EDITORIAL

Human as the Loop

Michael Fernandez and Rachel E. Scott

Although there are many perks of editing an American Library Association (ALA) Core division journal, one of the best may be the press passes we are provided to attend the ALA Annual Conference and Core Forum. Engaging with poster presenters and speakers and encouraging them to submit to *Library Resources & Technical Services* (*LRTS*) is truly an honor and a pleasure. It was similarly wonderful attending the Library Research Round Table Chair's Program to applaud *LRTS* authors Blair Solon, Margie Montañez, Liz Cooper, Amy Jankowski, Glenn Koelling, and Laura Soito on their 2026 Jesse H. Shera Award for Distinguished Published Research.

Unsurprisingly, many sessions during this year's conference grappled with and explored the use of artificial intelligence (AI) tools. Of particular interest to *LRTS* readers were those that reported on AI tools for cataloging and metadata work. We've all heard the expression "human in the loop," but in the session "AI Assisted Metadata Creation: Real-World Applications, Ethical Questions, and Practical Lessons," presenters Anna Oates Schlaack and Casey Mullin both reiterated the importance of human *as* the loop.

Mullin presented his work to develop ErgoCat, an app that automates cataloging workflows with minimal typing and mouse clicks. Mullin wrote in his Substack that he started reframing his question around "how the human can deploy generative AI to automate the aspects of cataloging work that a machine can do faster and just as well (if not better) than a human can. It's not about replacing a human's effort, it's about redeploying the human mind and freeing their physical body from the drudgery of data entry."[1] Mullin coined the phrase "Cataloger in the Loop," but his app ensures the centrality of the cataloger throughout the workflow.

Schlaack, presenting on behalf of herself and colleagues Stephanie M. Luke and Ayla S. Kenfield, described a case study conducted with digital collections at the University of Illinois Urbana-Champaign. The team identified several failures of the tools for the task at hand. One of my takeaways from their presentation was the importance of articulating the limits of an AI tool for a given task. Librarians are increasingly asked to test and use AI tools for their work. While concern and skepticism toward AI tools are incredibly valid, it will likely be more compelling to point out specific reasons that AI might not be up for the task at hand.

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The next issue of *LRTS* will be our themed issue on the topic of change management. We received a resounding response to our call for papers, and the issue is shaping up to be something special. Libraries are responding to change in novel and creative ways. In the meantime, this issue of *LRTS* presents timely case studies and compelling new research on topics ranging from paper shelflists to ebook accessibility.

Communications on Practice

In "When Everything Changes: Reimagining Structure, Process, and Community in Collections," Amanda Bugbee, Denis Shannon, Jamie Markus, Cynthia Hughes, Elyse K. Johnson, Amber R. Lotspeich, and Shannon M. Smith discuss how employee turnover and an integrated library system migration forced quick and meaningful change at the University of Wyoming Libraries. The Collection Management department leveraged change management strategies to rebuild the department from the ground up, creating a structure that met the needs of library workers and their work.

Evan Peebles and Ari Romero relate their considerations and experiences in "Better Together: Implementing a Shared Inbox for Electronic Resource Licensing." Working together to establish a new Licensing and Accessibility Unit highlighted the importance of timely access to information and context for all parties. They requested and implemented a shared inbox and have found it facilitates their planning, agility, and open communication.

In "The Vanishing Newspaper, Academic Libraries, and Our Withering Democracy," Steven Shapiro discusses changes in the news industry and considers the implications for academic libraries as advocates for and consumers of newspapers. Shapiro argues that librarians contribute to an educated citizenry through information literacy and have an important role to play in news literacy, newspaper readership programs, training the next generation of journalists, and digitizing and hosting student newspapers.

Features

Elizabeth Hobart shares results from a 2024 survey in "The Paper Shelflist in the 21st Century." Guidelines have historically directed special collections libraries to maintain a secure paper shelflist, but this instruction was removed in 2023. Hobart reports on the status of paper shelflists in rare books, archives, and special collections, investigating why librarians maintain them and exploring the effects of continuing or ending the practice.

In "Approaches to Rare Books Cataloging and Reducing Backlogs of Hidden Collections: A Review of the Literature," Mary Burns examines the literature to consider librarians' methods and approaches to reduce cataloging backlogs of rare books. Burns finds evidence of minimal-level and phased cataloging approaches, as well as cross-departmental collaboration and the adoption of technology tools, and explores the application of AI and the implications of linked data.

Adina Mulliken presents an "Accessibility Analysis of Academic Library EPUBs." The study investigates EPUBs from four vendors and eleven publishers to assess linking, alt text and extended descriptions of images, heading structures, MathML for mathematical content, specification violations, publisher-provided accessibility metadata, and alignment between publisher metadata and observed accessibility features. Mulliken reports inconsistencies between the potential, actual implementation, and reported metadata surrounding EPUB accessibility.

Notes on Operations

In "To Weed or Not to Weed? Undertaking a Large-Scale Print Serials Withdrawal Project," Jylisa Kenyon, Ramirose Attebury, and Jeremy Kenyon detail their iterative approach to weeding serials. Their case study outlines how a previously weeding-averse library ramped up from small- to large-scale serials weeding work by leveraging data and applying a formula that weighed various criteria for weeding.

Book Reviews

Books reviewed include *Compact Copyright: Quick Answers to Common Questions,* Second Edition by Sara R. Benson, *Library Technical Services: Future Forward* edited by Mary Beth Weber and Melissa De Fino, and *Working with Library Collections: An Introduction to Technical Services for Support Staff*, Second Edition by Hali R. Keeler.

