., 2022). However, as self-directed learning itself is a skill, students are likely to benefit from explicit training, including such strategies as goal setting and self-reflection (Morris-Eyton & Pretorius, 2023).

Complementary to self-directed learning as a means of skills acquisition, the act of teaching provides opportunities for reinforcement. Providing students with the opportunity to teach others, often peers, can improve learning outcomes (Duran, 2017; Pahl, 2019). These approaches are often applied in teaching conceptual knowledge. For example, Rogers found that students in an undergraduate cognitive psychology course had higher test scores when they delivered a lecture to their peers on a topic than when they wrote a paper on the topic (2021). The learning-by-teaching approach has also been shown to benefit skills development, especially in computational skills. Multiple studies in undergraduate computer programming

courses report improved learning outcomes when peer instruction is incorporated into the course (e.g., Porter et al., 2013; Ruiz De Miras, 2021). Opportunities to teach further serve to augment and enhance the learning process for graduate students, reinforcing their own knowledge and skills (Shortlidge & Eddy, 2018).

Effective teaching, itself, is a skill and there is a need for those delivering training to develop instructional skills and pedagogical best practices. Rarely do those outside the field of education receive training about the science of learning and how teaching methods can influence learning outcomes (Robert & Carlsen, 2017; Robinson & Hope, 2013). Training individuals outside of the computer sciences in the technical skills required for digital scholarship and data science requires an understanding of the novice perspective and ideally involves such practices as peer-to-peer learning and practical applications (Brown & Wilson, 2018). Active learning practices are an effective means of skills development in problem solving and critical thinking (Hepner & Carlson, 2018; Prince, 2004; Styers et al., 2018), and there are growing calls to adopt such practices in academic institutions (Bradforth et al., 2015; Stains et al., 2018). Yet transitioning from traditional, lecture-based passive learning is not trivial and requires intentional training (Niemi, 2002; White et al., 2016).

Academic libraries are well-positioned to address the needs of skills development in both digital pedagogy and computational and digital literacy for two primary reasons. First, the library is largely independent of any one domain. In the absence of the territoriality that often accompanies academic departments, the library is a natural hub for interdisciplinary work. Second, academic libraries are increasingly investing in programs supporting digital pedagogy (Lach & Pollard, 2019); digital scholarship (Hannah et al., 2020); and data science (Oliver et al., 2019). Several academic libraries are already partnering with The Carpentries to introduce data and programming skills to scholars in several disciplines. Such efforts create an opportunity for libraries to further engage with the campus community to develop and provide intermediate-level digital and data skills training (Surkis et al., 2017). Library-directed programs supporting skills development are also emerging, although there are few examples in the published literature. For example, the Sherman Centre for Digital Scholarship at the McMaster University Library runs a mentorship program for graduate students to participate in interdisciplinary professional skills training (Zeffiro et al., 2022). In another example, the LIS Education and Data Science (LEADS) fellowship program provided data science training and internship opportunities for early career information professionals (https://mrc.cci.drexel.edu/research/leads/), and the DATALIS™ initiative continues to extend professional development efforts in data science for library and information science students (https://datalis.design/). Such examples demonstrate the potential for academic libraries to drive skills development and transform campus capacity for digital and data-intensive scholarship.

Introducing the DS²F Model

DS²F is a library-based fellowship program intended to build capacity for campus-wide training in data and computational scholarship. The fellowship program is designed to address two known challenges in contemporary higher education: 1. insufficient training for data-intensive, computational research within subject disciplines; and 2. uneven attention to digital pedagogy and strategies for teaching technical concepts within graduate training programs.

Our approach to addressing these challenges emerged from a series of collaborative conversations among library faculty with expertise in data science, digital scholarship, instruc-

tional design, digital pedagogy, and open research. Prior experiences with The Carpentries' approach to curriculum development includes a focus on reverse instructional design, authentic tasks, and formative assessment. These guiding principles informed our strategy to focus on teaching fellows how to approach self-directed learning for technical skills and how to build individualized self-directed learning plans. In the first stage of the curriculum, fellows are provided instruction on how to learn. We then shift toward a set of curricular modules on learning how to teach technical skills and develop open educational resources on technical topics. This is the point at which fellows also shift from being self-directed learners to teachers in their own right. During the second semester, fellows develop and deliver a workshop open to the broader campus community that introduces topics, skills, or approaches that the fellows engaged with during their period of self-directed inquiry. This approach allows us to provide scaffolding which supports fellows who are pursuing a set of learning objectives that vary in disciplinary focus, technological application, and overarching methodology. Our approach to facilitating self-directed inquiry is also intended to serve fellows over the course of their careers as they continue to pursue lifelong learning in step with the pace of change in their respective fields.

The fellowship is designed to span two semesters. In the first semester of each round of fellowships, students engage in a scaffolded process of cross-disciplinary and inquiry-based learning. During this period, library faculty facilitate a series of monthly workshops focused on self-directed learning, project management, and research management. In the interim weeks between workshops, fellows assemble to work on individual learning and to access support from library faculty mentors and other fellows. These working sessions are supported by the team of library faculty delivering workshops and sponsoring the fellowship. Regular, sustained contact between library faculty and fellows is intended to provide connection and support, and facilitation is a shared duty among the faculty leads. Outside of weekly meetings, the UA Library supports a Slack workspace to further facilitate communication and collaboration among library personnel and fellows.

In semester two, fellows focus on creating their workshops for delivery to the campus. Throughout this period, library faculty continue to deliver monthly workshops with a focus on instructional design, digital pedagogy, and open educational resources. All fellows work with library faculty to determine dates and times for the culminating open workshop series delivered by the fellows. In the final weeks of the program, fellows package their workshop materials into an open educational resource and conduct a self-assessment of their instructional efforts while also providing feedback on the overarching fellowship program. Emphasizing student-generated teaching materials as the fellowship's primary outcome leverages potential benefits associated with peer learning, active learning, engagement with information and communication technologies, and learning through teaching (Ribosa & Duran, 2022).

The fellowship program requires coordination, planning, and evaluation on the part of participating library faculty. Preparatory activities include securing funds, recruiting applicants, offering information sessions about the program, reviewing application packages against a predetermined rubric, communicating with accepted fellows, and disbursing funding. Faculty also prepare workshop materials to deliver to the fellows and develop facilitation guides for the working meetings between workshops. During the active fellowship period, library faculty are committed to maintaining active, responsive communication, often supporting students in need of assistance or providing referrals to colleagues across campus with

relevant expertise. At the conclusion of the fellowship period, library faculty participants review feedback from fellows, discuss potential changes to the curriculum, and assess capacity for ongoing fellowship programming. While the overhead of program coordination is non-trivial, library faculty participants benefit by learning about emerging needs and trends among graduate student researchers through the application process, gaining exposure to a variety of interdisciplinary research projects, and enhancing the suite of curricular offerings available for use and reuse in different contexts.

The fellowship program was designed to complement instructional sessions and online resources offered by UA Library personnel. These include hands-on workshops in data analysis and visualization in the R programming language, consultations on data management best practices, and introductions to text mining software. Library personnel also maintained online resources for data science and digital scholarship, including tutorials for geospatial data analysis, resource navigation tools for identifying datasets, and guides for writing data management plans. The program was intentionally designed to address those training gaps not covered by programming that was already offered, rather than replace existing offerings.

Implementation

A cohort of three library faculty developed an initial proposal for piloting the DS²F model in summer 2019. We wanted to develop a relatively lightweight program that targeted graduate students from a range of disciplines across campus who had completed their coursework and were working toward their field exams or dissertation proposal. The goal was to attract potential fellows who knew there was an outstanding need to develop technical skills that they had not learned in class but which they would require to successfully complete their dissertation research. The goal was to attract intrinsically motivated students for whom we could provide additional support and incentive by 1. building a cross-disciplinary cohort; and 2. compensating each fellow with a modest stipend.

The curriculum we envisioned required engagement from library faculty based in three different departments within the library. The project leads brought these faculty together to engage in early socialization, buy-in, and iterative development over a series of meetings throughout the summer. The initial collaboration included the libraries' data science specialist, digital scholarship librarian, the head of the Office of Digital Innovation and Stewardship, two liaison librarians with functional expertise in instructional design and digital pedagogy, a content and collections librarian with expertise in open educational resources (OER), and the head of the Research and Learning department. Together, we developed a road map for launching an initial call for applications in Fall 2019 for a fellowship program that would run throughout the 2020 calendar year. We initially earmarked $7,500 to support five fellows who would each receive $1,500 disbursed in two installments, one at the end of spring semester and another at the end of fall semester. We launched the call for proposals in mid-September with an open informational session scheduled in early October and final applications due on October 15. We advertised the fellowship by directly emailing graduate student coordinators in each department on campus, and disseminating the call for proposals through local graduate student listservs and interest groups.

For the first implementation, we received 27 applications from 18 distinct disciplines across campus, including representation from the humanities, social sciences, physical sciences, and life sciences. To select fellows, we used a rubric that assessed the degree to which

the applicant:

- identified a technical skill(s) that is relevant and widely applicable;
- demonstrated knowledge of identified technical skill(s);
- demonstrated how the identified technical skill(s) applies to their research;
- expressed interest in delivering open workshops;
- expressed interest in teaching;
- demonstrated diversity in background and/or perspectives; and
- submitted an overall well-written and professional application.

Each applicant was assessed individually by six of the library faculty participating in the program, and then the top candidates were assessed as a group to ensure a diverse but complementary cohort.

We offered five fellowships to students in sociology (2), humanities (1), geoscience (1), and public health (1). All five fellows accepted and began the program in January 2020, but the student in the humanities withdrew in the early weeks of the program due in part to a misunderstanding about the program's approach to self-directed learning. For the first two months, fellows convened in the library for two hours each Friday with meetings alternating between workshops, discussions, and heads-down working sessions. Midway through the first semester, the fellowship program transitioned to virtual meetings via Zoom due to the university's closure in response to the COVID-19 pandemic. During the summer, we transitioned to monthly check-ins as fellows continued their self-directed learning program and began to outline plans for instruction in fall semester. During this period, fellows indicated appreciation for both the continuity and flexibility of the fellowship program and expressed that regular meetings counteracted some of the isolation of being a graduate student during lockdown. For fall semester, the fellows and project leads agreed to reduce weekly meetings to one hour due to sustained Zoom fatigue and ongoing remote work conditions. These sessions included several activities to assist with workshop design and preparation interspersed with heads-down working sessions and opportunities for one-on-one consultations with the project leads.

In November 2020, the team launched a fully remote DS²F workshop series, which included the following contributions from fellows:

- Sabrina Nardin – Introduction to web-scraping in Python
- Sam Scovill – Qualitative research in quarantine: The ethics and technical issues in moving offline research to an online context
- Jonathan King – An introduction to GitHub for scientists
- Mario Trejo – Editing data Visualizations using Inkscape

Sabrina Nardin's workshop was conceived from her dissertation research, which required dynamic web scraping of Italian newspapers for data collection and analysis. Sam Scovill was initially interested in delivering a workshop on qualitative data analysis software but pivoted upon witnessing many qualitative researchers struggling to continue field-based research in online contexts during the pandemic. Jonathan King's workshop was inspired by the need to develop collaborative best practices for data science research with labmates. Mario Trejo wanted to help scholars make scientific data visualizations more accessible to the public by using widely available editing tools. All four workshops were enrolled at capacity, and a discussion of reception and assessment is included in the following section. In the month following the workshops, each fellow re-packaged their workshop materials as an open edu-

cational resource and registered their offerings with OER Commons (https://oercommons.org/) or Merlot (https://merlot.org/merlot/).

Upon completion of the initial pilot, the project leads conducted an informal assessment of the overall project with plans to launch another call for applicants in fall semester 2021. While the original model front loaded all library-led workshops in the first semester, the team realized that sessions on instructional design, digital pedagogy, and open educational resources would be more useful to fellows during the active workshop development period in semester two. Though the program was designed with the intention of being relatively low touch, the project team also worked to streamline expectations and time commitments for participating library personnel without negatively impacting the fellowship experience. Individual library-led workshops were also revised based on feedback and engagement during the pilot's first year. Librarian-created lesson materials and program schedule are available at https://osf.io/68ezw/. Finally, the second round of the program was intentionally designed to accommodate shifting modalities in support of remote, on-site, and hybrid engagement options.

The second call for proposals received strong applications with a significantly diminished response rate, which we attributed to ongoing stressors associated with the pandemic. We received seven applications from seven different disciplines, and six library faculty members evaluated applicants using the same rubric from the first year. We offered six fellowships to students in public health (1), higher education (1), bioinformatics (1), English (1), earth sciences (1), and astronomy (1). Once again, one fellow withdrew during the first semester of the program, this time citing personal reasons. The second cohort of DS²F fellows met virtually once a week during the spring and fall semesters and continued the practice of monthly check-ins through the summer.

In November 2022, the team hosted the second DS²F workshop series, which included the following contributions from fellows:

- God'sgift Chukwuonye – R basics: Data cleaning and wrangling with R
- Aviva Doery – Introduction to editing 360-degree video in Adobe Premiere Pro
- Emmanuel Gonzalez – Using interactive data visualization to make sense of large datasets
- Anuj Gupta – Coding & decoding: Introduction to text mining for humanists and social scientists
- John He – Creating visualizations of the solid earth using Paraview

God'sgift Chukwuonye's workshop stemmed from the need to normalize and manage research data related to studies on the impact of heavy metals exposure on the health of individuals living in mining communities. Aviva Doery was interested in AR/VR approaches that might create virtual study abroad experiences for students who are unable to travel, and she created a hands-on workshop to introduce editing techniques for 360-degree video. Emmanuel Gonzalez wanted to explore how to use data visualization to synthesize and communicate information drawn from data-intensive research on drought resistance in plants. Anuj Gupta applied text data analysis techniques to a collection of first-year writing samples to study academic writing anxiety. John He wanted to build experience using high performance computing to design, implement, and visualize three-dimensional numerical simulations and experiments of the solid earth.

By fall of 2022, many campus activities had resumed in person, and fellows were presented with the choice of conducting remote, in-person, or hybrid workshops. The project team worked with fellows to discuss the challenges and affordances of each modality. Two

fellows elected to offer in-person workshops and three elected to conduct on-line workshops. Registration rates for the second cohort's workshops were more varied than in the first round with more participants continuing to opt for online engagement. As with the first cohort, fellows utilized the month following the workshops to create open educational resources and register their offerings with OER Commons or Merlot. Links to all student-created open educational resources are available at https://data.library.arizona.edu/data-science/digital-scholarship-data-science-fellowship.

Program Assessment

Throughout the planning and implementation of the program, we sought feedback from multiple audiences to improve the experience for all involved. We focused on soliciting information from three key audiences: participants in the fellow-led workshops, the graduate student fellows themselves, and the library personnel involved in the planning and delivery of the fellowship program. For all audiences, we used both structured and semi-structured surveys to collect information at key points of the program. These surveys informed changes to the program and provided critical feedback on fellows' workshop delivery and materials.

Following the delivery of the fellow-led workshop, we distributed a post-workshop survey to all participants. These surveys included a suite of common questions as well as questions specific to the workshop material and delivery. The questions common to each workshop included an assessment of the pace of delivery, the balance between hands-on and lecture material, and the learning experience. Workshop-specific questions asked participants to rate their experience in the workshop including the level of comfort with applying the material to their own work. Over the two cohorts, 81% of the 66 workshop participants who responded to the survey indicated an appropriate balance in time spent on hands-on activities and lecture, and 85% agreed that they could immediately apply what they learned to their own work. Workshop feedback was also shared with fellows to help identify areas of improvement in their instructional practice.

To improve the experience for the graduate student fellows, we surveyed each cohort twice: once mid-way through the program and once at the end of their fellowship. Briefly, at the midpoint of the program, we asked graduate fellows to share what was working for them and what they would change about the program. Many fellows, from both cohorts, highlighted the utility of interacting with other members of their respective cohorts. In both cohorts, we attempted to increase such opportunities during the second half of the fellowship. These opportunities included structured peer review throughout the development of instructional materials and opportunities to practice portions of their planned instruction. At the conclusion of the fellowship, we asked fellows to assess their learning progress both regarding their self-directed learning goals as well as their skills as instructors. Most graduate fellows (75%) agreed that they had enough support for computational and data skills development during the program. All graduate fellows felt they had enough support in developing skills as an instructor and 87.5% of fellows thought the balance of instructional time versus "heads-down" time for self-directed learning was appropriate. These formal feedback systems, combined with more frequent informal feedback opportunities, allowed the library team to adapt and respond to the needs of current and future graduate fellows.

Finally, several library personnel contributed to the program through planning and instruction, and we sought their perspectives to improve their experience. Following the first

cohort, we asked participating library personnel to provide an estimate of the time they spent, through synchronous (e.g., meetings with fellows, instructional sessions) and asynchronous (e.g., instructional preparation, logistics, planning) activities, on the program. Library personnel participated in 10 to 50 hours of synchronous activities over the course of the year for the first cohort and four to 40 hours in asynchronous activities. Fellowship coordinators represent the higher end of the range, while instructors tended to contribute at the lower end of the range. We also asked about interest in future participation and if there were areas that were covered in too much or too little depth. Library personnel were enthusiastic about participating in future cohorts, and almost unanimously suggested decreasing the amount of synchronous meeting time with consideration for the best use of library personnel's time. Furthermore, it was suggested that instructional sessions on pedagogical best practices were temporally too far removed from the student-led workshops (instruction on pedagogy occurred in early Spring semester, while student-led workshops took place late in the following Fall semester).

Based on the information from surveys and reflection on the program, it is important to highlight some specific benefits to graduate fellows and the campus community. All graduate students who completed the fellowship program accomplished most of the learning goals they had set for themselves; several mentioned how the structure of the fellowship program helped them accomplish learning goals they otherwise would have had difficulty completing. This structure was flexible enough to accommodate shifts in goals, allowing students to learn enough about topics to know which ones would or would not be most useful for their own thesis work. The utility of the fellows-led workshops and associated materials was evidenced by multiple fellows re-using the materials to instruct in subsequent, non-library workshop series offered at the University of Arizona.

The applications submitted by graduate students interested in the fellowship provided an informative, albeit informal, landscape scan and needs assessment for the campus. Through the students' applications, library personnel identified potential areas of engagement in a variety of campus communities in need of additional skills development support. Common themes in application materials included a desire for text analysis techniques, data visualization tools, and programming language competency. Such information is useful for highlighting emerging technologies libraries can plan to support, through library personnel or strategic partnerships.

Recommendations

The DS²F program serves as a model for other institutions seeking to support digital scholarship and data science skills development in the absence of significant additions to library personnel or professional development opportunities. For successful design and implementation of similar programs, we have four recommendations for program leaders: assemble a diverse team; rely on campus networks; recognize the value of personnel resources; and compensate fellows appropriately.

Assemble a Diverse Team

To support students in programs focused on such broad areas as digital scholarship and data science, the team should include practitioners from an array of disciplines touching on all areas of the program. This diversity of expertise will be important for ensuring that the team can guide student participants in asking the right questions, even if team members do not, themselves, have all the answers to those questions. Should expertise in the team be limited,

programs should either be restricted in scope to align with this expertise or leaders should recruit team members from outside the library to fill expertise gaps.

Rely on Campus Networks

The expertise of such a team is unlikely to include a depth of knowledge on all topics. Assembling a diverse team will also provide the benefit of creating a diverse network that program personnel can refer students to when their needs exceed the team's expertise. Campus partners can include research computing centers, information technology units, and other service centers such as bioinformatics cores. Connecting with campus partners through student fellowship programs benefits not only the student participants but also the library by strengthening ties through increased collaborations and reciprocal referrals.

Recognize the Value of Personnel Resources

Student mentoring and development programs take considerable personnel time, often more time than is anticipated. Between the first and second rounds of our implementation, we greatly reduced the amount of time asked from library personnel who were not part of the leadership team. Program leaders should be mindful of team members' time and other commitments and be prepared to fill-in if team members need to reduce their level of participation. Programs such as these require coordination, including scheduling, communications, and other logistical arrangements. Such time should be acknowledged as an explicit portion of position description(s) for personnel responsible for program coordination. Based on our program experiences, a cohort of ten students warrants approximately 25% of a full-time position for effective program coordination.

Compensate Fellows Appropriately

The level of participation should dictate how graduate students are compensated. We used an estimated weekly participation of two hours, along with contemporary hourly wages for graduate student workers to arrive at our stipend amount. The estimated time students spend on fellowship activities will most likely be an underestimate: even with guidance on time management, most fellows, if not all, spent more time on fellowship tasks outside of synchronous meetings than were expected. In addition to financial compensation, the fellowship is an opportunity to mentor students, which provides another, albeit less quantifiable, means of compensation. Such mentorship is not meant as a substitute, but rather a complement to financial compensation. Such support, through financial compensation and mentoring, can be especially important for building a diverse cohort, as these support mechanisms are especially important for retention and completion for students from underserved communities (e.g., Sowell & Okahana, 2015).

Conclusion

Programs such as DS²F are well suited to academic libraries with strong collaborative engagement within the library and active networks for coordination across a range of campus units with aligned interests. The breadth of topics in which graduate students wish to engage combined with the disciplinary diversity of our cohorts is an inherent strength of the program; it also requires that program coordinators tap into their networks to connect students with the resources they most need. Self-directed learning and consolidating learning outcomes

through teaching are vital career skills for students who are effectively at the end of their formal coursework and beginning their careers as independent researchers. By leveraging library expertise in these areas and the library's role as an interdisciplinary hub for campus engagement, graduate students are better positioned to develop new technical skills without losing momentum on their primary objective: a completed dissertation. In turn, the library is better positioned to remain at the forefront of identifying and addressing the needs of graduate students as they emerge and evolve. Ultimately, DS²F has proven to be a mutually beneficial and reciprocal model for research and learning among graduate students and librarians.

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Comparison of Librarian and Patron Ratings of Synchronous Chat Interactions

Erin Elizabeth Owens and Kat Brooks

While virtual reference has become more critical during and after COVID-19, there remains a lack of current research in patron and librarian perceptions of the service. This study aims to compare librarian and patron ratings of chat interactions and highlight trends in what these ratings may suggest. Researchers collected randomized samples of patron rated chat transcripts from two large academic libraries. The transcripts were then blind reviewed according to a rubric based on the *RUSA Guidelines for Behavioral Performance of Reference and Information Service Providers*. Analysis of these ratings found discrepancies between patron and librarian perceptions of successful interactions. Patrons and librarians seemed to differ on their criteria for high or low ratings, the level of impact of time in interactions, and trends for overall perception of success. The lack of alignment between librarian and patron perceptions suggests areas for further research in how to improve chat services and patron experiences.

Introduction

After many libraries were pressed into mostly or entirely remote service by COVID-19 pandemic lockdowns, virtual channels became critical in maintaining reference services. For example, a study by Radford et al. (2022) found that 71% of the libraries they interviewed reported dramatic increases in chat reference encounters in the early stages of the pandemic. As libraries seek to launch, assess, or enhance chat reference services in any stage of maturity, we must be aware of whether we are meeting both patron expectations and our field's own professional expectations. This study seeks to compare patron assessments and librarian assessments of live chats to determine how well each group's expectations for this service are being met in practice. If librarians believe they are meeting their profession's expectations, but patron ratings do not seem to agree, determining the cause for this disagreement would be important. Meanwhile, librarians may be able to improve the patron experience in chat if evaluations by both parties can help to identify and address areas of professional practice requiring greater attention or new approaches.

Institutional Contexts

Sam Houston State University (SHSU), a member of the Texas State University System, is a large public university in Huntsville, Texas, with a Fall 2022 headcount enrollment of 21,480.

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SHSU is Carnegie-classified as a Doctoral University: High Research Activity (R2). SHSU is also designated as a Hispanic-Serving Institution (HSI) and a Carnegie Community Engaged Campus, and it enrolls and graduates a higher-than-average number of first-generation college students. The Newton Gresham Library (NGL) at SHSU has offered live virtual chat services since 2004 and currently uses the LibChat platform from Springshare.

The University of Tennessee Knoxville (UTK), the flagship institution of the University of Tennessee System, is a large public university located in Knoxville, Tennessee, with a Fall 2022 headcount enrollment of 33,805. UTK is Carnegie-classified as a Doctoral University: Very High Research Activity (R1). The UTK Libraries have offered live virtual chat services since 2013 and currently use the LibChat platform from Springshare.

Literature Review

Live chat, once an uncertain tool in the suite of reference offerings, has become the focus of a wide number of research studies (Matteson, 2011). In the ten years following Matteson's review, chat has become an established mainstay of reference services in academic libraries. However, research on perceptions and assessment of the service has not evolved with the role of chat in 2021. Most relevant studies found were published between 2000 and 2010, when libraries were determining the value of chat and how to develop the pedagogies of the service (Desai & Graves, 2006; Smyth & MacKenzie, 2006; Arnold & Kaske, 2005; Hansen et al., 2009). Due to this lack of recent literature, this review includes some studies from ten years ago or older.

Our proposed study consists of two main elements: developing a rubric based on the *RUSA Guidelines for Behavioral Performance of Reference and Information Service Providers* (*RUSA Guidelines*) and applying that rubric to compare patron and librarian evaluation of chat interactions. Desai and Graves (2006, 2008; Graves & Desai, 2006) published several studies examining transcripts along with patron surveys, focusing on different elements of instruction in chat. Logan et al. (2019) analyzed exit surveys and transcripts to determine which behaviors correlated to patron dissatisfaction. Smyth and MacKenzie (2006) were able to highlight a disconnect in patron satisfaction and librarian assessment through their comparison study. Several studies used patron surveys and exit interviews to assess chat services without transcript comparisons (Foley, 2002; Lee, 2008; Neuhaus & Marsteller, 2002; Ruppel & Vecchione, 2012; Stoffel & Tucker, 2004). Hansen et al. (2009) surveyed both patron and librarian following reference interactions, finding provider pessimism to be a notable theme.

Great variation was found in rubrics used by researchers to assess chat. Many researchers developed their own rubric and coding schemas (Arnold & Kaske, 2005; Fuller & Dryden, 2015; Marsteller & Mizzy, 2003; Meert & Given, 2009; Pomerantz et al., 2006; Radford & Connaway, 2013; Butler & Byrd, 2016). A few used the READ Scale (Mawhinney & Hervieux, 2022; Mavodza, 2019; Cabaniss, 2015), while others built upon the ACRL Framework (Hervieux & Tummon, 2018) or used SERVQUAL (Gómez-Cruz, 2019). Of the studies that developed rubrics based on the *RUSA Guidelines*, most were concerned with the adherence of providers to the guidelines (Hughes, 2010; Maness et al., 2009; Van Duinkerken et al., 2009), while some used their rubric to assess provider skills (Keyes & Dworak, 2017; Ronan et al., 2006; Ward, 2004). Of all the research found, only two publications combined discussion of *RUSA* Guidelines with patron perception of chat interactions, both published more than ten years ago (Kwon & Gregory, 2007; Haynes, 2009).

Review of the relevant literature has highlighted a gap in current, methodologically similar, and extensive research concerned with the interactions of *RUSA Guidelines*, patron perceptions, and librarian perceptions of virtual chat interactions.

Aims

This study was guided by two primary research questions:

1. How well do librarians respond to live chat reference questions, in terms of professional guidelines from RUSA?
2. How do librarian ratings of chat responses compare to patron ratings of the same chats?

Methodology

We used the *RUSA Guidelines* to represent librarians' professional expectations for chat. A rubric based on these Guidelines, with an emphasis on the *Remote* aspect of the guidelines, was adapted for the current study from a rubric previously published by Cassidy et al. (2014). Because the original rubric was designed to evaluate SMS/text messaging rather than live synchronous chat, small modifications were made, mostly pertaining to the speed of response. The applied rubric is included in Appendix A.

With IRB approval from both institutions, each researcher downloaded their institution's LibChat transcripts that included patron ratings from August 1, 2019, to July 30, 2020. This period spans both pre- and post-COVID-19 pandemic; although the pandemic may have impacted the frequency and content of the chats, the researchers concluded that it should not impact the fundamental guidelines for library personnel behavior in responding to chats. The transcripts and associated metadata were cleaned to remove any personally identifying information, primarily patron names, identification numbers, email addresses, and phone numbers. Where applicable, identifying metadata fields were simply deleted from the dataset, but additionally the text of the transcript was carefully read and edited in context. Appendix B provides a data dictionary of the chat transcript data fields. One field worth explaining here in the methods is the *Patron Rating*, which users can optionally select after a chat ends; ratings are on a scale from 1 to 4, with the scores labeled as *Bad* (1), *So-so* (2), *Good* (3), and *Excellent* (4).

A sample of 360 transcripts was taken from each institution after data cleaning; this sample amounted to almost 100% of SHSU's potential transcripts for the period and 20% of UTK's potential transcripts for the period. In order to take a random sampling of UTK's larger dataset, a *RAND()* function was inserted in a blank column of the data spreadsheet to generate a random number; records were sorted according to that random value, and the first 360 randomly ordered rows were selected for analysis.

To test interrater reliability, two sample transcripts were selected from each institutional dataset (four records total) and scored by both researchers using the rubric. Two weeks later, without referencing their first set of scores, both researchers scored the same sample records again. An average agreement of 84.4% between raters demonstrated acceptable interrater reliability. An average of 84.4% agreement was also found between each researcher's first and second sets of scores, indicating acceptable intra-rater reliability as well. After establishing reliability, each researcher proceeded to rate the first 25 records from the other institution to check for any issues or questions which might require clarification; no issues arose. Each researcher then completed ratings for half the chat transcripts from their own institution and half the transcripts from the other institution (one rater per chat). During the rating process,

a total of ten transcripts were excluded from the dataset as being insufficient for rating (e.g., one transcript simply represented a patron logging back in to say "thank you" after they had accidentally lost the chat connection). Finally, these rubric-based librarian scores were analyzed and compared to the patron ratings. Descriptive statistics were collected, and Pearson's correlation tests were run as appropriate.

Results

After scoring and excluding insufficient transcripts, a total of 710 transcripts were found eligible for analysis, including 357 (50.3%) from Hodges and 353 (49.7%) from SHSU. Approximately 60% of these chats occurred before the COVID pandemic (defined for convenience by a date of March 15, 2020), including 212 chats from Hodges and 217 chats from SHSU. The remaining 40% of the chats analyzed occurred during the COVID pandemic up to the close of the data collection period (March 15, 2020, through July 30, 2020), including 145 chats from Hodges and 136 chats from SHSU.

Chat Characteristics

The length of time each patron spent waiting for an initial response to their chat was documented in the chat transcripts as "Wait Time" and was measured in seconds. The average wait time overall was 19.7 seconds, but this varied between institutions, with Hodges averaging 15.6 seconds, which was 8.2 seconds faster than SHSU's slower average of 23.8 seconds. The extreme outliers for wait time were documented at 1707 seconds (Hodges) and 1562 seconds (SHSU)—about 28.5 minutes and 26 minutes, respectively. Even with these two outliers removed from the data, Hodges still averaged 8.6 seconds faster than SHSU (10.8 seconds versus 19.4 seconds, respectively).

The duration of each chat in seconds was also included in the chat data. The average chat overall lasted 615.8 seconds (just over 10 minutes), but again the data showed variance between institutions. Hodges library personnel chatted longer on average than SHSU personnel, at 754.2 seconds (12.5 minutes) versus 475.8 seconds (just shy of 8 minutes), respectively. Along with longer average duration of chat, Hodges also exchanged a larger number of messages in the average chat: 14.8 messages, compared to just 10.8 messages on average at SHSU (the overall average number of messages was 12.8).

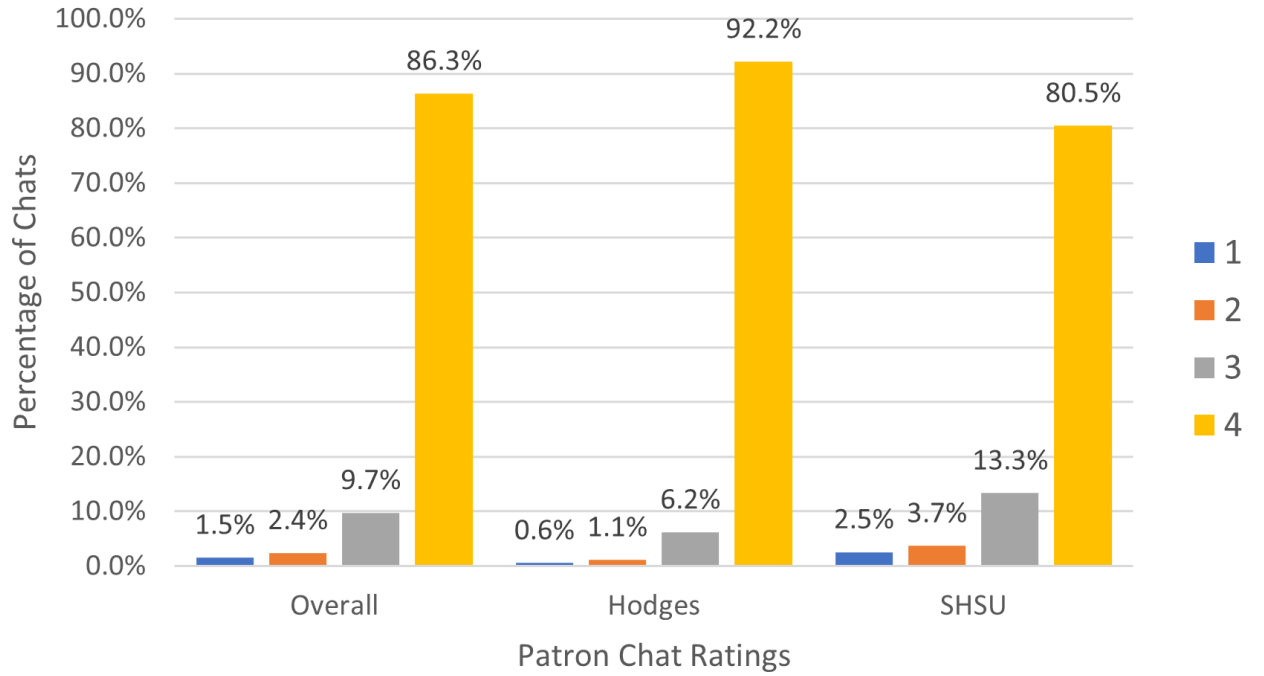
Statistical testing was conducted to determine whether these more mundane chat characteristics correlated to patron ratings. The wait time, duration, and message count all lacked statistically significant correlations to patron rating (Pearson's correlation coefficients = -0.04, 0.04, and 0.06, respectively); patron ratings did not appear to be influenced by chats being either faster or lengthier. The month and weekday of the chat were also found to have no correlation to the average patron rating, which was always between 3.6 and 3.9; students did not seem more satisfied or more frustrated with library personnel's chat performance at any particular time during the week, semester, or year. The same was true for patron ratings pre- and post-COVID: although individual chats occasionally earned poor scores at intermittent points in both periods, the overall average did not change appreciably, and a consistent proportion of chats earned each rating on the scale from 1 to 4. Pearson's correlation coefficients for librarian scores also did not identify any relationships of strong significance, although librarian scores had a low positive correlation with both message count and duration and a very low negative correlation with wait time (-0.12, 0.24, and 0.24, respectively). In other words, librarian scores

were likely to be slightly higher when more messages were exchanged, when a chat lasted for a longer duration, or when the wait time was briefer.

Patron Ratings

The average patron rating overall was 3.8 (on a scale of 1 to 4). The average at Hodges was slightly higher (3.9), while the SHSU average was slightly lower (3.7). The median and mode scores were 4, both overall and for each institution. Both overall and at each separate institution, the patrons who chose to submit a rating for their chats overwhelmingly rated them at the highest score of 4 (see Figure 1).

FIGURE 1
Patron Chat Ratings



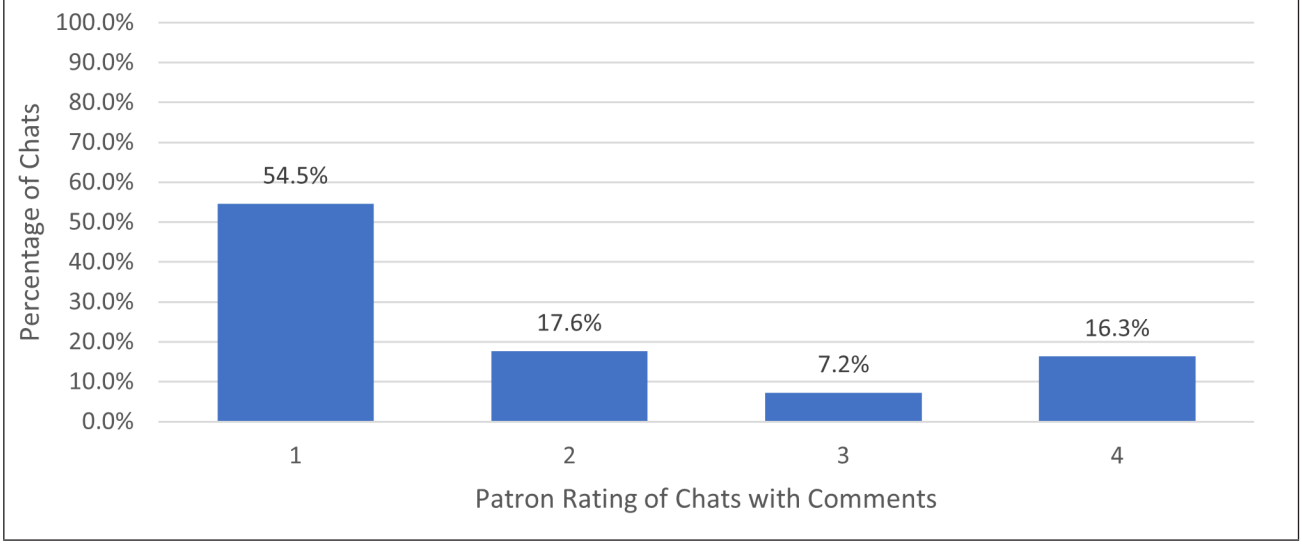
Only eleven chats received a patron rating of 1 or *Bad*. These chats were examined qualitatively to look for themes of behavior that resulted in patron dissatisfaction strong enough to warrant leaving a negative rating. As it turns out, patrons have straightforward expectations: they want library personnel to respond to their chat and answer their question. Three out of eleven chats earning the lowest patron rating were characterized by the library personnel either never responding to the chat at all, or by indicating that they would be right back and then never returning to the chat. At the same time, five of these eleven chats shared the common theme that the patron felt their question was never fully answered or their problem never fully resolved. In one chat which illustrates a variation of the *unresponsive* theme, a patron chatting during off-hours reached a library student worker, who redirected their research question to an email address being monitored by a librarian. The patron left no comment, but their negative rating—left well before they would have received a satisfactory or dissatisfactory answer to their email—may reflect discontent with being encouraged to use a less immediate communication method rather than receive a prompt, real-time reply.

Occasionally, however, a patron's poor rating expressed a frustration which, although possibly warranted, had nothing to do with the chat service at all: in one instance, the patron's low rating was accompanied by a comment expressing their disagreement with a specific pandemic-related service limitation. In another example, a patron was appropriately directed to the campus bookstore for the answer to their question; however, as indicated in their post-chat comment, the bookstore phone was not answered and the voicemail inbox was full, so they were unable to leave a message.

