

# Essays on Selected LIS Priorities



THE FRIDAY HARBOR PAPERS, VOLUME 1, SUPPLEMENT



# Introduction

The essays compiled here articulate some topics that emerged early in the work of LIS Forward, as we discussed areas of critical importance to the work of libraries and priorities for LIS research and education. As with the [Friday Harbor Papers main report](#), this supplement aims to inspire more thinking and writing about the future of LIS.

LIS Forward first engaged the iSchool community on these topics in a 2022 iConference session, after which group members drew upon their specific interests and expertise to develop the five essays included here:

- **Next-Generation Scholarly Communication**
- **Preparing for a Volatile Workplace**
- **Supporting Communities in an Era of Disconnection**
- **Access and Intellectual Freedom**
- **Building Resilience to Crises with Our Communities**

Some of the essays were reshaped in response to emergent concerns and controversies in the current social, political, and economic moment, and through iterative revision based on input from other group members. While there is considerable variation in the approaches taken by the authors, all of the essays cover vital topics with implications for professional practice and LIS education. The first essay examines trends in scholarly communication that affect the work of academic libraries; the other four relate to public and school libraries.

It is important to note that LIS Forward began during the COVID-19 pandemic and a national reckoning with racism that increased intentions toward a more diverse and inclusive society. At the same time, libraries and the communities they serve are experiencing the impact of climate change, calling for both immediate response and long-term planning for risk mitigation. As our work continued, there was a phenomenal acceleration in challenges to intellectual freedom and a surge in threats of violence to public and school libraries and librarians. These challenges come amidst rapid development and adoption of new AI technologies that have potential for both unprecedented benefits and unthinkable harms.

By sharing these collaborative outputs from LIS Forward activities, we hope to spark further consideration and discussion of these and other areas in pressing need of attention from the LIS community.

# Next-Generation Scholarly Communication



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Scholarly communication — the ways in which academic research is created, disseminated, and discovered — is a foundational part of LIS scholarship and practice, with a long history and vast literature. Here we highlight a number of key trends, past and present, to show the continued importance of scholarly communication as a core part of the LIS field and the professional work of libraries and repositories that serve researchers and steward research collections.

## Background

### *The role of LIS in scholarly communication*

Scholarly communication has long been core to academic librarianship and LIS research, both as an object of study and as a foundational component of LIS education and practice. It has always been a dynamic area of study and expertise, as formats and platforms for scholarly production have changed from paper-based to data-driven. In recent decades, in the digital, networked environment, our systems of scholarly communication have shown “signs of stress and crisis” (ACRL, 2006), and the intensity of the change and pressures has continued apace with current transformative trends in open science and open research. The vital contributions that libraries and librarians make to the ongoing and evolving systems of scholarly communication will require greater investment in LIS research and education to keep pace with the dynamic and evolving nature of scholarly work and academic research.

There are numerous contributors to the stress felt by our systems of scholarly communication. Commercial interests have tightened their grip on academic publishing, bundling journals into increasingly, and sometimes prohibitively, costly subscriptions. Peer review, a cornerstone of academic scholarship, is facing severe reviewer fatigue and shortages. Alarms are regularly sounded to call attention to a crisis in research reproducibility (e.g., Baker, 2016; Nature, 2013), a fundamental condition of the scientific method but also an increasingly ambiguous concept now serving as proxy for general concerns with research reliability and quality (Leonelli, 2018). At the same time, services for the curation and archiving of data and other research products vital to sustaining research integrity remain under-supported in many institutions.

Consequently, scholarly communication has become an area of advocacy and activism for LIS. In opposition to creeping corporate influence in libraries and academic publishing, many practitioners and scholars have become active in various dimensions of contemporary scholarly production, discourse, and exchange. They serve as advocates for equitable access to publicly funded research, authors’ rights, and lowering the costs of commercially published scholarship. They promote data sharing and reuse, alternative metrics for research assessment and impact, and development of the growing lineage of digital literacies (data, algorithmic, privacy, etc.). Importantly, the field is also advocating for responsible stewardship that integrates ethical approaches to rights, control, and bias into the work of building the actionable digital research collections essential for data-driven research approaches (Padilla, 2019).

As we consider the future of LIS research and education, we must ask how the field can resist and even reverse the growing crisis while supporting important and exciting advances in scholarly communication. We must ask: How can knowledge infrastructures resist commercialization, and what research and advocacy is needed to support this goal? How can we empower libraries to stay ahead of and harness myriad changes and their impacts? How can libraries, in turn, empower creators and catalyze research and learning within universities and their communities? How can we enlist faculty and researchers as allies in this work? How can iSchools prepare practitioners for this environment, and what research is needed to build robust and equitable scholarly communication methods and platforms?

We, as stewards and scholars of knowledge infrastructures, must take full advantage of the opportunities presented by technology, especially opportunities to remove barriers and increase equitable access to scholarship and data. At the same time, we need approaches that ethically and respectfully steward information over time for changing purposes and communities. As proponents of open research, we also need to practice principles of epistemically responsible reuse (Karcher et al., 2021) that prioritize contextualization of data and place ethical considerations over openness and interoperability.

Establishing robust and viable economic models to support open scholarship is imperative. It falls to libraries to do much of the work of articulating and implementing those models, through negotiations with publishers, development of local services, and engagement with their scholars. To do that effectively, academic libraries need to identify areas of intersectional opportunity both within the library and across campus and to build and sustain partnerships to act upon those opportunities. In doing so, libraries must continue to fulfill their long-standing service role, but also recognize their leadership role, a role arising from their expertise and from the urgency of ensuring access to scholarship.

## Implications for iSchools

### *Scholarly communication as an object of study*

As noted previously, the study of scientific communication and literature has been recognized as one of two primary sub-disciplines within information science (White & McCain, 1998). As reviewed by Palmer and Cragin (2008), early contributions often focused on information needs, uses, and transmission within the scientific and technical fields (e.g., Allen, 1969; Crane, 1971; Herner & Herner, 1967; Menzel, 1966; Paisley, 1968). Bibliometric analyses of research publications — the quantitative assessment of scholarly communication — became highly influential in shaping how impact is recognized in academia. Citation analysis methods, pioneered by Eugene Garfield, and advances in citation indexing (Small, 2018), were the precursor to impact metrics such as the h-index and the journal impact factor. More recent qualitative and multi-method research approaches have often drawn on STS (science and technology studies) and related social sciences, taking a socio-cultural approach, examining scholarly exchange through the lens of disciplinary cultures and practices (e.g., Frohmann, 2004; Fry, 2005; Palmer & Neumann, 2002; Borgman, Wallis, & Enyedy, 2007).