Notes

1. Casey Mullin, "Welcome to Cataloger in the Loop!," *Substack*, https://catalogerintheloop.substack.com/p/welcome-to-cataloger-in-the-loop.

COMMUNICATIONS ON PRACTICE

When Everything Changes

Reimagining Structure, Process, and Community in Collections

Amanda Bugbee, Denis Shannon, Jamie Markus, Cynthia Hughes, Elyse K. Johnson, Amber R. Lotspeich, and Shannon M. Smith

Introduction

The word "change" can produce feelings of reluctance, anxiety, and uncertainty for the future. Academic libraries are a unique environment that experience ongoing change in an attempt to keep up with industry trends and offer new, meaningful services to users. The speed at which academic libraries need to address such change has also significantly increased and coincides with library users becoming more self-sufficient locating electronic resources.[1]

Due to these factors, library workers need to have a willingness to adapt and embrace change. Considered an industry standard, the Prosci model of change management outlines the five stages of successfully navigating change in the workplace. Prosci's framework involves the awareness that there is a need for change, a desire to support that change, the knowledge of how to change, the ability to demonstrate the skills and behaviors required for change, and finally, the reinforcement to ensure changes stick.[2] These five stages remain necessary when navigating and implementing change management whether the proposed change is planned and systematically carried out or it occurs organically.

This Communications on Practice piece discusses how library workers in the Collection Management Department at the University of Wyoming (UW) Libraries found themselves experiencing a mixture of both determinants of change. A perfect storm of circumstances, including significant employee turnover and the migration of our integrated library system (ILS), signaled the need for quick and meaningful change. Rather than seeing this as a setback or obstacle, the departmental team viewed this as an opportunity to rebuild from the ground up. The authors describe the situation in which they found themselves, outlining the various factors that were catalysts for a departmental overhaul and the change management strategies that defined their success.

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Institutional Background

UW is an R1, land-grant research institution whose main campus is located in Laramie, offering both in-person and distance degree programs. As of the Fall 2025 semester, the university supports a full-time equivalent (FTE) of approximately 10,819 students.[3] Our institution offers more than 200 degree programs at the undergraduate, graduate, and certificate levels. UW is a unique institution with a mission to serve not only our campus community but also the eight community colleges and residents throughout the state.[4]

UW Libraries consists of its main location, the William Robertson Coe Library (Coe Library), as well as four other branches, including the Brinkerhoff Geology Library, Library Annex, the Rocky Mountain Herbarium, and the UW National Park Service Center Library, which is located 365 miles across the state in Grand Teton National Park.[5] Both the American Heritage Center (AHC) and the George W. Hopper Law Library are nonlibrary branch research entities on UW's campus. Although not considered library branches, they do share UW Libraries' ILS. The libraries' team is relatively small, composed of approximately thirty-two staff and twenty-three faculty members. Our department, Collection Management, is made up of five faculty librarians and eight staff members. The size of our team makes the responsibility of meeting the resource needs of students, staff, and faculty, as well as the citizens of Wyoming, an all-hands-on-deck situation.

The Situation

Our department oversees several key areas: collections, acquisitions, electronic resource management, assessment, and discovery. As we are a smaller department, most of us wear numerous hats, with our work commonly shared among these various areas. Collection Management plays a vital role in keeping the Libraries at the cutting edge of emerging resources while also ensuring seamless access to existing materials. This continues to be critical work as our institution gained an R1 designation in 2025. To support our institution's land-grant mission, our department is also responsible for securing statewide resource agreements when possible. For example, UW Libraries offer access to many research databases and popular ebooks and audiobooks to any Wyoming resident with a library card, accessible through a shared, state-wide resources portal.[6]

Collection Management also oversees the entire life cycle of all library resources, both electronic and physical. Responsibilities span the acquisition of materials, record loading and maintenance, cataloging and metadata management, as well as ensuring access through effective discovery strategies. The Libraries and its branches consist of approximately 2.5 million physical items and more than 3.8 million electronic items. As a department, we are always working to improve our materials and enhance the discoverability and accessibility of our resources—a significant challenge given our team's size. Several factors facilitated the need to implement changes for the day-to-day operations of the department. An ILS migration with an expedited timeline coupled with significant turnover and the loss of institutional memory highlighted where improvements were most needed.

In 2022, UW Libraries made the decision to update our library systems, with a goal of finding an ILS with more functionality for electronic resource management. This process entailed migrating away from our existing ILS, Sierra, our electronic resource management system, Intota, and our previous discovery platform, Summon. After research and consideration by a small task force, the Libraries elected to migrate to the Ex Libris products Alma and Primo VE. Our migration required the work of numerous teams to ensure communication across library departments and campus partners. The many layers of collaborative work to prepare our systems for migration highlighted the complexity of this undertaking because it involved coordination and facilitation of in-person and virtual training for everyone involved. In August of 2023, after a roughly nine-month migration period, the Libraries went live with Alma and Primo VE. Collection Management was the department most affected by the migration.

The timeline of our ILS migration coincided with significant turnover of both faculty and staff in the department, as well as the dean's office, whose business unit complements acquisitions processes in Collection Management. It quickly became clear that we had lost institutional memory that would have directly informed migration decisions. To our disadvantage, we began migration work with an understaffed team including vacancies of our electronic resource management library specialist and our discovery and metadata librarian. We were left with few long-term employees and very little overlap in terms of staffing; if someone else were to leave, we would have to entirely "reinvent the wheel" to complete our work.