Rating and Comment Co-Occurrence

Overall, students were very unlikely to leave a comment at all when rating a chat; only 16.1% (n = 114) of patron-rated chats analyzed included a comment. Among these, students who rated their chat poorly were more than three times as likely to leave a comment than those who gave a middling or high rating: 54.5% of patrons who assigned a chat rating of 1 also left a comment, compared to just 16.3% of patrons who assigned a chat rating of 4 (see Figure 2).

FIGURE 2
Frequency of Rating and Comment Co-Occurrence by Patron Rating



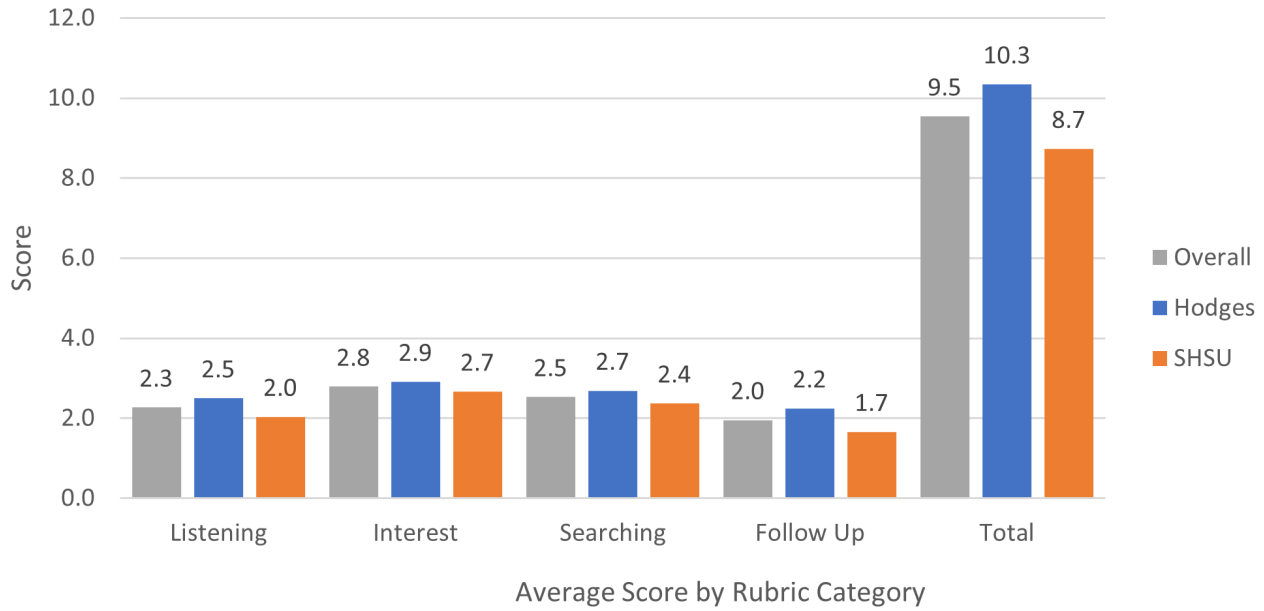
Librarian Scores

The librarian scores, determined through a rubric-based evaluation, reflected more nuance than the patron ratings. Each chat was scored on a scale from 1 to 3 (*Beginning*, *Developing*, or *Accomplished*) in the areas of *Listening*, *Interest*, *Searching* and *Follow Up*, corresponding to areas in the *Remote* guidelines of the *RUSA Guidelines*. Average scores in each area were very similar overall and for each institution, though scores for chats from Hodges were consistently a fraction higher than the scores of chats from SHSU (see Figure 3). Overall, the average total score was 9.5, while the institutional averages were 10.3 at Hodges and 8.7 at SHSU.

Some of the most frequently seen reasons for librarian scores being lower in a given rubric category included:

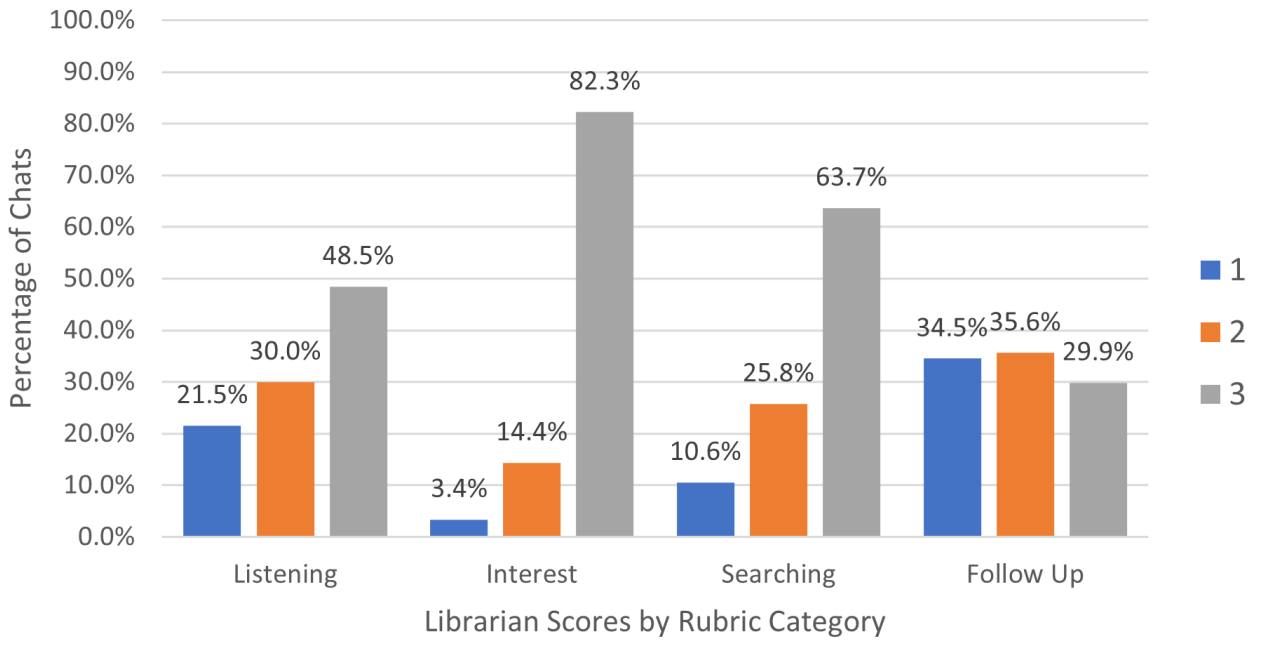
- Interest: abrupt language lacking pleasantries and empathy; failure to clarify vague queries.

FIGURE 3
Average Librarian Scores by Rubric Category



- Listening/Inquiring: slow response to initial query; failure to maintain regular contact while searching.
- Searching: failure to be transparent about where and how they searched; failure to provide appropriate links or contact information for patrons to move forward easily.
- Follow Up: failure to end chat politely; failure to encourage patron to return for further help.

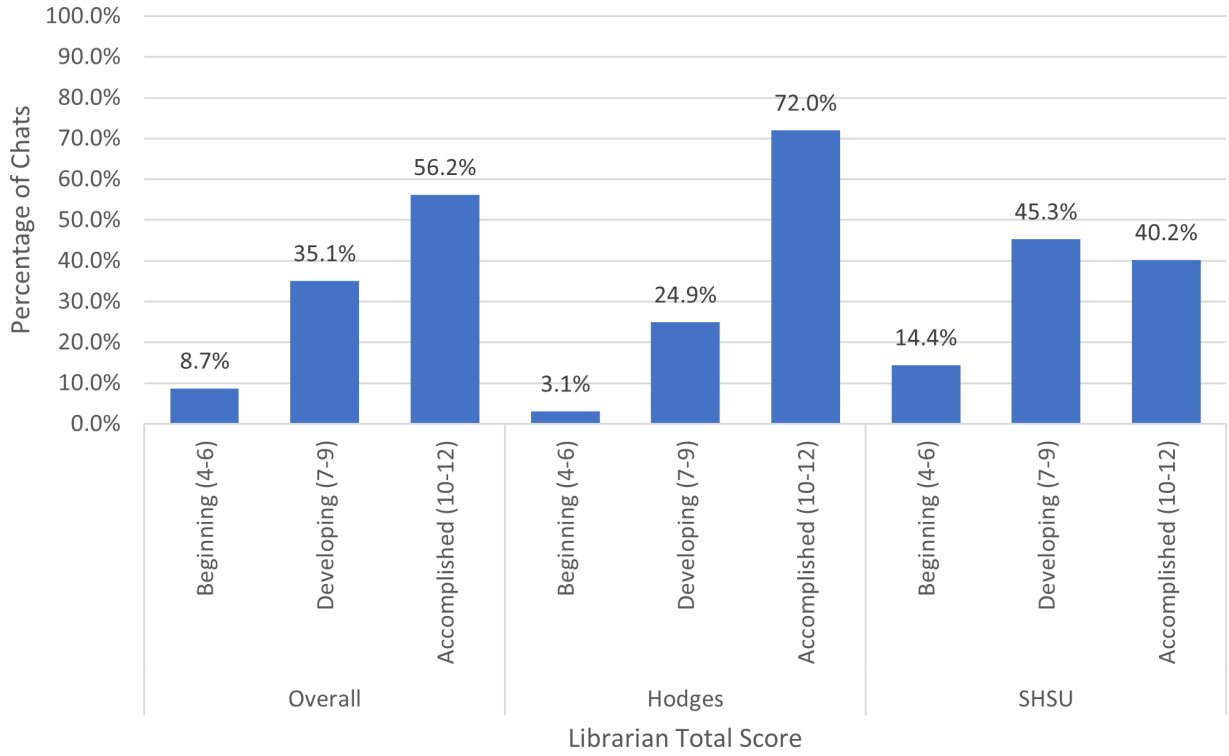
FIGURE 4
Librarian Scores by Rubric Category



Examining each rubric category in turn, librarians found *Interest* to be the strongest area of performance, with 82.3% of chats receiving a score of 3/*Accomplished* and only 3.4% of chats receiving a score of 1/*Beginning*. *Searching* also scored well, with 63.7% of chats at a 3 and only 10.6% of chats at a 1. The category of *Listening* showed more tepid performance: slightly less than half of chats (48.5%) scored a 3, while nearly a quarter (21.5%) scored a 1. Finally, performance in the *Follow Up* category showed the most room for improvement, with only 29.9% of chats scoring a 3 and 34.5% scoring a 1. Figure 4 shows the full details of how each category received librarian scores 1 through 3.

All told, the librarians assigned 143 chats the highest possible score of 12, including 121 chats from Hodges and only 22 chats from SHSU. At the other end of the spectrum, the librarians assigned just six chats, all from SHSU, the lowest possible score of 4. Overall, more than half of chats (56.2%) were scored as *Accomplished*; by institution, 72.0% of Hodges' chats were *Accomplished*, while only 40.2% of SHSU's chats scored at this level. Instead, the largest proportion of SHSU's chats scored in the *Developing* range (see Figure 5).

FIGURE 5
Librarian Total Scores



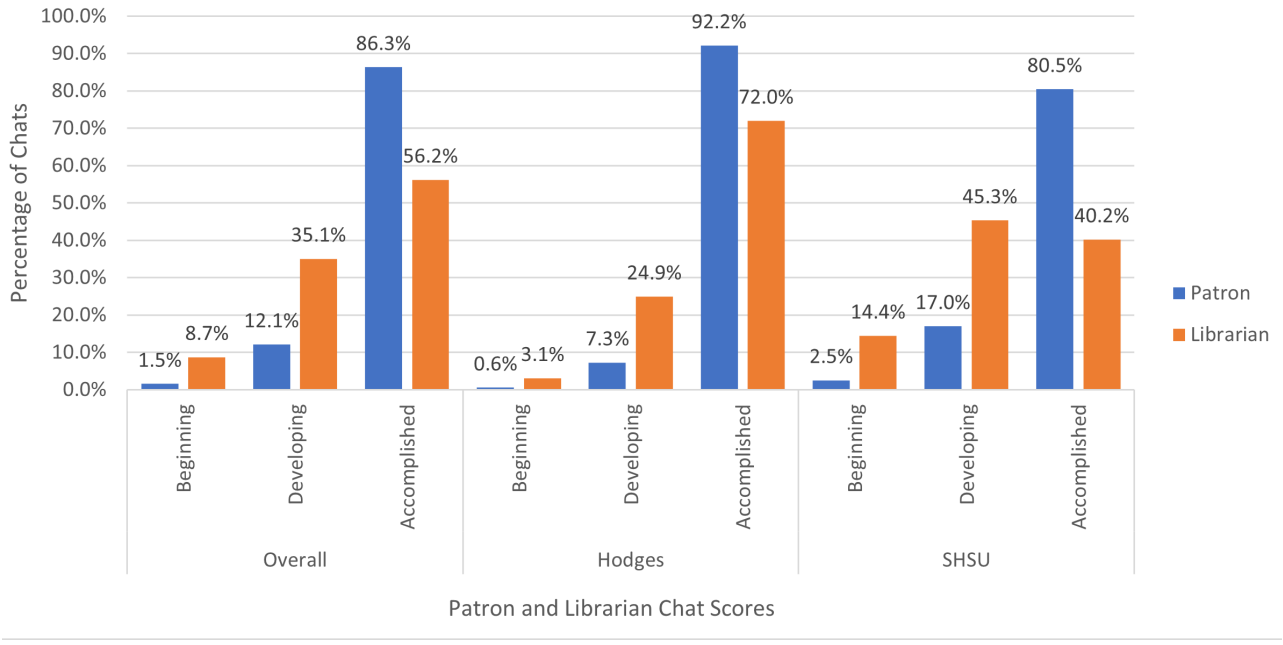
Unresponsiveness from library personnel earned poor librarian scores, just as this behavior earned poor patron ratings. Of the six transcripts which earned the lowest possible scores from the librarian evaluators, four did poorly because of simple failure to respond to a query. The remaining two chats were evaluated as simply being poor reference interactions: library personnel responses were abrupt and lacking in detail expected for clarity. For example, one patron asked, "What would be a good book to research educating the youth about protesting?" The library personnel monitoring chat stated, without any greetings, "There might be

some good articles on it using the main search engine on the page. As for books I'm not quite sure there would be anything recent in book form," and that was it. They asked no clarifying questions about the vague topic: was the patron's interest limited to "recent" discussion, or would they have been equally interested in books from youth protests of the 1960s? The library personnel also did not clarify the context of the need/use, such as whether the book format was specifically required by a class assignment, and they failed to ask other similar questions which would be expected in a strong reference interview. They did not walk the patron through a search attempt or any possible results. They did not even specify what they meant by "the main search engine," or on which page it could be found, which might have been clarified with a hyperlink. Curiously, the patron in this instance rated the chat a 4/4, compared to the librarian score of 4/12. Perhaps this was a more advanced user, who readily understood the search recommendation, and perhaps the unverified understanding of their query was accurate enough that they were satisfied with the result of the answer. In any case, patrons and librarians clearly share some common expectations and priorities, while others may differ significantly. We will examine such comparisons further in the next section.

Comparing Patron Ratings to Librarian Scores

The patron rating scale of 1 to 4 did not perfectly correspond to the librarian scoring rubric, which could yield a total score between 4 and 12. Rather than tear down and recreate a well-tested rubric, for purposes of comparison, the researchers decided to equate a patron rating of 1 to librarian scores 4 to 6, or *Beginning*. Patron ratings of 2 and 3 equated to librarian scores of 7 to 9, or *Developing*. Finally, patron ratings of 4 equated to librarian scores of 10 to 12, or *Accomplished*. Overall, patrons were more likely to consider a chat *Accomplished* than were librarians (86.3% versus 56.2%). Conversely, librarians were more likely to rate chats as *Beginning* than were patrons (8.7% versus 1.5%). Figure 6 shows the comparisons of patron and librarian scores, both overall and for each institution.

FIGURE 6
Comparison of Patron to Librarian Chat Scores



Discussion

According to the comparison between patron and librarian evaluations of live chats, both patrons and librarians seem generally satisfied with chat interactions, with patrons ranking most chats 4 out of 4 and the librarian evaluators assigning an average overall score of 9.5 out of 12. However, a librarian's score for a chat does not necessarily predict the patron's rating; the discrepancies between their assessments yield some valuable discussion points.

In a few noteworthy instances, the librarian evaluators scored a transcript highly (e.g., 10 out of 12 or even 12 out of 12) while the patron scored the same chat very poorly (e.g., 1 out of 4 or 2 out of 4, respectively). These discrepancies provide an interesting opportunity to investigate areas where librarian and patron expectations may be out of sync. In five out of eight chats with such mismatched scores, the library personnel fulfilled all the behavioral expectations of a good reference interaction, but the patrons were nevertheless dissatisfied with the services or collections available from the library. Such cases are difficult to eliminate, since the behavior of an individual professional may never fully satisfy a patron who simply wants the library to own more or different resources, or to provide services beyond what is appropriate (e.g., doing a research assignment for a student).

In two other instances, the librarian exhibited generally strong behaviors, except that the patron ultimately felt their question was not fully answered or that their problem was not resolved. One final chat, however, illustrates a very different kind of case. A patron requests "academically acceptable" sources on a topic, and the library personnel assists obligingly. They use welcoming language and ask clarifying questions about information needs and any constraints of a class assignment. When they suggest searching the library's discovery layer, they take the time to explain what it is and why the student would be better off searching there (as opposed to web search engines). They both explain and link to a sample search they formulated as a starting point for the student. By all accounts, this chat hits all the behavioral high points, and it earned a librarian score of 10 out of 12. However, the patron stopped responding to the library personnel before the end of the chat and subsequently rated the chat only 2 out of 4. Although no patron comment accompanies this rating, one possible explanation is that the patron became overwhelmed with the unfamiliar nature of the information presented and the speed of its presentation; perhaps the library personnel could have checked on the patron's understanding at more frequent intervals during the chat, making sure they were absorbing and understanding the guidance. On the other hand, perhaps the patron had hoped to have specific sources named for them, as opposed to instructions for searching. Whatever the patron may have been expecting, they didn't seem to feel that it was delivered.

The findings also suggest that librarians' professional expectations go beyond patron expectations in certain areas, such as cordiality of language and transparency about the search process. Patrons are more concerned about actually getting the answer they want, and they are the least satisfied when they do not perceive this has happened. While librarians routinely lowered a chat's *Interest* score based on abrupt language that lacked pleasantries or empathy, patron ratings indicated little concern about such cordiality, as long as the abrupt responses were prompt and constructive. This may reflect the ever-widening gap between expectations of digital versus in-person conversation. It may also result in part from increased interaction with chatbots on commercial websites, not to mention search engines, which fulfill requests dispassionately. Some of the initial questions posed in the chat even resemble the efficient,

incomplete sentences often fed into a search engine, such as: Recalling a recall; Help finding a book; Posting a flyer; SRDS; What is Interlibrary Loan?

Perhaps today's university patrons don't place as much priority on seeing textual evidence that they are speaking to a human. For that matter, as artificial intelligence text generators like ChatGPT become ever more skilled and ever more integrated into other online technologies, that which constitutes such "evidence" of humanity is perhaps less clear-cut. When even a machine can engage in a polite two-way discussion, does it really matter whether your partner in a dialogue is human, if they satisfy your requirements of the conversation? On the other hand, quite a few of the initial questions that launched chat interactions began (and ended) with indicators of establishing human rapport (e.g., Hello!; Heyy!; Good afternoon; Thank you!). This suggests that many patrons are aware and respectful of the human connection being initiated. And once a two-way dialogus has been established in a chat, patrons overwhelmingly conversed in a polite and appreciative manner. Even if some of them are satisfied by a chat that lacks such courteous "fluff" on the part of library personnel, continuing to strive for a warm human communication style is still probably the best policy for library chat providers, as long as that warm communication is balanced with efficiency and accuracy.

Related to this topic of warm human communication, the researchers discovered that *Follow Up* was particularly difficult to gauge via transcripts from LibChat. The transcripts from the study period did not record any details regarding which chat participant ended or disconnected from the chat or the timestamp at which the disconnection occurred. Therefore, it may often look as though the library personnel failed to appropriately end the interaction, when the patron may in fact have abruptly left the chat before an appropriate closing could be made. As a result of this limitation in the data, *Follow Up* scores may be lower than warranted. In the digital environment, adherence to RUSA's general *Follow Up* guideline of "Takes care not to end the reference interview prematurely," is not truly under the library staff member's control in the same way that it is during face-to-face interactions, and this factor should be taken into consideration by libraries undertaking assessment of their own performance in chat transcripts. The LibChat platform has since updated this aspect of transcript recording, so newer data analysis may be able to assess chat disconnection with more nuance.

Limitations and Further Research

The average patron chat ratings were consistently lower at SHSU than at Hodges. Similarly, librarian evaluators scored chats from Hodges higher in every rubric category, compared to chats from SHSU. This suggests that substantive differences may exist between the two libraries in terms of how library personnel are trained to provide reference via chat, how such training is refreshed over time and/or monitored for quality control, and the general norms in each library for engaging in reference interactions. While the current study did not gather details to compare these aspects of practice, the findings suggest that future research delving into this may provide insight for improving patron satisfaction with virtual chat reference.

Conclusions

In exploring the relationship between how librarians and patrons rate virtual chat interactions, this study highlighted both similarities and variances in how well the expectations of chat participants were met. While patrons were most satisfied when they got the answer they were seeking, librarians put a greater emphasis on professional expectations of cordiality

and customer service. Unresponsiveness was an issue for both, earning poor ratings from librarians and patrons. Overall, perceptions of librarians and patrons were often out of sync, which suggests there is room for further research in this area. These discrepancies provide an opportunity to better understand and serve patrons as chat reference evolves in a modern landscape.

Author Contributions

Erin Elizabeth Owens: Conceptualization (equal), Methodology (equal), Data Curation (equal), Investigation (equal); Formal analysis; Visualization; Writing: original draft (Introduction, Methodology, Results, Discussion, Limitations); Writing: review and editing (equal); **Kat Brooks:** Conceptualization (equal), Methodology (equal), Data Curation (equal), Investigation (equal); Writing: original draft (Abstract, Literature review, Conclusions); Writing: review and editing (equal).

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Appendix A
Chat Assessment Rubric

Rubric Purpose

The purpose of this rubric is to provide measurable criteria to assess the chat reference skills of library personnel in a selected set of chat transcripts. Results of this rubric are intended to be used as a teaching/training tool to communicate expectations and give informative feedback. The assessment goal is to improve the performance of library personnel in the area of chat reference services.

Rubric Credits

This rubric was adapted in 2021, by Erin Owens and Kat Brooks, from the rubric published in Cassidy, E. D., Colmenares, A., & Martinez, M. (2014). So text me—maybe: A rubric assessment of librarian behavior in SMS reference services. *Reference and User Services Quarterly 53*(4), 300–312. doi:10.5860/rusq.53n4.300.

	Accomplished – 3	Developing – 2	Beginning – 1
Listening/ Inquiring The reference interview is the heart of the reference transaction and is crucial to the success of the process. The librarian must be effective in identifying the patron's information needs and must do so in a manner that keeps patrons at ease. Strong listening and questioning skills are necessary for a positive interaction.	1. Communicates in a clearly receptive/ cordial/ encouraging manner 2. Uses open-ended questioning techniques if appropriate to encourage the patron to expand on the request or present additional information. Some examples of such questions include: – Please tell me more about your topic. – What additional information can you give me? – How much information do you need?	1. Communicates in a receptive/cordial/ encouraging manner 2. Does not use open-ended questioning techniques even when appropriate to encourage the patron to expand on the request or present additional information.	1. Communicates in an abrupt manner 2. Does not use open-ended questioning techniques even when appropriate to encourage the patron to expand on the request or present additional information.

	Accomplished – 3	Developing – 2	Beginning – 1
	3. Uses closed questions if appropriate to refine the search query. Some examples of clarifying questions are: – What types of information do you need (books, articles, etc.)? – Do you need current or historical information?	3. Uses closed questions to refine the search query. Some examples of clarifying questions are: – What types of information do you need (books, articles, etc.)? – Do you need current or historical information?	3. Does not use closed questions to refine the search query.
Interest A successful librarian must demonstrate a high degree of interest in the reference transaction. While not every query will contain stimulating intellectual challenges, the librarian should be interested in each patron's information need and should be committed to providing the most effective assistance. Librarians who demonstrate a high level of interest in the inquiries of their patrons will generate a higher level of satisfaction among users.	1. An automatic response acknowledges user questions submitted outside of library operation hours (hours during which the library is open) 2. Provided a very timely initial response (wait time for chat opening) 3. Patron assisted in a very timely manner (overall time) 4. Maintained regular contact	1. No automatic response acknowledges user questions submitted outside of library operation hours (hours during which the library is open) 2. Provided a somewhat timely initial response (wait time for chat opening) 3. Patron assisted in a somewhat timely manner (overall time) 4. Maintained regular contact	1. No automatic response acknowledges user questions submitted outside of library operation hours (hours during which the library is open) 2. Did not provide a timely initial response (wait time for chat opening) 3. Patron not assisted in a timely manner (overall time) 4. Did not maintain regular contact

	Accomplished – 3	Developing – 2	Beginning – 1
Searching The search process is the portion of the transaction in which behavior and accuracy intersect. Without an effective search, not only is the desired information unlikely to be found, but patrons may become discouraged as well. Yet many of the aspects of searching that lead to accurate results are still dependent on the behavior of the librarian.	1. Names the sources to be used, when appropriate. 2. Works with the patron to narrow or broaden the topic when too little or too much information is identified. 3. Recognizes when to refer the patron to a more appropriate guide, database, library, librarian, or other resource. 4. Offers detailed search paths or links/URLs to needed electronic resources. Excessively long links have been converted to a shorter link (for example, using Tiny.URL) 5. If appropriate, detailed directions to physical resources are given, for example – Call #s and Floor #s – Room #s	1. Names the sources to be used, when appropriate. 2. Indicates that the patron needs to narrow or broaden the topic when too little or too much information is identified. 3. Recognizes when to refer the patron to a more appropriate guide, database, library, librarian, or other resource when appropriate 4. Offers detailed search paths or links/URLs to needed electronic resources. 5. If appropriate, general directions to physical resources are given, for example—either call #s or floor #s, but not both.	1. Does not name the sources to be used when appropriate. 2. Does not work with the patron to narrow or broaden the topic when too little or too much information is identified. 3. Does not refer the patron to a more appropriate guide, database, library, librarian, or other resource when appropriate 4. Does not offer detailed search paths or links/URLs to needed electronic resources. 5. Even if appropriate, directions to physical resources are not given.
Rubric Notes for Searching: 1. Librarian answers that were clearly inaccurate to the scoring group received the "Beginning" (1) score. 2. Closed-ended questions that required little or no searching on the part of the librarian received the "Accomplished" (3) rating.			

Follow Up The reference transaction does not end when the librarian leaves the patrons. The librarian is responsible for determining if the patrons are satisfied with the results of the search, and is also responsible for referring the patrons to other sources, even when those sources are not available in the local library	1. Offers to answer more questions or asks the patron if they need help with anything else. 2. Encourages the patron to return if they have further questions by making a statement such as—"if you don't find what you are looking for, please come back and we'll try something else" or similar. 3. Makes the patron aware of other reference services, if appropriate (email, instant chat, phone, etc.) 4. Makes arrangements, when appropriate, with the patron to research a question even after the reference transaction has been completed. 5. Refers the patron to other sources or institutions when the query cannot be answered to the satisfaction of the patron. 6. Takes care not to end the reference interview prematurely.	1. Does not offer to answer more questions or ask the patron if they need help with anything else. 2. Does not encourage the patron to return if they have further questions. 3. Makes the patron aware of other reference services, if appropriate (email, instant chat, phone, etc.) 4. Does not make arrangements, when appropriate, with the patron to research a question even after the reference transaction has been completed. 5. Does not refer the patron to other sources or institutions when the query cannot be answered to the satisfaction of the patron. 6. Takes care not to end the reference interview prematurely.	1. Does not offer to answer more questions or ask the patron if they need help with anything else. 2. Does not encourage the patron to return if they have further questions. 3. Does not make the patron aware of other reference services even when appropriate (email, instant chat, phone, etc.) 4. Does not make arrangements, when appropriate, with the patron to research a question even after the reference transaction has been completed. 5. Does not refer the patron to other sources or institutions when the query cannot be answered to the satisfaction of the patron. 6. Ends the reference interview prematurely, before answering or addressing all parts of a question.

Appendix B
Data Dictionary

Field from LibChat	Definition	Disposition for Study
Chat ID	Unique numerical identifier assigned by the system to each chat	Kept
Name	Patron's name as input (may be a pseudonym)	Deleted
Contact Information	Patron's email or phone number as entered manually (if prompted in the library's chat setup)	Deleted
IP	IP address of the chat patron's device	Deleted
Browser	Name and version of the chat patron's internet browser	Deleted
Operating System	Name and version of the chat patron's device operating system	Deleted
User Agent	Any details available about the patron's user agent, such as browser type	Deleted
Referrer	URL/Web address from which the chat patron initiated a chat with the library	Deleted
Widget	LibChat system name of the specific widget used by the chat patron to initiate a chat A library may create multiple widgets that send chats to different library departments or otherwise have different configured behavior	Deleted
Department	The department, as defined in the LibChat setup, that received the chat	Deleted
Answerer	Username of the library personnel member who answered the chat	Deleted
Timestamp	The precise date and time at which a chat was initiated by a patron	Kept
Wait Time	Length of time in seconds that a patron waited for an initial chat response from library personnel	Kept
Duration	Length of time in seconds from library personnel's first response until a chat is ended	Kept
Screensharing	Indicates whether screensharing was used during a chat; Valid values: None; Yes	Kept
Rating (0-4)	Optional patron rating of a chat interaction after a chat has ended; Valid values: numerals 1 through 4 Scores correspond to labels in patron display: Bad (1), So-so (2), Good (3), Excellent (4)	Kept
Comment	Optional patron open-ended comments accompanying a chat rating	Kept; deidentified
User Field 1	Customizable field; not in use	Deleted
User Field 2	Customizable field; not in use	Deleted
User Field 3	Customizable field; not in use	Deleted

Field from LibChat	Definition	Disposition for Study
Initial Question	Initial question entered by patron when initiating a chat	Kept; deidentified
Transfer History	Details of the chat being transferred between operators (if applicable)	Deleted
Message Count	The total number of messages exchanged in the chat	Kept
Internal Note	Any notes added to the chat by library personnel after a chat ends	Kept; deidentified
Transcript	The complete text of the conversation	Kept; deidentified
Tags	Any tags applied to the chat by library personnel, eg, for searchability or other system uses	Kept

Carceral Labor and Academic Libraries: Investigating the Library Furniture

Kevin Adams and Maria Planansky

In this article the authors provide context for and detail the Alfred University Libraries' investigation into the libraries' relationship with manufacturing prison labor. The investigation utilized a patron furniture audit to collect furniture and manufacturer data. This research project demystifies the university library's relationship to prison labor, with an eye toward future steps needed to address this relationship; it seeks to understand the following: the makeup of our patron furniture; our institution's procurement policies, preferred sourcing, and legal requirements for purchasing; and the manufacturers' relationships to prison labor. Findings are shared and recommendations are made for divesting from the prison industrial complex.

Introduction

While moving furniture in preparation for the morning opening, a librarian glanced down and saw a chair's manufacturing label reading Corcraft, a known New York State Department of Corrections manufacturer that uses prison labor to produce its goods (Corcraft, n.d.). This was not surprising; higher education's involvement with the prison industrial complex (PIC) is well documented (Burke, 2020, 2021). The State University of New York (SUNY) system's procurement policies, following state law, list the department of corrections manufacturer as the top preferred vendor (SUNY, n.d.).

Incarcerated laborers in New York make as little as 10 cents per hour and are not protected by United States federal labor laws (Prison Policy Initiative, 2017). The prison industrial complex disproportionately impacts people with marginalized identities (Alexander, 2012). This type of exploitation, racism, and oppression is contradictory to the values of Alfred University Libraries (AU Libraries) (AU Libraries, 2023). As members of the AU Libraries Anti-Racism and Anti-Oppression working group, the authors conducted an audit of furniture in public library spaces to better understand our libraries' relationship to prison labor.

Background and Context

Alfred University is a small (1,260 FTE undergraduate and 418 FTE graduate students) comprehensive university comprised of non-statutory (i.e., private) and statutory (i.e., publicly supported) units. The university offers degrees through its SUNY statutory college, the New York State College of Ceramics, which includes the School of Art and Design and the Inamori

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School of Engineering, as well as through its private-side programs, the College of Liberal Arts and Sciences, the College of Business, and the School of Graduate and Continuing Studies. AU Libraries support all programs through unified services housed in Scholes Library (statutory) and Herrick Memorial Library (non-statutory). This uniquely situates AU Libraries to explore their purchasing regulations and policies, and how those impact the state and private aspects of our institution, with implications for both public and private academic libraries.

We were able to conduct this research with the support of our library administration, thanks in large part to their commitment to the libraries' anti-racism and anti-oppression initiatives. AU Libraries made this commitment in the early fall of 2020 and has laid the path for us to have numerous conversations about our libraries' relationships to systemic racism (AU Libraries, 2023).

At the outset of our research, we knew that AU Libraries possessed prison-labor-made furniture and that we wished to discontinue purchasing from vendors utilizing prison labor. Even with these understandings, there was much to investigate. This research project is primarily about demystifying the university libraries' relationship to prison labor, with an eye toward future steps needed to address this relationship. To do this, we set out to understand the following: the makeup of our patron furniture; our institution's procurement policies, preferred sourcing, and legal requirements for purchasing; and the manufacturers' relationships to prison labor.

Literature Review

This literature review provides a background understanding of the PIC, the intersections of the PIC and social justice issues, and the relationship between academic institutions (including libraries) and the PIC.

Prison Industrial Complex

The U.S. PIC is larger than that of any other nation, with nearly two million people (roughly the population of Nebraska) being held in prisons, jails, correctional facilities, and immigration detention facilities. This includes 1,042,000 individuals in state prisons and 208,000 in federal prisons and jails (Prison Policy Initiative & Wagner, 2023). The growth of the prison industrial complex over the last thirty years has been written about by critical theorists and activists such as Ruth Wilson Gilmore, Michelle Alexander, and Angela Davis (Alexander, 2012; Davis, 2003; Gilmore, 2007; Gilmore et al., 2022). Each of these thinkers highlights the systemic racism involved in the explosive growth of the PIC.

Approaching the PIC from a library science perspective, Jeanie Austin, a librarian, activist, and scholar, points out that the PIC operates to police "along lines of sexuality and gender conformity," as well as racialized ones. Austin connects prison expansion to the militarization of the police and new surveillance tactics. When pulling from Alexander's work, Austin highlights that the disproportionate policing of drug offenses along racial lines has led to 46.4% of federal convictions being drug offenses (2022). This percentage leads to higher rates of incarceration for Black and Indigenous People of Color (BIPOC), even though drug use has never been documented to be disproportionately distributed across race. Alexander points out that at the time of her writing, a higher percentage of the United States' Black population had been incarcerated than was incarcerated during apartheid in South Africa (2012).

The PIC consists of numerous systems of incarceration: prisons, jails, juvenile detention centers, state supervision, and Immigration and Customs Enforcement (ICE) detention (Austin, 2022). In this paper, we will focus solely on prisons, and specifically on prison labor.

Prison Labor

As of 2022, the United States holds 1.2 million people in state and federal prisons with two thirds of that population working as incarcerated laborers. A report produced jointly by the American Civil Liberties Union (ACLU) and Global Human Rights Center at the University of Chicago's Law School (GHRC) states that these workers do not have protections against exploitation, are often not paid minimum wage, and "are under the complete control of their employers" (2022, p. 5). Prison labor remains legalized by the Thirteenth Amendment, which states, "Neither slavery nor involuntary servitude, except as a punishment for crime where of the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction" (U.S. Const.). Legal scholars have argued that the disproportionate impact on BIPOC can be traced through the history of slavery, Black Codes, convict leasing, chain gangs, and Jim Crow laws (ACLU & GHRC, 2022; Hammad, 2019; Whitehouse, 2017). This current manifestation and its impact on BIPOC reflects the white supremacy and racism that is embedded in U.S. carceral systems (Hammad, 2019; Leung, 2018; Whitehouse, 2017). McLennan traces the legal, political, and social history of carceral labor to its earlier iterations in the Northwest Territory and later all non-Southern states. She expands on these histories, arguing that systems of carceral labor existed prior to the Thirteenth Amendment:

> Although the Thirteenth Amendment underwrote the drive to push convicted freed people back into bondage and hard labor, it also constitutionalized a brutal system of penal involuntary servitude that had been operating in the United States for more than four decades before the Civil War. Indeed, the amendment was as much a capstone as a foundation (2023).

Prison labor is coerced labor. Over 76% of incarcerated laborers face punishment for not working; this punishment can take the form of solitary confinement, loss of opportunity for lowered sentences, and loss of family visitations (ACLU & GHRC, 2022). Dominique Morgan, a former inmate shared with NPR:

> I was diagnosed with HIV right when I got into the prison, so I would have days where I physically did not have the energy to stand and work in the kitchen for 12 hours. But I had to work. You don't get days off. You don't get to have sick days. And if I didn't go to work, it was a rule violation (Garcia, 2020).

Morgan's perspective is one that is underrepresented in the scholarship. It is uncommon for the perspectives of incarcerated people and how they perceive their own relationship to prison labor to be highlighted. Wilson, Aggarwal, Groccia, and Villaronga are seeking to fill this gap in academic study with their project, *The Work and Us* (2023). Wilson, a Black and queer incarcerated writer, activist, and student, is leading the group in asking incarcerated people why they work and how they feel about it. Preliminary results have been shared

as the full survey results are forthcoming. The preliminary results are complex, as "these experiences, in turn, indicate that a one-size-fits-all approach focused on labor may not be the best way to improve the material conditions of imprisoned people, and will certainly not get us any closer to abolishing the prison–industrial complex"(Wilson et al., 2023). As Wilson et al. state, the root cause of dehumanization and exploitation is not the work, but in the prison itself (2023).

With such a lack of perspective in scholarly research to inform leaders in the carceral system, prison labor can be justified under the guise of rehabilitation and reduction of recidivism. The research to support reduced recidivism through prison labor is minimal but includes a recent evaluation that indicates that people who worked in prison had lower recidivism rates. Other studies have found no significant positive effects of prison labor on recidivism (Duwe & Henry-Nickie, 2021).

History and Afro-American and African Studies professor Heather Ann Thompson, quoted in an article in *The Economist*, said, "the vast majority of prison labor is not even cloaked in the idea of rehabilitation" (The Incarcerated Workforce, 2017). Legal scholar Lan Cao argues that prison labor has lost its rehabilitative purpose as is demonstrated by the profit-driven decisions in prison labor and its unsafe working conditions (2019). Cao gives the example of inmates who thought they were going to a drug rehabilitation center, but instead, arrived at "prison labor camps for private companies, such as meat processing factories that sold slaughtered chicken to big-name brands" (2019, p. 29). Oftentimes, decisions in managing prison labor are driven by profits and not the "benefits" of said work for incarcerated individuals (Cao, 2019; Hammad, 2019; Whitehouse, 2017). Incarcerated laborers produce over $2 billion of goods annually and provide over $9 billion worth of prison maintenance services annually, while receiving little to no pay for their labor (ACLU & GHRC, 2022).

Prison labor wages are abysmal, with minimum wages averaging $0.13 per hour and higher paying jobs averaging up to $1.30 per hour; many workers are paid nothing at all (ACLU & GHRC, 2022). Even when paid, workers often don't even get to keep these low wages: "Across the country, prisons deduct as much as 80 percent from incarcerated people's paychecks for court-imposed taxes, family support, restitution, and room and board, among other fees" (ACLU & GHRC, 2022, p. 59). Money that is made and kept by incarcerated laborers is usually then spent on necessities sold by the prison commissary, such as hygiene products, medicine, and food. Many laborers find that their wages do not allow them to provide for their own basic needs (ACLU & GHRC, 2022).