Studies of data sharing, citation, archiving, and reuse have become a significant area of concentration for LIS researchers, in response to trends in data-driven science and expectations within research communities and among journals, federal agencies, and other funders. Some of this research follows the “practice turn” of prior work on scholarly communication to describe disciplinary data practices broadly (e.g., Faniel et al., 2019; Frank et al., 2015; Karasti & Baker, 2008; Thomer, 2022; Wallis et al.,

2013; Yoon & Lee, 2019; Zimmerman, 2007); some is more explicitly action-oriented, seeking to improve data infrastructure or increase willingness to share data by individual researchers (e.g., Borgman, 2012; Cragin et al., 2010; Cutcher-Gershenfeld et al., 2016; Li et al., 2020; Tenopir et al., 2011, 2015); and some is quite practically oriented, focusing on the development of standards, protocols, and schemas for the dissemination of scholarly products (e.g., Greenberg et al., 2009, 2023; Lagoze & Van de Sompel, 2003; McDonough, 2009).

There have been parallel action-oriented strands of research explicitly arguing for the importance of open science, open data, and open access to scholarship more generally (e.g., Leonelli et al., 2015; Piwowar & Vision, 2013), as well as open-access advocacy from professional organizations like the Scholarly Publishing and Access to Resources Coalition (SPARC), which runs an annual International Open Access Week to spread awareness “around the importance of community control of knowledge sharing systems” (<https://www.openaccessweek.org/>). As new modes of networked communication and publication have arisen, so have new metrics to measure the use and impact of scholarship, generically referred to as “altmetrics” (Konkiel, 2013; Priem et al., 2010; Sugimoto et al., 2017). The increasing complexity of scholarly communication with informal modes of publication and social media-based interactions calls for renewed investment in analysis, interpretation, and critical evaluation of research productivity and impact. Going forward, the role of artificial intelligence in both the production and exchange of scholarship will be a dominant area of concern and study in the discourse and research on scholarly communication.

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It is essential to recognize that LIS research and advocacy contributes to a broader base of scholarly communication interests and activity within scholarly disciplines themselves. For example, the influential FAIR guiding principles for scientific data management and stewardship were developed by a group of bioscientists and associated research data experts (Wilkinson et al., 2016). Their recommendations echo decades of earlier work in LIS, as do other important policy advances, including the 2013 and 2022 Office of Science and Technology Policy (OSTP) memos (Holdren, 2013; Nelson, 2022) on ensuring access to federally funded research. Disciplinary professional organizations such as the Earth Science Information Partners (ESIP) have been highly effective in building community among researchers and data managers to improve knowledge infrastructures and interoperability. Interdisciplinary organizations such as the Research Data Alliance and FORCE (Future Of Research Communications and E-scholarship) have been critical to bringing information scientists and domain scientists together to conduct research and draft policy.

### *Scholarly communication as a core professional competency*

Support of scholarly communication is a cornerstone of academic librarianship as well as research. Analysis of job postings has demonstrated its prominence as a core competency in academic and research library work (Finlay et al., 2015; Xia & Li, 2015). It is considered a central service and area of expertise, as part of the shift “from passive, library-centric, collection building toward an active, participatory, and collaborative” set of roles and responsibilities, for example, with liaison librarians serving as “scholarly communication coaches” (Brantley et al., 2017, p. 143). As part of their support for both research and teaching, librarians often teach classes, conduct workshops, and develop resources

on scholarly communication topics, including the use of Creative Commons licenses, peer review, and establishing scholarly identity, which is another area of potential corporate monetization (Schonfeld, 2020).

The professional community devoted to scholarly communication is large and active. The Association of College and Research Libraries (ACRL) maintains an extensive Scholarly Communications Toolkit (<https://acrl.libguides.com/scholcomm/toolkit>), and the ACRL annual meeting features many tracks on scholarly communication topics. There is a peer-reviewed journal on the work of libraries in this area: *The Journal of Librarianship and Scholarly Communication*. Academic libraries, both as individual organizations and collectively, have been vocal and prominent advocates for change in scholarly communication practices, as evidenced by the Scholarly Publishing and Academic Resources Coalition (SPARC), which is a non-profit advocacy organization with more than 200 member libraries in North America. The coalition “supports systems for research and education that are open by default and equitable by design” and has been influential; for example, it lobbied successfully for revisions to the OSTP directive requiring open access to the results of federally funded research.

One of the most significant developments in 21st century scholarly communication support has been the widespread investment in institutional repositories for archiving papers, data, and other scholarly output from universities. The Registry of Open Access Repositories lists more than 3,900 repositories, with a large percentage based in university libraries. The maintenance and further development of these systems will be a central focus for LIS practitioners in coming years, along with the many complementary services developed to support associated research communities with the management, archiving, publishing, and sharing of data and other products of research. The infrastructure and services have been critical in supporting open-access efforts across campuses, providing universities with a straightforward solution to many common concerns about access, preservation, and sharing of data or preprints. Going forward, there is an increasing need to collaborate with, and potentially help lead, university research services in coordination with offices of research computing and information technology services (Chodacki et al., 2020; Cooper et al., 2022).

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## *Preparing the workforce*

Despite the centrality of scholarly communication in LIS research and practice, iSchools and LIS programs have been slow to develop educational offerings that fully cover the growing range of scholarly communication responsibilities in academic libraries. This lag is a liability for the profession, since we know that scholarly communication is at the heart of much of the work performed in academic libraries, and the preponderance of students in many LIS programs are placed in academic libraries. A snapshot of placements for four of the programs represented in the LIS Forward initiative show the highest percentage of students are going into academic libraries (between 33% and 50%) at each school. Yet a study by Bonn et al. (2020) found that “few scholarly communication practitioners felt well-prepared by their graduate training for the core set of primary and secondary scholarly communication responsibilities that have emerged” (p. 1). This finding is widely supported by anecdotal data emerging from conversations with academic library directors who opine about their candidates’ lack of preparedness for addressing scholarly communication issues in their jobs.

Nick Shockey, Director of Programs & Engagement for SPARC and founding director of the Right to Research Coalition, commented in an email exchange:



The scarcity of professional training for scholarly communications [scholcomm] has come up as a pain point in my conversations with both library administrators and scholcomm librarians. Library administrators have expressed the difficulty they sometimes have in hiring qualified candidates for scholcomm positions, and scholcomm librarians have described the challenge of providing training and related support to colleagues across the library whose positions are incorporating scholarly communications duties for the first time. Providing more robust scholcomm instruction in iSchools is an important step in addressing these challenges, and the course materials could serve as the foundation for useful professional development for library workers.