During this time, we were fortunate to have the addition of a temporary chair of collections role filled by a faculty member from another library department. This position was imperative because the chair took on many of the collection-related responsibilities that would have typically been handled by the team's migration lead. In September of 2023, our department's assistant dean announced her retirement when most of the migration-related work was wrapping up. Our current associate dean of collections joined the department roughly a month later and since then, we have worked to identify postmigration pain points and initiate cleanup projects. Some of the work we have faced includes creating all new workflows and processes for our ILS, establishing a new way to track our electronic resource renewals, radically changing budget lines and descriptions, and reworking our contract writing processes.

Implementing Change

Playbooks

Our associate dean joined us after eighteen years as the Wyoming State Librarian and brought with him the concept of employee playbooks. Playbooks offered a solution for documenting the "how" as well as the "why" of our function as a department. Playbooks typically include procedural documentation outlining how to perform position-based tasks. Starting to create our playbooks was not easy. We needed to learn Alma functionalities, and we needed to consider if and how our previous workflows could be adapted to fit into our new system. The first steps in creating our individual playbooks involved assessing what tasks would need to be created from scratch. Once identified, documentation for these

tasks was created through extensive trial-and-error and troubleshooting. Our playbooks consist of both textual and video instructions. The use of multiple formats of documentation has served to increase overall understanding of new processes and procedures. Some tasks—for example, contract writing in our financial management system—benefited from the inclusion of video-recorded, step-by-step instructions.

No two playbooks are alike; they vary according to the responsibilities of a given position. For example, the staff playbook for the position of library specialist, acquisitions, includes instructions for the regularly executed task of renewing newspaper subscriptions with a procurement card. The instructions for a task like this are intended to walk an employee step-by-step through the process. In contrast, a task that is included in the discovery librarian playbook outlines how to configure a new General Electronic Service in Alma. Although it is not a prescriptive task, a person in this position will need to know how to set up these services when necessary.

We created a centralized list of each person's playbook in the department's shared files. There is also a document outlining specific duties to help people find the playbook they need. Departmental colleagues test the playbooks to make sure that all necessary information is provided to complete a task. Testers should make sure no critical information is missing and are encouraged to ask questions. Sometimes it is enough to read through the instructions, especially if testing a task would lead to negative outcomes such as duplicating purchases or records (e.g., testers should not rollover financials merely to test the documentation).

The goal is to provide enough information about each task so that another person could complete it. These playbooks should be reviewed at least once a year to make sure all tasks (even rare ones) are included and to make sure that the information is current. Playbooks should include:

- A table of contents
- A schedule to show which tasks need to be completed daily, weekly, monthly, yearly, or as needed
- Information about where relevant usernames and passwords are located
- The date a playbook was last updated

File Reorganization Process

We also established a working group to review the files for the department. An extensive review of our filing systems was necessary so that a reorganization could be streamlined into a logical and consistent approach. Over time, multiple file systems had been created and used simultaneously, making it difficult to locate needed files.

By the end of an approximately nine-month project, the team's work resulted in condensing our file storage locations from eight to two; reducing file numbers from 178,339 to 7,369; and decreasing gigabytes (GB) of data from 279 to 116. Generic and confusing file names such as "Jane's files" and "CDO from P-Drive" were also removed. These file names may have made sense to the person who created the document, but after turnover and many years, such file names were no longer relevant.

Table 1. Comparison of File Retention Before and After Reorganization Undertaking at UW Libraries

	Folders at Start	Files at Start	Size in GB at Start	Folders at End	Files at End	Size in GB at End
L Drive	4,226	175,170	186	*337*	*4,023*	*105*
OneDrive	526	2,861	88	*0*	*0*	*0*
Teams	59	308	5	*894*	*3,346*	*11*
TOTALS	4,811	178,339	279	*1,231*	*7,369*	*116*

Table 1 illustrates the comparison of the folders, files, and GB from the start to the end of the project. File reorganization significantly helped the almost entirely new staff locate needed files more quickly and efficiently.

Data and Statistics Review

Given our turnover and migration, many regular technical services processes were interrupted and needed to be restarted. One of these processes was the regular analysis of usage data. Prior to this effort, usage data would be pulled at the point of need. This often worked, but it forced us into a time crunch to pull and review the data before we needed to make a decision. The first step was to revisit our Standardized Usage Statistics Harvesting Initiative (SUSHI) credentials to ensure automatic harvesting of usage data was set up. Because of the changes in the department, our SUSHI credentials were largely out of date.

The migration to Alma provided the opportunity to make a fresh start with SUSHI. As part of the configuration of our electronic resource vendors in Alma, we populated our new system with accurate and current SUSHI credentials. A complication in this process was that many of our administrative accounts with vendors were tied to specific individuals who no longer worked at the library. As such, the first step was to recover these credentials and then change them to shared credentials that all essential team members could use to log into vendor accounts. We selected our department's shared email address as the username whenever possible and made sure to save the usernames and passwords for our accounts in the Alma vendor record and the relevant playbook. The goal was to ensure departmental access to these crucial vendor accounts even if further turnover occurred.

Shortly after gathering the SUSHI credentials we needed, we shifted our approach and began a subscription to CzechELib Usage Statistics (CELUS), the COUNTER data visualization platform. This tool was selected for its straightforward and easy-to-understand interface. CELUS helped us to get back in the habit of regularly evaluating usage data instead of gathering usage data on a case-by-case basis when it was time to review a resource for renewal. Because of its robust visualization tools, CELUS also allowed us to more effectively communicate usage to entities and individuals outside of our department. Although Alma has built-in tools to gather usage data, we found that an advantage of CELUS was that there was a significantly reduced learning curve to use the tool effectively. Another advantage of CELUS is that one simply needs to log into one's institutional portal to view an overview of electronic resources

usage data, as well as the status of the SUSHI credentials in place. In Alma, usage reports must be run discretely, either manually or on an automated schedule.