Prison labor is not only compulsory and personally unbeneficial, but also often unsafe. Laborers perform dangerous jobs like fighting fires, repairing sewage lines, blacksmithing, and working in construction (ACLU & GHRC, 2022; *Open Letter: CUNY Divest from Corcraft*, 2020). Laborers don't always receive the necessary training or protective gear to safely work on the job, and most incarcerated laborers are not protected by the Occupational Safety and Health Act (OSHA) (ACLU & GHRC, 2022). It is important to note that this lack of protection disproportionately impacts Women of Color (WOC). As one incarcerated WOC observes of the plantation-style labor at a women's penitentiary in Texas, "whites on horses—armed as Black and Brown bodies tend crops," and that "white women are never assigned to the fields due to their perceived vulnerability" (Wilson et al., 2023).

Finally, the arguments that prison labor reduces recidivism and benefits incarcerated workers in any way may hold water were these workers able to benefit from their experiences

after their releases. It may seem that these work experiences could aid the formerly incarcerated in obtaining work following their releases but, unfortunately, this is not the case. Most prison labor jobs do not provide marketable skills or the resources to market any skills that are beneficial for re-employment. Some prisons provide vocational training programs, but these often do not train incarcerated laborers in the relevant and current practices of the given field (ACLU & GHRC, 2022).

Prison labor occurs across three types of prisons: federal, state, and private. The types of labor can be divided further into three types of services: work that facilitates prison operations, work that manufactures goods within prisons to be sold externally for profit, and work that occurs outside of prisons for the benefit of the state or private companies (Whitehouse, 2017). When examining the relationship between academic institutions and prison labor, we will focus on the labor that occurs outside of prisons as well as for the manufacturing of goods within prisons.

Prison Labor, Academic Institutions and Libraries

Much of the literature related to prison labor and libraries has focused on databases and digitization, with a smaller portion of the conversation focusing on library furniture production. By contrast, much of the current literature pertaining to prison labor and higher education in general relates to furniture production and services.

In 2015, *Mother Jones* ran an article by Shane Bauer that reveals the relationship between prison labor, the Church of Jesus Christ of Latter-day Saints, government documents, and genealogical records. Prisoners in Utah work for anywhere from receiving no compensation to receiving only $1.75 per hour to digitize documents that are searchable on FamilySearch (2015). Similarly, Logsdon identified that prison labor has been used to digitize maps, newspapers, yearbooks, and other materials, connecting this trend to libraries. Logsdon identified 12 states where prisons provide digitization services: Alaska, Colorado, Connecticut, Florida, Maryland, Minnesota, New York, Oklahoma, Oregon, South Dakota, Texas, and Utah. Drawing on critical prison studies, Logsdon's research aims to better understand the way that prison labor factors into the logic of power and capital in the age of mass digitization (2019a, 2019b).

In our review, we found that much less research has been done on the relationship between libraries and prison manufacturing. One of the instigators of our investigation was a blog post focused on libraries, in which Carrie Wade asked:

> Are we destined to become rapidly passé and wasteful at the suffering of society's most vulnerable and exploited workforce–those incarcerated folks forced to assemble, stitch, hammer, screw, and staple all the bits together below minimum wage so we can have our luxurious and loud palaces of learning? (2021)

Wade argues that to destroy the legacy of white supremacy, libraries, amongst other institutions, must abolish their connections to prison labor. More has been written about the relationship between prison labor and academic institutions writ large. Burke, in an article published in *Inside Higher Ed*, wrote: "Every U.S. state except Alaska features some sort of correctional enterprise, where inmates make goods like license plates and desk chairs. And in several states, public universities are required to buy from those entities" (2020).

We know that New York is one of those states. Other higher education institutions with similar requirements include University of Virginia, University of Wisconsin, and University of Maryland (Burke, 2020). Beyond this study, we found no extensive scholarship or comprehensive list of universities required to purchase goods produced using prison labor. This information is often documented on university procurement pages and in state laws. Documented pushback to this type of requirement from faculty, staff, and students includes SUNY Brockport, SUNY University Faculty Senate, Virginia Tech Graduate and Professional Student Senate, and the City University of New York (CUNY) system (Burke, 2021; SUNY University Faculty Senate Operations Committee, 2024; Virginia Tech Graduate and Professional Student Senate, 2021).

Perhaps the most thorough investigation of the relationship between prison labor and higher education was conducted and published in a 2020 open letter by CUNY for Abolition and Safety (*Open Letter*, 2020). The open letter was signed by elected officials, undergraduate and graduate organizations, faculty organizations, community organizations, and other higher education groups. The letter, addressed to then-New York State Governor Andrew Cuomo and CUNY administrators, focuses on Corcraft, the New York State Correctional Industries brand name for labor and manufacturing provided by incarcerated workers referenced in our paper's introduction.

Between 2009 and 2018, CUNY purchased over $245,000 in products from Corcraft, which pays incarcerated laborers between $0.16 and $0.65 an hour. Laborers produce classroom and office furniture, among other products that are sold to State University of New York (SUNY) and CUNY (*Open Letter*, 2020). Documentation, obtained via Freedom of Information Act Law (FOIL) request, of purchases from Corcraft also indicate that SUNY and CUNY pay for incarcerated laborers to conduct hazardous services, such as asbestos removal (*Corcraft Purchases—CUNY / SUNY*, n.d.). The letter focuses on the health and safety of those working for Corcraft, highlighting on-the-job injuries and the impact of the COVID-19 pandemic on incarcerated people.

In conjunction with the open letter, the Release Aging People in Prisons (RAPP) Campaign and CUNY for Abolition and Safety held a press conference, *Divest & Decarcerate*, in which panelists shared their perspectives on incarcerated labor (CUNY For Abolition & Safety, 2021). Amongst these panelists were formerly incarcerated people who had worked for Corcraft during their time of incarceration. The panelists addressed the historic racism of the Thirteenth Amendment and prison labor; the need to raise awareness about mass incarceration while emphasizing an abolitionist paradigm over reformism; the forced labor utilized by Corcraft and strategies for divesting from the company; inmates' lack of opportunities for parole; the importance of collective organizing as well as freeing political prisoners; and the transfer of government funding from education systems to that of incarceration. CUNY for Abolition and Safety demand "that CUNY, as a public institution that asserts they stand for racial justice, ceases to partake in the exploitation and death of our communities" (*Open Letter*, 2020).

Our essay contributes to this literature by more clearly explaining the relationship between academic library furniture and manufacturing prison labor. Our investigation includes an examination of relationships with state correctional facilities, while also exploring the lesser documented relationship between academic libraries and private companies benefiting from prison labor. We build on this literature by answering the question: how do procurement policies at the university level play into this relationship?

Methodology

Furniture Audit

The initial step of our investigation into prison labor and its connections to AU Libraries was understanding the makeup of the current furniture within our institutional buildings, Herrick Memorial Library and Scholes Library. In considering the furniture within these buildings, we categorized the furniture into three distinct groups: patron furniture, office furniture, and resource shelving. Patron furniture was a natural starting point; it is a highly visible area where purchases are made regularly unlike resource shelving, which is often static, and office furniture, which includes furniture and objects brought in from staff people's homes. In theory, patron furniture purchases can be traced to regular university purchasing.

While patron furniture was a natural focus, it did have its challenges. AU Libraries' patron furniture is flexible by nature and mobile as it can be moved depending on the day-to-day needs of the building or events. Relatedly, university courses take place in Herrick and Scholes, and building spaces can be reserved for activities and clubs. This makes multiple areas off limits to any type of furniture tracking for a discrete period of time.

We had a systematic approach to the audit. Working as a pair, we inventoried each library separately and one floor at a time. We divided spaces up according to the building's blueprints. To account for "furniture creep," we blocked out time to cover an entire floor per inventory session. For transitional areas or high traffic areas, we took pictures to ensure we didn't miscount items that could be moved if we were unable to access the space later. We logged inventory in real time on a spreadsheet that included the library building, floor, room number or wing, type of furniture, a robust description of each item's physical attributes, and, if present, the corporation listed on the manufacturing label. If there were any duplicate items, we recorded the total number of these items and noted the room or wing. During this inventory, we took photos of key furniture pieces that were later uploaded to the spreadsheet to provide a visual reference of the written description. We were as descriptive as possible due to the sheer quantity of furniture, and input pictures of furniture and furniture labels alongside data. The audit spanned all of February 2022.

After the audit was completed, we identified gaps in the data and determined how to best fill them. A large gap was due to manufacturing labels with incomplete information. If there was any identifying information, such as a patent number, we looked up the patent holder to see what company or individual had submitted or registered the patent. Some items of furniture had no labels at all, likely because they had peeled off, been destroyed, or been altered. We were able to address this gap by identifying many items in our visual data of furniture pieces. We cross-referenced recent purchases with communications regarding purchase orders to fill in affiliated manufacturing information.

After rectifying gaps in our data where we could, we reviewed the inventory in its entirety. Equipped with images and full descriptions of the inventory and trends in visual data, we developed a controlled vocabulary, dividing the patron furniture into four categories: tables, workspace seating, soft seating, and miscellaneous. These divisions helped us identify trends in the history of our purchases.

Investigating Companies

Utilizing the manufacturing data that we collected on the furniture in our libraries, we sought to identify relationships between these manufacturers and prison labor. It is important to note

that many private companies are currently not transparent about their relationship to the PIC. For this reason, it is possible that even if we are unable to identify a connection between the PIC and certain companies, there is still a potential that they are profiting from it (Worth Rises, 2020).

There are several watchdog organizations that research and publish information connecting private companies to the prison industrial complex. We cross-referenced the names of the companies in our data against three lists provided by Worth Rises, Project of the American Friends Services Committee (AFSC), and the Corporate Accountability Lab (CAL) (American Friends Service Committee, n.d.; Worth Rises, 2020; Wu & Brady, 2020a, 2020b). Worth Rises, one of the most valuable datasets, is "dedicated to dismantling the prison industry and ending the exploitation of those it touches" (n.d.). The AFSC is a religious society that works to challenge injustice (2022). The CAL is a group of legal, human rights, and environmental rights activists that seeks to hold corporations accountable (2022). If a name appeared on any of these lists, we followed the evidence cited to better understand the connection to prison labor.

The Worth Rises database was the most comprehensive of all three datasets that we consulted for our research. As a part of its mission to expose worker exploitation, Worth Rises has researched and published a searchable dataset that was updated in 2022 with downloadable data from past versions. We used the 2020 dataset to search for companies that manufactured furniture found in our libraries. This dataset includes companies that have ties to the PIC outside of prison labor, so we made a point to verify the nature of the manufacturer's connection with the PIC (Worth Rises, 2020).

State correctional facilities are more open about their use of prison labor and are not included in the datasets that we consulted. These datasets are limited to private companies because state correctional facilities that utilize prison labor openly share this information on their websites. For example, the Corcraft website states: "Corcraft is the industry program within the New York State Department of Corrections and Community Supervision. We employ incarcerated individuals to produce goods while preparing them for release by teaching them work skills, work ethic and responsibility" (n.d.).

Findings

Preferred Sourcing

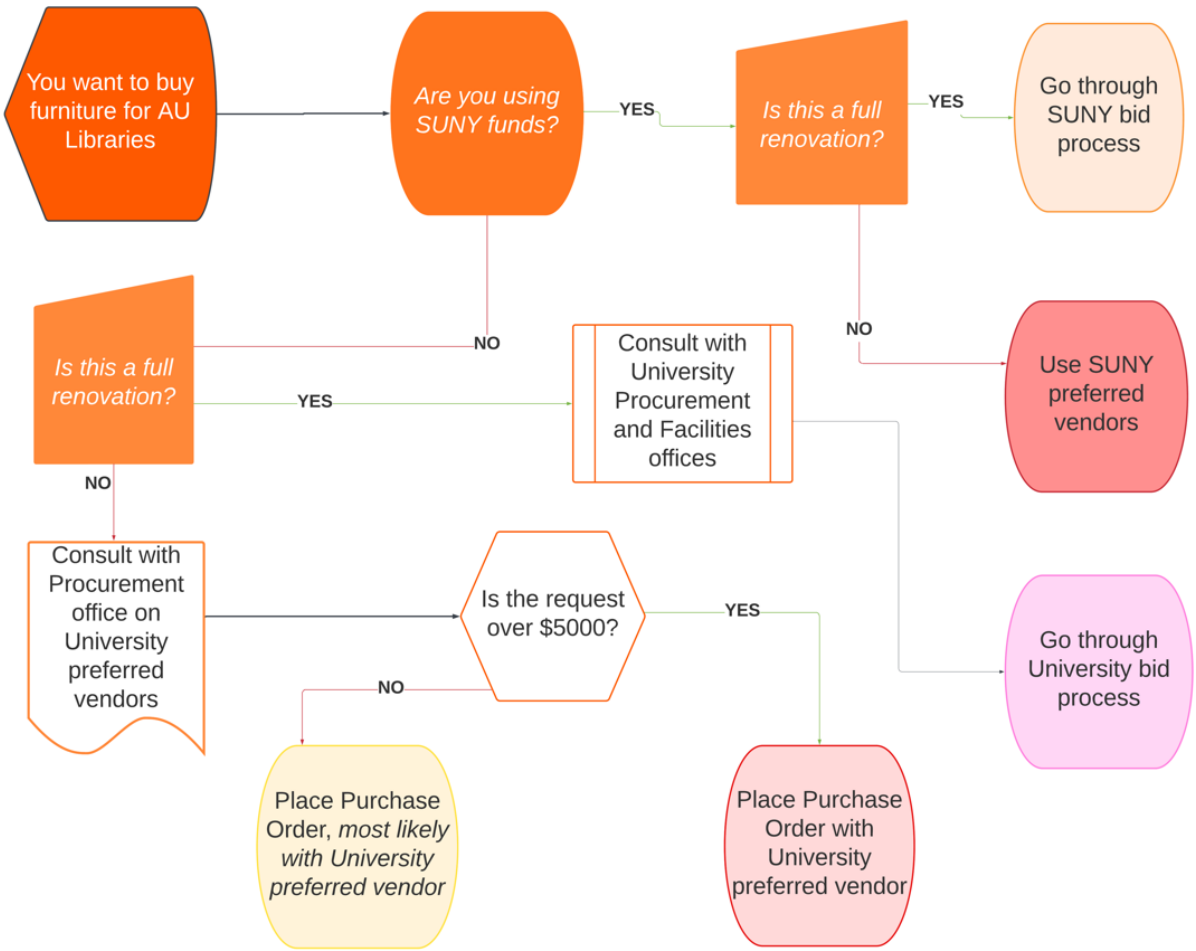
Separate from the furniture inventory, we conducted a related investigation into preferred sourcing and procurement policies at Alfred University. The rationale behind this was that it was insufficient to simply assess the patron furniture items in our buildings, we needed to understand the forces that shaped AU Libraries' decision making on furniture purchases: Alfred University procurement policies and SUNY procurement policies, depending on where funding comes from. Figure 1 is a flowchart depicting the essential steps, including which university departments need to be involved, depending on the funding source and amount.

For private institution funds, AU Libraries follows AU sourcing guidelines (see Figure 1, following the steps for "Are you using SUNY funds? No") (Alfred University, n.d.-a). Alfred University partners with three preferred sources for furniture: Krueger International, Sauder Education, and Intivity (V. Ewald, personal communication April 26, 2022). AU's procurement office revamped its purchasing guidelines circa 2018, stating that at minimum all furniture purchasing decisions involve two to three departments: the requesting department, the procurement office, and potentially AU Facilities, which oversees maintenance of

the physical spaces on campus. The level of involvement of each department corresponds to the project scope and amount spent, with scrutiny increasing as the amount spent increases. For purchases under $1,000, requirements include an official Purchase Order request and conversation with the procurement office (Alfred University, n.d.-b). A larger-scale purchase would include a request for proposal necessitating Procurement's involvement with vendor negotiations. Spending over $50,000, or possible renovations requires the AU Facilities department to become involved and necessitates a bid process (*Bids and Proposals*, n.d.).

For SUNY or state funds, AU is required by law to use New York state preferred sources, (see Figure 1, following the steps for "Are you using SUNY funds? Yes"). New York State finance law and corrections law directs SUNY institutions to consider preferred sources whenever purchases of commodities or services are required (SUNY, n.d.). There are three preferred sources in New York State: Corcraft, New York State Preferred Source Program For People Who Are Blind, and New York State Industries for the Disabled (SUNY, n.d.). Each preferred source has a list of all the commodities and services they offer. For educational and institutional furniture, Corcraft is the main source that offers these items (NYS Office of General Services, 2022).

FIGURE 1
Preferred Sourcing at Alfred University: A Flowchart to Determine Procedures and Standards for Purchasing Furniture for Alfred University Libraries



Furniture Audit

The results of our patron furniture audit (see Table 1 for a full list of the patron furniture audit results) showed 905 pieces of furniture from 28 companies across Scholes and Herrick Memorial Libraries. The largest percentage (47.96%) of furniture came from Krueger International (KI), with 434 pieces of furniture. The remaining top companies are Jasper Chair with 97 pieces (10.72%); Corcraft with 59 pieces (6.52%); Gunlocke with 34 pieces (3.76%); and Nemschoff Chairs, Inc. with 10 pieces (1.1%). We could not identify a manufacturer for a significant parentage (19.67%) of the furniture inventoried, either due to lack of manufacturing label or lack of current records indicating a purchase order with a vendor from the Procurement Office.

TABLE 1
Patron Furniture Audit Results

Company	Number	Percentage
Krueger International (KI)	434	47.96%
Unidentified	178	19.67%
Jasper Chair	97	10.72%
Corcraft	59	6.52%
Gunlocke	34	3.76%
Nemschoff Chairs, Inc.	10	1.10%
Global Industrial	9	0.99%
Spectrum Industries	9	0.99%
Modway	8	0.88%
High Point Furniture Industries	7	0.77%
Winsome Trading, Inc.	7	0.77%
AFL-CIO Local No. 162	6	0.66%
Conway	6	0.66%
LumiSource	6	0.66%
Lesro Industries	5	0.55%
Skyline	5	0.55%
Bevis	4	0.44%
Restaurant Furniture.Net	4	0.44%
Allsteel	3	0.33%
CrossRoads	3	0.33%
Informa by Gaylord	3	0.33%
Anji Qianglong Steel and Plastic Furniture Co.	1	0.11%
Bretford	1	0.11%
Globe/ChairWorld	1	0.11%
HON Company	1	0.11%
Inwood	1	0.11%
Kimball International	1	0.11%
Oklahoma Sound	1	0.11%
Upholsterers International	1	0.11%

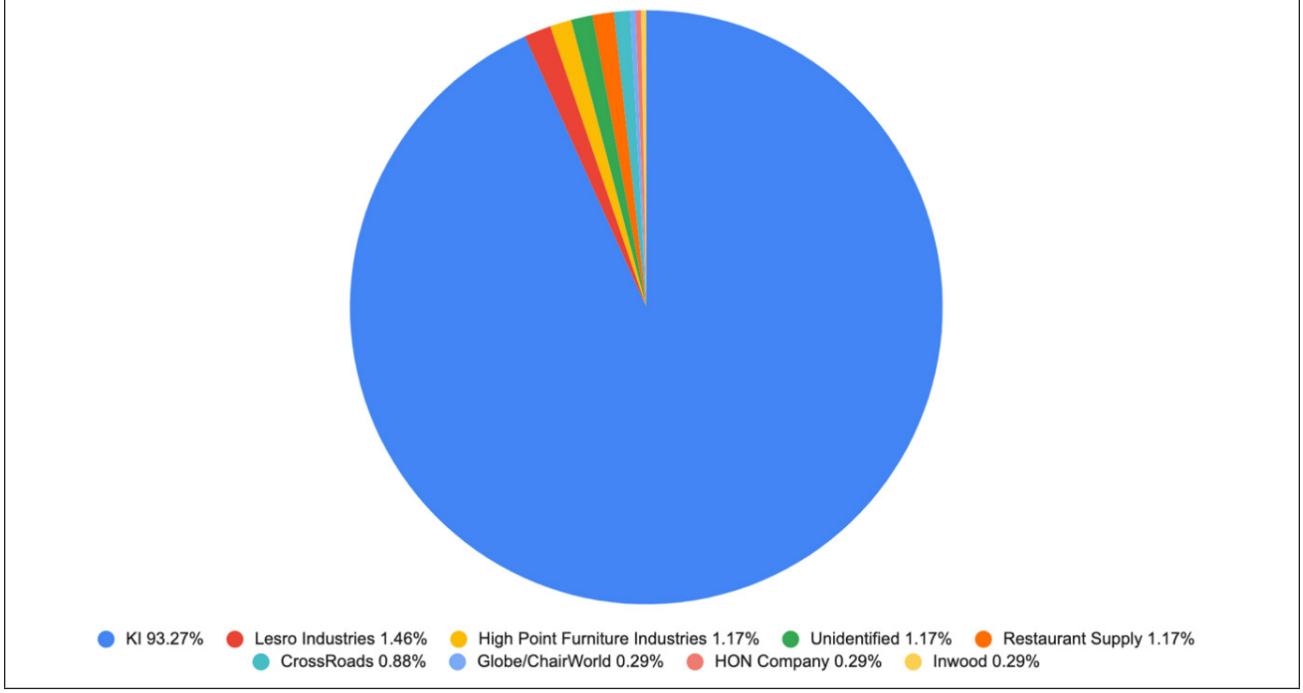
Note: Percentages may not add up to 100% due to label rounding

Analysis

Patterns emerged when the 905 furniture items from 28 manufacturers across two libraries were split according to each building and type of seating (see Figures 2 and 3). Purchases for items from KI and Corcraft follow the procurement policies and preferred sourcing requirements for Alfred University but can also be explained by the context of the purchases. In this section we draw out the implications from these patterns, so that we can take steps toward divesting from the Prison Industrial Complex (PIC) in the future. There are instances in which AU Libraries purchases veered from the procurement policies and preferred sources for AU, which we explore as a path forward for future purchases.

When outfitting traditional educational spaces, such as classrooms or computer labs, AU Libraries purchases most often come from KI, a preferred vendor, see Figure 2. The last known large-scale purchases for Herrick Memorial Library happened during a major renovation in the late 2000s, furnished exclusively by KI. This is reflected in the data from our private side library: a majority of furniture—319 of 342 items (93.27%)—comes from KI. These purchases were most likely made following the recommendation of the architect dur-

FIGURE 2
Percentage of Patron Furniture (per company): Herrick Memorial Library

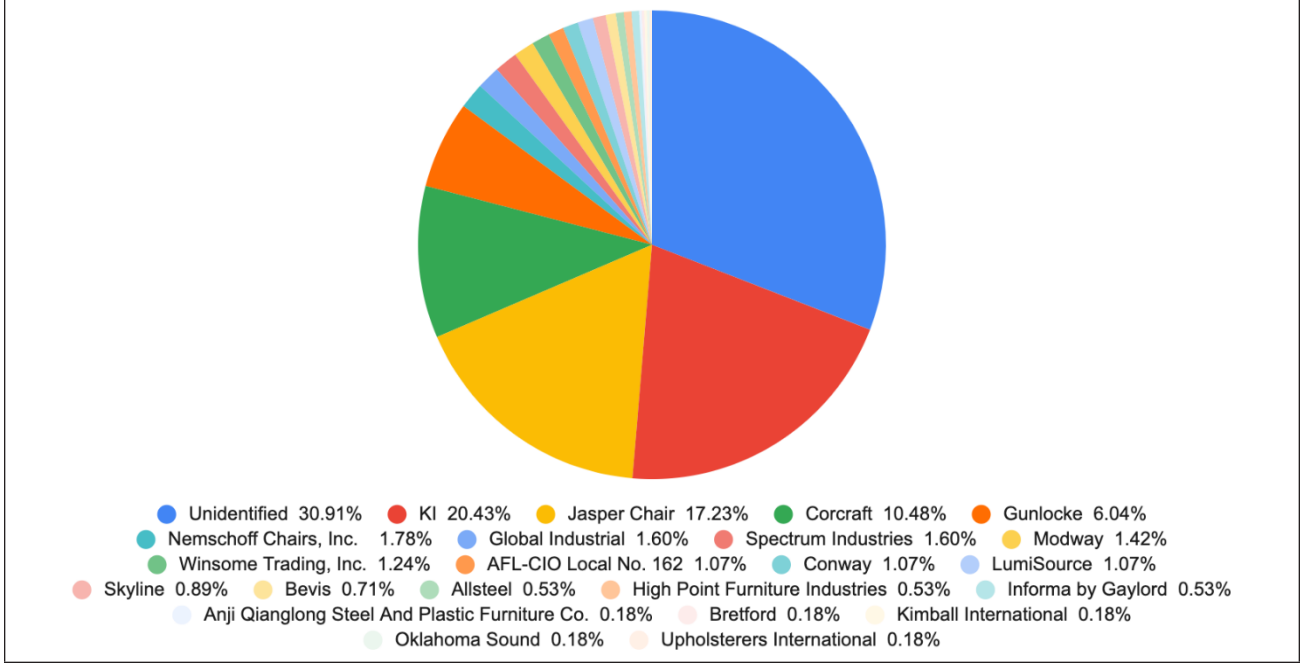


ing the renovation. We are not sure of additional reasoning behind the purchase, but KI is a popular option for libraries due to their variety of products and integration into university procurement systems.

Figure 2 shows the percentage of patron furniture, per company, found in Herrick Memorial Library, which is the library building associated with the private university.

Figure 3 shows the percentage of patron furniture, per company, found in Scholes Library.

FIGURE 3
Percentage of Patron Furniture (per company): Scholes Library



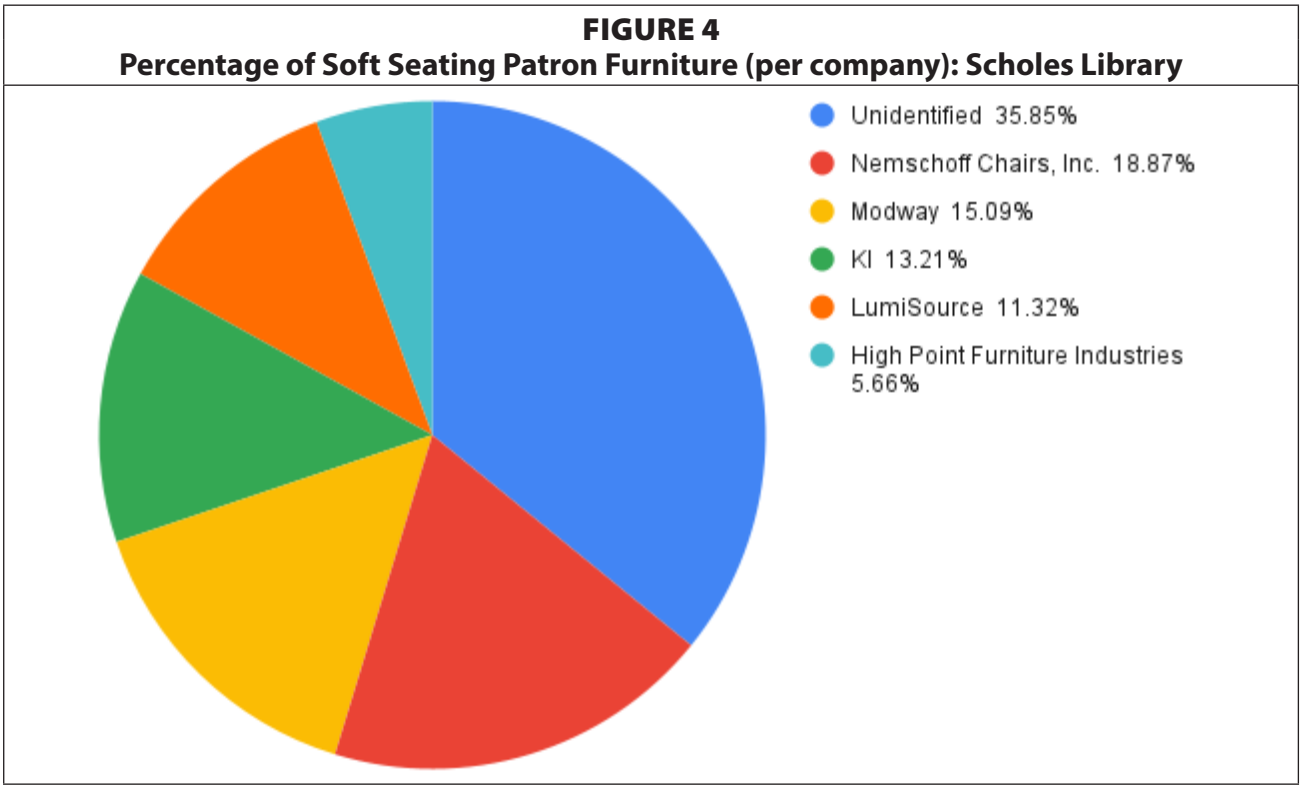
Scholes Library is the library building that serves the New York State College of Ceramics, a State University of New York statutory college hosted by Alfred University.

The data from Scholes Library does not reflect as clear of a picture (see Figure 3). This was surprising, given that in theory, Scholes purchasing should be governed by the stricter New York State guidance when using state funds. Many of the purchases in Scholes do not appear to follow the preferred sources for Alfred University. This indicates that AU Libraries may have more flexibility in purchasing than we originally thought.

To better understand the purchasing patterns at Scholes, we divided the data into furniture type: miscellaneous, soft seating, tables, workspace seating. This shed light on purchasing patterns, specifically both soft and workspace seating (see Figures 4, 5, 6, and 7). Of these, items from LumiSource and Modway were the most recent purchases for Scholes Library in 2017 as part of a Scholes Library furniture and space refresh across multiple floors with a $5,000 budget (M. Romanchock, personal communication, May 27, 2022). AU preferred sources were not used. These non-preferred sources included pub-style seating to refresh a vending machine area into a café-style destination spot; other items included mid-century modern style furniture, floor poufs, and rugs to make another destination reading area adjacent to the art periodical collections. All other soft seating purchases pre-date current record keeping.

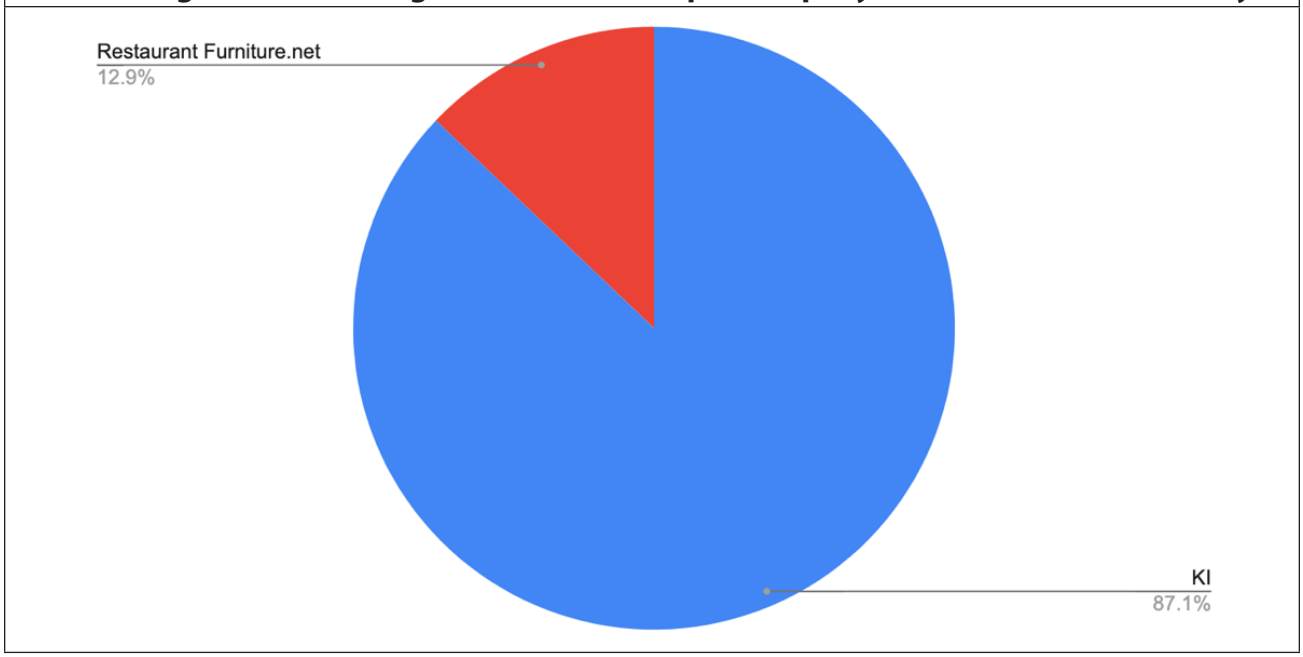
Figure 4 shows the percentage of soft seating patron furniture per companies found in Scholes Library, which is the library building that serves the New York State College of Ceramics, a State University of New York statutory college hosted by Alfred University.

FIGURE 4
Percentage of Soft Seating Patron Furniture (per company): Scholes Library



In Herrick Memorial Library, 41 soft seating furniture items (see Figure 5), came from two manufactures: 37 (87.1%) from KI and 4 (12.9%) from Restaurant Furniture.net. The purchases from KI happened during a large-scale renovation in 2007 and aligned with the AU preferred sourcing protocol.

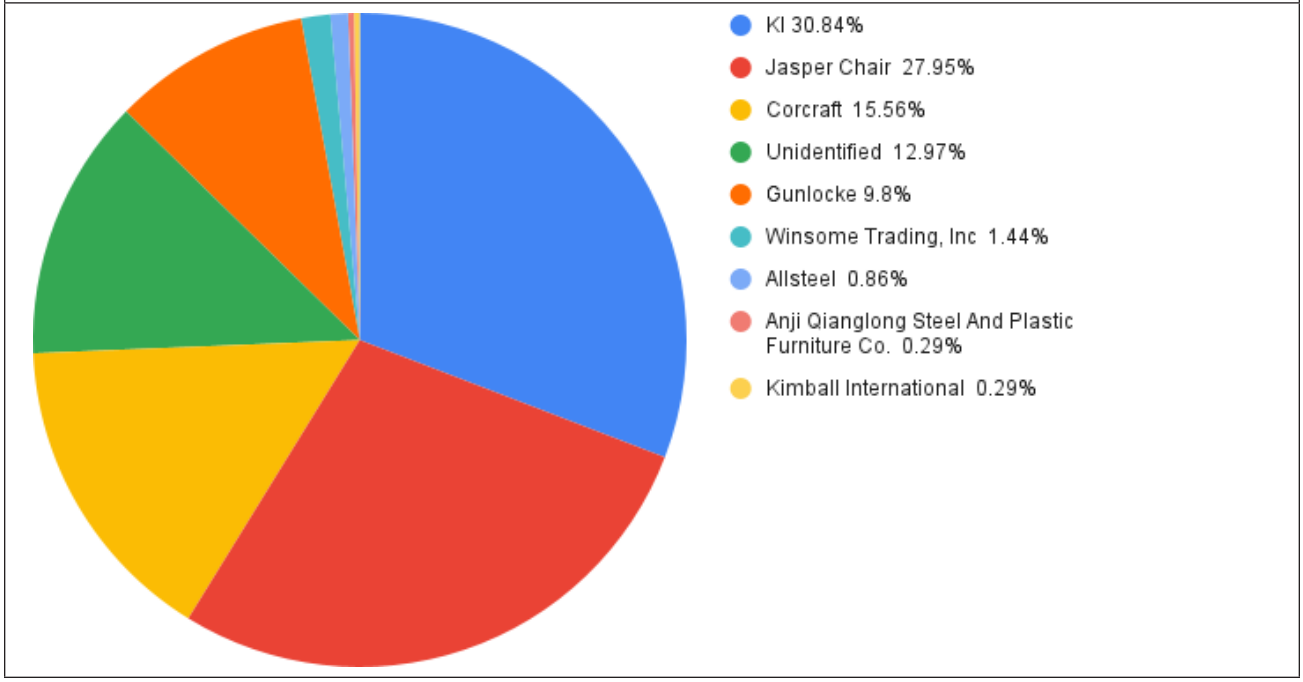
FIGURE 5
Percentage of Soft Seating Patron Furniture (per company): Herrick Memorial Library



However, we continue to see flexibility in vendors with recent purchases. The most recent furniture acquisitions in Herrick Memorial Library are restaurant style booths for a patron lounge area purchased from Restaurant Furniture.net, not one of Alfred University's preferred vendors. This flexibility in purchasing was justified as a part of a unique project to renovate a small space in the building around a theme that was not supported by the preferred vendors (Herrick Library, 2018).

Workspace seating at Scholes Library comes from eight manufacturers which reflect both

FIGURE 6
Percentage of Workspace Seating Patron Furniture (per company): Scholes Library

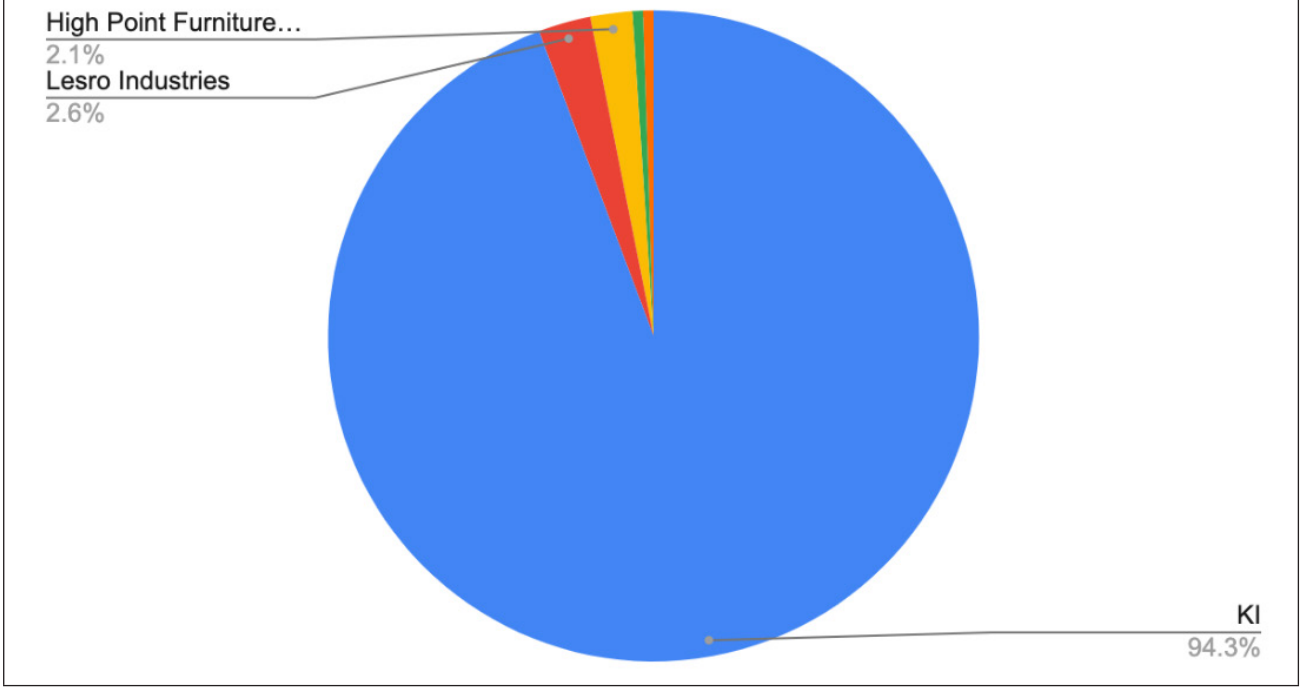


preferred and non-preferred sources (see Figure 6). These reflect similar trends: traditional furniture follows preferred sourcing, while seating with special thematic and design needs veers from procurement policy. KI purchases follow procurement preferred sourcing protocol and reside in more traditional library settings: a library computer lab, an open classroom, and a special collections examination and reading area. Winsome Trading, Inc. purchases were made in 2017 outfitting a cafe-style vending and coffee area as part of a high-top seating area for patrons to use; these purchases deviate from the AU preferred sourcing protocol (M. Romanchock, personal communication, May 27, 2022). These purchases were able to deviate from SUNY regulations because they utilized Alfred University budget funds and met specific design needs.