It is important to note that certain areas of scholarly communication have been evolving in curriculum and educational programs in recent years. IMLS invested in significant capacity building in digital curation and data curation starting in the mid-2000s (Lee et al., 2007; Palmer et al., 2008). The trends and demand have been recognized nationally (National Research Council, 2015), and many iSchools now offer specializations in digital or data curation and digital preservation (Palmer et al., 2014; Yoon et al., 2021). The field is also benefiting from investment in initiatives dedicated, for example, to the integration of LIS and data science (Greenberg & Marciano, 2022) and research data management training for practitioners, with one active program sponsored with corporate funding from Elsevier (Shipman & Tang, 2019). There have been calls to “teach librarians to become data scientists” and thereby better support the increasingly computational research at their universities (Erdmann, 2014), and many iSchools now have robust data science curricula that students can take advantage of within LIS or other degree programs in their schools. Further study is needed to better understand the scope of course offerings, if and how they are integrated with scholarly communication curriculum more broadly, and current gaps in the array or relevant areas of expertise.

### *Principled and responsible open scholarship*

Imperatives for open scholarship — and open infrastructures to support that scholarship — raise many questions about how to support and promote openness in ways that align with the principles and ethics that underpin our field. One such question: How do the economics of scholarly publishing need to change to equitably support researchers and libraries alike? Many argue that scholarly communication is a fundamental part of the work of the academy; Paul Courant, former provost at the University of Michigan and later dean of the library, once quotably asserted “there is no scholarship without communication.” While it might follow that communication emanating from research and scholarship should be fully supported in the natural course of university business, the long-standing publishing business models are rooted in an economy based on corporate financial gain. Yet at the same time, this system could not function without the gift economy-based practice of peer review. This tension between corporate profits and unpaid academic labor is growing increasingly untenable. Academic libraries are pursuing new models for working with publishers, such as transformative agreements wherein library licensing and subscription fees also cover article publishing charges for open access. However, these new models raise concerns about their viability and affordability, especially for economically disadvantaged institutions in developing countries and for small and under-resourced institutions more generally.

Another question to address in our pursuit of open science: How can we best balance openness with

respect for people, privacy, and academic precarity? As Bahlai et al. point out, “open science isn’t always open to all” (2019); there are many dimensions of openness that need to be examined for their impact on at-risk and marginalized groups involved in research, including the collaborators and communities working directly with scholars. In our calls for open science, we must avoid “#bropenscience” — exclusionary approaches or naive openness regardless of the potential harms that could result (Whitaker & Guest, 2020). In some areas of academia, disciplinary or cultural responsiveness will mean deviating from or developing new principles to guide our practices (Palmer & Cragin, 2022). In the humanities, “the FAIR principles of maximum reusability and interoperability cannot be achieved on an epistemic level, even if they can be achieved technically” (Tóth-Czifra 2020, p. 245). This is also true for domains that require protections for sensitive data or controls based on ethical or cultural considerations. In the case of Indigenous data stewardship, libraries and repositories will need to adhere to the CARE Principles for Indigenous Data Governance (Research Data Alliance, 2019), designed explicitly to support Indigenous research methods and data sovereignty. In implementing CARE (collective benefit, authority to control, responsibility, and ethics), priorities will necessarily be driven by Indigenous values and decision-making by Indigenous communities (Carroll, et al. 2019), rather than the largely ubiquitous FAIR principles or other scholarly communication economies. Finally, many sectors of the academy still expect communication to be supported and disseminated by for-profit businesses, which may engage in unethical data sharing behaviors. Libraries’ dependence on products from these companies can be in direct opposition to privacy and ethical standards that underpin LIS and iSchools, as seen in the controversy around the case of Thomson Reuters and RELX selling personal data to Immigration and Customs Enforcement (ICE) and other law enforcement agencies (Lampman, 2019).

**[iSchools] must contribute to basic research and workforce development in ways that advance and maintain a healthy scholarly communication ecosystem.**

To support libraries in this work, iSchools need to evaluate and potentially reinvest in scholarly communication research and education. They must contribute to basic research and workforce development in ways that advance and maintain a healthy scholarly communication ecosystem.

Research questions raised by new forms of scholarly communication are inextricably intertwined with our systems of knowledge production and include the wide range of work practices involved in research and scholarship across disciplines. We expect the scope of research questions of vital importance to span well beyond what would traditionally be considered “communication” to encompass discovery, access, stewardship, and preservation of all kinds of research inputs and outputs, as well as the lingering questions on economic models. Newer areas of inquiry need to address important questions about reaching public sector audiences, scholarly disinformation, supporting convergence research, and curation for transparency and bias reduction in AI.

iSchools must build partnerships across their campuses, with their own libraries, with museums and archives, with IT and data and research services, and with scholars in adjacent fields who can contribute insight into forms and methods of scholarship beyond the disciplinary norms of LIS. LIS scholars need to ensure their own awareness of contemporary practices and expectations, both to exploit the value of those practices and to meet those expectations. Increased awareness and expertise within LIS programs and subsequent attention to scholarly communication as a research area will have benefits for both the scholars themselves and for their students.

Educational advances would require new and revised courses that give students understanding of the rich intellectual history but also exposure to the complex and dynamic current environment. Connections between related existing courses should be made to build coherence within curriculum for academic librarians. More advanced and hyper-contemporary courses are needed for the career path into research-intensive libraries, specialized repositories, and professional leadership in scholarly communication. Coursework on topics such as open access, copyright, knowledge infrastructure development and maintenance, data reuse, and digital curation are core to the work of the next generation of academic libraries and research repositories. They also have broader applicability to other iSchool academic programs in data science and AI.

Additionally, students need to be trained to act as brokers among stakeholders and invested parties (researchers, their research subjects, publishers, universities, research labs and institutes, professional organizations) in scholarly communication. As stated by Dan Daily, dean of libraries at the University of South Dakota, in an email exchange, “Scholarly Communications’ can’t just be the responsibility of one or two librarians at a campus. Rather, academic library leaders, library faculty and library staff all have roles to play in the scholarly communications ecosystem. Professional education in scholarly communications will equip and prepare librarians to best serve their campuses.”

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# Preparing for a Volatile Workplace



*By Brian Sturm and Mariel Melo, Professors, University of North Carolina at Chapel Hill*

## Background

The state of Illinois made a significant move on June 12, 2023, by enacting a groundbreaking law that explicitly prohibits book bans in public schools and libraries (Mayorquin, 2023). This action represents a long-awaited rebuke to the escalating censorship trend across the nation by organized hate groups. It exposes a wider systemic problem of the enduring oppression of historically marginalized communities, specifically BIPOC and LGBTQIA+ populations. By outlawing book bans and curtailing the influence of organized groups that obstruct library operations, this measure aims to restore trust in librarians' expertise and affirm their role as guardians of knowledge. Illinois Secretary of State Alexi Giannoulias, who also serves as the state librarian and played a crucial role in driving the legislation, remarked, "What this law does is it says, let's trust our experience and education of our librarians to decide what books should be in circulation" (Savage, 2023, para. 3).