Renewals

Another area that presented an opportunity for improvement was our system for tracking renewals of continuing resources. It was no longer sustainable for the electronic resources librarian to solely manage renewals. To address this, we adopted a new team-based approach where different individuals in the department would be more involved in the process. We were now able to share the workload of reaching out to vendor representatives for usage data when SUSHI or a self-service portal was not an option, asking for renewal quotes, entering contracts and licenses into the University's contract management software, as well as other tasks. This topic is discussed more fully in the context of contract writing in the following section.

There was also no formal system for tracking renewals throughout the year; instead, renewals were addressed as information came in from vendors. This prevented a proactive approach and led to several instances of subscriptions lapsing because information either never arrived or was sent to someone who was no longer employed at UW Libraries. To address this, we began by documenting renewal processes. The goal was to have a working sketch of the steps associated with resource renewals. This helped us to understand institutional requirements and who was responsible for different steps on our team. When determining who would be the point person for a specific task, we would also designate a backup so that the task would not fall through the cracks if the assigned point person was out of the office or moved on to another position.

While undertaking this process, one of our team members came across an email on the Electronic Resources in Libraries list from the Tennessee Graduate School of Medicine.[7] The email included a blank draft of a Microsoft Excel workbook that they used to track continuing resources throughout the year. We adopted this document and expanded it to fit our needs. Our modified workbook now includes sheets that correspond to funds in our budget structure. Each sheet represents a material type (e.g., database, journal package, or content fee) and contains columns outlining resource names, purchase order lines, projected price for the current year, the previous year's renewal cost, and whether the renewal lives directly with the library or with one of our consortial partners. We also use this workbook to track service contracts, for example, our multiyear agreement with our monograph vendor GOBI. This change has allowed us to have a more accurate snapshot at any given time of where our budget is. Importantly, it has supported us in achieving a proactive approach to our renewals and no longer waiting for vendors to contact us.

At the time we were fine-tuning our renewals workbook, our department came into possession of several new whiteboards. We mounted the whiteboards in central locations and transcribed information from the spreadsheets onto them. Weekly stand-up meetings of around ten to thirty minutes were scheduled so that we could quickly touch base on the status of renewals we were actively working on and ensure that no important steps fell through the cracks. In addition to these weekly meetings, more

thorough monthly meetings were scheduled to have in-depth conversations about renewals and to plan ahead. Both meetings served to help us keep on top of renewals, but they also improved communication and collaboration among the department.

Contracts

Previously, we struggled with balancing the workload of writing and managing resource contracts. These challenges stemmed primarily from a lack of experience and fragmented institutional memory—the team averaged months, not years, of experience in managing library collections at any university library. Much like renewals, contract writing and tracking responsibilities had been assigned to a single individual, and documentation regarding contract procedures was often inconsistent or incomplete. This situation led to gaps in knowledge about our holdings, misunderstandings about how to write acceptable contracts, and a lack of historical context for most previous selection and purchasing decisions. The shortage of documentation and lack of collective collection expertise contributed to confusion when addressing contract-related and legal compliance questions.

Once again, we found that relying on an individual team member was not a sustainable or practical way to manage hundreds of overlapping agreements. Relying on one librarian to hold all contract and workflow knowledge created a process bottleneck, as well as an unfair level of pressure on one person. To address this, we implemented contract training for all faculty in the department and a targeted group of staff. This built a shared set of skills and base-level knowledge. Although the university provided general training and guidance on the process for how to write and enter a contract into the procurement and payment system, that training did not account for any library-specific procedure or discuss the necessity to review and negotiate terms and conditions of contracts. This prompted us to develop documentation listing the steps needed to create and manage the contract, as well as things to look for in vendor-supplied licenses and language to include or exclude. We supplemented the university and internal workflow guidance documentation with two internally recorded videos—one covering the initial university procurement process and another explaining and showing each step of contract submission. The videos and all internal training materials were placed in a single shared folder so that everyone could review the documentation as needed.

In addition to the training, we simplified our paperwork by redesigning internal contract templates to include language and examples from successful agreements. For example, our sole source paperwork template included draft, ready-to-edit information required by our procurement office:

> *No Federal or Grant funds will be used in this agreement. This is a [NEW or X year renewal] contract that includes a XX% annual increase. Last year we paid $X,XXX on PO number XXXX under contract [CONTRACT NAME/NUMBER].*

Providing easy-to-update information on all templates created consistency across contract writers, allowed the team to quickly submit accurate paperwork, and led to fewer questions from our procurement and finance departments.

Distributing contract responsibilities across the team was an important step in this reorganization. Assignments were based on team member availability as well as content or vendor expertise, with simpler agreements routed to those newer to the process. Our stand-up meetings provided a regular opportunity for contract writers to ask questions about the process, request help or a writing partner, discuss sticky agreement language, and pass tough issues up to the department chair for further work. This team-based approach has made writing, tracking, and submitting contracts significantly easier and more transparent for everyone involved.

Contract Filing and Storage

Along with updating our contract workflow process, we also assessed the current and past practice of filing and storing our active and inactive agreements. Unfortunately, we found significant issues: many historical contracts had not been filed, and a high percentage of archived agreements were incomplete or missing all signatures. The team recognized that we could not change the past, so we made the strategic decision to address what could easily be fixed and focused the bulk of our energy on creating a better process for filing current and future agreements. To clean up our old files, we pulled all physical contracts from the various locations throughout the libraries and digital files from the three different online systems used in the recent past. All contract files were inventoried, consolidated, deduplicated, correctly labeled by vendor and date, and filed either physically or digitally.