Figure 6 shows the percentage of workspace seating patron furniture, per company, found in Scholes Library, which is the library building that serves the New York State College of Ceramics, a State University of New York statutory college hosted by Alfred University.

Workspace seating in Herrick Memorial Library (192 total pieces) does not diverge from preferred sources, because the needs for the furniture are not uniquely outside of the vendor's offerings. The furniture comes from five manufacturers, with a majority—181 pieces (94.27%)—coming from KI (see Figure 7). The remaining companies are from preferred sources or likely came from offices: Lesro Industries had five pieces (2.6%); High Point Furniture had four pieces (2.08%); HON Company had one piece (0.52%); and Globe/ChairWorld had one piece (0.52%). As with its soft seating, Herrick Memorial Library acquired most of its workspace seating en masse during a renovation of the facilities in 2007. This furniture comes entirely from KI, a university preferred vendor. There have been no recent workspace seating purchases for Herrick Memorial Library.

FIGURE 7
Percentage of Workspace Seating Patron Furniture (per company): Herrick Memorial



Implications

Renovation and large-scale purchases at Alfred University have significant oversight and need to fit within existing procurement policies. Furnishing decisions may be tasked to a project manager, architectural firm, or outside actor who is not a library worker. One vendor may become a renovation's sole furniture source due to a bid process. Without active participation from the library during the renovation process, ethical ramifications of furniture decisions may not be interrogated, and it could be easy to purchase furniture from a company connected to prison labor.

Smaller scale initiatives in budget and scope allow for more flexibility. An initiative calling for furniture that functions differently than a traditional classroom or workspace is particularly malleable; these initiatives may require unique offerings that cannot be supported by preferred vendors. Alfred University Libraries emphasizes a welcoming, open space that prioritizes students. Prioritizing the student experience in themed seating such as the Scholes Café and Herrick Library's Saxon Station allowed for purchasing from non-preferred vendors in 2017 and 2018; in 2023, prioritizing the student experience allowed for outfitting themed individual student study rooms in an underutilized area of Scholes. Furniture that stands out and attracts students is a compelling component in creating a campus destination spot. Data and gate counts that demonstrate increased usage for areas outfitted with non-preferred vendor furniture can help support future requests.

Companies Connected to Prison Labor

We identified two companies that we had purchased from with connections to prison labor: Corcraft and KI. The nature of these connections is quite different and should not be conflated.

Corcraft

"Corcraft is the 'brand name' for the Division of Correctional Industries, an entity within the NYS Department of Corrections and Community Supervision" (Corcraft, n.d.). We can say with confidence that the furniture manufactured by Corcraft was created by people working while incarcerated. Additional services that Corcraft provides, which fall outside of the scope of our audit, but our libraries could have benefited from in the past include dangerous labor such as asbestos removal (*Corcraft Purchases—CUNY / SUNY*, n.d.; Fisher, n.d.).

Krueger International (KI)

KI's relationship to prison labor is less clear cut. KI appears on the Worth Rises dataset with an indication that the company has ties to prison labor. The evidence listed in the Worth Rises data directs to the Texas Department of Criminal Justice (TDCJ) (Worth Rises, 2020). The TDCJ's publicly available records indicate that they spent over $34 million with KI between 2015 and 2022, primarily on what are coded as raw materials, rather than on furniture, what KI is known for selling (Texas Comptroller, n.d.).* However, this does not paint the full picture.

To clarify the relationship between KI and prison labor, we had to look to one of its subsidiaries, Original Equipment Industries (OEI). OEI is a subsidiary of KI that was, according to their website, established specifically with correctional industries in mind (Original Equipment

* To navigate to the TDCJ spending, using the Data Visualization page, select payments to Payee, and under agency select Texas Department of Criminal Justice.

Industries, n.d.). OEI is also a member of the National Correctional Industries Association (NCIA). The NCIA defines correctional industries as programs that utilize prison labor or, in its words, that "provide real-world work experience and training to incarcerated individuals to prepare them for successful reentry and employment after release" (n.d.). OEI advertises in different correctional industries publications, consistently using similar language: "OEI is a leader in bringing you quality parts, a dedicated sales team and turnkey support services that are a step above the rest" (2021). It is unclear if OEI sells prison-made furniture, but it appears that they provide corrections industries with all the tools necessary to start their own prison labor outfits. KI's connection to the PIC via OEI, is sufficient for AU Libraries to purchase elsewhere.

Actions Taken

The results of the furniture audit inspired two types of actions: raising awareness and changing AU Libraries' purchasing considerations. Our initial steps toward raising awareness focused outside our institution, within the broader context of librarianship.

The entirety of this research has direct implications for libraries within the State University of New York system and are governed by New York State laws for preferred sourcing. Our first step in conveying this information was to present at the State University of New York Library Association (SUNYLA) conference in 2022 (Adams & Planansky, 2022a). This presentation inspired conversations which led to other presentations and poster sessions with the Medical Library Association, Metropolitan New York Library Council, and ACRL (Adams & Planansky, 2022b, 2022c, 2023). Foundational to these presentations, poster session, and conversations have been building connections with others that are interested in divesting from the PIC.

Our work is inspired by other abolitionist library groups, like the Abolitionist Library Association (ABLA) and the Prison Library Support Network (PLSN) (Abolitionist Library Association, n.d.; plsn-nyc, n.d.). As a part of our awareness building project, we sought to connect others with these groups. While we hope that attendees have taken the information back to their institutions, some of the most meaningful and action-driven conversations that have come from this awareness building happened with other librarians who were already involved with organizing toward abolition, like ABLA and PLSN.

In partnership with the AU Libraries Anti-Racism and Anti-Oppression working group, we have begun exploring developing an ethical purchasing policy that would address forced labor and the PIC, and other forms of ethical purchasing. Attempting to provide guidance for an institution to make ethical purchasing decisions under capitalism is an unwieldy project, which is still being formulated. In the meantime, the libraries have taken direct, albeit informal, action to cease, where possible, purchasing from KI and Corcraft.

Without a library purchasing policy in place, the AU Libraries Administration was able to implement changes in its purchasing practices. Both the AU Libraries Dean and Director have stayed abreast of our research and seen our research presented at multiple conferences. The Director of Libraries, who oversees purchasing library furniture, added addressing forced labor as an important part of the purchasing workflow. In a recent set of purchases, made in the year following the patron furniture inventory, to update the furniture in an open classroom, the director did some background research on the company we were purchasing from, Sauder Education, to ensure that the company did not have ties to the PIC. Additionally, the

director has taken steps to encourage library staff and faculty to purchase furniture from providers other than KI. Next steps will include raising awareness across Alfred University and pointing toward the actions taken by the libraries as examples for how to divest from the PIC across campus.

Conclusion

Following the discovery that AU Libraries housed furniture connected to the Prison Industrial Complex (PIC), our furniture audit identified the extent to which our library has ties to the PIC by purchasing from Krueger International (KI) and Corcraft. The investigation yielded a deeper understanding of the history, policies, and laws which fostered these connections. Our discovery that AU Libraries purchased much of its current furniture from KI during a renovation has implications for libraries making large furniture purchases or undergoing renovations. Large-scale purchases and rehab projects are ideal times to look closely at the vendors and their connections. Navigating state laws that require purchasing materials made in state correctional facilities is more complicated. By understanding our institution's procurement policies and practices we identified nuances in their application that will be important for how we proceed with future purchasing.

While we are seeking ways to divest from the PIC in our library, we understand that these steps will not immediately lead to changing conditions for people working in prisons. Vital to the conversation about divestment are the voices of people who are incarcerated. In the preliminary study, *The Work and Us* Wilson et al. share the perspective of incarcerated workers; according to Tommy, an incarcerated person, legislation in Colorado that ended involuntary servitude in 2018 "has had no effect on anything here. No pay rate changes, but prices for canteen and hygiene products and phone time fees have been raised again at least three times in 2022" (2023). For librarians or libraries looking for a more direct impact on the lives of incarcerated people, we recommend becoming directly involved with abolitionist groups such as Abolitionist Library Association (ABLA) and the Prison Library Support Network (PLSN) (Abolitionist Library Association, n.d.; plsn-nyc, n.d.). Within our institution, we hope to build toward divesting from the prison industrial complex entirely, with prison labor as a starting point.

For libraries that are interested in divesting from prison labor, librarians can use this research to begin exploring their state and institutional preferred sourcing requirements, evaluating their own library furniture, exploiting flexibility in current policies, and developing their own purchasing policies that call for divestment.

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Music Students and Library Collections after Pandemic Closures: An Examination of Format Preferences and Reported Usage

Joe C. Clark, Jessica M. Abbazio, and Jonathan Sauceda

This study details university music students' required resources, format preferences, and information-seeking behaviors after the campus shutdowns brought about by COVID-19. Using both qualitative and quantitative methods, the investigation was undertaken at three large U.S. universities in fall 2022. Results revealed that music students continue to use and value library resources, a sentiment that rose with class standing. Longitudinal comparisons with 2012 and 2017 studies reveal that the dramatic shift towards digital resources seen between 2012 and 2017 has not continued and that format preferences are largely unchanged from 2017. Students reported heavy reliance on libraries for books, scores, and articles, while audio and video content were likely to come from freemium resources like YouTube or other streaming sites.

Introduction

Music students generally require a variety of information resources, ranging from scores and audio recordings to books and journal articles. Options for acquiring needed content are more plentiful than ever, with an abundance of audio, video, and sheet music websites, many of which are free to access. To effectively build useful collections and educate users, understanding music students' needs and priorities, their format preferences, and their related information-seeking behaviors is essential.

Campus shutdowns that resulted from the COVID-19 pandemic may have forced some students to look beyond academic libraries for their class materials, so understanding possible shifts in behaviors is also important. Even if students are receptive to the idea of visiting their library, extended library closures and decreased access to library collections and instruction may have resulted in students becoming uncomfortable with accessing resources via library channels. Pandemic-related shifts at institutional levels may have also affected library collection development policies, including budget cuts, moves toward e-preferred purchasing models for monograph acquisitions, and pushes for establishing workflows to accommodate born-digital scores and recordings—all changes that could affect the ways that students access library resources.

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The present study examines student format preferences, as well as student use of learning materials and the library, after pandemic-related campus closures. Beginning with a goal of investigating whether and how students' format preferences and information-seeking behaviors have changed in recent years, especially in response to the pandemic, this research builds on two previous studies that examined format preferences of performing arts students (Clark et al., 2018; Clark, 2013). The present research involved three institutions, employed an online survey and focus groups, and included only music students. Our research questions were: 1) What content do music students use in their coursework? 2) What formats do students prefer, and why? 3) What content/formats do students want the library to acquire? 4) What are the obstacles for using library content? and 5) What are the factors that influence students' information-seeking behaviors?

Literature Review

Two major bodies of literature are relevant to the current study. The first explores COVID-19's impact on learning in higher education. The other area, which has a lengthier history but is also narrower in specificity, is the discussion of university music students' use of the library. Although some students valued the move toward remote teaching and learning that COVID-19 necessitated, a case study at Western Michigan University showed that in-person instruction was preferred, indicating a possibility of shifting towards the pre-2020 status quo (Al-Mawee et al., 2021). That study found that first-year students reported they missed interacting with one another, and that first- and second-year undergraduates were especially critical of virtual instruction; conversely, respondents appreciated the flexibility that distance learning afforded (p. 11). Another study found a marked decrease in emotional engagement as a result of reduced human interaction (Salta et al., 2022).

In response to campus closures, libraries made various modifications to services. These included changing physical spaces, offering more online bibliographic and information literacy instruction, and increasing focus on virtual collections and services (Louderback, 2021; Munip et al., 2022). In spite of the massive—and what could be characterized as heroic (Wiggington, 2022; Berg et al., 2022)—efforts of librarians, scholarly materials were not universally available during pandemic shutdowns, and that caused problems for particular disciplines. According to a study of civil engineering users, for example, researchers missed having access to several library resources (e.g., study spaces), but reported that they were still able to utilize electronic library resources (Gad et al., 2023). Green (2022), in a survey to which 402 library employees responded, found that many (60%) expected the purchasing of physical materials to continue to decline in favor of electronic resources. However, a recent survey at Sam Houston State University (Owens et al., 2023) found that the COVID-19 pandemic did not create a noticeable shift in ebook usage or in attitudes surrounding them.

Among the complex practices of library users across disciplines, studies have long documented the unique information-seeking behaviors of music students (Dougan, 2012; Clark & Yeager, 2018; Holmes, 2020). In the early 2010s, Clark (2013) developed a first of its kind, in-depth study of performing arts students' format preferences and library usage. The baseline findings were especially informative when taken together with the follow-up multi-institutional examination conducted in 2017, through which Clark et al. discovered strong preference shifts toward electronic media. However, participants who expressed the strongest preferences for physical books (58%) over ebooks continued to be music students.

Respondents overwhelmingly favored digital access to audio, periodical, video, and reference material. Most participants (56%) in the 2017 study opted for electronic scores, whether or not they originated from the library.

Recent research has described a monopolization of the landscape by free and freemium websites, especially regarding audio and video resources. Studies acknowledged the dominance of YouTube as a video and audio streaming service, even before the pandemic took effect (Clark & Evans, 2015; Dougan Johnson, 2020). Similar findings were related by Czeisel and Smith (2021), whose data collection also took place before the coronavirus shutdowns; in terms of usage, students strongly gravitated toward commercial services but felt that library materials were of a higher quality. At the same time, some libraries value offering "obsolete" material. For example, Bonjack (2023) has argued for the importance of making older formats such as LPs more accessible. Dougan Johnson found that liner notes were a useful tool attached to physical audio media, even when the actual sound was not necessarily the target of users' needs (2020, p. 202). Bonjack and Dougan Johnson (2023) both noted how the dominance of streaming has excluded libraries from their traditional role as collectors and acknowledged that the days of mass LP and CD collecting have passed. They now encourage advocacy toward institutional ownership of digital recordings.

The trend toward digital access through the 2010s was undeniable, particularly for audio and video. It might be reasonable to assume that the pandemic would accelerate similar patterns for other formats, yet older technologies persist. As Umberto Eco argued, "the book is like the spoon, scissors, the hammer, the wheel. Once invented it cannot be improved." Nevertheless, Eco presented a flexible definition of the successor to the scroll; after criticizing long form reading via computer screen as a prescription for eye fatigue and an allusion to the danger of electrocution for bathtub readers, he leaves room for the evolution of the book, to the extent that it need not be crafted with paper (Carrière et al., pp. 4–5). The score could be viewed similarly, and other content types have certainly witnessed profound changes in the realm of audio and video.

Background and Setting

At the time of this study, the authors each served as librarians for the schools of music at their respective institutions: Kent State University, University of Minnesota, and the University of Rochester. Each music or performing arts library was located in, or near, the same building as the school of music.

Kent State University is a suburban public R1 university with eight campuses located in Northeast Ohio. The main university campus, Kent, had a total enrollment of just over 25,000 during the period of study. The School of Music consisted of 131 undergraduates, 110 master's students, and 20 doctoral students. Most master's degree students (n = 77) were in the online Master of Music in Music Education program. Fifty-seven percent of the undergraduates were majors in Music Education. Residential master programs included ethnomusicology, composition, theory, conducting, and performance. The doctoral programs were in music education and theory-composition.

More than 12,000 students attend the University of Rochester, a highly ranked, private non-profit institution in western New York State. Approximately 500 undergraduates and 400 graduates were enrolled in the Eastman School of Music,* which is comprehensive in the

* The University of Rochester also includes the Satz Department of Music, but this study only targeted Eastman participants.

music programs it offers in performance, education, composition, conducting, history, and theory (Eastman School of Music, University of Rochester, n.d.; *Fast Facts/FAQ*, n.d.).

The University of Minnesota, Twin Cities, with an enrollment over 50,000, is a public R1 institution and the flagship campus of the University of Minnesota system (University of Minnesota, n.d.). Approximately 170 undergraduate and 235 graduate students attended the School of Music during the 2022–2023 academic year, and were enrolled in undergraduate, graduate, and postgraduate degree programs in instrumental studies, vocal arts, jazz, music education, theory, musicology/ethnomusicology, music therapy, creative studies & media, and world music.

The response of each institution to the COVID-19 pandemic varied. Kent State University Performing Arts Library was closed between March 2020 and reopened in August 2020 with limited hours. It has remained open during the fall and spring semesters since Fall 2020. The University of Minnesota Music Library was closed to the public between March 2020 and August 2021, reopening with the start of the fall 2021 semester and the return to in-person classes. Several of the University of Minnesota's main library locations were accessible to campus affiliates during limited hours and via keycard access beginning in Fall 2020. Eastman's Sibley Music Library closed in March 2020 and, though summer classes were held remotely, it reopened with limited hours, and with distancing and masking requirements in June 2020. Students in the 2020/21 school year could choose whether to attend fully remote or opt for a hybrid of remote and in person modes. By fall of 2021, the ability to choose modalities was no longer in effect, and many courses reverted to their pre-COVID methods of instruction.

Methodology

The mixed-methods, Institutional Review Board (IRB) approved study consisted of an online survey and student focus groups that each author deployed at their home institution. Using the survey from the previous multi-institutional study as a starting place (Clark et al., 2018), the authors developed the survey and focus group questions over a four-month period (see Appendices A and B, respectively). The survey was deployed in Qualtrics through Kent State; links contained embedded data to connect participants to their home institution. The authors promoted the survey via student listservs and administered it to willing respondents in various music classes. Participants for the focus groups were recruited via the surveys. Incentives to participate in the surveys and focus groups varied between institutions. The investigators exported all survey data from Qualtrics into IBM SPSS Statistics 28. Incomplete submissions and surveys that were obviously completed by bots (i.e., those completed in under one minute) were deleted. For analysis, the authors exported data from SPSS to Microsoft Excel. All calculations based on survey data were rounded to the nearest percent. To uncover incongruities, responses were further analyzed by area of study, by class standing, and by institution.

Focus groups consisted of semi-structured, person-centered group interviews in which the facilitators asked questions from a predetermined list but responded to lines of inquiry posed by participants who were inspired to share questions and additional details related to their personal experiences. Focus groups lasted up to 60 minutes and consisted of open-ended questions developed in conjunction with the survey. The authors conducted these meetings with volunteers from their respective schools in person or via Microsoft Teams or Zoom after the close of the survey window. Focus group dialogue was transcribed using transcription software and checked by the authors for accuracy.

To analyze the qualitative data gathered for this interpretivist study, the authors have adopted a realist epistemological approach to report on the reality of students' lived experiences. Braun and Clarke (2013) describe interpretivist studies as follows:

> Qualitative analysis which is interpretative aims to go further than descriptive analysis, unpicking the accounts that are given, and asking questions like 'What's going on here?' and 'How can we make sense of these accounts'? It tries to gain a deeper understanding of the data that have been gathered, and often looks 'beneath the surface' of the data, as it were, to try to understand how and why the particular accounts were generated and to provide a conceptual account of the data, and/or some sort of theorising around this (p. 174).

Braun and Clarke (2006) describe essentialist or realist methods as approaches that "repor[t] experiences, meanings and the reality of participants" (p. 81). They continue:

> The research epistemology guides what you can say about your data, and informs how you theorize meaning. For instance, with an essentialist/realist approach, you can theorize motivations, experience, and meaning in a straightforward way, because a simple, largely unidirectional relationship is assumed between meaning and experience and language (language reflects and enables us to articulate meaning and experience) (Braun & Clarke, 2006, p. 85).

The authors conducted a reflexive thematic analysis (Braun & Clarke, 2006; Braun et al., 2019), generating initial codes through an iterative process and identifying patterns via an inductive approach and axial coding (Strauss & Corbin, 1998; Bernard & Ryan, 2010; Braun & Clarke, 2006; Braun et al., 2019). The authors created a thematic map that illustrates shared meaning-based patterns (Braun & Clarke, 2006; Vaismoradi et al., 2013).

Results

We begin by presenting an overview of emergent focus group themes. We then offer the survey demographics and results with some focus groups remarks to elucidate preferences and behaviors. In the discussion section, we attempt to make meaning of the study outcomes as well as provide a picture of today's music students and their information-seeking behaviors.

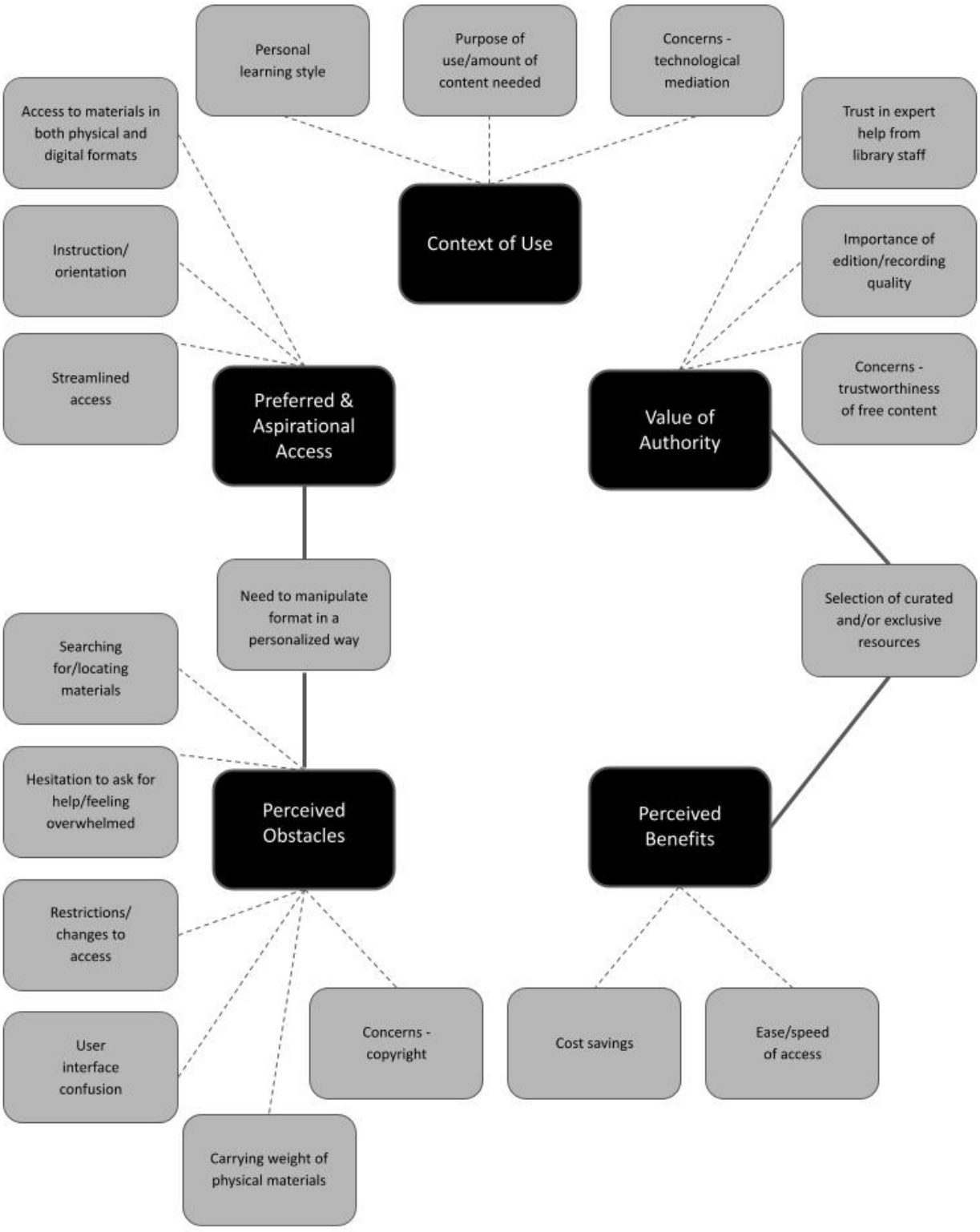
Qualitative Overview

Qualitative data was gathered during nine focus group interviews that included twenty-six graduate and nine undergraduate students. Participants represented a range of majors, categorized here as performance or conducting, music history or ethnomusicology, music therapy, music education, and theory or composition.

Students were invited to share their opinions on a range of library resources and formats (see Appendix B for focus group questions). Answers yielded a set of five broad themes that transcended material types: Theme 1: Context of Use; Theme 2: Preferred and Aspirational Access; Theme 3: Value of Authority; Theme 4: Perceived Obstacles; and Theme 5: Perceived Benefits. The five themes (illustrated in Figure 1) are underscored by related subthemes, sev-

eral of which connected with more than one of the major themes. The relationships between themes and subthemes are represented in the thematic map by dotted lines. Several subthemes bore relationships to more than one overarching theme; these connections are represented in Figure 1 by solid lines.

FIGURE 1
Thematic Map of Themes and Subthemes Identified in Qualitative Data



Overall, students communicated that they value easy, quick access to both library and non-library resources (Theme 2: Preferred and Aspirational Access; Theme 5: Perceived Benefits) and prefer to manipulate research and performance materials in a personalized way (Theme 2: Preferred and Aspirational Access; Theme 4: Perceived Obstacles). These priorities manifested in several examples. These included: 1) the desire to have access to the same content, especially scores and books, in both digital and physical formats so they could choose based on their specific needs; 2) requests for streamlined access to subscription interfaces or downloadable content; and 3) calls for instruction on how to navigate library systems and access resources.

Theme 1: Context of Use encompassed students' desire to have access to resources in various formats. Many focus group members communicated that they choose physical or digital materials based on the amount of content needed. For example, many expressed a preference for digital materials when taking notes or conducting quick searches, and desire print when engaging in deep reading, score study, or performance. Concerns about technological mediation, including screen fatigue and equipment malfunctions, sometimes influenced participants to choose physical media over digital, but personal learning style also played a part in their preferences and usage patterns. Theme 3: Value of Authority permeated discussions about choosing materials and focus group members emphasized the trust they place in the curated collections and "exclusive" content (i.e., unavailable for free online) to which the library provides access. Many expressed concerns about the quality and trustworthiness of free internet content and emphasized the importance they place on authority when choosing a score edition or audio/video recording.

Finally, focus group conversations presented participants with an opportunity to share their opinions on the obstacles and benefits they had noted when interacting with both library and non-library resources. These ranged from feeling uncertain or frustrated when searching their library's collections to concern about the weight of physical materials or dealing with copyright. Still, the articulated benefits seemed to outweigh these perceived detriments. Many students lauded the library for helping them save money and providing easy ways to browse for and discover relevant repertoire and scholarship. They also extolled the benefits of free and freemium digital audio and video platforms, highlighting the ways that these resources make content easily discoverable and accessible.

Survey Demographics

For the quantitative portion of the study, 219 Eastman students (24% of enrolled students), 141 University of Minnesota students (35% of enrolled students), and 76 Kent State students (41% of students enrolled in in-person programs) completed the survey, for a total of 436 respondents. The researchers did not note any significant differences in results by institution. Just over half (52%) of study participants identified as performance or conducting majors (see Table 1). Some participants selected "other" as area of study instead of the option that represented their area; for example, one identified as a "classical guitar major" rather than selecting "performance." Most of those who selected "other" for their area of concentration were double majors or minors in music.

The distribution of class standing in survey respondents skewed toward first-year and sophomore students (46% [n = 202]), while graduate students in master's and doctoral programs made up only 23% (n = 100) of participants. Most respondents indicated that they were 25 years old or younger (86% [n = 373]). Thirty-one participants (7%) reported being over the age of 31.

TABLE 1
Survey Participants by Institution and Area of Study

Area of study	Kent State	Rochester	Minnesota	Total
Music Education	37	14	29	80
Music (general BA)	6	22	23	51
Performance/conducting	28	161	34	223
Music History/ethnomusicology	0	3	6	9
Theory/composition	3	9	6	18
Music therapy	0	0	14	14
Other	2	9	24	35
Total	76	218	136	430

Past Library Usage

The survey began with two questions about past library usage. In response to the question "Have you used physical materials from the library? These might include print books, print scores, print journals/newspapers/magazines, print encyclopedias, CDs, etc.," 76% (n = 332) responded affirmatively. The percentage of students using physical materials increased along with class standing; only 63% (n = 127) of first year and sophomore students reported using physical materials; this number increased among juniors, seniors, and master's students, reaching 100% usage (n = 46) for doctoral students. When analyzed by area of study, the data reflects high levels of usage of physical library materials across all disciplines, though was lowest among music education 68% (n = 54) and music therapy students 64% (n = 9).

Sixty-nine percent (n =303) of surveyed students replied positively to the question: "Have you used digital materials from the library?" Like the use of physical library materials, use of digital library materials also increased along with class standing, rising from 52% (n = 105) for first year and sophomore students to 96% (n = 44) for doctoral students. While usage of digital library materials was notable across most areas of study, music therapy students reported the highest level of use at 93% (n = 13). They were followed by 89% (n = 8) of musicology and ethnomusicology students.

What Formats Are Music Students Using?

Survey participants were then asked if they used, or planned to use, scores, books, audio, video, reference content, and journals for classes/lessons. The most common content, in rank order, were scores (86% [n = 375]); books (81% [n = 353]); serials (57% [n = 250])' audio (55% [n = 240]); reference materials (53% [n = 232]); and video (44% [n = 193]). For those who answered positively, we followed up with questions about sources of the content as well as frequency of use. These data appear below.

Scores

The importance of scores was consistent across class standing and disciplines of study. Participants from all majors relied heavily on score use (which ranged from 84% to 91%, depending on class standing), except for students in music therapy, of whom only 64% (n = 9) reported score use.

The authors observed that while many students had a general preference for print scores, they admitted to frequent use of freely available digital scores. Survey data indicated that score preferences were split between physical (48% [n = 179]) and digital access (51% [n

= 193]). Of those who preferred digital access, 31% (n = 117) favored scores through digital non-library sources like the International Music Score Library Project (IMSLP.org), and 20% (n = 76) claimed to prefer digital scores from the library.*

Most survey respondents reported accessing scores from various sources at an average of two to three times per week (25% [n = 93] for print scores from the library; 32% [n = 121] for print scores from non-library sources; and 50% [n = 186] for free online scores). Digital scores that students purchase themselves received the lowest amount of reported use by all survey respondents; 19% (n = 72) described using these types of resources one to two times per year, and 30% (n = 114) stated that they never used them.

Graduate student survey participants indicated that they made use of their library's print score collections more frequently than undergraduates, with 43% (n = 21) of master's students and 37% (n = 14) of doctoral students specifying that they used these materials two to three times per week. Use of non-library print scores was higher, and about a third of students reported that they used print scores from non-library sources two to three times per week. Focus group participants reported wanting to annotate their materials and to retain those markings. Furthermore, studio teachers often required them to purchase scores to build a personal library.

The percentage of participants who preferred physical versus digital scores was fairly evenly split among students in most majors. Music theory/composition and music therapy bucked the trend; while the number of participants from each discipline was small (17 and eight, respectively), only 25% of these students favored physical scores over digital.

Students shared several reasons why they did not exclusively prefer digital scores over physical materials. They included experiencing screen fatigue and fear of technical difficulties during a performance, as well as skepticism about the trustworthiness of free online resources. Several focus group members highlighted the difference in quality between the scholarly editions of scores and the free content available through crowd-sourced sites like IMSLP; they lamented the latter's lack of introductions and editors' notes, though they appreciated finding manuscript scores and first editions on the public domain site. Several participants expressed anxiety when discussing their experiences with searching for scores in their library's catalog, yet they reported placing trust in the curated selection of resources offered in the library's score collections. Many liked the tangibility of print, and frequently described how much easier it was for them to browse and compare print score editions side by side.

Major drawbacks to working with print included carrying the weight of heavy materials and hesitancy to write on library-owned scores. Several focus group contributors were partial to the idea of "owning" library copies of scores they scan or download, as they liked to create annotated and clean copies that they could organize on their own devices. One participant stated, "It's always going to be there. I'll never lose that copy."

Books

Eighty-two percent of survey respondents (n = 356) reported using book content for their classes and/or lessons, with similar rates for graduates and undergraduates. Survey participants' preferred means of accessing book content was equally split between physical and digital resources. However, students indicated that they used print books more frequently than ebooks; 50% (n = 179) of students reported using print books two to three times per week,

* Kent State University did not subscribe to any digital score databases during the study period.

while only 36% (n = 129) reported this level of ebook usage. Students reported using library ebooks less frequently than library print books, with 21% (n = 74) stating that they did not ever use library ebooks. When survey respondents did consult ebooks, however, they preferred to access them through the library. Sixty-four percent (n = 112) of ebook users rated accessing these materials through the library as their first choice, while 36% (n = 63) indicated that they opt for non-library sources like Amazon or Google Books.

Students expressed interest in having access to both physical and digital content and choosing depending on their need. For example, participants reported preferring ebooks for research to copy and paste text and conduct keyword searches. However, they desired print when reading a source in its entirety to avoid screen fatigue. Students highlighted access issues with library ebook platforms, citing examples of awkward interfaces, the difficulty of reading on small screens, download limits, and the disappearance of licensed content.

Serials

Most survey respondents (57% [n = 250]) across all majors and class standings reported that they use journal, magazine, or newspaper content in their studies. Students enrolled in research intensive programs responded with the highest numbers of affirmative answers to this survey question; 100% (n = 9) of music history/ethnomusicology students and 83% each of theory/composition students (n = 15) and music therapy students (n = 10) reported working with serial content. Doctoral and master's students reported the highest rates of use at 98% (n = 45) and 75% (n = 39), respectively.

According to survey participants, their preferred means of accessing to serials was via digital library resources (70% [n = 174]). Print was only favored by 10% (n = 25). The concept of cost savings came up frequently during focus group discussions, and respondents noted the value the library provides in subscribing to hundreds of resources like journals that would otherwise be unavailable to them.

Audio

Fifty-six percent of survey respondents (n = 242) across all class standings reported that they either had or planned to use audio content. Although most students across most majors needed audio content in their studies, use was highest amongst music history/ethnomusicology (89% [n = 8]) and theory/composition students (83% [n = 15]).

Students expressed an overwhelming preference for streaming audio; 83% (n = 198) favored audio available through non-library resources like Spotify, YouTube, or Amazon, and 14% (n = 34) indicated a preference for library audio databases. Advanced undergraduates and doctoral students were the most frequent patrons of library audio databases; 26% (n = 10) of doctoral students reported that they access these resources two to three times per week, and 24% (n = 16) of juniors and seniors stated that they accessed library streaming audio two to three times per month. However, these numbers paled in comparison to students' use of non-library streaming audio: 82% (n = 56) of juniors and seniors; 76% (n = 22) of master's students; 71% (n = 27) of doctoral students; and 65% (n = 69) of first-year students and sophomores reported using non-library streaming audio resources two to three times per week. Only 3% (n = 8) of survey respondents indicated that they preferred to access audio through CDs.

Focus group participants voiced a significant preference for non-library streaming audio, indicating comfort with using the interfaces of YouTube and Spotify, and an appreciation

for the convenience and speed of accessing content through these platforms. Students also articulated several drawbacks to these resources, including the limited availability of older recordings and recordings issued by smaller labels, inconsistent metadata, sound quality issues, and the impermanence of audio recordings available via free or freemium platforms.

Many focus group participants mentioned the importance of performance quality and trustworthiness when choosing a recording and cited the need to find performances featuring authoritative interpretations by specific performers or specialist ensembles (e.g., in early music) through the library's collections of streaming audio resources and physical recordings. Focus group participants expressed an interest in liner notes, acknowledging these resources' worth in their research processes and lamenting that supplemental commentary is often not available via freemium platforms. These views were juxtaposed against the annoyance they experienced when using library audio collections, including reports of awkward interfaces and apps, and frequent requests to log in or authenticate. Focus group members also communicated that they did not feel it necessary for libraries to continue to collect CDs since "we live in a streaming world." They cited several reasons that they do not use physical audio media, including a lack of browsing access to CD and LP collections, problems with searching for recordings in library catalogs, and a lack of access to audio playback equipment.

Reference Content

Fifty-three percent (n = 127) of students reported a preference for digital access to reference materials through the library, while 29% (n = 68) indicated a tendency towards free websites like Wikipedia. Only 16% (n = 37) preferred print reference books in the library. Although survey respondents ranked non-library digital reference sources lower, they accessed these resources at a high rate. The rates by class standing were 60% (n = 26) for master's students, 57% (n = 20) for doctoral students, and 39% (n = 25) for juniors and seniors. Thirty-eight percent (n = 35) of first year and sophomore students reported that they accessed digital reference content from non-library sources two to three times per week.

Video

Video content, either from library or non-library sources, was the least used of the six content types surveyed at 44% (n = 193). Doctoral students reported the most use of video content (72% [n = 33]), while between 40% and 50% of undergraduates and master's students reported using video in their classes and/or lessons.

Eighty-five percent of survey respondents who used video (n = 165) preferred non-library streaming venues like YouTube and Amazon. Twelve percent (n = 23) favored digital access via library subscriptions such as Kanopy, while only 3% (n = 5) wanted to use DVDs. Library streaming video platforms received more use than DVDs, but not by much. While 21% each of doctoral students (n = 7) and juniors/seniors (n = 11) reported using library streaming video two to three times per semester, 14% (n = 12) of first year and sophomore students reported using library streaming video only one to two times per year. Non-library streaming video, however, was used frequently, with almost half of students across all class standings reporting that they used non-library streaming video two to three times per week.

A vocal number of focus group members highlighted the value of specialized streaming video platforms available through the library. They recognized that resources like the Berliner Philharmoniker Digital Concert Hall are not freely available and offer proprietary

content. Students reported being more interested in the library providing access to specialized video databases that cater to viewers with, as one focus group member put it, "niche" musical interests over subscribing to audio platforms that include materials they can find on free or freemium platforms.

Opinions, Behaviors, and Agreement Statements

When asked why they used non-library resources, students across all class standings commonly cited convenience and comfort with non-library sources (see Table 2). Almost all survey respondents (93%) reported using non-library sources, with "getting non-library sources is more convenient" (66%), and "I feel more comfortable using non-library resources because I use them outside of classes/lessons" (45%) as the second and third most common reasons, respectively.

TABLE 2
Responses to "Why do you use non-library sources for your studies? Please check all that apply."

I frequently obtain items for my studies through non-library sources (YouTube, IMSLP, Wikipedia, etc.).	93%
Getting non-library sources is more convenient.	66%
I feel more comfortable using non-library resources because I use them outside of classes/lessons.	45%
The library doesn't have everything I need.	33%
I don't know what the library has.	24%
I don't know how to obtain library resources.	16%
Non-library sources are just as credible, authoritative, trustworthy.	14%
I don't need library materials.	5%

Over half of survey respondents indicated they were encouraged to use library resources by music faculty, believed that library resources played an important role in their studies, and were willing to access content in unfamiliar/inconvenient forms if it is more credible (see Table 3).