To be clear, book bans are not a recent phenomenon but rather a recurring issue throughout history. However, the current wave of book bans takes on added significance as the United States approaches another presidential election in 2024. The number of book bans has seen a significant increase, more than doubling in 2022 alone (ALA, 2023). The American Library Association released a report stating;

“ The prevalent use of lists of books compiled by organized censorship groups contributed significantly to the skyrocketing number of challenges and the frequency with which each title was challenged. Of the overall number of books challenged, 90% were part of attempts to censor multiple titles. Of the books challenged, 40% were in cases involving 100 or more books (ALA, 2023).

The energy behind organized book bans and challenges has unleashed a form of physical and emotional violence that has long plagued the field but has now reached unprecedented levels. A public librarian described the toxicity of their work environment: "I've been called a pedophile. I've been called a groomer. I've been called a communist pornographer" (Gonzalez, 2023, para. 8).

## *Hostile working conditions*

The working conditions that public librarians currently experience are remarkably different than they were less than a decade ago. Libraries are not neutral; they cannot afford to be neutral. A stance of neutrality isn't protective, but does the opposite: It makes librarians and libraries targets for hate groups to exploit. Concerns about personal safety, liability, and character defamation have become prevalent as new dynamics enter the workplace, such as enforcement of mask requirements during the COVID-19 pandemic, controversies surrounding drag queen storytime programming, and instances of hate groups reserving library rooms to promote intimidation and fear. Anxiety within the profession is growing as librarians face protests, hate mail, and potential lawsuits.

The entire field and profession are impacted, but more notably it becomes discernibly difficult for BIPOC and LGBTQIA+ library professionals whose communities are at the center of the censorship efforts. The impact of these censorship efforts extends beyond the field as a whole, affecting the ability of librarians to serve their communities and uphold the principles of diversity, inclusion, and intellectual freedom.

## *Low Morale and Burnout*

It is no surprise that librarians and LIS students are experiencing low morale and burnout. Burnout occurs when two elements are at odds in a job: high expectations and low control (Nagoski & Nagoski, 2019), precisely what librarians experienced acutely amid the pandemic. Moreover, librarianship is also a “human giving” profession in that librarians perform labor in service to others to a level that is detrimental to their health. As a public-facing service profession, it provides hate groups with a target for their hateful rhetoric and for conjuring fear. The prevalence of burnout is associated with the phenomenon of “vocational awe,” the detrimental coupling of one’s identity to the work that they do (Ettarh, 2018).

## Implications for iSchools

iSchools prepare students on a range of topics and skills. Traditional areas of expertise, such as reference services and collection development, need to evolve. Similar to how technology drives the need for expertise in information retrieval, digitization, and preservation, current socio-political drivers require a new kind of professional sophistication. Curricula need to cover topics that prepare students to navigate the challenges and risks they will encounter as professionals in a public institution within a deeply divided country.

- **Potential criminal liability:** Are students equipped with the knowledge and understanding of legal and ethical considerations to mitigate the risk of potential criminal liability that can arise in their work as librarians? In Florida, school librarians are confronted with the fear of committing a felony if they do not adhere to new guidance on book bans. As a result, they are covering books, pulling them from the shelves, and required to complete mandatory training on how to select compliant books (Pendharkar, 2023).
- **Threats of physical and emotional harm:** Is there adequate training and preparation in the curriculum to help students handle threats of physical and emotional harm directed toward librarians? Do students learn strategies to protect themselves and respond to such threats in a professional manner? (Gonzalez, 2023)
- **Well-being in a service industry:** Recognizing that librarianship is a service-oriented field, does the curriculum address the “subordination” of librarians’ well-being to patrons? Are students taught techniques for self-care, setting boundaries, and balancing the demands of the profession while prioritizing their own mental and emotional health? (Grimm, 2022)
- **Crisis management:** Given the potential for crises to arise in library settings, does the curriculum prepare students to effectively handle and navigate challenging situations? Are students trained in crisis response, conflict resolution, and communication strategies that promote a safe and inclusive environment?

- **Addressing personal biases:** Does the curriculum provide opportunities for students to reflect on and work through their own biases? Are students encouraged to develop cultural competence, inclusivity, and an understanding of social justice issues that impact library services and the communities they serve? (Ferreti, 2020)

It is important to note that the curriculum should not solely focus on negative aspects. LIS graduate students are driven by a strong commitment to social justice and a desire to contribute positively to their communities. They enter the field with a clear understanding of the challenges present in the world. While there is nothing inherently wrong with this disposition, it can make them vulnerable to exploitation.

As faculty, our responsibility is to provide ongoing support by fostering transparency about the current environment, promoting proactive strategies for mental health and self-care, and empowering students. The aforementioned list outlines topic areas that engage with the working conditions surrounding librarianship. The following areas and questions focus squarely on supporting students to navigate and thrive in their chosen profession.

- **Empowering students:** How does the curriculum position students to feel empowered to push back when their job responsibilities exceed their scope? Are there opportunities for students to develop assertiveness skills and learn to advocate for themselves professionally?
- **Supporting BIPOC and LGBTQIA+ students:** How does the curriculum address the specific challenges faced by BIPOC and LGBTQIA+ students and their advancement in a field reckoning with its white supremacist histories and predominantly white composition? Are there inclusive perspectives and critical discussions incorporated into the curriculum to foster understanding, resilience, and empowerment? (Galvan, 2015)
- **Psychosocial training interventions:** How are students and practitioners trained and provided with opportunities to attend psychosocial training interventions? Are there resources and support systems in place to help them identify burnout, manage stressors, and prioritize their mental well-being? (Restrepo, 2021)
- **Critical engagement with socio-political histories:** How does the curriculum encourage students to critically engage with the socio-political histories of white supremacy that underlie the history of libraries? Are there discussions and assignments that prompt students to reflect on power dynamics, inequities, and the need for social justice within the library profession?
- **Uncoupling vocational awe:** How does the curriculum advocate for the uncoupling of vocational awe, which is often associated with librarians at alarming rates? Does it challenge the notion of librarianship as a self-sacrificing and all-consuming identity, emphasizing the importance of work-life balance and self-care?

**It is important to note that the curriculum should not solely focus on negative aspects. LIS graduate students are driven by a strong commitment to social justice and a desire to contribute positively to their communities.**

By being transparent about the challenges and realities of librarianship and providing a realistic set of strategies and approaches, the curriculum can extend compassion and prepare students for challenges,

responsibilities, and ethical considerations inherent in the role of a librarian today. Idealistic and overly positive depictions of librarianship can ultimately set students up for failure by not adequately preparing them for the diverse and nuanced aspects of the profession. Supporting the holistic well-being of LIS students and practitioners will take substantial investments (Nardine, 2019; Kendrick & Damasco, 2019) in professional development and overall job satisfaction, including mental health. In equipping them with the necessary skills and knowledge to navigate complex situations, it will be essential to prioritize their well-being and provide inclusive and effective services to diverse user populations.