After an in-depth look at the university's records retention policy, we decided to print and maintain physical copies of only "forever contracts," that is, those agreements that are perpetual in nature, cover owned content, or are not superseded through renewal. Subscription-based or renewable contracts are stored digitally, each in a dated folder containing all documents associated with the acquisition process (e.g., procurement justification documentation, Voluntary Product Accessibility Template [VPAT], quote, notes on irregularities, signed contract). Digital contracts are held both in the university-wide contracts system and our team's shared folders to minimize redundancy; physical contracts are held in department file cabinets.

Community Building

As the department undertook significant structural and procedural changes, it became clear that the success of these efforts depended not only on systems and workflows but also on the resilience and cohesion of our team. With 80 percent of the department having been at the university for three years or less, we needed to cultivate a sense of belonging, trust, and shared identity. To address this, we developed a sustained, intentional approach to team and community building.

We incorporated monthly community-building gatherings designed purely to help people connect as humans rather than just coworkers. These two-hour events are entirely optional and do not feel like our typical meetings, yet participation has been enthusiastic. Prior to introducing these activities, the department rarely held social events beyond occasional retirements or library-wide celebrations, and many team members felt isolated in their daily routines. The new approach has filled an important

cultural gap. Most of our events were just for the department, but at least once a quarter we invited another department to join us to strengthen our relationship and foster a broader sense of institutional connection.

Food and games quickly became central to our events. Over the course of a single year, we hosted a New Year's celebration, partnered with the dean's office to hold a *Sorry!* boardgame tournament called "Sorry you have to be here" on Leap Day, celebrated Pi Day with pie, organized a library-wide mini-golf tournament, enjoyed a Jell-O–themed gathering with the Interlibrary Loan Department, and held a Kentucky Derby–inspired event complete with hats and book cart horse races. These activities created shared experiences that served as a foundation for camaraderie and informally built a more supportive community.

Planning responsibilities for these activities were equitably distributed. Each quarter, different team members volunteered to help coordinate events to spread the workload so that no one person became overburdened. The variety of activities ranged from very simple (bring a pie or play a game) to more elaborate (find two people outside of our department to help you build a mini-golf hole). Offering this variety of activities provided something of interest to nearly everyone.

We also built community through structured opportunities to learn about one another during monthly department meetings. At the start of each meeting, a colleague was invited to share a brief presentation on personal interests such as hobbies, travel experiences, photographs, or recommendations related to books and films. Participation in these share sessions was voluntary, yet nearly everyone opted to join in. These presentations became one of our most successful community-building practices because they helped to reintroduce colleagues to one another and led to a lot of laughter and further conversations about who we are as people. Through these efforts we have created a healthier, more connected, and more resilient workplace. Team building has become an integral part of how we maintain trust, support new colleagues, and ensure that our department can adapt and thrive during periods of rapid institutional change.

Reflections on Change

Our department recently filled two librarian positions and welcomed a new chair. Onboarding team members presented an opportunity to assess our newly implemented tools and processes that resulted from the change management efforts outlined in this article. In the following section, we present reflections from the newest team members.

Collection Management Librarian

As a 2022 Master of Library Science degree graduate, I transitioned into my first professional role at UW Libraries following a pivotal reimagining of the department's workflows. Drawing on eight years of experience in various roles across UW, I have worked within several distinct organizational cultures; however, the recent changes within the Collection Management department are particularly

noteworthy. These initiatives have cultivated both operational excellence and a supportive environment essential for meeting the university's evolving collection needs.

The implementation of a detailed renewal tracking spreadsheet has been an indispensable tool. This centralized resource tracks renewals, historical pricing, purchase orders, and upcoming deadlines. Featuring a legend for ease of use, the spreadsheet is a living document; leadership frequently solicits feedback on how to improve its functionality. I appreciate this openness to suggestions because it allows the tool to evolve alongside our needs. Supplementing this spreadsheet with weekly whiteboard meetings keeps our team aligned on active renewals. This turns a potentially overwhelming process into a manageable, shared responsibility while providing valuable accountability for the team.

Coming from other campus units where information often lived in silos on individual hard drives, I find our current file accessibility refreshing. This transparency fosters a culture of self-sufficiency and ensures that essential documentation is within reach for the entire team. Furthermore, the department's knowledge management system—built on position-based "playbooks"—was vital during my onboarding. As someone who learns best through step-by-step instructions and hands-on application, I found these resources invaluable for understanding the "how" and "why" of departmental tasks. These playbooks are useful not only for new faculty but also for existing staff to understand cross-departmental responsibilities. While the transition occasionally revealed outdated information that required a critical eye, the framework itself remains a superior resource for navigating the complexities of my position.

Finally, leadership recognizes that departmental success depends as much on people as it does on process. Our team-building activities consist of low-pressure social gatherings that facilitate genuine connection and decompression. Unlike the "forced fun" I have often experienced in other corporate settings, these informal events make it easier to relax and build authentic relationships with my coworkers. By pairing effective workflows with an empathetic approach to team building, this department has created a resilient, high-functioning team. The success of these recent changes gives me great confidence in our ability to continue refining our processes. I look forward to contributing to the ongoing growth and efficiency of our team as we meet the challenges of modern collection management.

Chair of Collection Management

I transitioned into the department as a new chair after working as student success librarian in the UW Libraries. While I held some institutional memory, an understanding of our campus community, and experience managing digital collections workflows, I was relatively new to the world of licensing and budgets. Approximately a month into this role, the department found itself down two or three positions for the next five months.