TABLE 3
Responses to "Indicate your level of agreement with each statement."

	Agree	Neutral	Disagree
The library should prioritize the purchase of print/physical materials over digital materials.	29%	46%	24%
Library resources play an important role in my classes/lessons.	61%	31%	8%
I begin my research on the library's website.	43%	29%	28%
I prefer to research exclusively with digital resources.	40%	33%	27%
I prefer to purchase and own some of the materials needed for my academic coursework.	47%	25%	27%
Music faculty encourage me to use library resources in my classes/lessons.	69%	23%	8%
I am willing to use content in an inconvenient/unfamiliar form if it's more credible.	66%	27%	7%

In alignment with the focus group Theme 3: Value of Authority, 66% (n = 277) of students surveyed agreed with the statement: "I am willing to use content in an inconvenient/unfamiliar form if it's more credible." Perhaps surprisingly, 36% (n = 71) of first- and second-year students concurred with the statement that the library should prioritize print over digital materials. These results seem to align with several findings of the qualitative data; a notable number of focus group participants indicated that they prefer to have access to materials in both physical and digital formats, and many focus group members communicated that they recognize the value of physical materials, especially print scores.

When asked to rank order material types that are most important for their library to purchase (see Table 4), most students prioritized score content. Rated last were ebooks, which received only 36%. A breakdown of responses by class standing, however, revealed several important differences between groups. Interest in library acquisitions of ebooks and reference databases grew as class standing increased. Doctoral students desired that their library purchase more print books and serials databases as compared to master's and undergraduate students.

TABLE 4
Responses to "What should the library buy?"*

Material type	Ranking
Score databases	71% (M = 1.95, SD = 1)
Print scores	67% (M = 1.76, SD = 1)
Video databases	52% (M = 2.68, SD = 1)
Reference databases	43% (M = 2.73, SD = .9)
Audio databases	42% (M = 2.68, SD = 1)
Serial databases	38% (M = 2.41, SD = 1.2)
Print books	37% (M = 2.48, SD = 1)
Ebooks	36% (M = 2.50, SD = 1.1)

* A lower mean indicates higher ranking.

Discussion

This study suggests that preferences documented in the 2018 article seem to have solidified in many cases, although there were several notable changes to how respondents prioritized print vs. digital materials in a comparison of the longitudinal data (see Table 5). The preferred means for books and scores changed dramatically between 2012 and 2017 but moderated between 2017 and 2022. Eight percent more students in 2022 preferred accessing books electronically over print, leaving an even divide between physical and electronic books. As physical interactions have become more common since libraries reopened from pandemic closures, it will be important to note whether these preferences remain consistent or move in a particular direction.

TABLE 5
Preferred Means of Access in 2012, 2017, and 2022*

	Physical			Electronic/Web-based		
Material type	**2012**	**2017**	**2022**	**2012**	**2017**	**2022**
Books	84%	58%	50%	16%	42%	50%
Scores	73%	45%	48%	27%	56%	52%
Audio	36%	4%	3%	61%	96%	97%
Serials	34%	10%	10%	66%	90%	90%
Reference materials	55%	16%	16%	45%	83%	84%
Video	39%	1%	3%	61%	100%	97%

* The 2012 survey offered the respondents the option to choose "No preference" or "Both," so some total percentages represented in Table 5 are under 100%.

After considerable movement towards digital scores between 2012 and 2017, 3% more students indicated a preference for print in 2022; the divide between preference for print or digital scores, however, remains almost evenly split. Perhaps the reason for the stalling of momentum—in addition to possible screen fatigue—is that the technology in common use today was already relatively mature circa 2010 with the development of IMSLP and tablet computers. Movement toward digital access provided by commercial services like nkoda.com and Henle Library (www.henle-library.com) may be slowed due to digital rights management (e.g., download and printing restrictions in nkoda), limited catalogs (e.g., Henle only offering Henle publications, whose print forms are already well-represented in many music libraries), or monetary considerations. Improvements in smartphone cameras and library scanners mean that users can quickly digitize the library physical holdings they trust for free, obviating the need for photocopies and providing durable access in the file type (usually PDF) most useful for access, sharing, and markup.

Students seemed especially interested in the library's commitment to providing a score collection distinguished by both breadth and depth. Many noted the importance of purchasing contemporary pieces unavailable elsewhere (and pointed to perceived deficiencies in library holdings of new music) as opposed to works easily accessible elsewhere or already available in other editions. Some, however, mentioned the value of the ability to compare different versions of the same work to determine the edition most suited to their needs. It was clear that the reason for using the library in these cases came down to finances. Purchasing a large collection of new pieces with different editions of the same work is cost prohibitive for any individual.

Preference for electronic audio has similarly remained fixed in 2022 when compared with 2017, underscoring the findings of Dougan Johnson (2020) and of Czeisel and Smith (2021). While there was little room for further movement away from physical audio media, the added value respondents placed on liner notes points to an advantage that library-provided resources like Naxos offer over YouTube and Spotify; this further supports both Dougan Johnson's (2020) and Bonjack's (2021) findings regarding the relevance of physical media. Music students do not seem to ascribe the same educational value to the additional materials with which DVDs are sometimes packaged—for example, commentary, deleted scenes, and other special features—as they do to CD liner notes. The rate at which they prefer to use DVDs remained virtually unchanged between 2017 (2%) and 2022 (3%).

These findings suggest trust in library collections, which would likely be welcomed by librarians, but which could still be cause for concern. Students should not uncritically accept content they find in library sources while at the same time rejecting that same content simply because it appears online. Information literacy instruction on what makes book, score, periodical, reference, audio, or video content reliable and useful would serve patrons better than reflexively accepting the authority of both physical and digital library collections. However, many students appear to have internalized the message that they cannot always trust information available online. Theme 3: Value of Authority was bolstered by discussions of students' concerns about the trustworthiness of openly accessible and free content. As one focus group participant put it: "We don't want students to go strictly to Google or to Wikipedia to find that baseline information, we would rather them go to the reference, you know, pull out the book, and then that pushes them to more suitable research avenues." The study was conducted before large language models like ChatGPT rose in the national consciousness, yet it seems

reasonable that a similar sentiment would hold, equating physical and/or library-mediated resources with trustworthiness over freemium, web-based tools.

Several recurring motifs persisted across discussion of multiple material types and formats. Students reported valuing "quality" and "reliable" research and performance materials and were willing to access content in a format that they did not find convenient if they deemed it more reliable than free internet alternatives. Participants recognized and appreciated that their library offers access to "exclusive" content, such as journal articles and obscure recordings. However, this ideal was contrasted by convenience and ease of access. Because students sometimes feel overwhelmed by library interfaces and systems, both digital and physical, they valued having streamlined ways to interact with and manipulate materials. Though context of use emerged as a major driver for participants' decisions for all content types, students aspired to have simultaneous physical and digital access to content and the option to download digital versions so as to "own" them on personal devices.

Study Limitations

This research had several limitations. The authors intentionally designed the survey to be short to encourage students to complete it, and therefore several topics that could have been relevant to students' use of library materials were excluded (e.g., whether they had access to a CD player at home or knew about circulating playback equipment offerings at their institution).

Focus group participants were likely to be library supporters and graduate students, hence their responses may not be generalizable to broader student populations. Because these focus groups were intended to gather information from participants and not to serve as opportunities for information literacy instruction, the authors could not correct misapprehensions that may have affected participants' perceptions of library resources (e.g., making a distinction between journal articles provided seamlessly by the library via IP authentication and free online materials from non-library sources). Furthermore, students may have been hesitant to express dissatisfaction with library collections or services because the librarians served as the facilitators of the focus groups.

Lastly, the sample of participants surveyed and interviewed may not be broadly generalizable to the population of all university music programs. The participating institutions do not offer identical programs of study (e.g., only one of the three institutions offers a music therapy program), so data gathered from students in some majors represents a small sample size. The music collections at the participating institutions also differed in size and scope, impacting student perceptions of library holdings. Slightly more than half of the students who completed the survey were performance or conducting majors, so feedback from participants in applied disciplines received greater representation than responses by students in academic tracks of study.

Conclusion

The 2022 survey and focus groups highlight the enduring importance of the library and illustrate the ways in which format preferences have shifted and solidified since the arrival of the COVID-19 pandemic. By presenting combined data gathered from institutions of different sizes and geographic regions, this study may offer findings useful to librarians in several settings. Physical content remains a viable format for scores and books, while digital materials of every content type are an undeniably important resource for libraries and their patrons. Non-

library resources—most notably YouTube, IMSLP, Wikipedia, and their counterparts—have entrenched themselves in the educational landscape. Libraries should adjust their collection practices to varying degrees based on what students and their faculty are using. YouTube, in particular, has become a dominant resource for both video and sound. This was evinced by one particular focus group statement: "I don't really use much audio anymore, only YouTube." The value placed on seamless digital connection should be a boon to Open Educational Resources in the years to come, even if most users are unaware of that nomenclature.

Bibliographic instruction clearly plays an important part in how libraries and their patrons interact with collections. Students expressed feeling intimidated and overwhelmed by collections in terms of amount and complexity. In-person orientation and face-to-face instruction obviously became difficult or impossible during the pandemic. Yet, as restrictions have been removed, the importance of bibliographic instruction has been made ever clearer. Similarly, students often remarked on their disappointment that they were not exposed to library resources much earlier in their academic careers.

While some academic librarians may have had concerns during the COVID-19 pandemic about the future of their work and libraries, conditions have mostly returned to a pre-pandemic environment. User needs and preferences did not change dramatically after the pandemic and are similar to those in 2017. Librarians will continue to face challenges, and understanding and monitoring the needs, preferences, and behaviors of library users remains crucial as information seeking behaviors evolve and freely available materials permeate the internet.

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Appendix A. Survey Questions

Past & Current Use

Have you ever used **physical materials from the library**? These might include print books, print scores, print journals/newspapers/magazines, print encyclopedias, CDs, etc.

○ Yes
○ No

Have you used **digital materials from the library**? These might include ebooks, digital scores, digital journals/newspapers/magazines, digital reference sources (like Oxford Music Online), streaming audio/video (like Naxos), etc.

○ Yes
○ No

Have you used, or do you plan on using, **books** for your classes/lessons?

○ Yes
○ No

Display if "Have you used, or do you plan on using, books for your classes/lessons"= yes.

How often do you typically use **book content** (including textbooks) for your classes/lessons? Indicate formats & frequency.

	2 to 3 times a week	2 to 3 times a month	2 to 3 times a semester	1 to 2 times a year	I have not used yet, but probably will	Do not use
Print books **from the library**	○	○	○	○	○	○
Print books **not from the library**	○	○	○	○	○	○
Electronic books (eBooks) **from the library**	○	○	○	○	○	○
eBooks **not from the library** (like Google books)	○	○	○	○	○	○

Have you ever used, or do you plan on using, **audio** content for your classes/lessons?

○ Yes
○ No

Display if "Have you used, or do you plan on using, audio for your classes/lessons" = yes.

How often do you typically use **audio** content for your classes/lessons? Indicate formats & frequency.

	2 to 3 times a week	2 to 3 times a month	2 to 3 times a semester	1 to 2 times a year	I have not used yet, but probably will	Do not use
CDs **from the library**	○	○	○	○	○	○
CDs **not from the library**	○	○	○	○	○	○
Digital audio **from the library** (like Naxos)	○	○	○	○	○	○
Digital audio **not from the library** (like Spotify, etc)	○	○	○	○	○	○

Have you ever used, or do you plan on using, **video** content for your classes/lessons?

○ Yes
○ No

Display if "Have you used, or do you plan on using, video for your classes/lessons" = yes.
How often do you typically use **video** content for your classes/lessons? Indicate formats & frequency.

	2 to 3 times a week	2 to 3 times a month	2 to 3 times a semester	1 to 2 times a year	I have not used yet, but probably will	Do not use
DVDs **from the library**	○	○	○	○	○	○
DVDs **not from the library**	○	○	○	○	○	○
Digital video **from the library** (like Kanopy)	○	○	○	○	○	○
Digital video **not from the library** (like YouTube, etc)	○	○	○	○	○	○

Have you used, or do you plan on using, **journal, magazine, or newspaper articles** for your classes/lessons?

○ Yes
○ No

Display if "Have you used, or do you plan on using, journal, magazine, or newspaper articles for your classes/lessons" = yes.
How often do you typically use **journal, magazine, or newspaper articles** for your classes/lessons? Indicate formats & frequency.

	2 to 3 times a week	2 to 3 times a month	2 to 3 times a semester	1 to 2 times a year	I have not used yet, but probably will	Do not use
Print articles **from the library**	○	○	○	○	○	○
Print articles **not from the library**	○	○	○	○	○	○
Digital articles **through the library**	○	○	○	○	○	○
Digital articles **not through the library**	○	○	○	○	○	○

Have you used, or do you plan on using, **reference** content (like encyclopedias and dictionaries) for your classes/lessons?

○ Yes
○ No

Display if "Have you used, or do you plan on using, reference for your classes/lessons" = yes.
How often do you typically use **reference materials** (like encyclopedias & dictionaries) for your classes/lessons? Indicate formats & frequency.

	2 to 3 times a week	2 to 3 times a month	2 to 3 times a semester	1 to 2 times a year	I have not used yet, but probably will	Do not use
Print library reference books (encyclopedia, etc)	○	○	○	○	○	○
Digital reference sources **through the library** (like Oxford Music Online)	○	○	○	○	○	○
Free websites **not through the library** (like wikipedia)	○	○	○	○	○	○

Have you used, or do you plan on using, **scores** for your classes/lessons?

- ○ Yes
- ○ No

Display if "Have you used, or do you plan on using, scores for your classes/lessons" = yes.
How often do you typically use **scores** for your classes/lessons? Indicate formats & frequency.

	2 to 3 times a week	2 to 3 times a month	2 to 3 times a semester	1 to 2 times a year	I have not used yet, but probably will	Do not use
Print scores **from the library**	○	○	○	○	○	○
Print scores **not from the library**	○	○	○	○	○	○
Free digital scores (like IMSLP)	○	○	○	○	○	○
Digital scores I **purchase** online	○	○	○	○	○	○

What materials should the library prioritize for future purchase? Check all that apply.

- □ eBooks
- □ Digital journals, magazines, and/or newspapers
- □ Print books
- □ Online video databases (with performances, masterclasses, etc.)
- □ Digital databases with reference materials
- □ Print scores
- □ Streaming audio music databases (like Naxos)
- □ Score databases with scores for downloading/printing
- □ I don't believe the library should prioritize any materials for purchase

Do not display if "I don't believe the library should prioritize any materials for purchase" = yes OR "What materials should the library prioritize for future purchase" is less than 2.

Carry Forward choices from "What materials should the library prioritize for future purchase?"

Of the choices you selected, rank order up to four of your top materials you think the library should prioritize for purchase. Rank your top four choices (1 = highest priority):

- ___ Print books
- ___ eBooks
- ___ Print scores
- ___ Score databases with scores for downloading/printing
- ___ Streaming audio music databases (like Naxos)
- ___ Online video databases (with performances, masterclasses, etc.)
- ___ Digital journals, magazines, and/or newspapers
- ___ Digital databases with reference materials (like Oxford Music Online)

Preferred means of access

Display if "Have you used, or do you plan on using, audio content for your classes/lessons" = yes.
What is your preferred means to access **audio/sound** for your classes/lessons?

- ○ CDs
- ○ Digital **library sources** (like Naxos)
- ○ Digital **non-library sources** (like Spotify, YouTube, Amazon)

Display if "Have you used, or do you plan on using, video content for your classes/lessons" = yes.
What is your preferred means to access **video** for your classes/lessons?

- ○ DVDs
- ○ Digital **library sources** (like Kanopy)
- ○ Digital **non-library sources** (like YouTube, Amazon)

Display if "Have you used, or do you plan on using, sheet music/scores for your classes/lessons" = yes.
What is your preferred means to access **sheet music/scores** for your classes/lessons?

- ○ Print
- ○ Digital **library sources**
- ○ Digital **non-library sources** (like IMSLP, etc.)

Display if "Have you used, or do you plan on using, journal, magazine, and newspaper articles for your classes/lessons" = yes.
What is your preferred means to access **journal, magazine, and newspaper articles** for your classes/lessons?

- ○ Print
- ○ Digital **library sources**
- ○ Digital **non-library sources**

Display if "Have you used, or do you plan on using, reference materials for your classes/lessons" = yes.
What is your preferred means to access **reference materials** (dictionaries, encyclopedias, etc.) for your classes/lessons?

- ○ Print reference books in the library
- ○ Digital **library sources** (like Oxford Music Online)
- ○ **Free websites** (like Wikipedia)

Display if "Have you used, or do you plan on using, book content for your classes/lessons" = yes.
What is your preferred means to access **book content** for your classes/lessons?

- ○ Print
- ○ eBooks **from the library**
- ○ eBooks **not from the library** (like through Amazon, Google Books, etc.)

Satisfaction & Agreement

Indicate your level of agreement with each statement:

	Agree	Neutral	Disagree	Don't know
I prefer to purchase and own some of the materials needed for my academic coursework.	○	○	○	○
Music faculty encourage me to use library resources in my classes/lessons.	○	○	○	○
I am willing to use content in an inconvenient/unfamiliar form if it's more credible.	○	○	○	○
The library should prioritize the purchase of print/physical materials over digital materials.	○	○	○	○
Library resources play an important role in my classes/lessons.	○	○	○	○
I begin my research on the library's website.	○	○	○	○
I prefer to research exclusively with digital resources.	○	○	○	○

I frequently obtain items for my studies through non-library sources (YouTube, IMSLP, Wikipedia, etc.).

- ○ Yes
- ○ No

Display if "I frequently obtain items for my studies through non-library sources (YouTube, IMSLP, Wikipedia, etc.)" = yes.

Why do you use non-library sources for your studies? Please check all that apply:

- □ I do not need library materials.
- □ I feel more comfortable using non-library resources because I use them outside of class/lessons.
- □ Getting non-library resources is more convenient.
- □ Non-library sources are just as credible, authoritative, trustworthy.
- □ I do not know what the library has.
- □ I do not know how to obtain library resources.
- □ The library does not have what I need.

Demographics

What is your class standing?

- □ First Year/Sophomore
- □ Junior/Senior
- □ Masters (MM, MA, MFA)
- □ Doctoral (DMA, PhD)
- □ Other post-baccalaureate

What is your age?

- □ 18-21
- □ 22-25
- □ 26-30
- □ 30+

What is your area of study in the School of Music?

- □ Music education
- □ Music (general BA)
- □ Performance/conducting
- □ Music history/ethnomusicology
- □ Theory/composition
- □ Music therapy
- □ Other (please describe): _____

Appendix B. Focus Group Questions

- Why do you use or not use the library to get materials for your classes/lessons?
    - How has the pandemic changed these practices?
- How do you like to consume/read book content for classes/lessons: in print, on smaller mobile devices, or larger electronic screens?
    - Follow up: what do you see as the advantages/disadvantages of the various formats?
    - Follow up: what are the issues with finding/accessing each format type? Does that influence your preference?
    - Follow up: Other thoughts on print books vs. electronic books?
- How many of you use audio and/or video for classes/lessons, and how do you access/listen to it?
    - Follow up: what do you see as the advantages/disadvantages of the various formats?
    - Follow up: should the library spend money on audio and/or video resources (CDs, DVDs, streaming DBs, etc.)?
    - Follow up: what are the issues with finding/accessing each format type? Does that influence your preference?
    - Follow up: Other thoughts on this audio/video?
- How many of you use scores for classes/lessons, and how do you access/view them?
    - Follow up: what do you see as the advantages/disadvantages of the various formats?
    - Follow up: should the library spend money on score resources (print, score DBs, etc.)?
    - Follow up: what are the issues with finding/accessing each format type? Does that influence your preference?
    - Follow up: Other thoughts on scores?
- How many of you use journal, magazine, newspaper articles for classes/lessons, and how do you access/view them?
    - Follow up: what do you see as the advantages/disadvantages of the various formats?
    - Follow up: should the library spend money on journals (print, electronic, ILL, etc.)?
    - Follow up: what are the issues with finding/accessing each format type? Does that influence your preference?
    - Follow up: Other thoughts on journal content?
- How many of you use reference sources for classes/lessons, and how do you access/view them?
    - Follow up: what do you see as the advantages/disadvantages of the various formats?
    - Follow up: should the library spend money on reference materials (print, online reference DBs, etc.)?
    - Follow up: what are the issues with finding/accessing each format type? Does that influence your preference?
    - Follow up: Other thoughts on using reference materials?

- How important are the library's collections of the following:
    - Physical materials (books, scores, media items, print journals)
        - To what extent do you use the library's collection of physical materials (e.g., daily, weekly, monthly, once or twice a semester, a couple times a year, not at all, etc.)
    - Electronic/digital resources (books, scores, media items, print journals)
        - To what extent do you use the library's collection of electronic/digital materials (e.g., daily, weekly, monthly, once or twice a semester, a couple times a year, not at all, etc.)
- What are the obstacles to accessing library resources (e.g., double-factor authentication, having to go to the library website, etc.)?
- What does the ideal library collection look like for your discipline? Is it more important that the library make certain resources available digitally than others? If so, which types of materials do you prefer to find/use in digital format?

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An Analysis of Hybrid/Remote Work Eligibility in Academic Librarian Job Advertisements

Ruth Sara Connell and Meris Mandernach Longmeier

This paper seeks to capture changing policies and approaches to hybrid and remote work in academic libraries following the COVID-19 pandemic. For this study, job advertisements were gathered and those hiring managers surveyed. Results show that hybrid/remote positions have competitive salaries; that many types of academic library positions have hybrid eligibility; and that campus and library policies regarding hybrid/remote work and their inclusion in job postings continue to evolve. Despite the potential recruitment benefits of these flexible work arrangements, many who offer them are not including this information in their job advertisements; therefore, job candidates should ask or negotiate for this benefit.

Introduction

With the changes to library services and work practices during and following the COVID-19 pandemic, it is important to understand and capture recruitment trends for hybrid and remote work in libraries. Several recent publications note a trend toward more flexibility about when and where library work is performed. While some institutions had flexible work arrangement policies prior to the pandemic, they were not regularly used, and instead applied on a case-by-case basis (Hosoi et al., 2021). The global COVID-19 pandemic forced individuals to work differently, and many found they preferred the flexibility. Additionally, individuals showcased equal or greater productivity (Green, 2022) when working remotely or in a hybrid fashion, especially after caregiving facilities re-opened. Yet, in academic library job postings there is not a standard approach for indicating hybrid/remote eligibility or flexible work arrangements.

Examining job advertisements gives researchers a glimpse into hiring trends in the profession as well as wish lists for individual library organizations and can showcase changes to sub-disciplines over time in the library and information science fields. While they may not capture the exact working environment in libraries, job advertisements indicate a willingness to consider different working styles during the recruitment process and are a leading indicator for changes emerging in the field.

The authors (one at a large Doctoral Very High Research Activity institution, the other at a small Doctoral/Professional university) noted different approaches at their own institutions for hybrid and remote work as well as ongoing changes to flexible work arrangements following

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the COVID-19 pandemic. These observations motivated them to examine job advertisements and hiring practices in academic libraries in a post-pandemic environment to determine if the differences were mirrored in other academic libraries. Therefore, for this research study, the authors gathered U.S. academic library job postings for five months in 2023 and contacted hiring managers to determine whether there were any considerations around hybrid and remote options for the recruited position. Through this study, the researchers sought to answer the following research questions:

1. Is there any relationship in job postings between salaries and hybrid/remote eligibility?
2. Is there a difference in hybrid/remote and on-site arrangements by job function/responsibility?
3. Are there differences in hybrid/remote offerings by academic library characteristics/classifications?
4. How prevalent are hybrid/remote options in positions where they are not mentioned in the job ads?
5. Does the potential impact on recruitment influence decisions regarding whether to include work arrangement information in academic librarian job descriptions?

Literature Review

Two themes that informed the current study from the literature were: 1. hybrid/remote work trends that emerged after the pandemic, and 2. research practices around job advertisements within library and information science.

Remote and Hybrid Work Options for Libraries During and Post-COVID-19 Pandemic

Library service delivery and operations changed significantly during and after the COVID-19 pandemic (Hall & Duggins, 2022; Hinchliffe & Wolff-Eisenberg, 2020). To continue to provide library services in the pandemic and post-pandemic environment, corresponding changes were made in remote/hybrid work arrangements. In the Association of College and Research Libraries (ACRL) Academic Library Trends and Statistics 2022 survey, a set of questions were devoted to library service and workplace trends post-COVID-19. The results showed that about half of academic libraries were offering hybrid (42.4%) or remote (7.8%) options to library employees (ACRL Benchmark Question 4). ACRL also asked libraries whether hybrid/remote options would be included in library job postings, when positions were eligible. Responses indicated that 40.6% would include this information in job postings, 35.1% were unsure, and 24.4% would not (Question 7).

Early pandemic studies of changes to library services noted website differences and surveyed libraries about changes to work locations (Heady et al., 2021). For the fall 2021 semester, hybrid schedules were the most common approach; Heady et al. noted that remote work options "were almost equally available to professional staff (33%) as paraprofessional staff (31.2%)" (p. 742). The same study noted that much of the success of maintaining services during the pandemic "relied largely on existing technological infrastructure … and the happenstance that many library workers possessed home internet connections and the computer hardware necessary to conduct library work" (p. 752). Recommendations from these findings included establishing at least 20% remote work agreements and encouraging library administration to participate in remote work to understand how it affected the library workforce.

After one year of the COVID-19 pandemic, a survey of public services librarians was conducted to capture work locations of employees (Todorinova, 2021). At the time of this survey, many were still working hybrid or fully remote. Todorinova reported that many librarians noted both advantages and drawbacks to remote work. In some cases, individuals were as productive with work output and research, although they were also more stressed. Others noted that caregiving responsibilities made it hard to maintain a positive work/life balance. Many commented on missed chance encounters with colleagues and constituents alike, though new online communication pathways have helped.

Around the same time, technical services librarians were also surveyed about the changes to work and work location post-pandemic (Green, 2022). Green found that of the 402 respondents, fewer than 5% expected to work in fully remote positions, but nearly half of both staff and faculty expected to have the option of hybrid work in the next three to four years. These survey results point to the changing nature of work for this segment of library workers, which will ultimately allow for greater flexibility of work locations. Green found that less than 7% of those surveyed said they would not work remotely at all because they had responsibilities that required on-site work. However, while the work could be done remotely, the study noted that it did not account for whether workers would prefer remote or hybrid work. Green pointed out that some of the factors causing challenges to working from home, such as caregiving, may subside, resulting in more academic library workers being interested in remote or hybrid work. Additionally, Green highlighted that "some employees may not have the option of working remotely—because of local policies, reporting structures, or political options—even when it is technologically feasible" (p. 9). This suggests a need to balance individual preferences with organizational approaches that best serve library users.

In addition to understanding approaches from the library workers themselves, a study in fall 2020 highlighted how administrators' approaches influenced changes to library work and worker location (Hosoi et al., 2021). This study highlighted that flexible work arrangements (FWAs) before the COVID-19 pandemic were often couched as pilots or experiments; during the pandemic many institutions standardized their policies and libraries adopted their use more regularly. While 52% of those interviewed had flexible work arrangement institutional policies prior to COVID-19, they were used as exceptions rather than as standard practice. Hosoi et al. found that nearly one third of the directors noticed an increase of productivity from remote workers. The overwhelming majority (77%) of those interviewed thought that flexible work would increase in the future and pointed to the rationale that it would help with recruitment, retention, and with location/commute issues.

A recent study of work modality practices and preferences of academic library workers found that over three-quarters of nearly 1,000 respondents had the option for remote/hybrid work on a regular basis (Green, 2023). While most (9%) were not working remotely every day, 50% worked remotely one or two days per week and during certain times of the year. Some preferences expressed for increased acceptance of remote work included: flexible schedules for caregiving, better work-life balance, and avoiding commutes. The study also noted various rationales for on-site work, such as attendance at events, doing site-specific work, connecting with colleagues in person, and participating in workplace social events. Recommendations were provided to better support all workers included offering multiple options for attending meetings, training for supervisors managing the work of multi-modal employees, and flexible evaluation metrics to ensure productive and accountable workers.

As libraries continue to grapple with remote work, particularly in those instances where institutions are not setting campus-wide policies, clarity and training for managers will be essential. A recent (2022) book on practical tips for remote library workers included several questions for facilitating discussion with hybrid or remote employees, such as: "are there aspects of any role that cannot or should not be done remotely?" "What tools, resources, and strategies will library employees need to work effectively?" and "How will remote work affect the culture and collaboration among the library as a whole and the department the remote employee is in?" (Virello, p. 2). Similar to Green, Virello noted that remote work should not take a one-size-fits-all approach and instead should be based both on the specific job requirements and the individual that inhabits the position.

Job Advertisements Within LIS

Research on job advertisements in library and information sciences has been used to monitor current or historic recruitment trends (Triumph & Beile, 2015; Wise et al., 2011; Xia & Wang, 2014; Yadav, 2022); to track changes to job specifications for particular sub-disciplines within the field (Croneis & Henderson, 2002; Eclevia et al., 2019; Han & Hswe, 2010; Reed & Butkovich, 2017; Xia & Wang, 2014); or to capture emerging areas within librarianship (Kim et al., 2013; Plassche, 2022; Todorinova, 2018). While job postings represent current needs within a particular organization, they also highlight the language used to describe the changing nature of work within the field.

Hybrid and remote work have been studied using job advertisements. Petersen gathered job postings for medical libraries from MEDLIB-L (2023) to compare changes to job ads from pre-pandemic (2018-2019) to post-pandemic (2021-2022). This study found a 16% increase of flexible work arrangements listed in postings between the two time periods. Use of the words "hybrid" or "remote" in the job ad itself also increased. While the study's sample size was small, its findings highlighted emerging changes in library organizations' recruitment strategies.

Similarly, two meta-analyses examined job advertisement research methods. Recommendations included using a sample of more than 100 job advertisements, clearly articulating research questions, detailing methodologies used to support reproducibility, and disclosing limitations (Harper, 2012; Kim & Angnakoon, 2016).

Methodology

For this study, the authors collected job advertisements posted between February and June 2023. Job listings were found on the American Library Association's JobLIST and listservs such as eluna-announce and OhioLINK. For the purposes of this study, we defined the following terms:

- Remote: A work schedule that can be done entirely off-site; immediately or after an on-site training/orientation period.
- Hybrid: A work schedule that includes both off-site and on-site work hours, with 20% of the year or more off-site; immediately or after an on-site training/orientation period.
- On-site: A work schedule that is entirely or almost entirely on-site; off-site eligibility must be less than 20% of the year.
- Librarians: Positions requiring MLS/MLIS/MIS degree from an ALA accredited program (or international equivalent).

The criteria for inclusion were that positions had to be posted by a higher education insti-

tution in the United States and require a master's degree accredited by the American Library Association (or international equivalent). Dean, associate/assistant dean and library director positions were excluded from the study because such hires would likely have considerable autonomy in setting their schedule, might report to someone outside of the library, and would potentially have a smaller likelihood of remote work due to the nature of work and campus level commitments. The position descriptions collected varied from entry level positions to those requiring multiple years of experience, and they spanned many sub-disciplines within libraries. The authors worked to gather as many job advertisements as possible, but aimed for "a minimum sample of 100 job adverts," as recommended by Harper (2012, p. 47).

Due to the temporary nature of job advertisements, all listings were downloaded and saved. The authors used a spreadsheet to track relevant data including institution, position title, and salary information. When advertisements listed a person or position title to whom the position would report, the authors gathered and tracked that person's name and email address. If no contact was listed, the authors found the person who seemed most appropriate from library websites using organizational charts, when available, or by contacting HR representatives listed in the job ad. In the end, the authors identified 141 individuals from 129 unique institutions, as some institutions posted more than one position during the time researchers were gathering positions. While the researchers initially tracked whether job postings included hybrid, remote, or on-site work arrangements, the categorizations on ALA's JobList (e.g., On-Site, Hybrid, Remote) often contradicted the wording in job postings, so this variable was gathered from survey responses instead.

Meanwhile, the authors created the survey instrument based on their research questions. Once drafted, the survey questions were reviewed by two academic librarian colleagues. After the reviewers' suggestions were incorporated, the survey was distributed to two different colleagues at the researchers' own institutions for a final review. Once complete, the survey (see Appendix A) was distributed in early June 2023 and remained open for approximately a month, closing on July 10, 2023. To encourage participation, initial emails and reminders were personalized with the supervisors' names, the institution and the title of the advertised position.

Demographic Profile of Institutions

Of the 141 surveys distributed, there were 72 deduplicated responses (51% response rate). Respondents were given the option of including their institution name or keeping the anonymity of their employer and answering three questions about their Carnegie Classification in these categories: Basic Classification, Size and Setting, and Control (Indiana University Center for Postsecondary Research, n.d.). Most (64, or 89%) provided their institution name while eight (11%) provided Carnegie information. Of the 64 respondents who provided their institution name, three institutions were represented twice (due to different open positions at the same universities with different respondents), resulting in 61 unique institutions; it is unknown whether the additional eight responses were from unique institutions or whether there was some overlap.

Although there were 72 responses, only demographic questions required a response. In addition, skip logic was used, which means that participants did not see all survey questions, but only those relevant to them based on their prior responses, often resulting in fewer than 72 responses per question. In some cases, participants were directed to select all answers that applied, resulting in higher totals than respondents answering a question. Therefore, within

the results, the response numbers for each question are noted. Additionally, due to rounding, percentages provided may not add up to 100.

For this study, most institutions (46, or 64%) were public, while 26 (36%) were private not-for-profit. One was a two-year associate's degree granting institution while 71 (99%) were four-year institutions.

Size and Setting

Carnegie classification differs for four-year and two-year institutions. Two-year institutions do not have residential characteristics and the numbers used for size differ. Because of this, the single two-year institution was removed from the size and setting analysis, as was a respondent who did not provide this information. Of the 70 remaining four-year institutions, 27 (39%) were highly residential; 30 (43%) were primarily residential; and 13 (19%) were primarily nonresidential. Large institutions (i.e., at least 10,000 degree-seeking students) represented the majority of responses (41, or 59%), while medium institutions (i.e., 3,000–9,999 students) and small/very small institutions (i.e., fewer than 3,000 students) were almost equally represented (15, or 21% and 14, or 20%, respectively).

For some Carnegie classifications, there were not enough responses to consider all categories separately, so categories were simplified. For example, there were nine "Baccalaureate Colleges: Arts & Sciences Focus" institutions and one "Baccalaureate Colleges: Diverse Fields" institution; these were combined into one Baccalaureate Colleges classification with ten institutions (n = 70; 14%). Master's Colleges & Universities had 13 institutions (19%) and Doctoral Universities had 47 (67%). Because of the small numbers of baccalaureate and master's colleges and universities, these institutions were combined into one non-doctoral category for statistical analysis.

When asked whether librarians have faculty status at their institution, 37 (n = 72; 51%) said "yes, all have faculty status;" seven (10%) said "yes, some have faculty status;" and 28 (39%) said "no."

Respondents were asked a question about tenure/continuing appointment eligibility at their institution, and could select all responses that applied, including "other." In some cases, the researchers recoded answers based on the responses to "other." For example, one respondent selected solely "other" and explained: "Faculty librarians are eligible for tenure; staff librarians are eligible for permanent appointment as we are a state institution." This "other" response was changed to "Some are eligible for tenure," and "some are eligible for continuing appointment." See Table 1 for results excluding "other" responses.

TABLE 1
Are Librarians Eligible for Tenure or Continuing Appointment at Your Institution? (n = 66)

	Tenure	Continuing Appointment	Tenure AND/OR Continuing Appointment
Yes, all	13 (19.7%)	17 (25.8%)	29 (43.9%)
Yes, some	11 (16.7%)	5 (7.6%)	14 (21.2%)
No	42 (63.6%)	44 (66.7%)	23 (34.8%)

Results

Survey responses included two types of data: quantitative (i.e., multiple choice) and qualitative (i.e., text responses). Fisher's exact test was used to explore associations between types

of classifications, since it can be applied to data in a two-by-two table is "especially useful when the total sample size or some of the expected values are small so that the chi-square test cannot be used." (Colman, 2015) The demographic characteristics of basic classification, size and setting, control, and tenure/continuing appointment eligibility were run as independent variables and compared to the responses as dependent variables. Only statistically significant results are included here.

Flexible Work Arrangements for Librarians at Institution

Respondents were asked whether hybrid and/or remote options were available for full-time librarians within their library, and most of the 46 who answered the question said yes (see Table 2). Several respondents indicated that FWAs impacted morale, both negatively when not available equally to all employees, and positively as a relatively new benefit.

TABLE 2
Eligibility for Hybrid/ Remote Work

	Frequency	Percent
Yes, all are eligible for hybrid and/or remote work	19	41.3
Some are eligible for hybrid and/or remote work, but not all	13	28.3
No, no one is eligible for hybrid and/or remote work	14	30.4
Total	46	100

Most (46, n = 58; or 64%) respondents' institutions adopted hybrid and/or remote work options for librarians during or after March 2020, the COVID-19 period. Only 12 (n = 58, 17%) had flexible work arrangements before the onset COVID-19, a difference as compared to Hosoi et al.'s findings from ARL directors where 52% indicated FWA availability prior to the pandemic (2021).

The results of three separate Fisher's exact tests indicate significant associations between hybrid and/or remote work arrangements and Doctoral institutions (p = .001), large institutions (p = .002), and those offering continuing appointment (p = .05). These three demographic classifications are more likely to have hybrid and/or remote work arrangements available than their counterparts. See tables 3, 4, and 5 in Appendix B.

Salaries

The researchers analyzed all 141 position descriptions gathered, and those results, in addition to respondents' answers regarding salaries, are provided here. Of all the job advertisements gathered, 81 (n = 141, 57%) included salaries or information about salary scales that outlined specific ranges. The minimum starting salaries were used for analysis. For this larger group, the minimum salary mean was $63,994 and the median was $60,116. Due to the wide variability of entry level to senior management positions and geographic locations, the minimum starting salaries varied widely, from $29,861 to $156,000.

Survey respondents were asked whether they included a salary range, maximum, or minimum in their job description. For identifiable institutions, the response to this question was used to cross reference salaries and add the minimum salary listed in the job description as a variable for analysis. There were nine instances where respondents' answers did not

match the information found in position descriptions. The researchers created a researcher-confirmed variable that recoded the nine responses that did not match the information found in the posted positions. Many positions (43, n = 72, or 60%) included a salary. For the 40 institutions (n = 43) whose positions were identifiable, the mean salary was $62,889 and the median salary was $60,658.

The results of Fisher's exact test indicate a significant association (p = .026) between library size (i.e., large vs. not large) and inclusion of a salary in job description. Large libraries were more likely to include a salary (see Table 6 in Appendix B). Moreover, positions and libraries with hybrid/remote eligibility had higher minimum salary means than those without stated flexible work arrangements, based on survey responses (see table 7).

TABLE 7
Salary Minimum Means by Hybrid/Remote Work Questions (Rounded to Nearest Dollar)

	Yes	No	Total
Is this position eligible for hybrid or remote work?	$60,542 (n = 20)	$57,522 (n = 10)	$59,535 (n = 30)
Are hybrid and/or remote options available for full-time librarians in your library?	$66,039 (n = 21)	$61,624 (n = 7)	$64,935 (n = 28)

Flexible Work Arrangements

Next, respondents were asked whether their posted position was eligible for hybrid or remote work. Hybrid positions were in the majority (see Table 8).