At this time, iSchools are confronted with the need to change and meet the moment. Currently, the field is suffering from a lack of diversity in current and emerging librarians; however, to be clear, this isn't a numbers problem but rather based in pervasive systems of oppression that make the work unsustainable and harmful. Justice, equity, diversity, and inclusion efforts and programming have been ongoing as libraries continue to grapple with the field's roots in white supremacy (Leung & Lopez-McKnight, 2020). Now more than ever, iSchools need to take a stance and make a concerted effort to support librarians and emerging professionals as they endure conditions that are overtly hostile to librarians and are especially harmful to BIPOC and LGBTQIA+ professionals. This includes providing support and ensuring iSchool curricula prepare emerging librarians to work in today's libraries.

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# Supporting Communities in an Era of Disconnection



*By Chance Hunt, Associate Teaching Professor, University of Washington*

## Background

Technological change has simultaneously brought people together and created divisions. Pew Research reported “Eight-in-ten teens say that what they see on social media makes them feel more connected to what’s going on in their friends’ lives, while 71% say it makes them feel like they have a place where they can show their creative side” (Anderson et al., 2022, para. 3). And yet disconnectedness also exists and is wearing us out. A 2021 NBC poll found that “nearly two-thirds of Americans say that social media platforms are tearing us apart” (Murray, 2021). In 2020, a Pew Research report declared “many tech experts say digital disruption will hurt democracy; between now and 2030, democracy will be weakened by “the speed and scope of reality distortion, the decline of journalism, and the impact of surveillance capitalism” (Anderson & Rainie, 2020).

In the throes of this conflict, uncertainty, and chaos, public and school libraries serve as critical community infrastructure, particularly in rural and disadvantaged urban areas. Accordingly, this paper asserts the need for LIS programs to invest in two key areas: community well-being and acceleration of technology.

## Community Well-Being

Libraries play the role of anchor institutions and often are a tangible representation of local government investment in the community. According to the Rural Libraries and Social Wellbeing Project, “public libraries located in rural locations have unique capabilities to generate social well-being outcomes in their communities” (RLSW, 2018, para. 1). They provide a foundation for “multidimensional social wellbeing,” a concept that extends beyond economic outputs to assess the relative wellness of individuals, communities, and nations (Norton & Dowdall, 2017). While people value their material standard of living, other factors are highly significant (Stiglitz et.al, n.d.), including social connection. The presence of nonprofit organizations and cultural resources is central to social connection and depends largely on institutions that build trust and support the kinds of neighborhood participation that underlie interpersonal relations.

Public libraries demonstrated their essential role in well-being during the pandemic, as they became telehealth hubs for people in need. They provided computers and internet access for critical doctor visits, and they distributed COVID tests and vaccines. They also supported health in their communities through innovative programs that kept people’s imaginations thriving through delivery of library materials, take-home crafts kits, and online story hours. In short, public libraries adapted in real time to serve their communities and helped to keep communities whole. As demonstrated in the New America 2021 study of public libraries in the pandemic, “libraries are a key part of building a more equitable

ecosystem of learning across communities, providing access to knowledge, resources, and training that may not be otherwise accessible to people with lower incomes” (Guernsey et al., 2021).

As our communities recover from the impacts of the pandemic, however, well-being seems more at risk due to increasing political and social polarization. As seen with the escalation of local book bans, public libraries have been thrust into intense socio-political realities within their communities. According to PEN America, educational gag orders and systematic banned books efforts are reducing a shared sense of civility and connectedness (Friedman & Johnson, 2022; Friedman & Tager, 2022).

The pressures extend beyond public and school library governance to local policy and state legislation focused on changing control of what stories and reading materials can be collected, exhibited, and taught in the classroom. Winners and losers are being selected through declarations about whose life is worthy of representation in public collections of information. Public libraries, where the doors have been open to all for access to collections, computers, and services designed to answer questions and support community needs, are now faced with increasing mistrust. Significant barriers are being erected that deter communities’ health and well-being through information and connection to each other.

## Access, Adoption, and AI

The potential for connection has always been one of the great promises of digital technologies, and public libraries have served as one of the few institutions dedicated to equalizing digital access and literacy. As the pace and intensity of disconnection escalates, we need new strategies for understanding, building, and supporting community connection through digital technologies.

The internet, mobile apps, and especially machine learning and AI are quickly and dramatically changing how information is created and disseminated. At the same time, long-standing disparities continue to underlie all of the established and emerging technologies. Uneven access to broadband, hardware, and digital skills impacts how people can prepare for good-paying jobs and every imaginable personal transaction, as tracked by the Digital Divide Index (Gallardo, 2021). More inclusive metrics are needed that can fully represent mobile technology adoption rates or levels of digital literacy.

There is both optimism and caution over how humans and machines will coexist in the coming 10 to 15 years. For example, technology experts are “split on how much control people will retain over essential decision-making as digital systems and AI spread” (Anderson & Rainie, 2023). With the emergence of ChatGPT, a recent Forbes article asked “Is Google’s Reign Over?” (Marr, 2023). Since the early 2000s, Google has been seen as a threat to publishing, to finding accurate health-care information, and to the existence of libraries themselves. And yet, these dire predictions did not come to fruition. Publishers, health-care providers, and libraries are still thriving in the United States, but the work has changed in a multitude of ways.

## Implications for iSchools

How might iSchools, with their multidisciplinary faculty, educate students as effective technology equity advocates? Progress may be made by modeling how LIS programs equip children’s librarians to become effective literacy advocates and practitioners (Campana et al., 2016). However, it will be imperative for researchers in iSchools to explore and assess the fidelity of library program models and develop innovative strategies for further advancing public libraries in the digital age. That work will

require collaboration with social work, public health, and public policy researchers to further integrate the interests of libraries into broader academic inquiry on community issues.

With the acceleration of machine learning and AI, all forms of information engagement will be transformed. For librarians, their active engagement across the spectrum of information creation, dissemination, and search will be critical to delivering responsive services in the future. Information schools are uniquely positioned to bring their multidisciplinary forces together to fully engage with the multiple dimensions of human/machine co-creation. Whether it be the future of coding, publishing, misinformation, information dissemination, or their ethical applications, LIS programs in iSchools can collaborate more fully with the other programmatic disciplines to maximize the research objectives that the complexity of these issues will require.

The National Digital Inclusion Alliance (NDIA) offers a glimpse into one model that could help close gaps in digital equity at the local level through the deployment of digital navigators, “guides who assist community members in internet adoption and the use of computing devices.” Digital navigators work in the community, as seen with how NDIA is actively supporting the Tech League working out of Salt Lake City Public Library. Funded by the Institute of Museum and Library Services (IMLS), the model demonstrates how libraries can play an active role in equipping the American public with digital skills and access points to services, information, and expertise in a hyper-connected world (Balboa et al., 2021). It also suggests the need for forward-looking LIS curricula in partnership development, public service innovation, and effective assessment.