The mixture of being short-staffed in critical roles such as materials processing and electronic resource management while settling into a new leadership position and team was not an easy balance. It was unrealistic to expect the rest of the team to carry the workload without pitching in myself wherever possible. I quickly learned to consult existing playbooks for workflows I was unfamiliar with as I

navigated covering roles alongside my team—these became a lifeline for understanding proxy setup, locating credentials for admin portals, and compiling license agreements into our university's contract management system.

As the team navigated this experience, we found situations where a workflow was missing—often a team member had a copy in their email from the previous colleague who had drafted it. This allowed us to update the document to current information and file it in a shared space. A story many of us are familiar with is the situation where turnover sometimes means loss of documentation if files are stored on personal drives (even if unintentional). We identified a few such gaps during this time, including how to run usage reports. This was an excellent reminder for me as a new leader of the value of documentation and workflows being accessible to everyone.

The systems the department had in place undoubtedly allowed me to be more effective in my work sooner rather than later. I also found myself noting confusion points. One of these was simply combining some of our larger "parent" folders in our file organization after I realized I consistently clicked into the wrong folder to find documents. It can equally be a challenge to keep up with documentation—it is not unusual to hear team members ask each other if they wrote that down. In this way there is a shared accountability among the department. A number of our university contract processes changed during this time. It was unclear whether these changes were permanent or temporary, so I chose to mitigate that by writing a one-page document of these adjustments with the idea of integrating this into our more robust documentation if the change lasted for longer than a few months.

Electronic Resources Librarian

As a new faculty librarian, I have benefitted from the various change management strategies instituted in the department in differing ways. Transitioning from a staff role at a small library to a faculty role at a larger library, the existing structure has been essential to my onboarding experience and success as a new employee. I have felt confident adjusting to my new work duties and environment because of the support system already in place.

The existence of playbooks for every position is an excellent onboarding tool. I was able to easily understand the responsibilities of our department as a whole and quickly identify which coworker to ask about specific workflows. Playbooks also provide documentation to support in-person training sessions. However, the playbooks were not sufficient on their own for workflow training, and I did need to fill in gaps with conversations with coworkers. Due to the cyclical nature of collections work, paired with staff turnover and changes at the university and industry level, not all workflows were documented thoroughly, and I did have to slightly reinvent the wheel on usage reporting. The existence of any documentation, however brief, still aided in the process. I have taken steps to write instructions as I go and will need to proactively keep the playbook for my position up to date.

I have especially benefitted from the data and statistics review efforts. My hiring coincided with the gathering of electronic resource usage statistics for ACRL reporting; without the previous cleanup

work, that task would have been nearly impossible in my short timeline. While my position was vacant, COUNTER updated to Release 5.1, and the majority of our credentials became outdated. Although most entries simply needed a new link, some vendors switched their COUNTER reports to new platforms and generated completely new credentials. Having easy access to updated administrative account logins streamlined the process of updating to COUNTER 5.1 and helped us make the ACRL deadline.

Participating in the team-building activities made it easy to bond with my new coworkers and understand my place in the department. Our Collections department alone is the same size as my entire last library, so it has taken me time to adjust to the department size. Thankfully, having dedicated time for socialization makes that adjustment much easier. Rather than feeling like I am interrupting my colleagues in their busy work schedule with chitchat, I have been able to relax, learn everyone's name, and form connections. It also gave them a chance to welcome me to the team. Our team-building activities contribute to a positive work environment where we respect each other as people outside of what tasks we complete.

Conclusion

Our new team members have provided invaluable insight into our current departmental systems, while also highlighting existing gaps and sharing ideas for this work. As outlined in Prosci's framework, we have demonstrated the awareness that change was needed and had a desire to support such change.[8] Although change has been successfully implemented, as a department, we acknowledge that change management is an iterative process. Knowing this, we plan to implement the feedback from our newest team members in a continued effort to improve upon our initial change management approach.

Already, we are adapting existing processes to reflect the present team, and some workflows now live in different playbooks than they did initially. There has been conversation about streamlining playbooks to include primarily information that is unique to that position with anything that may fall across multiple positions linked to a workflow. The goal would be to minimize duplicate effort on documentation—a system change of this type will require the effort of the entire team. We are more adept at recognizing a moment when documentation may be relevant. Several of us struggled when we had a new requirement to include information for signature authority on our vendor agreements. The struggle was primarily in how to effectively assign this information in the system; once a team member successfully accomplished this, they knew to document their process so that the rest of us could follow their approach.

Community building continues to be prioritized, and we find it even more critical as we find our footing as a new team. We set aside a dedicated space for a community puzzle that most of the team works on during their breaks. On a particularly tough week, one of the team members brought a "how are you feeling?" meme scale to the beginning of a team meeting. This has quickly become a standing element of these meetings to both have a laugh and gauge the morale of our colleagues. Throughout this article we have shared our approach to navigating change and why these strategies have been implemented. As we move forward together, we have learned these strategies and practices must evolve with the current members and the priorities of their work.

Notes

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Better Together

Implementing a Shared Inbox for Electronic Resource Licensing

Evan Peebles and Ari Romero

Introduction

Electronic resources (e-resources) management involves a complex web of communication between vendors, stakeholders, and staff. Ordering, sales, licensing, activation, renewal, evaluation—these are simply some of the elements involved in providing e-resources to our communities. The scale of communications can become overwhelming even when a role is managed by one individual; when working as part of a team, an additional element of coordination emerges that requires consideration and care to manage successfully.

Before the University of North Texas (UNT) Libraries established the licensing unit as a team of two people, licensing requests were handled by the collections strategist librarian (CSL). When internal university decisions suddenly and dramatically increased the workload, it became clear that one person alone could no longer maintain the contracting workflow. With increasing state and institutional requirements extending the duration of each negotiation, there were simply not enough hours in the day.