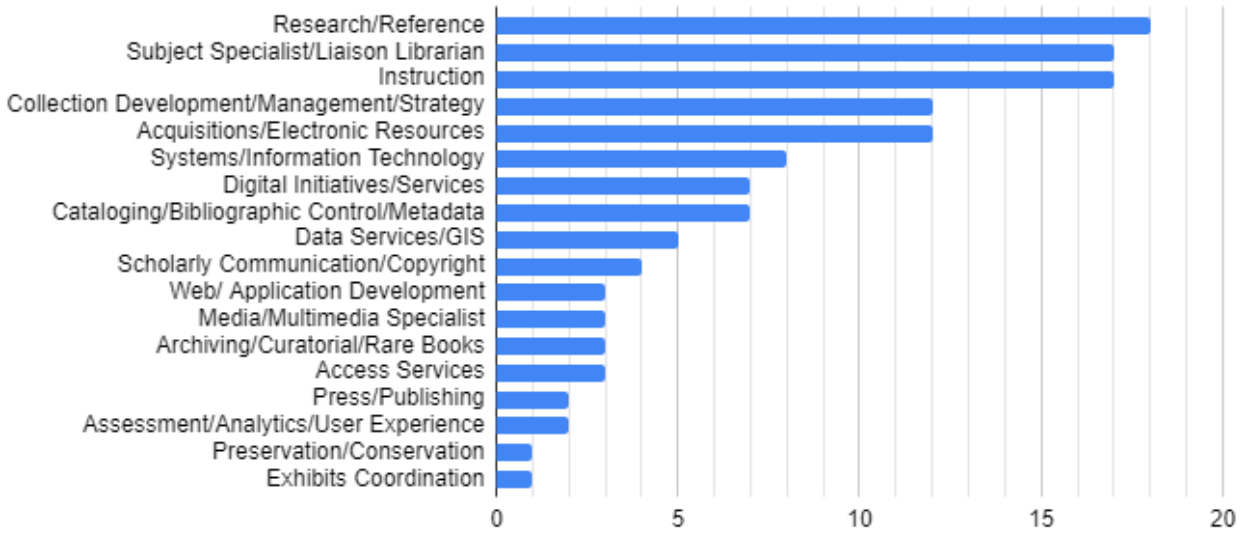
TABLE 8
Position Eligible for Hybrid or Remote Work

	Frequency	Percent
Yes, hybrid (remote 20% of the year or more)	36	50.7
Yes, remote	1	1.4
Negotiable	13	18.3
No	21	29.6
Total	71	100

Those who indicated their open position was hybrid, remote, or negotiable were asked two follow-up questions. The first, "Does this position require an on-site training/orientation period?" received 49 responses. Ranked by frequency, the responses were "Yes, mostly on-site" (22, or 45%), "Yes, entirely on-site" (16, or 33%), "Other" (8, or 16%), and "No" (3, or 6%). Most of the other responses indicated it was unknown, unspecified, or dependent on various factors. The second follow-up question asked if there were limitations on where the hybrid/remote employee can live. There were 41 responses: "Other" (18, or 44%), "Yes, same state" (11, or 27%), "No" (10, or 24%), and "Yes, same country" (2, or 5%). Eleven of the other responses explained that the employee must be proximate, but no specific geographic limiter was specified.

To identify positions' areas of responsibility, respondents were provided with a list of areas of work within academic librarianship, modified from the ARL Annual Salary Survey (2021), and asked to select all applicable areas. For 71 positions, the 18 position areas were represented 125 times, with between one and five subjects provided per position (see figure 1).

FIGURE 1
Frequency of Position Area Categories



For areas with at least five associated positions, the researchers looked at hybrid/remote eligibility (see figure 2). In these responses, Cataloging/Bibliographic Control/Metadata positions were the least likely to be eligible for hybrid/remote work (1, n = 7; or 14%) and Acquisitions/Electronic Resources positions were most likely to have these flexible work arrangements (8, n =12; or 67%, with one of the four remaining positions being negotiable).

The statistically significant results related to flexible work arrangements for the posted positions were similar to the results for library-wide arrangements. Two Fisher's exact tests indicated that Doctoral (p = .024) and large (p = .011) institutions' posted positions were more likely to provide hybrid/remote work arrangements than their counterparts. See Tables 9 and 10 in appendix B.

Inclusion of Hybrid or Remote Eligibility or an On-Site Requirement in Position Description

All survey participants were asked whether they included information about hybrid/remote eligibility or ineligibility in their position description; most did not (see Table 11).

When answers to this question were compared against whether a position was hybrid-eligible or fully on-site, responses revealed that information about work location arrangements was slightly more likely to be included for hybrid positions (16, n = 35; or 46%) than on-site positions (7, n = 21; or 33%). Interestingly, two thirds (27, n = 41) of respondents who answered that they did not include work arrangement information in their job descriptions indicated that hybrid (18), remote (1), or negotiable (8) work options were available.

FIGURE 2
Hybrid/ Remote Eligibility by Position Area

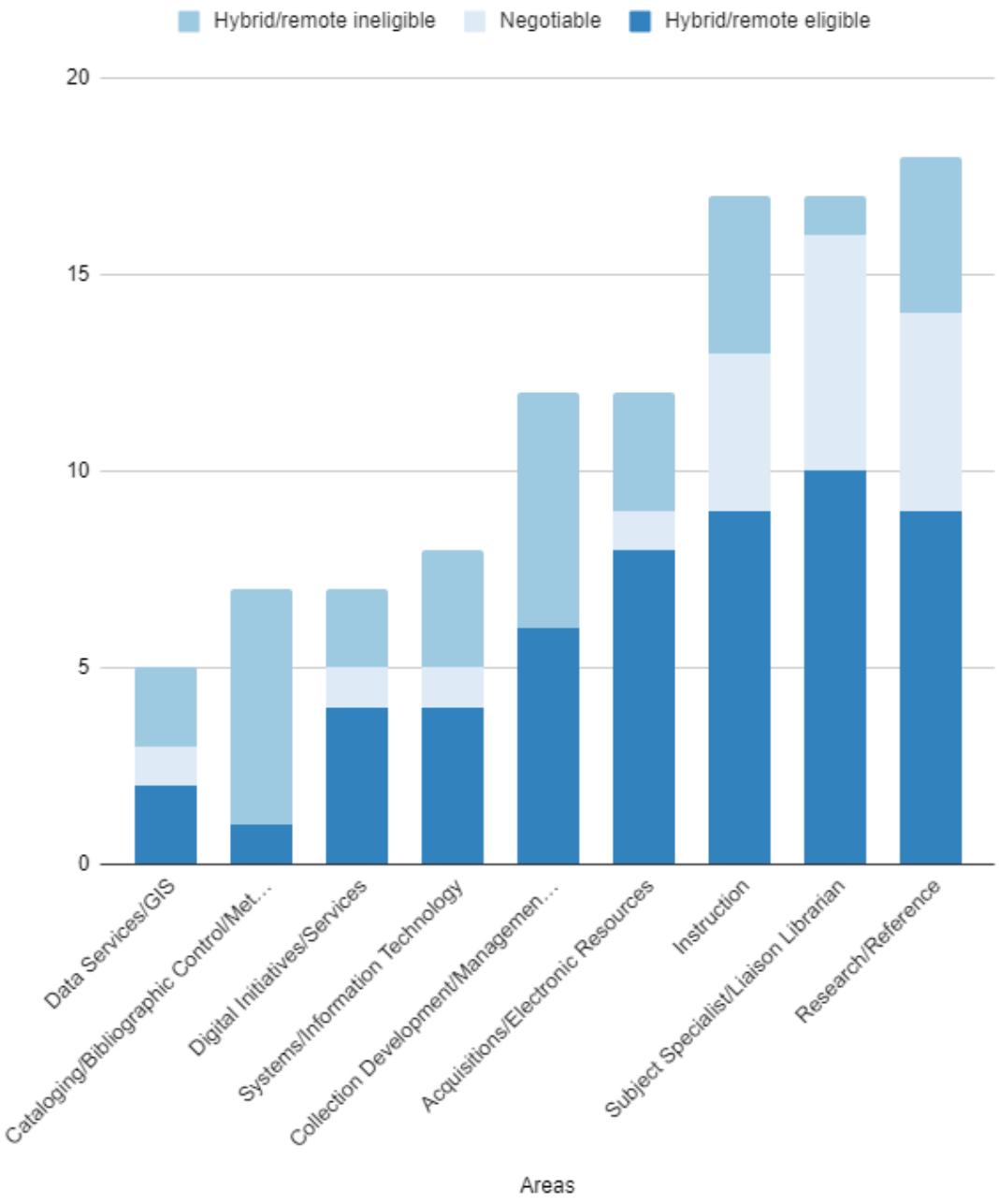


TABLE 11
Did You Include Hybrid and/or Remote Eligibility or an On-Site Requirement in Your Job Description?

	Frequency	Percent
Yes, included hybrid and/or remote eligibility	19	27.5
Yes, included on-site requirement	9	13.0
No	41	59.4
Total	69	100

The 19 respondents who indicated that they included hybrid/remote eligibility in their job descriptions were asked whether they included this information in hopes of increasing the competitiveness of their pool. More than three quarters responded affirmatively (15, n = 19; or 79%). Only two (11%) said no, one (5%) said it was not discussed, and the last person selected "other" and commented, "Not sure, but probably helped." This same group was asked when they started to note hybrid and/or remote eligibility in job descriptions, pre- or post-COVID, and all 11 who answered said post-COVID.

Likewise, the nine respondents who indicated their job descriptions noted an on-site requirement were asked whether their organization was concerned that including this information might result in a less competitive candidate pool. Three (33%) said yes, two (22%) said no, two (22%) said it was not discussed, and the remaining two responded "other" and commented:

- "No, but they should have been. We received only three applicants, none of whom were qualified. We're going to have to re-advertise" (Public, Large, Doctoral High Research Activity, Primarily Residential).
- "Individuals are concerned, but the institution is not" (Public, Large, Doctoral Very High Research Activity, Primarily Residential).

The group of 41 that did not include hybrid eligibility/ ineligibility in their postings were asked if they considered including this information and 23 responded. Most (13, n = 23; or 57%) indicated they did not discuss the choice while four (17%) did. Six responded "other" and provided further context:

- "We did consider it briefly, but this position is heavily public-service oriented. And, barring any bigger policy or support from Human Resources, we didn't include any language in the job description" (Private, Small, Baccalaureate Arts & Sciences, Highly Residential).
- "Although hybrid is an option—it is only hybrid in 'working from home.' Since there is still an expectation of at least 60% of time spent on campus, and because this is a teaching position with in-person teaching, candidates would still need to live within driving distance of campus. Marketing it as hybrid seemed a bit of false advertising" (Public, Large, Doctoral High Research Activity, Primarily Nonresidential).

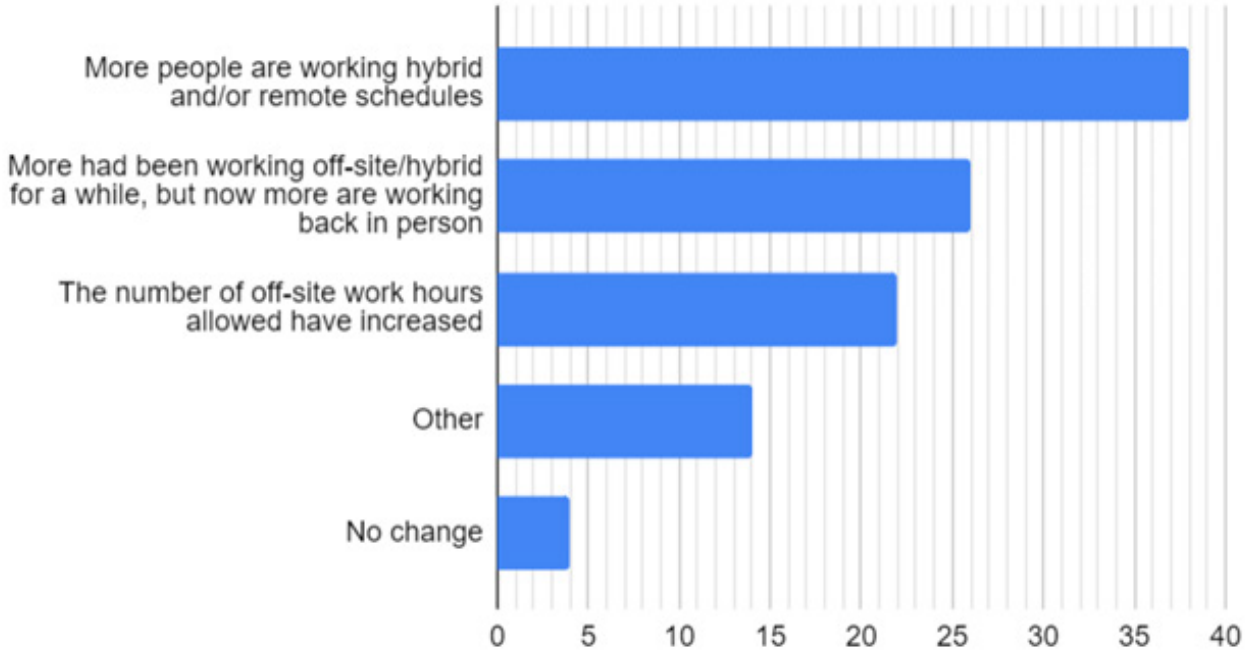
This same group was asked whether they considered that including this information might affect the competitiveness of their pool. Only seven out of 31 respondents (23%) said yes. Most did not discuss this.

The survey closed with a series of general questions for all respondents. When asked how hybrid/remote work arrangements have changed at their institutions since the pandemic and presented with five options, including "other," and directed to select all that apply, 69 people responded with 104 areas of change (see figure 3).

Some of the "other" responses included:

- "We are 100% back in person [at all of our library locations]" (Public, Medium, Doctoral High Research Activity, Primarily Residential).
- "While library faculty have always had the flexibility for remote work, now all library employees can work remotely at least one day a week. The model is working so well that we are considering increasing the number of days individuals are eligible to work remotely" (Private, Large, Doctoral Very High Research Activity, Highly Residential).
- "Change of library leadership since COVID-19 resulted in more openness to allowing library staff to work hybrid schedules" (Private, Small, Baccalaureate Arts & Sciences, Highly Residential).

FIGURE 3
Frequency of Changes Since COVID-19



Discussion

In response to our research questions we found that salaries for hybrid/remote positions and on-site positions are roughly comparable. A recent study with an admittedly small sample size, found that "salaries for remote/hybrid positions did not appear to be less than in-person postings." (Peterson, 2023) Our study, although it also had a relatively small sample size, replicated this finding. Large research institutions were more likely to post salaries within the job advertisements.

For research question two, Figure 2 highlights the differences between hybrid/remote eligibility based on job functions; yet the sample size of our respondents may not make this more widely generalizable. In this study, hybrid options were much more prevalent than fully remote positions. Furthermore, several qualitative comments noted that individuals were expected to be in person at least two days a week, which limits some flexibility in where individuals can live as they would need to commute into campus.

The two areas of most interest from survey responses focused on the recruitment impact of including/excluding FWAs in job descriptions as well as a theme around the evolving nature of hybrid/remote work options and their uneven reflection in job advertisements. Some of the hindrances to include information about hybrid/remote work in eligible job postings included stasis, campus requirements, and concerns about the permanence of flexible work arrangements. These areas will be discussed in greater detail.

Recruitment Impact

One of this study's research questions (RQ5) was "Does the potential impact on recruitment influence decisions regarding whether to include work arrangement information in academic librarian job descriptions?" and a series of both quantitative and qualitative questions ad-

dressed this topic. Respondents who included hybrid/remote eligibility (15, n = 19) considered that this would positively impact the competitiveness of their pool, but most (13, n = 23) who did not include information about workplace flexibility did not consider its impact on the recruitment. It is worth noting that two thirds (27, n = 41) of respondents who answered that they did not include work location in their job descriptions either offer hybrid/remote options or are open to negotiation. Therefore, academic libraries that allow flexible work arrangements should consider adding it to job postings to attract applicants. Open-ended responses supported this idea:

- "No remote option is, increasingly, going to translate into reduced applicant pools" (Public, Large, Doctoral High Research Activity, Highly Residential).
- "Once there was an official [work from home] option, my department discussed how best to integrate it so that we continue our work. Adding it to this job (and others) was seen as a way to hopefully drive more interest in the positions since it's seen as a benefit" (Private, Large, Doctoral Very High Research Activity, Highly Residential).
- "I strongly believe that including hybrid and/or remote eligibility/ineligibility in job descriptions to attract competitive candidates have changed considerably. It is important to include some hybrid/remote work in librarianship and management positions" (Public, Medium, Doctoral Very High Research Activity, Primarily Nonresidential).

Evolving Nature of Remote/Hybrid Work and Job Advertisements

One of the lasting impacts of the pandemic is that about half of all positions now have hybrid or remote eligibility, according to both ACRL Benchmark data (2022) and the responses related to posted positions from this study. Libraries in doctoral and large institutions are leading the way in this area. Why do some academic libraries leave FWAs out of job postings? These findings show that many library search committees do not discuss whether to include this information when recruiting. It is conceivable that positions are posted with a pre-COVID template, hiring managers are revising an existing position description, or otherwise just are not considering workplace modality during recruitment. Some responses indicate that institutional policies have been a barrier:

- "Institutionally, hybrid and/or remote eligibility has not been included in job descriptions. This summer, the college passed a first-ever work from home policy, so future discussions about including this information in job descriptions may evolve. With our current opening, we did share with candidates during the interview process that this policy was forthcoming, as we felt it might entice some candidates when considering work/life balance" (Private, Very Small, Baccalaureate Arts & Sciences, Highly Residential).
- "I always appreciate seeing positions that have been thoughtfully designed to be remote-eligible. However, my institution does not permit it for these positions." (Public, Medium, Master's, Primarily Residential).

Others pointed to the evolving nature of institutional policies about working from home. Some comments indicated concerns about including a benefit in a job posting that is not guaranteed to last:

- "At this time technically anyone can be eligible to work from home, but HR requires people to apply and approves or doesn't approve them on a case by case basis. I tell candidates the position is eligible for work from home (probably 1 or 2 days a week if non-faculty librarian) after a probation period, but that the university might cancel the

work from home policy at any time or deny it in their specific case and I can't guarantee it will be an option when they come off probation, or even tomorrow" (Public, Large, Doctoral High Research Activity, Primarily Residential).

The future state of flexible work arrangements seems mixed in libraries' application. As Hosoi et al. note, ARL directors believe there will be more flexibility in the future (2021), yet individual campuses have taken drastically different approaches, with some giving no option for remote work. Overall, campus-wide policies are informing many library approaches, though interpretation and implementation is still evolving, even on campuses where FWA policies have been adopted. Due to this wide variability, job seekers should ask or negotiate hybrid/flexible/remote work schedules when pursuing new employment opportunities, particularly when the work mode is not specified in the job advertisement.

In addition, some respondents indicated there was more nuance for work modality than could be listed in job advertisements. One respondent stated that, "it makes it harder for folks searching for truly 100% remote eligible jobs" (Public, Large, Doctoral High Research Activity, Primarily Nonresidential). Eligibility of positions for flexible work arrangements, an important factor for both retention of existing employees and recruitment of new employees, is often challenging to locate, may be available at an institutional level or at a library organization level, or may be negotiable by position. Therefore, recruitment success as it relates to hybrid/remote eligibility noted in job advertisements would be an excellent future area of research.

Study Limitation

This study would have benefitted from a larger sample size to allow wider applicability at different types of institutions. The authors gathered position postings for three and a half months; a more expansive study would require a longer lead period, which might make tracking down information about older positions more challenging. Given that results related to hybrid/remote eligibility and inclusion of FWAs in job postings align with ACRL 2022 trends responses, there is reason to believe that these 72 responses are representative of academic libraries in the United States.

Conclusion

In comparing hybrid and remote eligibility from survey results with salary minimums posted in job ads, this study's authors found that hybrid/remote eligible positions had competitive salaries with solely in-person positions. In examining differences between hybrid/remote and on-site arrangement by job functions, some types of positions, such as electronic resources, had more hybrid/remote eligibility than others; however, due to a small sample size, this may not be generalizable. Large, research-intensive institutions were more likely than other types of institutions to post salary information and indicate whether hybrid/remote options were possible.

When posting job advertisements, those that included hybrid/remote eligibility were more likely to have considered the influence on recruitment than those who omitted workplace modality. While the majority of this survey's respondents did not include hybrid/remote options in the job description, two thirds of those indicated that some flexible work was possible. As recruiters in library and information science in a post-COVID-19 pandemic environment, it has become more prevalent to allow greater flexibility in work location and therefore if allowable for the position, it should be noted in the job description to recruit the most robust search

pool. As with many studies of job advertisements, this work seeks to capture a snapshot in time of changing policies and approaches following the COVID-19 pandemic.

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Appendix A: Survey Instrument

Definitions

Remote: A work schedule that can be done entirely off-site; immediately or after an on-site training/orientation period

Hybrid: A work schedule that includes both off-site and on-site work hours, with 20% of the year or more off-site; immediately or after an on-site training/orientation period

On-site: A work schedule that is entirely or almost entirely on-site; off-site eligibility must be less than 20% of the year.

Librarians: Positions requiring MLS/MLIS/MIS degree from an ALA accredited program (or international equivalent).

Continuing appointment: Similar to tenure, continuing appointment is awarded after a probationary period and provides job security in recognition of performance and potential.

*required

Institutional Information

1. *What is the name of your institution? If you're on a branch campus, please include the campus location. This information will be used to pull Carnegie Classification information and will NOT be used to identify you or your institution in the published results- aggregate data are all that will be reported. [radio buttons]
    - ○ If you prefer not to answer this question, please select this option and you will be taken to three questions regarding your Carnegie Classification.

Institution (including branch) name: [Jump to question "Do librarians have faculty status at your institution?"]

[If responded "If you prefer not to answer this question, please select this option and you will be taken to three questions regarding your Carnegie Classification." to the Institution name question, they will see questions below. Those who provided the institution name will skip these questions.]

Carnegie Classification Information

In the questions below, please provide your institution's Carnegie Classification information, found here.

2. Basic Classification: [text]
3. Size and Setting Classification: [text]
4. Institutional Control:
    - ○ Public
    - ○ Private not-for-profit
    - ○ Private for-profit

[Jump to question "Do librarians have faculty status at your institution?"]

5. Do librarians have faculty status at your institution?
    - Yes, all
    - Yes, some
    - No
6. Are librarians eligible for tenure or continuing appointment at your institution? (select all that apply)
    - Yes, all are eligible for tenure
    - Yes, all are eligible for continuing appointment
    - No, neither tenure nor continuing appointment
    - Some are eligible for tenure, but not all
    - Some are eligible for continuing appointment, but not all
    - Other (please explain)
7. Are hybrid and/or remote options available for full-time librarians within your library?
    - Yes, all are eligible for hybrid and/or remote work
    - Some are eligible for hybrid and/or remote work, but not all
    - No, no one is eligible for hybrid and/or remote work [if no, jump to "Which area best describes your open…"]

[If responded "Yes, all are eligible for hybrid and/or remote work" or "Some are eligible for hybrid and/or remote work, but not all" to "Are hybrid and/or remote options available for full-time librarians within your library?]

8. When did your library adopt hybrid and/or remote work options for librarians?
    - During or after March 2020 (Covid-19 period)
    - Before March 2020 (pre-Covid-19 period)

Open Position Questions

For the next section, all of the questions relate to the vacant/open position you were contacted about for this survey.

9. Which area best describes your open position's area of work in your academic library? (select all that apply)
    - Access Services
    - Acquisitions/Electronic Resources
    - Archiving/Curatorial/Rare Books
    - Assessment/Analytics/User Experience
    - Cataloging/Bibliographic Control/Metadata
    - Collection Development/Management/Strategy
    - Data Services/GIS
    - Digital Initiatives/Services
    - Exhibits Coordination
    - Instruction
    - Media/Multimedia Specialist
    - Preservation/Conservation
    - Press/Publishing
    - Research/Reference
    - Scholarly Communication/Copyright
    - Subject Specialist/Liaison Librarian

- Systems/Information Technology
- Web/ Application Development
- Other (please explain)

10. Did you include a salary range, maximum, or minimum in your job description?
    - Yes
    - No
11. Is this position eligible for hybrid or remote work?
    - Yes, hybrid (remote 20% of the year or more)
    - Yes, remote
    - Negotiable
    - No [if no, jump to "Did you include a hybrid and/or remote eligibility or an on-site requirement in your job description?"]

[If responded Yes (either hybrid or remote) or Negotiable to "Is this position eligible for hybrid or remote work?]

12. Does this position require an on-site training/orientation period?
    - Yes, entirely on-site
    - Yes, mostly on-site
    - No
    - Other (please explain)
13. If remote/hybrid work is supported, are there limitations about where the employees can live?
    - Yes, same state
    - Yes, same country
    - No
    - Other (please explain)
14. Did you include hybrid and/or remote eligibility or an on-site requirement in your job description?
    - Yes, included hybrid and/or remote eligibility
    - Yes, included on-site requirement
    - No

[If responded "Yes, included hybrid and/or remote eligibility" to "Did you include hybrid and/or remote eligibility or an on-site requirement in your job description?"]

15. Was your organization's decision to include hybrid and/or remote eligibility in your job description related to generating a more competitive candidate pool?
    - Yes
    - No
    - Did not discuss
    - Other (please explain)
16. What other considerations led to including this position's hybrid and/or remote eligibility in your job description?

    [Text box]
17. When did your library begin to note hybrid and/or remote eligibility in job descriptions?
    - During or after March 2020 (Covid-19 period)
    - Before March 2020 (pre-Covid-19 period)

[If responded "Yes, included on-site requirement" to "Did you include hybrid and/or remote eligibility or an on-site requirement in your job description?"]

18. What considerations led to including this position's on-site requirement in your job description?

[Text box]

19. Was your organization concerned that including the on-site requirement in your job description might result in a less competitive candidate pool?
    - ○ Yes
    - ○ No
    - ○ Did not discuss
    - ○ Other (please explain)

[If no to "Did you include hybrid and/or remote eligibility or an on-site requirement in your job description?"]

20. Did your organization consider that including hybrid/remote eligibility or an on-site requirement in your job description might result in a more/ less competitive candidate pool?
    - ○ Yes
    - ○ No
    - ○ Did not discuss
    - ○ Other (please explain)
21. Did your library consider including the position's hybrid and/or remote eligibility/ ineligibility in your job description?
    - ○ Yes
    - ○ No
    - ○ Other (please explain)

[General Questions for all participants]

22. How have remote/hybrid work options changed at your institution since COVID? (select all that apply)
    - ○ More people are working hybrid and/or remote schedules
    - ○ The number of off-site work hours allowed have increased
    - ○ More had been working off-site/hybrid for a while, but now more are working back in person
    - ○ No change
    - ○ Other (please explain)
23. How have your thoughts about including hybrid and/or remote eligibility / ineligibility in job descriptions evolved?

[text box]

24. If you have any comments regarding any of the topics covered in this survey, please share them here:

[text box]

25. If you would like to receive the results of this survey (with identifying information removed), please provide your email address.

[text box]

Appendix B: Tables of Statistical Significance

TABLE 3
Are Hybrid and/or Remote Options Available for Full-Time Librarians Within Your library? Simplified (Yes or No) by Doctoral/ non-Doctoral Carnegie Classification

		Doctoral Universities	Non-Doctoral Universities	Total
Yes, some/all are eligible for hybrid and/or remote work	Count	26	5	31
	Expected Count	21.1	9.9	31
	% of column	86.7%	35.7%	70.5%
No, no one is eligible for hybrid and/or remote work	Count	4	9	13
	Expected Count	8.9	4.1	13
	% of column	13.3%	64.3%	29.5%
Total		30	14	44
Fisher's Exact Test, Exact Sig. (2-sided), p = .001				

TABLE 4
Are Hybrid and/or Remote Options Available for Full-Time Librarians Within Your library? Simplified (Yes or No) by Institution Size (Large or Not Large)

		Large Institutions	Not Large (Medium and Small) Institutions	Total
Yes, some/all are eligible for hybrid and/or remote work	Count	24	8	32
	Expected Count	19.2	12.8	32
	% of column	88.9%	44.4%	71.1%
No, no one is eligible for hybrid and/or remote work	Count	3	10	13
	Expected Count	7.8	5.2	13
	% of column	11.1%	55.6%	28.9%
Total		27	18	45
Fisher's Exact Test, Exact Sig. (2-sided), p = .002				

TABLE 5
Are Hybrid and/or Remote Options Available for Full-Time Librarians Within Your library? Simplified (Yes or No) by Continuing Appointment Eligible

		Yes, all or some are eligible for continuing appointment	No	Total
Yes, some/all are eligible for hybrid and/or remote work	Count	15	16	31
	Expected Count	12	19	31
	% of column	88.2%	59.3%	70.5%
No, no one is eligible for hybrid and/or remote work	Count	2	11	13
	Expected Count	5	8	13
	% of column	11.8%	40.7%	29.5%
Total		17	27	44
Fisher's Exact Test, Exact Sig. (2-sided), p = .05				

TABLE 6
Did you include a salary in your job description? (Researcher Confirmed) by Institution by Size (Large or Not Large)

		Large Institutions	Not Large (Medium and Small) Institutions	Total
Yes	Count	29	12	41
	Expected Count	24	17	41
	% of column	70.7%	41.4%	58.6%
No	Count	12	17	29
	Expected Count	17	12	29
	% of column	29.3%	58.6%	41.4%
Total		41	29	70
Fisher's Exact Test, Exact Sig. (2-sided), p = .026				

TABLE 9
Is This Position Eligible for Hybrid or Remote work? Simplified (Yes or No) by Doctoral/non-Doctoral Carnegie Classification

		Doctoral Universities	Non-Doctoral Universities	Total
Yes, hybrid or remote eligible	Count	26	10	36
	Expected Count	21.9	14.1	36
	% of column	76.5%	45.5%	64.3%
No	Count	8	12	20
	Expected Count	12.1	7.9	20
	% of column	23.5%	54.5%	35.7%
Total		34	22	56
Fisher's Exact Test, Exact Sig. (2-sided), p = .024				

TABLE 10
Is This Position Eligible for Hybrid or Remote work? Simplified (Yes or No) by Institution by Size (Large or Not Large)

		Large Institutions	Not Large (Medium and Small) Institutions	Total
Yes, hybrid or remote eligible	Count	25	12	37
	Expected Count	20.1	16.9	37
	% of column	80.6%	46.2%	64.9%
No	Count	6	14	20
	Expected Count	10.9	9.1	20
	% of column	19.4%	53.8%	35.1%
Total		31	26	57
Fisher's Exact Test, Exact Sig. (2-sided), p = .011				

"At Least One Peer Reviewed Paper by Graduation": An Analysis of Pre-Graduation Publication by Post-Baccalaureate Graduate Students

LeEtta Schmidt and Jason Boczar

This study examines the prevailing debates surrounding pre-graduation publishing and investigates the frequency of graduates including previously published material in a thesis or dissertation at one university. The goal of the study was to ascertain where library services outreach could best be targeted to help thesis and dissertation writing graduates with information on author rights and copyright. The results indicate that less than 15% of departments have a degree program that requires scholarly publishing prior to graduation. A quantitative analysis showed that 45% of submitted theses and dissertations included wording that indicated the presence of previously published material.

Introduction

The literature across many disciplines indicates both a prevalence of post-baccalaureate graduate publication prior to degree and a continuing debate on the benefits of this expectation from the perspectives of both faculty and students. The focus on graduate publishing creates new demands for libraries providing support services for graduate research, theses, and dissertations. Library and information sciences (LIS) literature echoes other disciplinary debate and argues that libraries are perfectly positioned to supplement faculty instruction and mentoring for graduate publishing, thesis, and dissertation work. However, it is unclear whether libraries have conducted much analysis of the pre-graduation publications that graduate students might include in their theses and dissertations. Libraries need more information on the differing requirements of various disciplines to focus efforts where they will be the most effective. Additional information on the requirements of publication prior to a degree may also enhance the evaluation of existing copyright, author rights, research, and scholarly communication services for graduate students by providing a more accurate view of the target population.

This paper provides a review of the debate and current state of post-baccalaureate graduate publishing as well as an analysis of published theses and dissertations at one university

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to determine the prevalence of graduate inclusion of previous publication in theses and dissertations. The analysis shows that most graduate student publications included in submitted theses and dissertations came out of only 10 academic departments, and that only 10 degree programs made publication prior to graduation a requirement of the degree. Information about the population of graduates including previous publication in their theses and dissertations was also used to re-evaluate existing copyright service statistics provided to graduates to ascertain how well the population was being served. Knowing this information can also help determine where further copyright and scholarly communication outreach efforts can best help graduate students.

Literature Review

The literature across many disciplines discusses either the ubiquity or emerging expectation of publication prior to graduation with an advanced degree (Ballamingie & Tudin, 2013; Hatch & Skipper, 2016; O'Hara et al., 2019; Clark, 2020). Hatch and Skipper (2016) recount being counselled to have at least five publications by the time they finished their PhD program. For others, encouragement to publish happens as early as undergraduate study (Caprio, 2014; Fraser Riehle & Hensley, 2017). That publication is a metric of success among career researchers, is favored by search committees for tenure track positions, and expected by professional researchers, are often given as reasons supporting the requirement of publication in students prior to graduation (Ballamingie & Tudin, 2013; McClellan et al., 2017; Floyd et al., 2019; Hatch & Skipper, 2016; Reis, 2000). When she addressed graduate students of the study of religion, Clark (2020) said that publishing encouraged search committees to see graduate candidates as potential colleagues and productive scholars. Kaiser and Pratt (2016) pointed to the consistent rise in expectations for graduate students, noting that a couple of peer-reviewed articles would distinguish a graduate in 2006 or earlier, but by 2016 is common among all graduates.

A noticeable amount of literature indicates problems or issues with publication prior to graduation. Pasco (2009) suggests that attempting publication as a scholar could compete with the responsibilities of being a student, causing students to sacrifice work on their own degree or teaching responsibilities. Wilke (2017) further expounds that the schedules of journals and publishers are so dissimilar from the schedule of a graduate degree, where peer review can last months or longer, that publication prior to graduation should not be required. The literature shows that many disciplines are making publication part of a student's thesis or dissertation work to address the conflicting requirements of degree and publication that Pasco highlighted. Ball (2010) recounted experiences of graduates being encouraged to publish articles for later inclusion in their dissertation as a way for the dissertation committee to outsource review of the graduate's research. Perhaps in response to this type of experience, Fulton (2018) asserts that engaging journal staff, editors and peer reviewers for student work is inappropriate even though teaching and counseling students on how to craft and submit a manuscript for publication should be part of their degree experience. In their study of rhetoric and composition scholars, Wells and Söderlund (2018) reported that several interviewees found that format and function of peer reviewed articles did not work well as dissertation chapters. Other scholars voice concern over the escalating effect that publication prior to graduation has on tenure and promotion review (Flaherty, 2017; Velleman, 2017).

Regardless of any continuing debate, many studies show links between publication prior to graduation and future career successes (Kaiser & Pratt, 2016; Pickering et al., 2015;

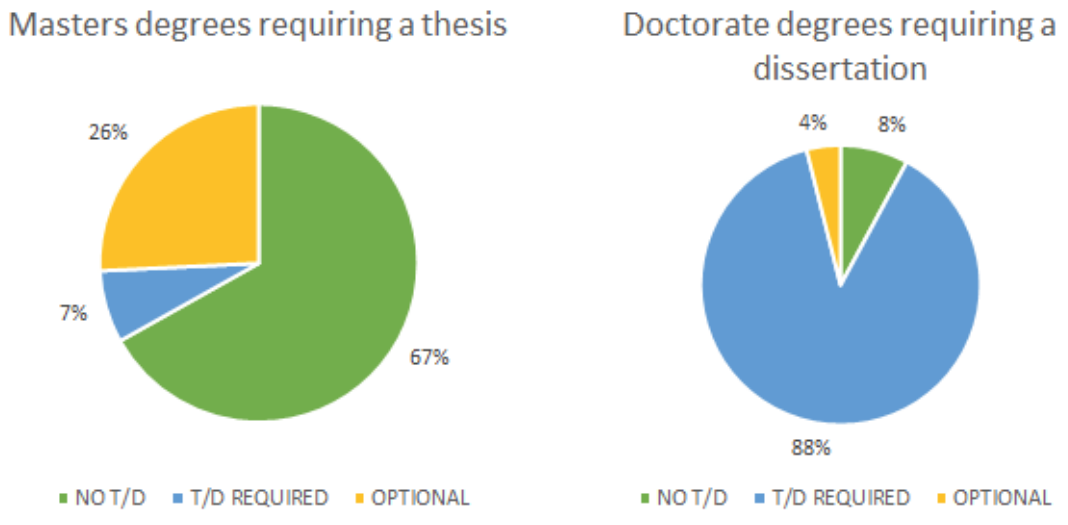
Ballamingie & Tudin, 2013; Garbati & Samuels, 2013). Pickering et al. (2015) confirmed that graduate publication rates were increasing over time, and that publication prior to a PhD indicated a greater likelihood of publication post PhD. This finding is echoed by Kaiser and Pratt (2016), whose examination of scholar curriculum vitae found that "doctoral students who publish in elite journals increased their potential career publication productivity," and that "lead and solo authorship continue to have a significant and positive effect on lead/solo publications during a faculty members' career." The tendency for pre-graduation publication to affect post-hire productivity has created what Headworth and Freese (2016) term "'tournament mobility,' in which early successes can end up being quasi-necessary conditions of high later attainments" (p. 1259).

Expectations or requirements for publication are not always accompanied by instruction and preparation, as noted by Wells and Söderlund (2018) in their survey of researchers. O'Hara et al. (2019) reported similar findings and noted that, though students and institutions can benefit from "more robust research mentoring practices," the benefit to faculty is less or non-existent and could inhibit faculty from participating. Both Ball (2010) and Fulton (2018) describe how writing for publication should be embedded into instruction and the mentoring relationship between faculty and graduate. The cross-disciplinary literature helped to develop a picture of the possible needs in departments that may regularly interact with library services devoted to supporting research, publishing, and the archiving of theses and dissertations. A notable article from within the LIS literature, McClellan et al. (2017) pinpointed the 'instruction gap' relating to pre-publication training as an opportunity that could also be filled or supplemented by libraries.

Institutional Background

The University of South Florida (USF) is a preeminent high-impact global research university with three campuses in the Tampa Bay area. In 2022, USF enrolled over 9,000 graduate students in 178 graduate programs. All graduate programs with a thesis or dissertation option or requirement submit their final manuscripts with ProQuest. The submission process includes an agreement with the university that the electronic thesis or dissertation (ETD) will be hosted and made accessible through the institutional repository. The Tampa campus library serves as

FIGURE 1
Thesis/Dissertation Requirements in Masters and Doctorate Programs



the library for the largest USF campus and provides support for the institutional repository ingest services for all ETDs.

Of the 178 degree programs available to students in 2022, 163 were master's degrees, 51 were doctorate degrees, and nine were professional degrees. Figure 1 illustrates that of the professional degrees only one required a dissertation while one made it an option; 12 master's degree programs required a thesis while 42 made it an option; and 45 doctorate programs required a dissertation while two made it optional. Language from the posted degree requirements and accompanying graduate handbooks reflected the observation in the literature of the growing requirement of publication connected with graduation (see Table 1).