Information schools, due to their interdisciplinary nature, are uniquely positioned for research and education in areas where technological, political, and social issues intersect with people’s information needs and well-being. iSchools could:

- Build competencies in community engagement skills for all practicing library staff, including mid-career professionals, non-MLIS library staff members, and perhaps governing boards.
- Commit to research networks working in collaboration with rural librarians, to be sustained and coordinated across multiple types of communities. This could involve partnering with associations such as the National Digital Inclusion Alliance; Schools, Health & Libraries Broadband (SHLB) Coalition; and the Association of Rural and Small Libraries (ARSL) to further deepen relationships where professional and social communities intersect.
- Collaborate with computer science, public policy, social work, and public health schools to develop research and education goals that address the policy, legal, and technological issues facing public libraries.
- Make intentional decisions about core courses to shift emphasis toward organizational management, advocacy, technology, policy, and future implications of digital technology in public settings.
- Create “teaching libraries” where students engage in active research and co-design with practitioners. Moving beyond the walls of the academy will help academics connect directly with the communities served by libraries to inform and recalibrate curriculum and theoretical and academic

**Information schools, due to their interdisciplinary nature, are uniquely positioned for research and education in areas where technological, political, and social issues intersect with people’s information needs and well-being.**

conceptions of libraries. For example, teaching libraries could embrace, study, and critically assess the development and use of algorithms, machine learning, and AI impacts on their service communities.

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# Access and Intellectual Freedom



*By Emily Knox, Associate Professor, University of Illinois at Urbana-Champaign*

## Background

Information access is the act of creating, disseminating, organizing, and preserving information for a given population. It is also related to the broader concept of freedom of expression and the right to communicate. As Kay Mathiesen (2008, p. 574) notes, encouraging access to information allows for the realization of expressive acts and also provides for rich information cultures that lead to human dignity and autonomy. Intellectual freedom can be defined as the right of every individual to hold and express opinions, and seek, access, receive, and impart information and ideas without restriction (Knox, 2022). Both information access and intellectual freedom are core values of librarianship and related professions.

Information access and intellectual freedom both rely on several different legal and cultural regimes. For example, laws and norms related to confidentiality and privacy are imperative for maintaining one's right to intellectual freedom. Intellectual property laws, especially copyright, dictate what kinds of information is accessible. For information professionals, it is important to balance the rights of creators with the rights of users. United States copyright law will soon be part of a political and legislative fight as of Jan. 1, 2024, as Mickey Mouse moves into the public domain. Copyright law has not been fully revised since 1976 and is not responsive to the current information and communication ecosystem.

The Library Bill of Rights states: "Books and other library resources should be provided for the interest, information, and enlightenment of all people of the community the library serves. Materials should not be excluded because of the origin, background, or views of those contributing to their creation" and "Libraries should challenge censorship in the fulfillment of their responsibility to provide information and enlightenment" (ALA, 2006). Yet the past few years have seen unprecedented attacks on intellectual freedom. In 2022, ALA reported 1,269 attempts to censor library resources, targeting 2,571 books, which is the highest number of attempted book bans in a single year since ALA began compiling these lists more than 20 years ago (ALA, 2022). Challenges to library materials have continued in 2023, with the ALA reporting a 20 percent increase in the number of unique titles challenged between Jan. 1 and Aug. 31 compared to 2022 (ALA, 2023). Along with these increases in materials challenges has been a marked increase in attacks on librarians, in the form of personal threats and harassment by members of the public challenging these materials.

## Implications for Libraries

Libraries are the physical embodiment of the right to free expression in a community and provide materials from a variety of viewpoints and opinions as well as the services needed to access those materials. All library staff and boards must be committed to the core values of librarianship. This means that all library workers and board members must have training that introduces them to and provides context for understanding these values. Library workers at all levels must be trained to advocate for library values and services.

The current attacks on libraries and schools have highlighted the need to advocate for the library as an institution and increase marketing of library services to all stakeholders, including those who do not use libraries as well as those the library serves out in the community. Although library workers as a whole often eschew politics, they and their supporters must be involved in local, state, and national political processes to ensure continued support for public institutions. When the library is visible to and involved in the community, community members better understand the value of the library and will advocate for the access all community members should have.

## *Materials Challenges and Anti-Intellectual Freedom Laws*

Challenges to materials in public institutions, especially books, ebb and flow depending on societal changes. These materials challenges have generally been against what might be called diverse books or books that center the lives of “LGBTQIA, Native, people of color, gender diversity, people with disabilities, and ethnic, cultural, and religious minorities” (We Need Diverse Books, n.d.). Along with the materials challenges, opposition to critical race theory, and concerns over sexual orientation and gender identity, there are also a growing number of anti-intellectual freedom laws being passed across the U.S. In addition, states have passed laws that would make it a criminal offense for libraries or schools to provide information that someone deems inappropriate. Librarians and other information professionals must remain vigilant in the face of these challenges.

## *Section 230*

Section 230 of the Communications Decency Act, passed in 1996, states “No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider” (Electronic Frontier Foundation, n.d.). It provides so-called “safe harbor” for online companies so that they are not legally responsible for information posted on their websites. This means that individuals cannot hold communications platforms liable for harm that derives from material that they publish. Some tech companies are calling for increased regulation for their platforms.

## *AI, Algorithms, Tracking, Privacy*

Surveillance is not only carried out by the government but also by technology companies. This matters for intellectual freedom in general because algorithms and tracking work together to create so-called information bubbles. These filter bubbles mean that the communications circuit is controlled by AI and tracking. Individuals must work hard to take themselves out of an information environment that provides only certain types of information.

## *Misinformation/Disinformation/Malinformation*

The question of what is or is not truthful information is more a question of interpretation than a question of facts. This matters for intellectual freedom because of the effects mitigating mis- and dis-information might have on freedom of expression. Who decides what is mis- or dis-information? How are they making those decisions? Who might be harmed when these decisions are made?

# Implications for iSchools

Research has found that librarians from ALA-accredited schools are more likely to uphold intellectual freedom in their institutions (Krieb & Knox, 2018). Courses in these programs help secure commitment to the core values of librarianship. Along with these commitments, the programs in iSchools must also train students to make ethical judgments in context, using what might be called a practical philosophy of librarianship (Knox, 2014). This practical philosophy of ethical judgments is based on three foundations: codification through the American Library Association, institutionalization through coursework and policies, and investigation through research into information access, intellectual freedom, censorship, and related areas.

It is also imperative that students understand critical cultural literacy, which includes cultural competence, critical information literacy, media and design literacies, historical literacy, emotional literacy, political literacy, and racial literacy (Cooke, 2021). That is, these ethical judgments are based on context. And, as the U.S. population becomes more diverse, LIS professionals must be able to build critical cultural literacy to serve the diverse populations in their communities well.