In the early stages of establishing the new Licensing and Accessibility Unit (LAU), it became clear that coordinating the complex licensing workflows between two people with separate inboxes was less than ideal. Negotiations sometimes faltered when important information and context failed to bridge the divide, and a significant portion of the week was devoted to in-person coordination of contract reviews. To address these problems, we decided to request the creation of a shared licensing inbox. Although this process has not been without its complications, we believe the workflow strongly supports unit success, and its many benefits outweigh the drawbacks. Upfront planning, a fresh perspective, flexibility, agility, and open communication have been key components of the successful implementation of the shared inbox.

Early Implementation

In summer 2024, the department hired a licensing and accessibility librarian (LAL). In the early stages of the unit formation, both the CSL and LAL reported to the head of collection development (HCD) until the CSL was promoted to the head of the formalized Licensing and Accessibility Unit (HLA). Hiring a new librarian and establishing a new unit within the department created a natural opportunity to reevaluate existing licensing workflows.

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Both the LAL and the HLA share the responsibility for carrying out the department's licensing workflows, a large portion of which involve communicating with e-resource vendors and campus administrative units over email. Streamlining these communications from separate email accounts into one shared inbox had the potential to elicit several benefits. The shared inbox was created in August 2024, after the LAL completed their initial training period and before the LAU was established. Creating the shared inbox before the LAU helped set the stage for what would become the primary workflows within the unit. When the LAU was formed in spring 2025 and the CSL took on their new role as the HLA, the workload distribution was already well established and running smoothly through the shared inbox.

The logistics of setting up the shared inbox involved proactive communication with both internal and external stakeholders. Due to a limit on Outlook permissions, we could not set up the shared inbox in the department, so the HLA emailed the Libraries' Technology and Computer Operations team (TACO) stating our request. TACO created the shared inbox under our requested email name: Lib.License@unt.edu. Each of us accessed the shared inbox by adding it as an additional mailbox to our existing individual accounts. In addition to the HLA and the LAL, TACO also granted the HCD access to the shared inbox. As the head of the department, we determined that the HCD would be the best additional person to have access to the shared inbox in the event that both unit members were out of the office and a high-priority email needed to be addressed.

After each of us confirmed access to the shared inbox, our priority was to proactively communicate the new inbox and resulting workflow changes to external stakeholders. We sent emails to all stakeholders involved in facilitating licensing-related requests: the Collection Management Division, Head of Access Services, Media Library, TACO, Office of General Counsel, University Signatory, and System Head of Contracts. We also updated our e-resource vendors throughout the year as they contacted us for renewals and new contract reviews, requesting that they update their records to include Lib.License@unt.edu as their primary contact for licensing-related communications.

Creating the Filing System

We prioritized devising a filing system for storing emails for future reference or university retention purposes. This effort was an important part of how we recalibrated our licensing workflows, as the system we crafted naturally dictated several steps in our new workflow. Although many of these filing decisions were made shortly after the shared inbox was created, we did make other decisions over time as we gained experience using the shared inbox and filing system. To explain the filing system in practical terms, we present each decision below without indicating the time that each decision was made.

In making the initial filing decisions, we organized email chains with vendors by fiscal year. Within each fiscal year folder, communications received from the vendor are placed inside the *Vendor* folder. Communications to the vendor are placed in a nested *Vendor Sent* folder. Whereas previous negotiations were filed by vendor name alone, nesting the vendor folders with new or renewal contract negotiations under the relevant fiscal year keeps folder contents manageable while still allowing us to reference negotiation histories. It also helps us easily visualize the university's fiscal year timeline and

more quickly access relevant histories. Within the larger fiscal year folder, we created two subfolders: *01 In Progress* and *02 Completed*. Adding *01* and *02* in front of *In Progress* and *Completed* ensured that the subfolders would appear in the correct order because Outlook's default folder order is alphabetical. We replicated this approach with other subfolders in the fiscal year umbrella folder, as well as other umbrella folders.

To account for delays or cancellations of contract terms, we added two additional folders: *03 Paused/Delayed* and *04 Cancelled/Failed*. Highlighting these categories enables us to access negotiation histories for contracts that stakeholders may have questions about. To round out the fiscal year subfolders, we concluded with a folder titled *05 TAQ*. This folder tracks all correspondence related to the Technology Acquisition Questionnaire (TAQ), which the UNT Libraries are required to submit to campus IT for review of all e-resource acquisitions. It contains additional subfolders titled *TAQ Additional Communication*, *TAQ Approved*, *TAQ Request Numbers*, and *TAQ Sent* to further organize our correspondence because these emails represent a significant portion of our workflow.

Near the end of our folder list, we added two remaining standalone folders: *Internal Communication*, where general correspondence that does not have a home in any of the previously mentioned folders goes, as well as a *VPATs* folder, which contains emails related to a project of gathering VPATs for vendors that did not have one yet. Because this was an isolated project, it made sense for us to leave the *VPATs* folder at the end of the list and not integrate it with our routine workflows and communications. In thinking through what subfolders to create, we established an archive of correspondence that is organized and accessible for current and future employees in the LAU.

Workload Distribution

Considering workload distribution was an important focus in setting up our filing system in the shared inbox. Before creating a workflow, we first met to outline the scope of the work and to discuss our ideas with our current level of expertise and goals in mind. Most of our work in the LAU involves negotiation with vendors of e-resource subscriptions ranging from $100 to $1,000,000, with subscriptions costing more than $100,000 signaling a need for review from our Office of General Counsel. Because the HLA had been negotiating contracts for a few years, they took on the higher-risk contract negotiations requiring legal review, whereas the LAL, a new librarian with some negotiation experience, took on contract reviews of less than $100,000, in addition to license reviews from our Media Library. Emails without such distinct delineation, such as inquiries from teams external to the unit, were decided as a shared responsibility.