TABLE 1
Thesis, Dissertation, and Publication Requirements Among Degree Programs

College/School	MA Thesis	Thesis Optional	PhD Dissertation	Dissertation Optional	Publication Requirement
College of Arts and Sciences: School of Humanities	10	9	5		
College of Arts and Sciences: School of Natural Sciences and Mathematics	12	8	12	1	6
College of Arts and Sciences: School of Social Sciences	7	6	4		
College of Behavioral and Community Sciences	5	4	6		1
College of Education	1	1	5		
College of Engineering	10	9	8		3
College of Graduate Studies					
College of Marine Science	1		1		
College of Nursing			1		
College of Public Health	1		1		
College of The Arts	2	2	1		
Morsani College of Medicine			1		
Muma College of Business	4	3	3	1	
Patel College of Global Sustainability					
Taneja College of Pharmacy	1				

Graduate students in the School of Natural Sciences and Mathematics, College of Behavioral and Community Sciences, and College of Engineering were given the instruction to have at least one paper accepted to a peer review journal or conference by the time of graduation. A few programs required the paper to be sole or first authored and explicitly stated that the paper be related to the student's dissertation research. None of the posted degree requirements or handbook instructions examined explicitly stated that the paper should be included as part of the thesis or dissertation. Additionally, the USF Office of Graduate Studies instructs graduate students that only sole or first authors may include previously published papers as chapters in their theses/dissertations (2022).

Methodology

The USF Libraries receives new ETDs for inclusion in the institutional repository from ProQuest. Students are required to upload the PDF of their ETD and appropriate metadata to ProQuest prior to graduation. The student also signs an agreement giving permission to USF to post the ETD on the institutional repository. The USF Libraries retrieves PDF and XML documents via a scripted FTP process from ProQuest and deposits the PDFs in the institutional repository. To analyze the content of ETDs from 2014–2021, the researchers retrieved PDFs from ProQuest to create a data set for text analysis. The early date of 2014 was chosen since it was the earliest year that XML and PDF files were available from ProQuest.

Over 4,000 ETDs were retrieved to compose the data set that would be searched systematically for certain phrases. The search process would also contextualize the phrase within the document to support a manual quality control check on the results and eliminate false positives. To start the process the PDFs were converted to plain text using the pdftotext command-line utility.* Once the plain text files were created, the files were searched using ripgrep,† a fast command-line search utility. Four key terms were searched to find ETDs that had previously published content: "Reprinted," "Used with permissions," "Previously published," and "Note to reader." These terms were selected based on the researchers' familiarity with the ETD submission process and the requirements of the Office of Graduate Studies. The search output resulted in .txt match files that included the lines that the search terms appeared. An additional search was made that provided context for the search term by providing four lines before and four lines after the search term appears.‡ These txt files were added to spreadsheets where they could be tagged and deduped. The researchers initially checked a small batch of results against the ETD PDFs to look for false positives and ensure that the ETD did have previously published material. The results of this initial review confirmed that the search terms were catching ETDs that included previously published material.

The data set was also searched for publication year, college, department, and whether it was a thesis or dissertation. All this information was routinely available on the cover page of every ETD. The first page of the PDF was extracted and converted into plain text using the command-line utility pdftk.§ Using ripgrep, the information was pulled from the ETDs with manual data cleanup for items not matching certain patterns. The positive key term results were then analyzed against the results for department and year to identify patterns.

Limitations

This study looked specifically at the inclusion of previously published articles in theses and dissertations included in the Institutional Repository hosted by the libraries, so it does not reflect the full range of graduate student publishing activities. The only version of ETDs available for analysis are PDF documents. The process used for analysis involved creating plain text documents from the already Optical Character Recognized PDFs. Broken formatting such as strange line breaks caused issues and may have resulted in ETDs that had previously published content but were not identified.

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* For FILE in *.pdf; do pdftotext $FILE ${FILE%.*}.txt; done

† To get the filenames only, we ran: rg -i 'previously published' *.txt > ../previously_published.txt && rg -i 'Note to reader' *.txt > ../Note_to_reader.txt && rg -i 'Reprinted' *.txt > ../Reprinted.txt && rg -i 'used with permission' *.txt > ../used_with_permission.txt

‡ To get context for each result we ran: rg -i --heading -A 4 'previously published' *.txt --sort path > ../previously.txt

§ For FILE in *.pdf; do pdftk $FILE cat 2-end output full/${FILE%%.*}-01.pdf; done

The greatest limitation to the study was the lack of standardized language used by graduate students to signify that a chapter of their thesis or dissertation was previously published. Students are not required to include a particular phrase in their ETD to indicate that a portion was previously published. However, a partnership between the Office of Graduate Studies and the USF Libraries in 2015 resulted in recommended phrasing that many graduates adopted. The implication of this limitation is that there are more ETDs that have previously published content; however, there are not fewer than we counted. Further standardizing terminology in the future would minimize this limitation and allow more accurate text parsing.

The study also did not include any direct feedback or participation by graduate students, which may have helped to expand the population examined to include publishing graduates who did not include those publications in their thesis or dissertation. Without direct input from graduates, this study also did not collect information on how much instruction graduates received on publication, or from where they may have received it. Future studies of the ETDs could better capture any terms that a student may have used in their ETD.

Results

The researchers analyzed 598 ETDs between the years 2014 and 2021. Out of these, 546 were dissertations and 52 were theses. Of the ETDs, 270, or 45%, returned positive results for key terms which indicated they included previously published material. Most ETDs with previously published material were from the College of Arts and Science and the College of Engineering. The five departments with previously published material are the Department of Chemistry, Department of Computer Science and Engineering, Department of Electrical Engineering, Department of Cell Biology, Microbiology, and Molecular Biology, and the Department of Civil and Environmental Engineering (see Table 2).

TABLE 2
Departments With the Most Previously Published Content in Submitted ETDs

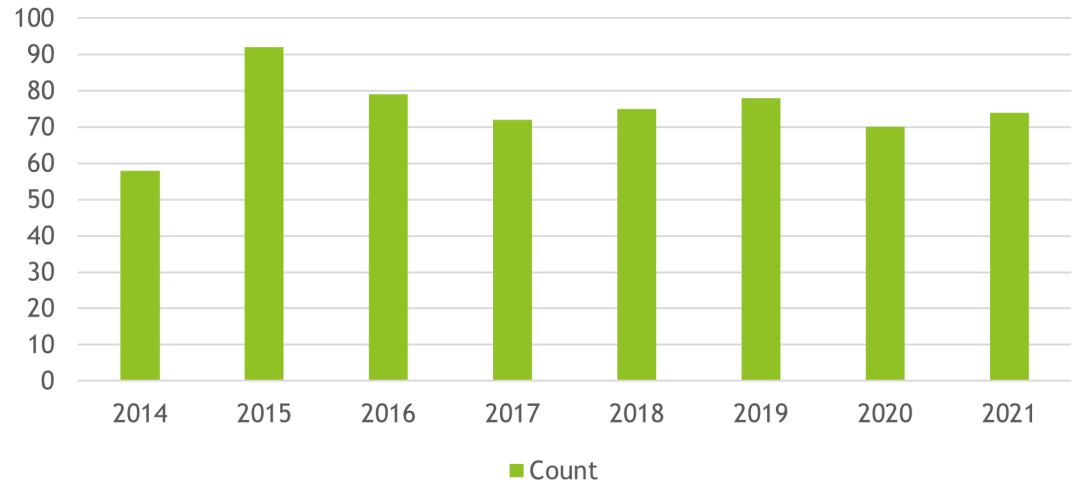
Department	Count of ETDs
Department of Chemistry	66
Department of Computer Science and Engineering	65
Department of Electrical Engineering	51
Department of Cell Biology, Microbiology, and Molecular Biology	50
Department of Civil and Environmental Engineering	38

As of 2023 USF has 77 departments. Of these, the study showed there are 54 departments from the University that, between 2014 and 2021, had at least one student who previously published a portion of their ETD. Throughout the years looked at by the study, the number of ETDs including previously published content remained relatively steady between 70 and 80 per year. The years 2014 and 2015 represent minor outliers in that only 58 ETDs were submitted in 2014, followed by 92 in 2015 (see Figure 2).

Discussion

The study shows that since 2014, a steady number of students have including previously published materials as a part of their thesis or dissertation. For the most part, the number has re-

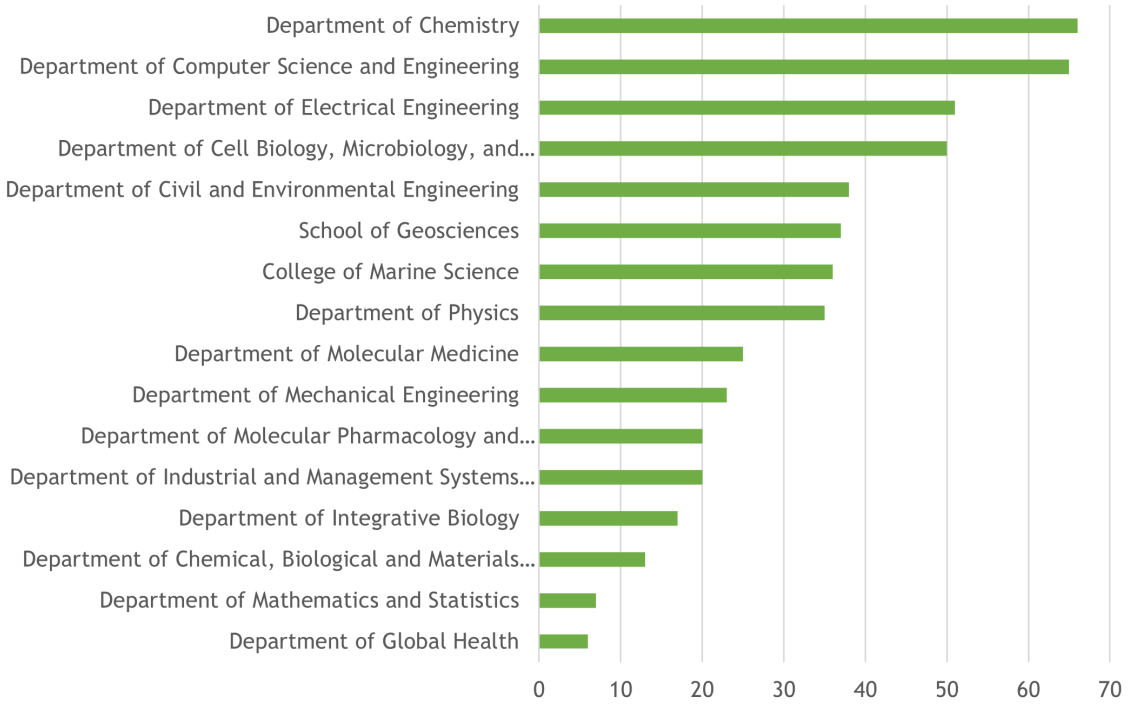
FIGURE 2
Count of ETDs with Previously Published Material Per Year



mained consistent throughout the years. The results indicate that a few concentrated departments require, or allow, a format of dissertation that relies on the inclusion of previously published articles or papers. Out of 77 departments, 38 had five or fewer students including previously published material. This study did not include a count of graduates from each department, so it cannot be determined at this time if the five or fewer students from each of the 38 departments mentioned represented all or a majority of the departmental graduates for those years.

Of the remaining 16 departments with ETDs including previously published materials, the top five accounted for 45% while the top 10 accounted for over 70%. As a whole, ETDs

FIGURE 3
Count of ETDs in 16 Departments with the Most Previously Published Content

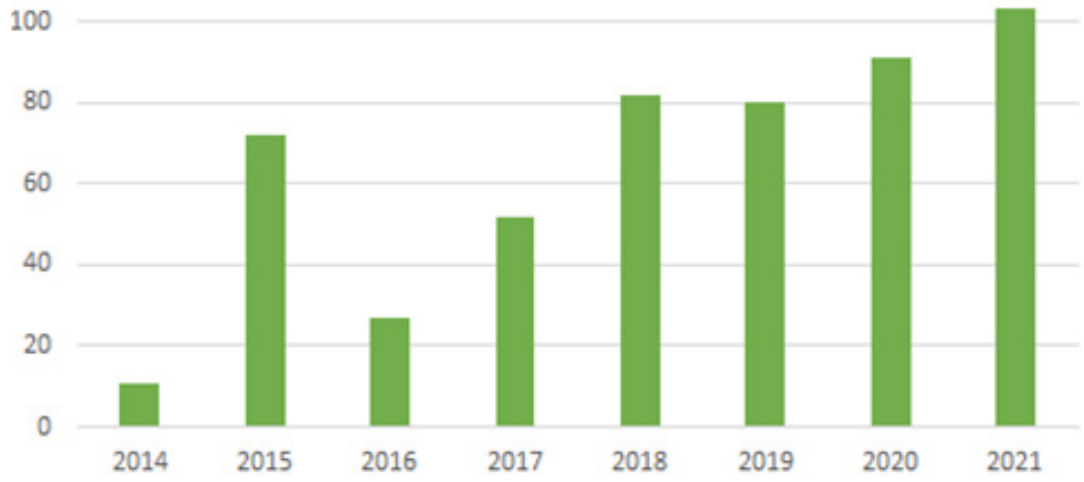


including previously published content accounted for about 15% of the total ETDs submitted between 2014 and 2021. The 10 departments that accounted for over 70% of the ETDs including previously published content provided a focus to both evaluate point of need library services and explore the development of additional services and instruction.

The researchers approached this study with the idea that copyright, author rights, and scholarly communication outreach regarding the use of previously published content in ETDs could be improved by ascertaining the tendency of different departments to both require and submit ETDs with previous publications. Several interactions with thesis and dissertation writing graduates during copyright, author rights, and scholarly communication outreach activities had indicated a lack of understanding concerning author rights and the publication process. The interactions seemed to indicate that graduates were not instructed on how to choose or evaluate a journal to ensure they could use their published research in their future projects. This observation echoed findings by McClellan et al. (2017) of an 'instruction gap' for publishing graduates. While library instruction on copyright, author rights, and scholarly communication was already customized to address these issues at point of need, it was unclear how thoroughly the population of publishing graduates was being served and if additional library instructional programming might assist in addressing the need. Review of the results prompted additional questions as to how the number of submitted ETDs with previously published content aligned with the number of copyright service interactions relating to using previously published content in a thesis or dissertation.

A review of copyright service interactions was performed to 1. check that the point of need instruction was, at the least, reaching those ETD authors who were including previously published content; and 2. inform discussions on additional library instructional programming that could support the larger population of graduates interested in or participating in publishing. Copyright services at the USF Libraries had been tracking service activity during most of the years included in the study. Service tracking data had already been coded to indicate if the questions received and consults conducted related to ETDs as well as several other key topics. Questions related to the use of copyrighted material in ETDs account for nearly 50% of all questions received by the USF Libraries' copyright services. Some of these interactions are

FIGURE 4
Unique Patrons with ETD Copyright Questions Per Year



referrals from the Office of Graduate Studies, either from their ETD preparation workshops or from facilitators of the ETD submission process. The question coding for ETDs, however, did not distinguish between using previously published articles as chapters or using figures or materials authored by others.

The tracking of copyright services changed in 2014 and 2016 resulting in only partial data for the 2014 calendar year before a drastic jump in the number of questions received during the 2015 calendar year. However, this jump in questions from ETD students during the 2015 year does correspond with a similar jump in ETDs with previously published content seen in Figure 2. Most patrons requesting assistance with using copyrighted material in either a thesis or dissertation did not return for more assistance later, however the results for figure 4 were deduped to show only unique patrons.

TABLE 3
Top 10 Departments Represented by Unique ETD Patrons to Copyright Services

College/Department	2016	2017	2018	2019	2020	2021	Total
Electrical Engineering	0	11	10	4	12	13	50
Engineering	3	3	0	18	5	17	46
Civil and Environmental Engineering	2	4	9	7	3	6	31
Computer Science and Engineering	4	0	7	4	8	4	27
Education	1	0	3	2	10	8	24
Humanities	0	1	3	7	6	5	22
Mechanical Engineering	0	0	3	5	7	7	22
Geosciences	2	5	3	6	4	0	20
Communication	1	0	1	3	6	6	17
Chemical and Biomedical Engineering	1	2	2	3	3	3	14

School and departmental identification of patrons changed over the years examined from free text entry to patron selection from a curated list and was not recorded at all during the 2014 and 2015 calendar years. This inconsistent patron self-reporting of college/department over the development of copyright services led to a large group of patrons being identified simply as "Engineering" alongside other similarly large groups of specific engineering departments. The departments of Chemistry and of Cell Biology, Microbiology, and Molecular Biology fell just outside of the top ten.

None of the posted degree requirements or handbook instructions examined explicitly stated that a published paper should be included as part of the thesis or dissertation, so publication prior to graduation could be happening alongside and in addition to the completion of a thesis or dissertation. However, discussions with students seeking assistance, and with ETD graduate support across campus indicate that previous publications are often incorporated into ETDs. Knowing which departments require previously published material that may be included as a part of their ETD provides new ways to adapt copyright services for the libraries. Being able to target specific assistance to those departments and students will increase the effectiveness of outreach and support provided by the USF Libraries. Instead of marketing ETD support services to all 77 departments at the

same level, the library can focus specific outreach and instruction on certain department graduates and their advisors.

This study did not look at where a student previously published. Further research into this area will help determine if graduate students are publishing in open access journals and what the implications of that may be in relation to copyright education from the library. Additional information about faculty research patterns may also be presented from further research into where graduate students are publishing since they often publish together.

Conclusion

This study looked at the prevailing debates surrounding pre-graduation publishing and investigated the frequency of graduates including previously published material in a thesis or dissertation. Though the population of graduates including previously published content in a thesis or dissertation may not incorporate the whole population of graduates publishing prior to obtaining their degree, this smaller population offered some insight into possible information and instruction needs of graduate student authors. The researchers began the study with the belief, supported by the literature, that library services were perfectly positioned to augment faculty instruction and mentoring regarding the publication process especially where it intersected with the completion of theses and dissertations. The results showed that theses and dissertations incorporating previously published articles was favored more strongly by certain departments at the University of South Florida. The Department of Chemistry and the Department of Computer Science and Engineering both led the count with 66 and 65 items, respectively. Over the entire University, 15% of ETDs contained pre-graduation publishing.

Using information learned from the study, existing copyright service statistics were re-evaluated to ascertain success at serving the graduate population at the point of need and to identify room for improvement or expansion of library instruction and outreach. Understanding the amount of previously published material in ETDs and the departments that are predominately emphasizing pre-graduation publishing can help libraries target instructional services specific to these practices. Future collaboration between copyright, scholarly communication, and subject liaison services within the library can also utilize the information learned from the study to target author rights instruction, outreach, and potential partnerships with faculty advisors in different disciplines. These targeted activities can inform future research into service uptake and graduate publishing behavior and to document the impact of library instruction on author rights.

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Help or Hazard? Patrons' Checkout History Retention Choices and Relations to Trust and Campus Role

Craig E. Smith and Kenneth J. Varnum

We explored the motivations of 588 university library patrons who chose to either have the library retain their checkout histories or not. We also examined associations between checkout history choice and both general data privacy concerns, and campus role. Over 90% opted to retain their histories. This group, compared to the no-retain group, had fewer privacy concerns, had greater trust in the library relative to the university, and were less likely to be librarians, archivists, or curators. We discuss how these findings add to the literature on privacy concerns of library users, and their possible implications for privacy policies.

Introduction

In recent years, a great deal of conversation and research has centered on the potential benefits and risks of data collection and analysis by organizations making their services available via the Internet (e.g., Gutierrez, 2023). In the public sphere, these conversations often focus on social media sites such as Facebook, X (formerly Twitter), and TikTok, online marketplaces such as Amazon, and online platforms where users interact with a vendor or with each other, leaving digital footprints behind. Many commercial sites have offered (sometimes limited) ways for individuals to opt out of some data collection or to see what data the site has collected. Apple's iOS, which powers hundreds of millions of smartphones, has a setting that can block third-party user tracking completely, causing some advertisers to rethink their approaches to customizing and optimizing campaigns (Loveless, 2022). Public perceptions of the risks and benefits of these data collection practices run across a wide spectrum, from those who profess no particular concern about what data is collected, to those who are strongly opposed to leaving any trace of where they travel online (McClain et al., 2023).

Libraries have long been concerned that records of library transactions, if stored and associated with individuals, have the potential to harm individuals (Matz, 2008). These concerns were elevated following the enactment of the USA Patriot Act in 2001. Concerns about the disproportionate harm that could be caused to individuals from at-risk communities (e.g., those from minority populations and those with undocumented immigrant status) have led

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libraries to, in general, proactively remove library transactions that could identify both the resource and the individual using it from library systems. To this end, patron privacy is addressed explicitly in the American Library Association's Code of Ethics (2021). The present study explores how library patrons feel about their checkout data being stored, the choices patrons make when given a choice to retain their history or not, and the reasoning supplied by patrons for their choices. In an era in which many academic libraries are retaining and using patron data for endeavors such as learning analytics studies, and in which people are increasingly accustomed to having their data held by a range of institutions, knowing more about how patrons weigh the benefits and risks of library data retention is important. The findings of this and similar studies can inform library decisions about whether to retain user data, and how to communicate and offer choices about data retention.†

Background

In higher education, student concerns and beliefs surrounding choice in data collection have been studied by, among others, the IMLS-funded Data Doubles project (https://datadoubles.org). Among this project's findings is that most students are aware that their use of the library generates data that are not wholly private; only 22% of students considered their use of physical library resources to be completely private (Asher, 2022). Nonetheless, students are typically not alert to the wide range of library interactions—for example, with physical and electronic materials—that generate or store data about them that is personally identifying (Asher, 2022). At the same time, regulations such as the European Union's General Data Protection Regulation (GDPR) directed that web content providers explicitly seek permission from users before conducting any tracking of their activities. This significantly raised many users' awareness of the fact that data are tracked (MacDonald & Klebe, 2018).

The Data Doubles project also found that students typically accepted university practices such as analytics and data mining, but wanted these activities to be paired with more transparency and the ability to consent versus opt out (Jones, 2023). These findings mirror similar findings from earlier research (e.g., Ifenthaler & Schumacher, 2016). Students expressed trust in librarians, more than in other campus actors, in part because students perceived librarians as having relatively little agency in students' educational outcomes (Jones, 2023). Other research has also found that librarians are highly trusted, relative to people in most other professions (Ipsos MORI, 2021; Lockwood & Ritter, 2016).

When it comes to libraries' collection and use of transaction data, most of the literature focuses on this in the context of library learning analytics. Library learning analytics can be considered within the broader scope of campus learning analytics activities. Some academic libraries have explored the relationships between the resources and services they provide students and student success (ACRL, 2010; Oakleaf, 2021). We note that a recent metanalysis indicated that such studies have found little to no statistical relationship between academic library use and academic outcomes (e.g., GPA and retention), and these types of studies are not able to shed light on causality (Robertshaw & Asher, 2019). In contrast to these studies, ours focused on individual concerns and feelings about one form of library data collection rather than using library data to make inferences about the impact of academic libraries.

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† This study was reviewed by the U-M IRB (HUM#00200146) and was determined to be exempt due to the lack of serious risk and vulnerable populations.

Collecting identified user data to build library-specific services has received much less attention, compared to studies focused on analytics. Another Data Doubles project output, "Transparency and Consent: Student Perspectives on Educational Data Analytics Scenarios," highlights the importance of consent but focuses more on research-oriented processes, rather than service-oriented (Jones et al., 2023). The present study takes this next step, asking how patrons feel about their data being retained to support a library service.

Additional Context for the Present Study

Until early 2016, the University of Michigan Library was typical of most public and academic libraries (Harper & Oltmann, 2017): as soon as a book was returned, the data connecting the library user and the item that was circulated were deleted. In 2016, the library dean advocated for greater library involvement in campus-wide learning analytics efforts and led a process to update the library's privacy policy and practices. After extensive discussions and debates about data and privacy, the decision was made to preserve the connection between users and the items they circulated; some library employees were supportive of this decision, and some were not.

This new practice allowed the library to provide a checkout history service for all users. Behind authentication, this checkout history was available to each individual and listed the items each person had checked out. At the time, technological barriers prevented the library from offering an opt-in or opt-out mechanism, and the service was automatically activated for all members of the university community who checked out an item. Interestingly, this led to a situation in which there was a considerable population of users who had a checkout history maintained but were not aware of it.*

The University Library changed its library management system in 2021. This technology update provided, for the first time, an opportunity to enable a mechanism allowing library users to opt in or out of the checkout history service. Conversations about the importance of allowing such a choice were initially led by the Library Diversity Council, a library-wide group concerned with questions of diversity, equity, and inclusion. The group expressed concerns about the potential harm an "always on" checkout history could create, particularly for marginalized and underrepresented communities across the campus.† In response to these concerns, and with the new library services platform enabling such an approach, the library decided to give users the ability to opt in or out of checkout history data collection through their library account page. The authors viewed this change of service model as a unique opportunity both to give our library's users more power over a subset of data collected about them, but also to better understand the motivations individual users might have when it came to making that choice.

Because of our past decision to create a checkout history for all users, the library found itself in a somewhat challenging situation. Individuals who had checked out an item between 2016–2021 had a checkout history (regardless of whether they knew it existed or wanted it), and those who did not check out an item in that time period—perhaps because their academic work did not lend itself to use of physical library materials or they were new to campus—did not. To avoid a situation in which the library arbitrarily deleted previous checkouts for all users, including those for whom it was a useful service, a split process was offered.

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* This also underscores the challenges of educating large user groups about library privacy policies and changes to those policies.

† For more on demographic-specific privacy concerns see, for example, Mathson & Hancks, 2007.

Starting with the switch to our new library management system in August 2021, if an individual had a checkout history, it was preserved and remained active. However, individuals without items in their checkout history would not have future checkouts added. Next, all individuals were given the option to change their current checkout history status, (i.e., to delete their history and stop future data collection if they had a checkout history, or to start collecting a checkout history if they did not have one). Library users could also download a copy of their checkout history at any time, and were invited to do so before deleting it, if they chose to opt out.‡

Of the 2,045 individuals who made an explicit choice about their checkout history between July 2021 and November 2022, 1899 (92.9%) opted in, while the remaining 146 (7.1%) opted out. The overall breakdown between choices was relatively consistent between those who had a checkout history before making the choice and those who did not: 91.7% of those with a checkout history chose to keep it, and 93.6% of those without a checkout history chose to start one (see Table 1).

TABLE 1
Frequencies and Percentages of Users Opting In or Opting Out of Checkout History Between July 2021 and November 2022

Decision	Had Checkout History		Did Not Have History		Overall	
Opted In	738	91.68%	1,161	93.63%	1,899	92.86%
Opted Out	67	8.32%	79	6.37%	146	7.14%
Totals	805	100.00%	1,240	100.00%	2,045	100.00%

This situation presented an opportunity for the quasi experiment (Stevenson, 2020) reported here. The present study explored the benefits and concerns that were considered by library users who opted to have a checkout history and compared them to the considerations of the group that opted out. We also tested whether some groups of library users (e.g., as a function of campus role, demographics, etc.) were more likely to maintain a checkout history than others.

Methods

Participants

Invitations to participate in the study were sent to those who made a choice about their checkout histories (i.e., retain/start a checkout history versus delete/not start a checkout history). The survey was sent in five waves; each wave was timed to be within three months of when members of that wave had made a decision about their checkout histories. The goal was to ask about a decision that was in respondents' recent memory; a survey question to check on respondent memory indicated that only three people who started a survey did not remember the choice they had made about their checkout history (this was < 1% of all opened surveys).

‡ The service checkout history described in this article is user-focused and data collected are explicitly for the individual's benefit, the principles of informed data collection and permission apply. The University Library's privacy statement (https://www.lib.umich.edu/about-us/policies/library-privacy-statement) describes how the library may use data, with more detail on data collection and use maintained by the central Information Technology organization, dubbed ViziBLUE, outlines data policies and uses across campus (https://safecomputing.umich.edu/viziblue/library-data).

TABLE 2
Counts of Survey Invitees and Participants

Survey Variant	Survey Wave	# of People Invited	# of Surveys Submitted	# Valid Surveys (Response Rate)
1	1	244	96	93 (38%)
1	2	431	158	155 (36%)
2	3	702	186	182 (26%)
2	4	226	65	61 (29%)
2	5	420	106	97 (23%)
Totals		2,023	611	588 (29%)

Note: In three submitted surveys, respondents had no memory of making a choice about checkout history and were thus not included in the count of valid surveys in the rightmost column above. The remaining non-valid surveys were characterized by large numbers of skipped questions.

Table 2 presents information about the number of library users who were invited to the study, the number of people who started a survey and submitted a survey, and the number of individuals whose survey responses were included in the data we present in this paper. Note that Table 2 refers to two variants of the survey; the only difference was that, in variant 2, we asked an additional question about whether respondents had vacillated in their checkout history decision.

Of the 588 participants in our final sample, 536 had elected to start or maintain a checkout history (91.2%), while 52 did not want to start or retain such a history (8.8%). These sample-level percentages are similar to those in the population of those who were invited to participate: 92.5% wanted a checkout history, 7.5% did not, respectively. Thus, regarding this important variable, our group of study participants was not different from the larger group of people who made choices about their histories.

Information about participants' primary campus role was obtained via the survey, as were data regarding whether respondents self-identified as a member of one or more groups that have been traditionally underrepresented and/or marginalized on university campuses. Further, information about many respondents' ethnicity and sex was available via the campus data warehouse. These data are quite flawed due to the omission of gender identities outside of the cis-male/cis-female binary, and due to the non-nuanced manner by which race and

TABLE 3
Frequencies: Participant Campus Role and Demographic Information

Primary campus role (self-report)	N	Member of marginalized group (self-report)	N	Person of color (univ. data)	N	Participant sex (univ. data)	N
Student	210	Yes	192	Yes	136	Female	297
Faculty	117	No	229	No	345	Male	234
LACs	46	Unknown	167	Unknown	107	Unknown	57
Staff	127						
Unknown	88						

Note: LACs are librarians, archivists, and curators. Unknown values are a result of skipped survey questions and/or missing university-held data. Participant sex is recorded as binary in the university's data warehouse; more inclusive data on gender identity was not available.

ethnicity data are collected. Nonetheless, Table 3, offers a useful snapshot of the identities of our participants; these data were used in some of the analyses we report below.

Survey Instrument and Administration

We chose to collect data via a survey because it allowed us to invite all possible participants into the study, and because we had only a small number of open-ended questions. The survey was developed by the authors and was then vetted by library colleagues and pilot-tested by a small number of library users. Once finalized, the survey questions were delivered to participants via Qualtrics online survey software.

The survey questions are presented in Appendix A. The first part of the survey asked about participants' campus roles and checked on participants' memories of opting in or out of having a checkout history; three participants were taken directly to the end of the survey because they did not remember their choice.

Next, participants were asked, in an open-ended fashion, why they made the opt-in vs. opt-out choice that they did. In survey waves one and two (see Table 2), the question was simply, "What reason(s) led you to make that choice?" A second variant of the survey was used for waves three to five, in which that initial question was retained, and a second question was added: "Did you give serious consideration to the opposite choice?" If participants in waves three to five responded affirmatively to this question, they were then asked, "What were those other considerations?" This was the only difference between the two variants of the survey; as such, aggregated results from waves one to five are largely reported together in the Results section.

The survey then asked questions about behavior and cognition. First, respondents whose checkout histories had been maintained for them prior to the survey were asked if they had been aware of their checkout histories and, if so, how often they looked at them. We were interested in whether people who used their checkout histories would reason differently about keeping or deleting their checkout histories. We then asked about participants' level of concern about data mismanagement at the levels of: 1. the University of Michigan library; 2. the University of Michigan more broadly;* and 3. internet-based companies such as Amazon, Apple, Netflix, etc. We expected that higher levels of concern with the library's and university's data management practices to be associated with a greater likelihood of opting out of having a checkout history. Further, we also expected that, on average, respondents would have the lowest levels of concern about data mismanagement regarding the library, based on previous research showing that library staff are highly trusted relative to most professions (Ipsos MORI, 2021; Lockwood & Ritter, 2016).

Finally, respondents were asked if they were a member of one or more groups that have been underrepresented or marginalized on college and university campuses; examples given included being underrepresented or marginalized on the basis of race, gender identity, disability status, sexual orientation, socioeconomic status, etc. We hypothesized that participants who are members of groups that have historically been underrepresented or excluded when data management practices were created might have less trust in such practices. The last survey question was open-ended and gave space for respondents to share other comments about library data.

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* The University of Michigan suffered a large-scale data breach in August 2023. Our results reflect opinions before that event happened.

To protect the data of all survey invitees, both those who completed the survey and those who did not, study data were stored on password-protected computers and restricted, HIPAA-compliant cloud storage folders.

Coding of Qualitative Data

We employed an inductive approach to the qualitative data we collected in the survey, seeking coherent themes in the responses to each open-ended question without assumptions or an existing theoretical framework (Charmaz, 2003; Urquhart, 2013).

As a first step, the two authors repeatedly read and discussed the responses to the open-ended survey questions, making notes about essential themes that emerged in response to each. After gaining familiarity with the data, we created a provisional coding scheme for each question. The research team reviewed the open-ended responses again and paid attention to whether the coding system for each question needed to be adjusted to accommodate previously missed themes. The final coding schemes for each open-ended question are presented in Appendix B.

The two research team members then independently used the coding systems to code the open-ended data from survey waves one and two. Following this initial round of coding, the two sets of codes were compared. For each code in the scheme, the measure of interrater reliability (kappa) was above the commonly used threshold of 0.70 (the kappas ranged from 0.76 – 1.00). Discrepancies were easily resolved through discussion. After establishing that the coding system could be used reliably, the rest of the coding was completed by the two authors together; here again, agreements were very common, and disagreements were easily resolved. The themes that emerged from the coding process are reported on in the Results section.

Results

Checkout History Choice and Campus Role

A total of 536 respondents opted to have a checkout history, with 239 starting one, and 297 electing to keep their existing history. A total of 52 respondents had chosen to either not start a checkout history (23) or to delete an existing one (29). These two groups were of central interest. We first analyzed whether the opt-in/opt-out choice was associated with campus role (see Table 4).

TABLE 4
Checkout History Choice as a Function of Broad Campus Role

Choice	Students	Faculty	LACs	Staff
Wanted History	95.2% (n = 200)	91.5% (n = 117)	76.1% (n = 35)	89.0% (n = 113)
Did not want history	4.8% (n = 10)	8.5% (n = 10)	23.9% (n = 11)	11.0% (n = 14)

Note: People who identified as alums, community members, unaffiliated researchers, and 'other' were excluded from this analysis due to cell size considerations.

An omnibus chi-square analysis indicated that there was at least one significant difference between the four campus role groups regarding their checkout history choice χ^2 (3, 500) = 17.76, $p < .001$, $\varphi = .19$. Pairwise tests were used to clarify this result, and the following significant differences were found:

- Students (95.2%) were more likely than staff members (89.0%) to want a checkout history (χ^2 (1, 337) = 4.69, p = .03).
- Students (95.2%) were more likely than librarians, archivists, and curators (LACs; 76.1%) to want a checkout history (Fisher's exact test < .001*).
- Faculty members (91.5%) were more likely than LACs (76.1%) to want a checkout history (χ^2 (1, 163) = 6.95, p = .008).
- Staff members (89.0%) were more likely than LACs (76.1%) to want a checkout history (χ^2 (1, 173) = 4.54, p = .03).

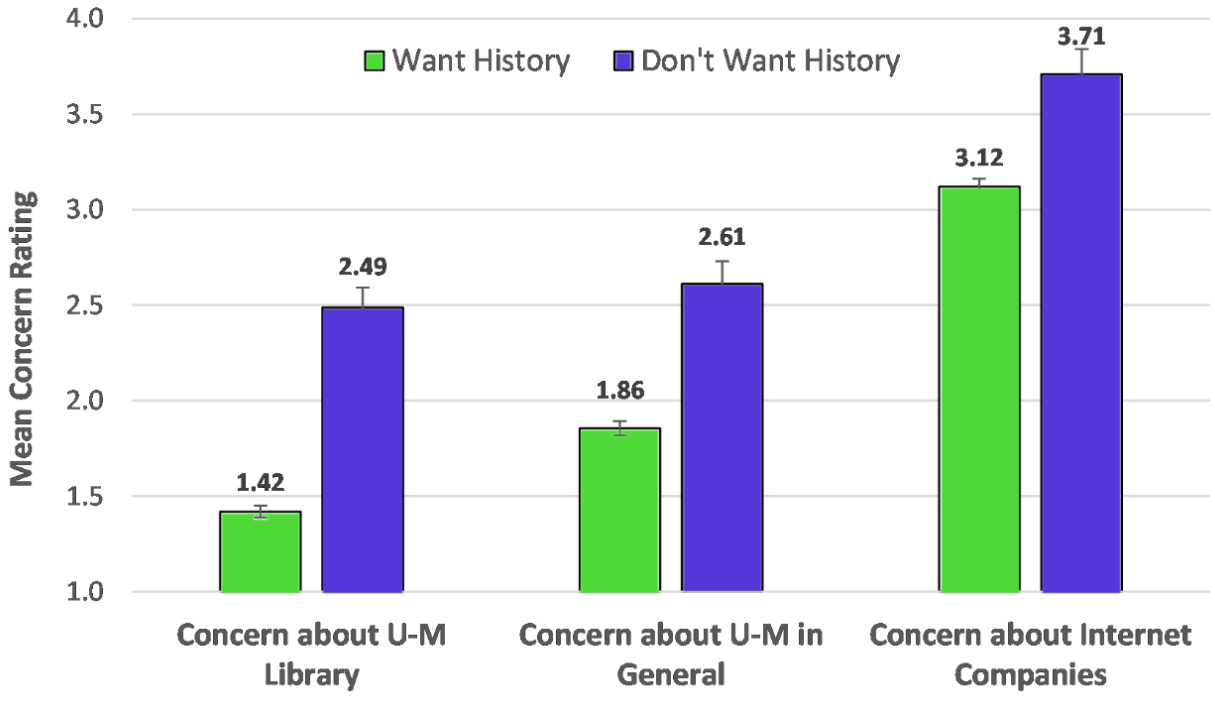
The clear trend that emerged in this set of analyses was that—although three quarters of librarians, archivists, and curators wanted a checkout history—LACs were significantly less likely than the other three groups to want their checkout data retained.

Checkout History Choice and Concerns about Data Management

Participants were asked about their concerns about data mismanagement in the library, at the University of Michigan in general, and by internet corporations (scored as: 1 = not at all concerned; 2 = mildly concerned; 3 = moderately concerned; 4 = very concerned). Choices about checkout history were analyzed in relation to these three questions about data mismanagement using a 2 (choice groups) × 3 (target of concern) mixed-measures ANOVA, with choice as the between-subjects variable and the concern questions as the within-subjects variables (see Figure 1).

Figure 1 highlights that concern about data mismanagement was stronger in the group that didn't want a checkout history, compared to the group that did. The figure also indicates

FIGURE 1
Relation Between Data Management Concerns and Checkout History Retention Choices



* Fisher's exact test was used due to low expected cell counts (n < 5). Here and elsewhere, measures were taken to use appropriate analyses for the very uneven groups sizes in our sample, with those electing to have a checkout history far outnumbering those who did not.

that data mismanagement concerns are least strong for the library, stronger for the University of Michigan in general, and stronger still for internet companies. This is in accord with the results of the ANOVA, which yielded significant main effects of both choice group (F (1,468) = 67.15, $p < .001$, $_p\eta^2 = .13$) and target of concern (F (2,936) = 262.15, $p < .001$, $_p\eta^2 = .36$).