## Conclusion

As the landscape for both access and intellectual freedom shifts rapidly across the nation and as information sources become more ubiquitous, it is absolutely critical for library workers to understand the Library Bill of Rights and other foundational documents of the profession and to establish strong policies that align with these values. Library workers must also track legislation that runs counter to intellectual freedom and free access — core principles of a democratic society — so that libraries can continue to serve the purpose of free information access for all.

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For current anti-intellectual freedom legislation, see [EveryLibrary's Legislation of Concern tracker](#). To understand more of how these conflicts are playing out in courts, see [Illinois Secretary of State testifies on free speech and book bans](#).

# Building Resilience to Crises with Our Communities



*By Beth Patin, Assistant Professor, Syracuse University  
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In this essay, the authors define what we mean by crisis and proceed to share how libraries have responded to past crises by sharing practitioner perspectives and scholarship. We then define the concept of resilience and how it can manifest in a society. We conclude by exploring some implications that point to directions and investments that will enhance LIS scholarship and practice for resilience in an era in which crises are continually emerging.

## Background

### *Definition of Crisis*

The literature on crisis management or response to crisis typically utilizes these three terms: (1) crisis, (2) disaster, and (3) emergency. A crisis is “a situation (e.g., a traumatic change) that produces significant cognitive or emotional stress in those involved in it” and “a state of affairs marked by instability and the possibility of impending change for the worse, for example, in a political or social situation” (American Psychological Association, 2020). The Federal Emergency Management Agency (FEMA) (n.d.) defines a disaster as “an occurrence of a natural catastrophe, technological accident, or human-caused event that has resulted in severe property damage, deaths, and/or multiple injuries.” A disaster has “community-level effects” (Cline et al., 2010, p. 2) to the extent that affected communities are not able to cope with the situation (U.S. Public Health Service, 1976 in Cline et al., 2010). An emergency is “any incident, whether natural, technological, or human-caused, that requires responsive action to protect life or property. Under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (2011), an emergency means any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States” (FEMA, n.d.). These terms (crisis, emergency, and disaster) are used interchangeably, and to some extent, overlap (Shaluf et al., 2003; Al-Dahash et al., 2016). Hence, for the purpose of this essay, we amalgamate those terms into one: crisis, to cover library practices and responses to everything that falls under categories of crisis, disaster, and emergency. In our work, we consider both natural (e.g., floods, fire) or man-made crises, such as war events (Harding, 2007; Cline et al., 2010), and both short-term (e.g., forest fire) and long-term, ongoing crises (e.g., the opioid crisis) (Vadivelu et al., 2018).

## Libraries’ Roles in Responding to Crises of the Past

Crises are occurring more frequently and are also increasing in severity (Scholl & Patin, 2013). We know libraries play critical roles in their communities in the aftermath of crises, but little research examines the roles public libraries play across multiple crisis types. Additionally, much of the existing research in this area focuses primarily on medical, special, or corporate libraries. If public libraries are discussed,

the body of research that is available is often case studies focusing on public libraries in a specific crisis such as a hurricane in Florida. For example, while studying library response after hurricanes, Zach and McKnight (2010) found that public libraries helped communities prepare before the storms, provided emergency information after the storms, provided physical shelter and aid, and assisted in cleaning up damage. Different crises require different plans and responses, yet it is impossible to prepare for every potential scenario, necessitating flexibility in crisis planning.

FEMA (2010) called for certain organizations to build core capabilities to confront crises and to measure and track progress on crisis response and rebuilding. These “essential community organizations,” as designated by FEMA, are organizations whose services are “necessary to save lives, or to protect and preserve property or public health and safety” (FEMA, 2010). Specifically, FEMA formally designated public libraries (Stafford Act, 2011) as essential community organizations, adding public libraries to the category of essential community services including police, fire protection/emergency services, medical care, education, and utilities. This new designation assumes public libraries have the potential to enhance resilience.

Despite this classification, public libraries remain underprepared to implement flexible and comprehensive crisis response plans. Additionally, there is a lack of knowledge of the roles of libraries throughout crisis and of crisis management and community resilience for library decision makers. It is essential that research expands what is known about the role of public libraries during crises and convey that information to library staff in a practical way so the information is actionable. It is even more important that research informs public libraries on what they can do together with community organizations and members to prepare to support their communities in crises, rather than reacting when a community is hit with a crisis, which is what happened during the recent COVID-19 pandemic.

**It is essential that research expands what is known about the role of public libraries during crises and convey that information to library staff in a practical way so the information is actionable.**

The emergency response literature is clear about the importance of resilience and the organizations expected to be involved in emergency management. Much of the existing research focuses on preservation of materials rather than services.

Before the 2004 and 2005 Gulf Coast hurricanes, a significant amount of anecdotal evidence about the roles public libraries play during crises was published. However, as with crisis plans and planning, there remains a shortage of scholarly research identifying and clarifying those roles. However, two studies exist that identify the roles libraries are playing in crises. Featherstone et al. (2008) have, so far, provided the only comprehensive list of the roles of libraries throughout crises. Researchers conducted 23 telephone and email interviews of North American librarians who responded to bombings and other acts of terrorism, earthquakes, epidemics, fires, floods, hurricanes, and tornados. They included various library types in their interviews but were focused on illuminating the roles of medical libraries.

Featherstone et al. (2008) found “librarians — particularly health sciences librarians — made significant contributions to preparedness and recovery activities surrounding recent disasters” (p. 343). They identified the roles libraries played, classifying them into eight categories: institutional supporters, collection managers, information disseminators, internal planners, community supporters, government partners, educators and trainers, and information community builders. This is the first delineation of specific roles libraries play. However, because this work’s primary goal was to consider the role of

medical libraries, these roles need to be verified across different library types. Featherstone et al. (2008) also emphasize the value of collaborative relationships between libraries and local, state, and federal disaster management agencies and organizations. This is a significant distinction from previous research that does not merely investigate the library building or its collections, but drives libraries to work with outside organizations in their communities. This emphasis is the beginning of a push for libraries to have a seat at the table in crisis planning in their communities. However, it does not provide best practices or approaches for working with them.

Like Featherstone et al. (2008), Zach and McKnight (2010) recommend that libraries collaborate with other organizations. Still, no evidence was presented regarding how to best work with other organizations to meet the information needs of the public in times of crisis. Some of the most crucial research evidence was discovered almost by accident. The open-ended question at the end of a survey captured the significance of libraries after several Gulf Coast hurricanes in 2004 and 2005. The last question of the survey asked, "In the space below, please identify the single most important impact on the community as a result of the library branch's public access to the internet" (Jaeger et al., 2007, p. 201). Respondents overwhelmingly discussed the services libraries provided after the hurricanes. This survey led to their next study, which is a more complete study of libraries during crises. Jaeger et al. (2007) found libraries strengthened their communities in several ways, including: helping communities prepare; providing emergency information; giving shelter; providing physical aid; caring for community members in need; working with relief organizations; and cleaning up the damage after the storms. Their research covered public libraries of a wide variety of location and size, but focused singularly on hurricanes. The authors stress the need to clearly define the roles of public libraries in crisis situations within the community.

More recently, during the pandemic where the United States was plagued with heightened mis/dis-information along with the systematic racism and police brutality, Subramaniam & Braun (2021) provided a comprehensive list of services offered by public libraries, which included serving as program provider, information provider, access provider (to resources such as digital devices, internet, meals, books, etc.), social support, community partner, producer and supplier of personal protective equipment and masks, and community space. They also listed the challenges associated with providing such services without community members having access to the physical library building, not knowing the community needs, and often being placed in a reactive position without any crisis preparation plans. *The Library Quarterly* journal dedicated an outstanding special issue in 2023 on libraries confronting pandemic misinformation, including the hesitancy of libraries to engage with pandemic misinformation (Kohlburn et al., 2023), tensions between information literacy and pandemic misinformation (Tripodi et al., 2023), and a comparison of counter-misinformation activities of libraries during the 1910s global flu and the 2020/2021 COVID-19 pandemic with the goal of identifying long-term lessons to combat future pandemic misinformation (Jennings-Roche et al., 2023). The issue also included an article on overall efforts of public libraries to serve as agents of health justice and teachers of health information behaviors (Ade et al., 2023), and a piece (Mehra, 2023) on how dysfunctions in contemporary society greatly increase the difficulty for libraries in fighting pandemic-related misinformation, which is only expected to worsen in the upcoming decade. We applaud these researchers for bringing these issues to the forefront by using an equity lens to study issues faced by their communities facing crises and also highlighting the inequities that often surface, causing crises to disproportionately affect marginalized communities.

# Implications for Research in iSchools

## *Developing the Concept of Resilience with and for Communities*

Resilience means: mitigating and withstanding the stress of man-made and natural disasters by recovering in a way that restores normal functioning, applying lessons learned from past responses to better withstand future incidents. Given local variability in community priorities, needs, and approaches for resilience, every community faces unique challenges and must tailor relevant and achievable resilience goals and means to measure progress. Resilience assumes hazards or disasters cannot be prevented and that a community can be equipped with resources and information that will enhance its ability to anticipate threats, reduce vulnerability, and respond to and recover from hazard events when they occur. Colten and Sumpter (2009) define community resilience as a community's ability to strengthen its response to deal with crises or disruptions. Tierney and Bruneau (2007) describe resilience as the inherent strength of a community and as the ability to be "flexible and adaptable" (p. 14). For them, resilience is measured after a disaster and is an outcome of how the community responds. As part of their work in the Multidisciplinary Center for Earthquake Research, Bruneau et al. (2003) developed the "4 R's of Resilience": robustness, resourcefulness, redundancy, and rapidity.

Norris et al. (2007) believe that resources have dynamic attributes. They draw upon Bruneau et al.'s "4 R's" to help describe the dynamic nature of these resources. Robustness, redundancy, and rapidity are all seen as dynamic attributes of resilient communities. In the community resilience framework, robustness measures the strength of resources in the community and considers their probability of deterioration. Redundancy measures the extent to which resources are sustainable in the event of a disaster or crisis. Finally, rapidity refers to how quickly the resources in the community are accessed, used, or mobilized. Community resilience relies on both the resources themselves and the dynamic attributes of those resources.

We believe that what these 4 R's mean to each community can be studied and defined, and solutions to crises that hit individual communities can be crafted for each R with their community members and organizations in mind. We also know that libraries have unique roles to play in each R and its manifestation; hence, we call upon library scholars and practitioners to articulate these roles and the timing to execute them (before, during, or after a crisis). We call upon iSchool researchers to study these 4 R's with and for their communities by leveraging the strength of libraries and using methodologies adopted by other disciplines that work closely with communities.

## *Research in Service of Practice*

The library practice is already grappling with the issue of how to support communities, how to train in-service and pre-service librarians to have these skills and hit the ground running when a crisis hits their community, and importantly, how to do this with the constant dwindling of resources, staff, and time. Subramaniam and Braun (2021) have put together a research agenda in service of practice that starts to tackle some of these challenges and questions (adapted and expanded in Table 1 with permission from the authors):

*Table 1: Crises-Related Research Agenda*

Areas of Research	Research Questions
Library staff training — determining the skills, knowledge, and dispositions necessary to work with communities during times of crises	<ul style="list-style-type: none"> <li>• What dispositions are necessary for library staff to move from a mindset in which equity equates to access to a mindset in which equity equates to justice?</li> <li>• What skills do library staff need in order to successfully work with non-dominant/minoritized communities?</li> <li>• How do we systematically and collectively change the mindset of library staff from being a library servant to a public servant?</li> <li>• Why is it important for library staff to have an equity mindset that is centered on justice?</li> </ul>
Community engagement — determining the assets available in communities during crises, connecting with community partners, and co-designing and co-implementing solutions with communities	<ul style="list-style-type: none"> <li>• What community connections need to be in place for library staff to successfully design services that effectively serve non-dominant/minoritized communities during times of crisis?</li> <li>• How do library staff learn about community assets? Whose assets are privileged and oppressed? How can libraries leverage an asset-based approach in determining the solutions?</li> <li>• How can library staff co-design and co-implement solutions with community members?</li> </ul>
Programs and services — reimagining working with communities without space and physical access	<ul style="list-style-type: none"> <li>• In what ways do libraries need to rethink disaster preparedness so that they are ready to work with communities during crises in which buildings are closed?</li> <li>• How can we co-design programs and services that serve the invisible populations in our communities facing exacerbated challenges during crises?</li> <li>• In what ways — why and how — do virtual library activities during times of crisis benefit or suppress non-dominant communities?</li> </ul>
Library administration — rethinking policies and structures	<ul style="list-style-type: none"> <li>• What impact do library policies have on staff ability to shift practices with agility and flexibility during times of crisis?</li> <li>• How do library decision makers and funding agencies move from a view that success lies in outputs to a view that success lies in outcomes?</li> </ul>
Disaster preparedness — rethinking disaster preparedness and success/ lessons learned	<ul style="list-style-type: none"> <li>• What are the salient roles libraries can play that leverage the assets in their communities? Why libraries during crises?</li> <li>• What are the best practices and lessons learned that can serve as guidance for future crises?</li> <li>• How can we create communities of practice that can come together to share their best practices during crises? How can these communities be incentivized and sustained?</li> <li>• How can we co-design a pathway that serves as a guide to libraries to handle future crises?</li> </ul>

We call on scholars with backgrounds in library and information science, learning sciences, communications, social work, urban studies, education, computer science, sociology, human resources, public policy, public health, political science, and other relevant areas to answer these and other questions that will allow libraries to better prepare their communities before, during, and after crises.

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