Further, there was a significant choice group × target of concern interaction (F (2,936) = 2.24, p = .002, $_p\eta^2 = .01$). The nature of this interaction was clarified via analyses of simple effects. The results of these post hoc pairwise contrasts indicated that:

- The group that wanted to retain a checkout history rated their data mismanagement concerns as significantly lower than the opt-out group across all three questions (i.e., about the library, the University of Michigan, and internet corporations), all p-values < .001.
- The group that wanted a checkout history viewed the library with least concern (M = 1.42), the university with an intermediate level of concern (M = 1.86), and internet corporations with the most concern (M = 3.12); all differences were significant, and all p-values < .001.
- The group that did not want a checkout history viewed data mismanagement risks at internet companies with more concern (M = 3.71) than the University library (M = 2.61) or the University of Michigan in general (M = 2.49), both p-values < .001.

The group that did not want a checkout history, unlike the group that did, made no significant differentiation between the library and the university more broadly regarding data mismanagement risk. This led to the significant interaction effect reported above.

Checkout History Choice and Prior Use of Checkout History

We next examined potential links between checkout history choice and whether people were aware of and used their checkout histories prior to making their choice; these analyses were limited to people who had an existing history that they chose to retain or delete. Of the whole group of 286 people in this analysis, 186 (65%) had been aware of their checkout histories, compared to 100 (35%) who had not. Within the 'keep history' group, 65.0% were aware they had a history, and within the 'don't keep' group, 65.4% had this awareness. Thus, the groups were essentially the same regarding awareness, χ^2 (1, 286) = 0.002, p = .97. We also investigated whether awareness of a prior checkout history was associated with campus role; there were no differences that rose to significance in an initial chi square test, χ^2 (3, 250) = 6.61, p = .09.

Those who did have an awareness of their existing checkout histories were then asked how often they referred to it or used it in some way. We were interested in whether those who chose to keep their histories had made more use of them compared to those who did not to retain a checkout history. The frequency scale respondents used ranged from 1 (never) to 6 (about once a week or more); all the scale points were anchored with frequency labels, available in Appendix A. On average, those who wanted to retain their checkout histories used their histories 'no more than a few times' per year (M = 2.27), while the group that did not want their histories used them closer to 'never' (M = 1.40). Although neither group used their histories often, the group that wanted their histories retained had indeed made more use of them in the past, t (237) = 4.81, $p < .001$.

Associations with Aspects of Social Identity

We were also interested in whether members of groups that have been historically and are currently underrepresented and marginalized at colleges and universities would have different checkout history preferences and different levels of institutional trust, compared to those

who are often well represented on campus and in academic leadership positions (e.g., White people, straight people, cis-males, etc.). We found that 91.7% of respondents who identified as being in an underrepresented/marginalized group ($n = 192$) wanted a checkout history, and 93.0% of those not identifying as such wanted a history. This difference was not significant, χ^2 (1, 421) = 0.27, $p = .60$.

A 2 (broad social identity groupings) × 3 (target institution in question) mixed-measures ANOVA replicated the significant finding (previously reported) that level of trust depends significantly on the target institution (e.g., the library, the university, internet companies). There was no significant main effect of being underrepresented/marginalized or not ($p = .37$), nor was there a significant interaction effect ($p = .62$). Thus, concern about data privacy was similar across the two broad social-identity groupings, and the groups varied similarly as a function of the institution in question.

We then used the available institutional data to look specifically at the roles of race and sex (i.e., the binary variable in the University's data warehouse). First, although most people wanted a checkout history, respondents of color (98.5% of 136 people) were more likely than white respondents (88.1% of 345 people) to want a checkout history, χ^2 (1, 481) = 12.99, $p < .001$. When looking in a more nuanced way at race, the same pattern was found (see Table 5).

TABLE 5
Checkout History Choice as a Function of Race

Choice	Asian/Asian-American	Black	Hispanic	Native American	Multiracial	White
Wanted History	98.3% (n = 59)	100% (n = 22)	97.2% (n = 36)	100% (n = 1)	100% (n = 17)	88.1% (n = 304)
Did not want history	1.7% (n = 1)	0% (n = 0)	2.8% (n = 1)	0% (n = 0)	0% (n = 0)	11.9% (n = 41)

Note: Race data—including the terminology—were obtained from the University's data warehouse, and do not always reflect how people describe themselves when asked about their racial backgrounds.

Finally, there was not an association between the binary sex variable and checkout history choice. Those listed as female were as likely to want a checkout history (92.3% of 297 people) as those listed as male (89.7% of 234 people), χ^2 (1, 531) = 1.02, $p = .31$.

Reasoning about Checkout History Choice

Central to the present research were the open-ended questions about why people made the choices they did (asked in all five survey waves), and what consideration—if any—they gave to the opposite choice (asked in survey waves three to five). The process used to code the resulting data is described in the Methods section, and is further detailed in Appendix B.

As noted, all participants were asked why they made their checkout history choice, and 265 participants in data collection waves three through five were asked if they considered making the opposite choice. Of these 265, 31% ($n = 81$) reported that they gave serious consideration to both checkout history options. This included 45% (9 of 20) in the 'don't want history' group, and 29% (72 of 245) of the 'want history' group. This difference was not statistically significant, in part due to the reduced power associated with the small number of people who did not want a checkout history, χ^2 (1, 265) = 2.12, $p = .15$.

There was a difference as a function of campus role, however, about whether people gave serious consideration to both checkout history options during decision making. Among students in data collection waves three to five, 22.2% indicated that they seriously considered both options, compared to 36.7% of faculty members, and 53.8% of librarians, archivists, and curators (LACs), χ^2 (2,161) = 7.50, p = .02.* In clarifying pairwise tests, a Fisher's exact test indicated that students (22.2%) were less likely than LACs (53.8%) to have considered both options carefully, p = .037. The faculty group occupied an intermediate position and did not differ significantly from either the student or the LAC group.

There were no significant differences as a function of race or gender with regard to giving serious consideration to both checkout history options or not.

Reasons Provided for Choice Made

Table 6 presents the themes that emerged from the coding of participants' open-ended responses about the bases of their checkout history choices.

TABLE 6
Frequencies of Considerations Underlying Checkout History Choices, as a Function of Choice Group

Concerns considered during choice	**Group: Keep checkout history**	**Group: Not keep checkout history**
Data privacy concerns	0.6% (3 of 530)	44.2% (23 of 52)
Library shouldn't be keeping such data	0%	28.8% (15 of 52)
Don't want or need it, not useful	0%	25.0% (13 of 52)
Wasn't aware library was retaining these data	0.2% (1 of 530)	7.7% (4 of 52)
Lack of trust in the university	0%	5.8% (3 of 52)
Not doing much academic work at present	0%	1.9% (1 of 52)
Benefits considered during choice	**Group: Keep checkout history**	**Group: Not keep checkout history**
For use as a reading list (no mention of research)	49.2% (261 of 530)	0%
Simple desire to have it (no reason provided)	17.0% (90 of 530)	0%
Miscellaneous future uses	9.2% (49 of 530)	0%
For enabling future research	8.1% (43 of 530)	0%
Accessibility issues raised as part of reason	0.4% (2 of 530)	0%
Other issues considered during choice	**Group: Keep checkout history**	**Group: Not keep checkout history**
Response was uncodable	10.8% (57 of 530)	7.7% (4 of 52)
No privacy concerns in this situation	4.9% (26 of 530)	1.9% (1 of 52)
Expect this type of service from libraries	0.2% (1 of 530)	0%

Note: The question about issues underlying one's choice was asked in all five waves of data collection. Formal comparisons between the two choice groups—regarding the likelihood of providing each type of response—were not conducted due to the clearly group-dependent nature of the responses.

* Staff were not included in this analysis due to problems with small cell sizes.

As is evident in Table 6, respondents in the 'keep' and 'don't keep' groups each considered very different issues when asked about why they made the choices they did. Common reasons for choosing to not keep a checkout history included: concerns about data privacy (44%), the opinion that the library should not be retaining such data (29%), and the lack of a personal or professional need for a checkout history (25%). Conversely, relatively common reasons for electing to maintain a checkout history included: its utility as a reading list (49%), a generic desire to have it (17%), and its utility in informing future research activities (9%).

As noted, in data collection waves three to five we asked whether people gave serious consideration to the checkout history option they didn't ultimately choose; those who answered affirmatively were then asked what those other considerations were. This new question was added because we were concerned that the approach to question-asking used in data collection waves one and two might be obscuring a more nuanced decision-making process. The results in Table 7 highlight that some people did indeed consider both sides of the issue prior to making their choices.

TABLE 7
Frequencies of Alternative Considerations During Checkout History Choicemaking, as a Function of Choice Group

Issues mentioned when asked about considerations of alternative choice	Group: Keep checkout history	Group: Not keep checkout history
Concerns about privacy (without elaboration)	8.5% (26 of 307)	0%
Had privacy concerns related to specific materials being checked out	2.9% (9 of 307)	0%
Had privacy concerns that were outweighed by expected benefits of checkout history	2.3% (7 of 307)	0%
Respondents unsure they would ever review their histories	2.0% (6 of 307)	0%
Concern about data breach (e.g., hacking)	1.6% (5 of 307)	0%
Unsure how the checkout history feature works	1.6% (5 of 307)	0%
Concern about government access to records	1.3% (4 of 307)	0%
Had privacy concerns but trusted library to protect data	0.7% (2 of 307)	0%
Simple desire to have it (no reason provided)	1.0% (3 of 307)	11.1% (3 of 27)
For use as a reading list (no mention of research)	0.3% (1 of 307)	7.4% (2 of 27)
Response was uncodable	2.0% (6 of 307)	3.7% (1 of 27)

Note: Unique responses mentioned by single individuals not included in Table 7. Formal comparisons between the two choice groups—regarding the likelihood of providing each type of response—were not conducted due to the clearly group-dependent nature of the responses.

Particularly worthy of mention is that, in the 'keep history' group, a small but notable number of people indicated that they did fret about data privacy concerns in one way or another prior to making their choice. Thus, for many people the choice was straightforward, while for some it was indeed a relatively nuanced decision-making process.

Discussion

We explored how 588 patrons of a large, public university library thought and felt about li-

brary data privacy, in the context of their decisions to have the library either maintain or delete their checkout history records. The situation in which library patrons were offered a chance to opt in or out of checkout history storage provided a unique opportunity to ask what types of thoughts, concerns, and emotions accompany such a decision.

When patrons were offered the chance to have a checkout history, versus not having a history, over 90% opted to have their circulation data retained. Members of this 'Keep' group, compared to the 'Delete' group, in general:

- were less concerned about privacy;
- expressed greater trust in the library versus the central university as stewards of their data;
- had used their histories more in the past (of those who had them); and
- were less likely to be in the campus role of librarians, archivists, curators.

These findings dovetail with other recent research showing that students, for example, are typically comfortable with their library data being retained and used for research, though not without a desire to have more transparency in data collection practices (Jones, 2023). Indeed, most of the students in the present study—and most in other campus roles as well—were comfortable enough with library data collection that they actively chose to have the library retain their checkout history data, despite the rather rare use of these histories on average.

People who wanted their checkout histories often reasoned that the data would come in handy in the future as a reading list record, or as an aide for future work, and most did not give deep thought to concerns like data privacy, although 8.5% did. Conversely, those who did not want their checkout histories described having data privacy concerns, the feeling that this was not proper practice for libraries, and the lack of their need for such data. Most of this 'don't keep' group did not describe wavering in their decisions, though a small percentage did consider the potential benefits of retaining a checkout history.

One of the more fascinating findings in the present study was that, although most people opted to retain a checkout history, the group of LACs (librarians, archivists, and curators) was significantly less likely to make that choice. This raises questions about the dynamics at play when a library employee feels more concern about a patron's data than does the patron themself. Such a dynamic is ripe for future study. For example, does the small but significant difference between LACs and patrons—regarding views on data privacy—ever result in library data policies that are out of step with what many patrons want or need? Additionally, while we might be able to infer the role of age as an important variable when comparing faculty and students, future research is needed to formally measure and test this.

Future research could also explore the potential role that 'parentalism' (i.e., a non-gendered version of 'paternalism') plays in the data privacy decisions made by libraries. Parentalism involves restricting or controlling some aspect of others' experiences with the goal of serving their best interests (e.g., when states require all motorcyclists to wear helmets) (Carney et al., 2023). It could be the case that some libraries, or library employees, push for data policies that are viewed as best for patrons in the long term, even if it means denying a desire in the present (e.g., the desire for a checkout history). Studies of altruism have found that in some contexts, people do indeed engage in helping behaviors not only to satisfy the immediate needs/desires of others, but also to ensure the longer-term wellbeing of those others (Jacobsson et al., 2007). This can involve, for example, not engaging in helping behavior in the present when the helping may lead to longer-term negative consequences (Sibicky et al., 1995). Studies on parentalism in library policymaking could

add novel and important findings to both the literature on helping and altruism, and the literature on library data privacy.

Future research in this area could also consider various models of reasoning and decision making. Research has shown, for example, that when people are asked to make a morally- or emotionally charged judgment, intuition often drives the process, and explicit or rational reasoning about the judgment is often constructed after the fact (e.g., Haidt, 2001). Thus, it may be that the explanations provided by our participants regarding their past checkout history choices did not fully reflect the cognitive and emotional processes at play during the moment of opting in or out of data retention. Further, for some participants the decision may have been an emotionally charged one, while for others it may have been a simple and unemotional one; these potential differences in orientation toward data privacy decisions should ideally be considered in future studies of this topic and considered when creating and communicating about privacy issues.

Limitations

We acknowledge that this study was narrow and had shortcomings. First, we were very interested in the role that social identity might play in how people think about the privacy of their library data. We did ask a very broad question to ascertain whether respondents were members of marginalized and/or underrepresented groups (e.g., due to racism, gender discrimination, homophobia, etc.). We did not find much in the way of group differences regarding social identity, but this may have been because we did not ask nuanced questions about various aspects of respondents' identities. For example, it might be that people who LGBTQ+ are more concerned about the privacy of their library checkouts compared to heterosexual people; the approach of the present study did not allow for this level of exploration; future research in this area could benefit from stronger social identity questions.

In addition, we did not explore whether patron checkout history choices were related to other choices about data privacy, both inside and outside the library context. A study incorporating more than one data privacy decision will likely shed even richer light on how people think about their library data. Although we examined the association between trust in libraries and patron privacy choices, we did not explore causal relationships. It may be that libraries that offer patrons data privacy choices are more trusted than libraries that do not; such a question would be worth exploring, since the findings could have very practical implications.

Conclusion

What do the findings of the present study suggest about constructing or updating library data policies? First, the findings indicate that it may be beneficial for library policy makers to explicitly consider their own feelings and values related to data privacy alongside findings from recent studies that shed light on patron feelings and values. Noting where the orientations across library employees and patrons converge and diverge may enable policy makers to try new approaches to managing library data, and/or to communicate effectively and empathetically about the reasoning behind data policies. Second, the findings indicate that, when given some control over their library data, patrons typically have a very clear sense of their preferences. Library leaders should consider laying out the potential pros and cons of any data choices being offered to their patrons, so that patrons who might ordinarily make such a decision very quickly can slow down and consider future ramifications; this would

eliminate the need for libraries to engage in proactive parentalism while still allowing them to champion strong data privacy practices. Finally, our study indicated that many library patrons were unaware of their library's data policies and practices. Although campus communities are typically bombarded with messages from their colleges and universities, we strongly recommend that libraries find effective ways to alert their users to how their library data are managed, and what options are available to them (or not). This might involve one or more of the following: paying students to communicate about the library with their peers, liaison outreach to academic units, connecting with campus groups, using social media, placing messages on library websites, and creating welcome kits for those new to campus. Some of these communication efforts could also, of course, be paired with an explanation of library offerings and encouragement to use those offerings as well-informed, empowered patrons.

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Appendix A: Survey Instrument

[INTRO TEXT] Thank you for participating in our survey about your checkout history preferences. This survey will take about five minutes of your time. After data collection is complete, all identifiers will be removed from the data (e.g., your email address). When we report on the findings, we will be presenting aggregated data only. Your identity or name will not be connected to the data in any way. We will know only basic information about your campus role (e.g., faculty, student, staff).

As part of their review, the University of Michigan Health Sciences and Behavioral Sciences Institutional Review Board (IRB) has determined that this study presents no more than minimal risk, and is exempt from on-going IRB oversight (HUM00200146).

If you agree to participate, please click the next button below.

1. What is your primary role in relation to the University?
    a. Undergraduate student
    b. Graduate student
    c. Faculty member (tenure, research, lecturer, or clinical tracks)
    d. Faculty member (librarian, archivist, curator)
    e. Staff member
    f. Alumni
    g. Community member
    h. Researcher not affiliated with the University of Michigan
    i. Other (please specify) _____
2. [FOR THOSE WHO ALREADY HAD A CHECKOUT HISTORY] Since mid-2016, the University of Michigan Library maintained a checkout history for you, which is a list of items you have borrowed from the Library. You were recently given a choice about your checkout history, and our records indicate that you recently chose to [INDIVIDUAL'S CHOICE PIPED IN HERE FROM BACK-END DATA SOURCE] Is this correct?
    a. Yes
    b. No
    c. I don't recall making a choice about this
3. [FOR THOSE WHO WERE NEW TO LIBRARY] Since mid-2016, the University of Michigan Library has maintained checkout histories for some patrons, which is a list of items borrowed from the Library. You were recently given a choice about whether you want a personal checkout history, and our records indicate that you chose to [INDIVIDUAL'S CHOICE PIPED IN HERE FROM BACK-END DATA SOURCE] Is this correct?
    a. Yes
    b. No
    c. I don't recall making a choice about this

[NOTE: ONLY THOSE WHOSE CHOICE WAS REMEMBERED AND CONSISTENT WITH OUR RECORDS CONTINUED WITH REMAINDER OF SURVEY]

4. What reason(s) led you to make that choice? _____
5. [ASKED IN DATA COLLECTION WAVES 3–5 ONLY] Did you give serious consideration to the opposite choice?
    a. Yes
    b. No
6. [IF YES TO PREVIOUS QUESTION] What were those other considerations? _____
7. [ASKED OF THOSE WITH EXISTING CHECKOUT HISTORIES] Prior to the recent opportunity you had to keep or delete your checkout history, were you aware that you could access your checkout history in the library's My Account tool?
    a. Yes
    b. No
    c. Unsure
8. [IF YES TO PREVIOUS QUESTION] How often did you look at your Checkout History?
    a. Never
    b. No more than a few times a year
    c. A few times a semester
    d. About once a month
    e. A few times a month
    f. About once a week or more
9. [TEXT-ONLY ITEM] We're interested in your level of trust in the library, the University, and the internet more broadly with regard to responsible data management. Some types of data mismanagement include data leaks, data selling, and the sharing of identifiable information.
10. How concerned are you about data mismanagement, with regard to patron data stored by the University of Michigan Library?
    a. Not at all concerned
    b. Mildly concerned
    c. Moderately concerned
    d. Very concerned
11. How concerned are you about data mismanagement, with regard to student/employee data stored by the University of Michigan?
    a. Not at all concerned
    b. Mildly concerned
    c. Moderately concerned
    d. Very concerned
12. How concerned are you about data mismanagement, with regard to data stored about you by internet-based companies (e.g., Amazon, Apple, Netflix, etc.)?
    a. Not at all concerned
    b. Mildly concerned
    c. Moderately concerned
    d. Very concerned
13. We want to understand how groups that have been underrepresented or marginalized in academia think about data and privacy issues. Our goal is to serve everyone in our campus community sensitively and responsively. This question, like others

in this survey, is completely optional. Are you a member of one or more groups that have been underrepresented or marginalized on college and university campuses? (Examples include being underrepresented or marginalized on the basis of race, gender identity, disability status, sexual orientation, socioeconomic status, etc.)
    a. Yes
    b. No
    c. Prefer not to say
14. If you would like to share more information about your background or identity, please feel free to use your own words here: _____
15. If you have other comments you want to share about collection history and/or library data, please use the space below. (This is the final question on the survey.) _____

Appendix B: Coding Scheme

Chose to not have a checkout history. Coding categories for responses that were provided by (a) people in survey variants 1–5 who did not want a checkout history, and (b) people in survey variants 3–5 who thought carefully about both options.

- **Don't want or need it**: Statements about the checkout history not being wanted, needed, or useful
- **Library shouldn't keep it**: Statements about the library overstepping by retaining checkout histories
- **Privacy concerns**: Statements of worry about breaches to one's checkout history
- **Not aware of checkout history**: Statements that mentioned not having know about the history until being offered the choice
- **Not active in academic work**: Statements that mentioned no longer needing or using books from the library
- **Lack of trust in the university in particular**: Statements expressing a lack of trust that the larger university manages data safely
- **Uncodable**: Responses that did not make sense or were not categorizable

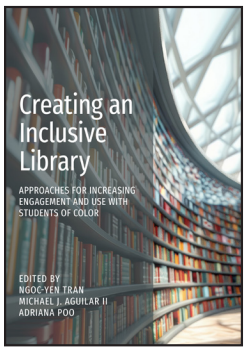
Chose to have a checkout history. Coding categories for responses that were provided by (a) people in survey variants 1–5 who wanted a checkout history, and (b) people in survey variants 3–5 who thought carefully about both options.

- **Want to have it**: A basic statement of want, with no explanation given
- **Want a reading list:** Statements about wanting to remember what one was reading in the past, preventing mistaken re-reading, facilitating intentional re-reading, tracking reading interests over time
- **Want to enable future research**: Statements about needing a citation list for dissertation or other research output, wanting to share things with other scholars
- **Other future use**: Statements about other future uses that is described in some detail (beyond a "just because" response)
- **No big privacy concerns**: Statements about a lack of privacy concerns, and about not having sensitive data in checkout histories
- **Expect this type of library service**: Statements about checkout histories being an expected or normal library service for patrons
- **Accessibility**: Statements linking accessibility support with the use of a checkout history
- **Uncodable**: Responses that did not make sense or were not categorizable

Other unique themes mentioned regarding the consideration of the opposite choice

- Privacy concerns related to specific materials being checked out
- Privacy concerns that were outweighed by expected benefits checkout history
- Privacy concerns that were outweighed by trust in the library
- Uncertainty about how to use the checkout history feature
- Concern about government access to records

Creating an Inclusive Library: Approaches for Increasing Engagement and Use with Students of Color, Ngoc-Yen Tran, Michael J. Aguilar II, & Adriana Poo (eds.), ACRL, 2024. 456p. Softcover, $125.00. 9798892556217



Edited by Ngoc-Yen Tran, Michael J. Aguilar II, and Adriana Poo, *Creating an Inclusive Library: Approaches for Increasing Engagement and Use with Students of Color* showcases how librarians and library workers from various colleges and universities prioritize the information needs of students of color. The book addresses how to manage concerns that impact students of color through library instruction, collection development, and community building. Contributing authors provide guidelines to encourage libraries to launch their own initiatives and programming centered on diversity, equity, inclusion, and antiracism. The book covers how academic libraries responded to critical events throughout 2020 and 2021. Amidst the COVID-19 pandemic, the Black Lives Matter movement, the Stop Asian Hate movement, and national DEI measurements, library workers developed initiatives and programming to support students of color despite, and because of, structural inequities. Notably, the editors draw attention to the sociopolitical issues that limit levels of engagement due to "fears of retribution, especially toward retention, tenure, and/or promotion" (ix).The editors divide this collection of articles into multiple sections to help readers locate chapters of interest and allow easy navigation through the title's six themes:

- Welcoming and sense of belonging
- Culturally relevant practices
- Building representation and inclusion
- Collaborations and co-creation
- Community building and engagement
- Fostering diverse student employees

The editors categorize chapters within the most applicable section of the book while also acknowledging that chapters could potentially fall into multiple categories. This disclaimer should be carefully considered, particularly since several sections overlap quite extensively. As for each chapter, the editors requested that contributor(s) include a positionality statement as the first footnote providing reasoning for its placement within a given section. Since most of the authors are people of color, the positionality statements challenge the myth of objectivity allowing readers to better understand how identity politics inform research interests. As a result, the book not only promotes praxis-based approaches to engage students/readers of color, but it also strives to decenter whiteness and encourage the voices of ethno-racialized librarians who have been historically excluded from academic scholarship.

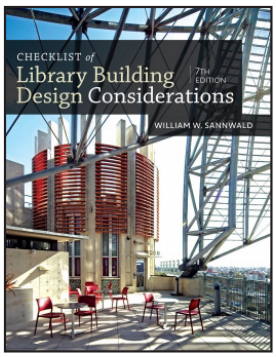
Throughout the first section, authors discuss the development of critical services to welcome students of color and cultivate their sense of belonging. Some of the initiatives involved fostering belonging through a summer bridge program, facilitating workshops centered on photo-sharing and storytelling, launching inclusive outreach efforts, and facilitating student-centered exhibits and oral history projects. In the second section, authors examine the process

of disengaging from universal approaches and implementing culturally relevant services into their own academic libraries. They address the needs of BIPOC (Black, Indigenous, and People of Color) students in several ways including teaching Native American students through the framework of cultural humility, supporting Black students by providing inclusive spaces, establishing student-centered programming, and developing archival walking tours during Hispanic Heritage Month. The third section demonstrates how academic librarians approach collection development focusing on representation and inclusion. The authors offer different methods to building library collections that reflect the identities and experiences of BIPOC students. While acquisition is a critical step, the authors also emphasize the importance of providing accessibility, implementing inclusive cataloging, requesting faculty recommendations, and partnering with students of color. The fourth section dives deeper into the theme of collaboration and co-creation. Authors discuss various ways of creating an inclusive library, such as co-curating an exhibit to serve indigenous communities, enhancing user experiences for BIPOC communities by gathering feedback from students and library workers, designing programming based on zine-making for Asian American student groups, and organizing Wikipedia edit-a-thons to build community for students of color. The fifth section offers more insight into building community and engaging with students of color. The authors approach community work in groundbreaking ways including initiating a series of panel discussions addressing institutional racism, supporting BIPOC students within Ethnic Studies libraries, advocating for Asian Canadian students through collection development and online resources, and organizing a panel to celebrate the contributions of Latinx library workers. The final section focuses on the importance of diversifying the student workforce and fostering professional development. The authors present how they provided job opportunities and improved retention rates for BIPOC students by developing IT internships and student ambassador programs.

Creating an Inclusive Library: Approaches for Increasing Engagement and Use with Students of Color documents the ways that academic librarians and library workers advocate for BIPOC students through the development of inclusive spaces, collections, and services. For this reason, this book would be an invaluable addition to collections within academic libraries. In particular, academic librarians serving students in library degree programs would greatly benefit from this book. It is critical for MLIS students to have access to books that offer resources and strategies devoted to anti-racism/inclusion efforts. As the editors express, "[w]e hope the resources and approaches contained within this book help all library workers engage with this critical and vital work and to build a community of support" (xiii). Currently, working librarians and MLIS students face policies that may restrict DEI which makes this title timely. Due to changing sociopolitical environments, academic, public, and school librarians will need to consider new and creative approaches to continue supporting communities of color. —*Nery Alcivar-Estrella, Ethnic Studies Librarian, California State University, Northridge*

Checklist of Library Building Design Considerations, William W. Sannwald, ALA Editions, 2024. 248p. Softcover, $79.99. 9780838938645.

Checklist of Library Building Design Considerations, now in its seventh edition (first published in 1988), has been reviewed, revised, and expanded to consider changes in current construction and patron needs. As a seasoned library consultant and a long-standing faculty member at San Diego State University, William Sannwald is a highly credible authority in the field of library design and development. With a career spanning over two decades, he has made



significant contributions to the subject, earning numerous awards for his work. This updated version offers comprehensive coverage of the steps from planning a new library to opening day to maintaining the new building. New topics include a discussion of the relationship between the client (i.e., the library and/or its political authority) and the architect and contractor; options for reducing the transfer of viruses in interior spaces; remote/automated control of building systems; flexibility in electrical design due to constantly revised floor plans; and the benefits of human-centered lighting.

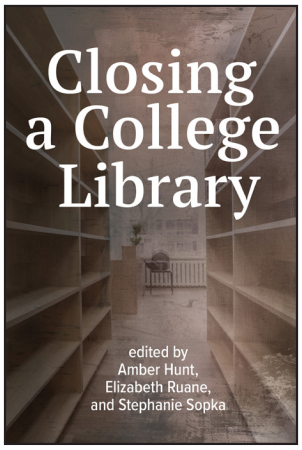
For those who have dedicated years to working in libraries, the constant evolution of services and spaces to meet the dynamic needs of users is a familiar challenge. Readers will undoubtedly appreciate the foresight and effort invested in anticipating these fluctuating essentials. It is fascinating to note that many popular spaces in today's libraries, such as plus-friendly areas, makerspaces, and computer labs, were not even on the profession's radar when this book first appeared as a pamphlet in the 1980s. Sannwald's principle that "function should drive design" (xvi) remains a guiding beacon; spaces should consider needs of the community and programs during construction versus the building dictating services. Some checklist items will not apply, depending on circumstances; and even if the answer to the question is "no," at least the subject was raised, and perhaps useful for future renovations or remodels.

The core of *Checklist of Library Building Design Considerations* is its practical checklists that are clearly garnered from the author's experience. This blend of narrative text and checklists is accessible to a wide range of readers. Checklists include far-sighted considerations that could easily be missed by those new to designing library buildings or redesigning existing spaces. There are clearly good questions to ask ahead of time rather than after the fact. The namesake checklists include an extensive range of considerations, including policy ramifications, comfort levels of patrons and staff, infrastructure configuration and re-configuration options. There is even an exploration of building construction alternatives, presenting a range of options that addresses diverse needs and budgets as well as a forward-thinking discussion on virtual library considerations, exploring the future of digital spaces and their impact on traditional libraries. Choosing an architect and a contractor highlights key qualities and considerations that are known to lead to successful construction outcomes.

To spark interest and generate ideas, sample questions include: "What will be the useful life of the new building? Does the design create a building that is unmistakably public in its character and function, yet very comfortable and non-intimidating for the user? Has the sign system been integrated into the building design and furniture selection process? If there are not enough electronic workstations to meet peak demand, is there a system in place to allocate their use? Will the library employ a library-moving specialist, or will the library move using only its internal resources? Have plans been made as to what to do with the furniture, fixtures, and equipment that are not moved?" (11–14). The checklist questions encompass a wide spectrum of topics, ranging from general to specific choices. It is hard to imagine that any building design consideration has *not* been covered. Of note is an "Indicators of Dissatisfaction with Existing Facilities" checklist in Chapter One which gives perspective on any given library building project and can be useful in bringing together disparate stakeholders.

Reviewers of previous editions have hailed this book as essential reading, and it is evident why. This masterful guide seamlessly blends the art and science of building design, planning, and maintenance, offering invaluable insights for both novices and seasoned professionals. It is a must-have for any library planning a new building or considering a renovation. — *Marie Daum, Kennesaw State University Libraries*

Closing a College Library, Amber Hunt, Elizabeth Ruane, & Stephanie Sopka (eds.), Chicago: Association of College and Research Libraries, 2024. 116p. eBook, $32. 9798892556064.



For most, permanently closing and dismantling a library is inconceivable; libraries are seemingly timeless institutions. The public assumes that these beloved knowledge centers will always be there for them. Likewise, academic librarians, until recently, almost never had to consider the possibility of closure, much less factor that grim scenario in their planning and forecasting. As the growing number of defunct colleges and universities over the past decade demonstrates, however, library closures are now a viable concern in the profession. More than a tragic outcome of the strong headwinds disrupting contemporary higher education, library closures pose unique logistical challenges for practitioners ill-prepared to confront them. *Closing a College Library* provides a timely resource for those impacted by this unfortunate emerging trend.

In this sobering but brief volume, contributors discuss their experiences with shuttering libraries at private nonprofit institutions that either merged with another or ceased operations altogether. Featured libraries include those that served Concordia University-Portland (Oregon), Marlboro College (Vermont), Marylhurst University (Oregon), and Robert Morris University (Illinois). Collectively, the authors draw from their varied experiences to offer strategies and advice, warn against potential pitfalls, and prepare readers for the emotionally fraught labor that closing and dismantling an academic library involves.

While affected practitioners of all job titles will find *Closing a College Library* insightful, the book is indispensable for those whose responsibilities include administration, collection management, electronic resources, special collections, access services, or institutional repositories. Interested readers should pay close attention to the unique considerations the authors raise concerning a library's legal obligations when lawsuits are filed against its institution; decommissioning interlibrary loan services; transferring physical and electronic resources to other institutions; withdrawing from consortia; and creating documentation about the facility for its next owners/occupants. Written by librarians for librarians, a closure "to-do list," sample deed of gift, and other practical documents are appropriately included as appendices for convenient retrieval.

Though *Closing a College Library* is a preliminary handbook, it is a significant contribution to the field. When they required guidance for their own closure, the editors discovered that information on the topic was scarce. Recognizing a need, the authors have produced this timely addition to the library science literature. More than merely addressing a gap, however, this work ultimately equips other practitioners with an essential resource. The authors state: "We have tried to take our collective misfortune and turn it into something useful, something that will help librarians do the best they can with this most unenviable

task" (p. vi). The authors are to be commended for their willingness to revisit a personally and professionally distressing chapter of their lives for the sake of supporting others. Because of their efforts, practitioners now have a conscientious resource they can consult and adapt to their own circumstances.

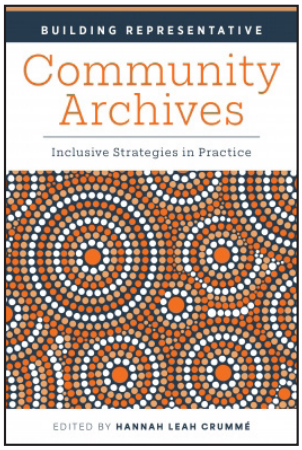
Regrettably, the four institutions featured in this book are not unique. From 2016 to 2024, over 100 colleges and universities merged or closed.[1] Nor is this disturbing development over. According to the Federal Reserve Bank of Philadelphia, as many as 80 institutions may close their doors from 2025 to 2029.[2] In this age of contraction, academic librarians should not assume that the unthinkable will never happen to them. For better or worse, *Closing a College Library* will be a relevant resource for years to come as more higher education institutions fall victim to the looming demographic cliff. — *A. Blake Denton, University of Southern Mississippi*

Notes

1. Higher Ed Dive. (2024, December 5). *A look at trends in college consolidation since 2016.* https://www.highereddive.com/news/how-many-colleges-and-universities-have-closed-since-2016/539379/

2. Kelchen, R., Ritter, D., & Webber, D. (2024). *Predicting college closures and financial distress.* Federal Reserve Bank of Philadelphia. https://doi.org/10.21799/frbp.wp.2024.20

Building Representative Community Archives: Inclusive Strategies in Practice. Hannah Leah Crummé, ed., ALA Neal-Schuman, 2024, 288 p. Softcover, $64.99. 9780838939598



In 2017, the Watzek Library Special Collections began the work of building relationships with the Vietnamese community in Portland, Oregon to address a historical gap in the records housed in their collections. Renowned for its extensive collection of books related to the Lewis and Clark expedition, it became apparent to the Special Collections team that the collection did not fully represent Portland's history or diverse population (39). Thus began a nearly decade-long project led by Hannah Leah Crummé, the current Head of Watzek Library Special Collections, alongside Dr E.J. Carter, Zoë Maughan, and Vân Truong, to document the experiences of Vietnamese immigrants and refugees whose presence in Oregon has been steadily growing since the 1970s (40). With a wealth of experience grounded in the creation and maintenance of community archives, as outlined in the third chapter of the edited volume, Crummé has assembled ten chapters of case studies and practical knowledge from different contributors who recount their experiences working with or building community archives. The edited volume is designed to provide archives and special collections with workable and innovative frameworks for improving their collections, procedures, and community relationships by addressing disparities in their holdings.

Crummé begins *Building Representative Community Archives: Inclusive Strategies in Practice* by arguing that "although history is often written by those in power, records are kept by everyone" (xi). Archives have historically prioritized the collection and preservation of records that present a whitewashed perspective of history while failing to accurately document the experiences of marginalized communities who are often excluded from the Western colonial narrative. Crummé points out that the need for this work now "is the result of earlier failures to examine our own approaches with a critical eye" (xxii). The broad range of institutions included in this volume that are grappling with these necessary and sometimes challenging

pathways towards inclusive community archiving demonstrates an eagerness to attend to these projects with care and consistency. Not all community archiving methods are alike in structure or application and Crummé posits the included works as non-exhaustive answers to the questions of who should be doing this work, what kinds of projects already exist, whether the work is ever finished, and what should be done next. The effectiveness of the book lies in the diversity of approaches that all in turn answer these questions.

One of the greatest strengths of the volume is the inclusion of highly detailed case studies that outline the successes and missteps of several community archiving projects. The contributors' transparency and honesty offer readers valuable insight into the real-world challenges and best practices of inclusive archiving. In Chapter 4, the creators of the Voices Out Loud project provide an in-depth look at their oral history initiative that began as a response to the defunding of the University of Tennessee's Pride Centre. The project started with the intent to provide current and future archives with "a model for approaching LGBTQ+ community outreach and developing sustainable archival collecting strategies" (55). They outline every step of the project, their successes and mistakes, and include numerous examples of the associated costs, consent statements, permission and release forms, interview questions, and other information that was shared with participants. Chapter 1, "Talking White" by Alissa Rae Funderburk, discusses another oral history project from the Margaret Walker Centre at Jackson State University that aimed to digitize and transcribe a vast collection of tape-recorded oral histories from numerous Black communities and organizations in the Mississippi area. Funderburk discusses the sensitive ways in which digitization and transcription must be approached to avoid conforming these histories to a Western style of recording and documenting. The various examples of transcription tools and methods that are outlined and evaluated could be a useful guide to any archive engaging in oral history work.

While many authors discuss new project work, several contributors offer a fresh perspective on the inclusive and remedial work being done to address past mistakes and failures in Special Collections and Archives. They detail their efforts to constantly reassess their collection policies and practices to ensure that communities are accurately represented in their archives. In Chapter 5, Conor M. Casey explores the concepts of "corrective collecting" and "democratizing documentation" as approaches to making community archives increasingly accountable to their stakeholders (117). Casey explains that while the Labor Archives of Washington had always sought to document female-gendered occupations, they decided to expand their collection of "nontraditional areas of employment for women" (135) as part of their recurring efforts to reexamine and improve their collection policies and priorities. In doing so, they participated in several community events and job fairs, created a tradeswomen travelling exhibit, collaborated on a book that discussed women electricians in Seattle, and helped create the Smith-McWilliams Endowment for Working Women's Archives.

The volume emphasizes community-centered approaches that involve and prioritize the collaboration, contribution, and engagement of the community whose experiences are being represented. While not every contributor can claim the same level of interaction with the communities they seek to document, there is a common thread of building trust, maintaining meaningful relationships, and respecting that the goals of a community may not always align with the goals of an institution. As these points are primarily grounded in case study and experience, the volume positions itself as a strong guide to developing future initiatives. This edited volume would be most valuable to those working in archival environments trying to

address the disparities in their collections or develop their own community projects; however, the range of projects discussed and the sensitivity with which they are executed could be a useful starting point for anyone interested in reparative work that centers a marginalized narrative. Contributors range from students to community members to established professionals in the archival field, which underscores the importance of engaging with these topics at any level of archiving. Crummé's original point is that records are kept by everyone, and so anyone with an interest in preserving a community history would benefit from owning this volume. — *Maia Trotter, University of Alberta*