From this outline, we determined who would take on which emails by creating a color-coded tagging system using the Categorize tab in Outlook. When an email comes in the shared inbox, either the HLA or LAL moves it to the folder *01 TBA (To Be Addressed)*. From there, the email is marked as unread and the determination is made as to who will respond to the email and handle any associated request. The tag colors we use to categorize emails are: blue, yellow, green, red, and gray. Blue emails are the LAL's responsibility, while yellow emails are handled by the HLA. When an email requires shared awareness or further discussion, they are tagged green and addressed together. These discussions may happen

over Teams chat or during one of our weekly unit meetings. Emails marked red are high importance. This category is rarely used because we address most of our emails within a few business days of receipt.

Sometimes items come in with no clear assignment based on the predetermined division of labor. This temporarily caused confusion when one person was not aware that a situation had been addressed or lacked context in further communications. We created the gray category to indicate when an item requires no further action and is ready to be filed.

Once an email has been marked with the appropriate color, there is some flexibility in how the assigned point person may proceed with handling the request. We sometimes differ in our approach of moving an email from the 01 TBA folder into the appropriate vendor subfolder. For example, when the HLA receives signed addendums from vendors, they move these emails immediately into the relevant vendor's subfolder, leaving each email unread until a large enough group of addenda can be sent to the university signatory in bulk. They prefer to leave higher-priority emails in the *01 TBA* folder until they are addressed so that they are easier to distinguish from lower-priority assignments. In contrast, the LAL prefers to move items from the *01 TBA* folder and into the associated subfolder earlier in the process. If there is a question about next steps or the subfolder has not been created, it will remain in the *01 TBA* folder for ease of shared reference. However, once the email has been logged on the to-do list, it is moved to a subfolder. Leaving the item marked as unread visually flags the folder as needing to be addressed, and the move to the subfolder allows for ease of reference to past portions of the negotiation, rather than switching between folders.

An example of an approach we share is copying a singular email in the *01 TBA* folder into multiple vendor subfolders by right clicking on the email, selecting "Move," then "Copy to folder." Creating a duplicate copy of the email allows for all relevant information to be isolated within a vendor's subfolder. This feature is helpful for multiple contract review requests that may arrive in one email from our Subscription & Resource Management Unit. Having a mix of uniformity and flexibility allows us to customize our approach based on our needs and preferences, while the overall workflow is structured enough that organization and efficiency are not sacrificed

Challenges

Although our division has experience with shared inbox workflows, implementing a new shared inbox for our unit was not without its challenges. Technological difficulties, loss of assistive features, stakeholder buy-in, volume management, and organizational changes all have an impact on the process.

Because of the organizational limitations on Outlook permissions, we were unable to set up a shared inbox within our division; such tasks fall to TACO. However, for various reasons including system-wide IT changes, this request was not completed for nearly two months. This delay required the creation of an interim workflow for the LAL's initial training period.

Even after the inbox had been finalized, there were still some issues. One notable problem was that we were unable to move nested folders. For example, if we had a folder inside the *In Progress* folder for

Vendor and a subfolder for *Vendor Sent*, once we completed the negotiation, we were unable to move the *Vendor* folder into the *Completed* folder due to a permissions error. Instead, we had to move the *Vendor Sent* folder into the *Completed* folder, move the liberated *Vendor* folder into the *Completed* folder, and then re-nest the *Vendor Sent* folder inside of the *Vendor* folder. This step added more time and effort to every negotiation, but we were unable to fix it by making changes to Outlook settings on our end. The problem was fixed after TACO was able to troubleshoot and adjust the shared inbox permissions for our accounts.

While nested folder issues were a shared experience, only one of us experienced the disappearance of folders within the display. Through synchronous troubleshooting, we were able to determine that the folders were still accessible, but that the HLA's display was simply not registering their presence. This problem persisted across the desktop app and the web app. Although we were able to compensate for some aspects, such as the filing of completed negotiations, it was not sustainable to ask one person to interact with the folders while the other could not view them. Unfortunately, this problem remains ongoing.

In addition to technical difficulties, switching to a shared inbox introduced new limitations. Outlook has a number of features that assist with administrative tasks, such as filtering incoming emails using the "Rule" feature, scheduling tasks and creating reminders for follow-ups, and notifying users of upcoming meetings with a pop-up window. These features were essential to managing previous workflows. Unfortunately, because we did not log in to the shared inbox directly, none of these features worked. The shared inbox will accept the creation of new rules, but those rules will not initialize, and incoming emails are never subject to the automatic filtering. The task feature and the to-do list are similarly ineffective. While it is still possible to flag a task for follow-up, which changes the color in the list and adds the visual flag representation, it will never notify nor add to the Outlook tasks list. Likewise, it is possible to create meetings and invite the shared inbox to attend, and the meeting will appear on the inbox's calendar; however, the notification feature will not activate, and it does not sync with Teams to change the user's status.

Another feature that is lost in the shared inbox is the Outlook Reaction. While this has had a minor effect and impacts only internal communications, it is still an inconvenience. Without the ability to quickly send a "thumbs-up" to acknowledge receipt of information that does not require a specific response, our only options are to manually confirm receipt (which potentially clutters email inboxes with low-importance acknowledgments), send a message separately through an alternative app like Teams (which may potentially lose context and cause confusion), or simply let the sender assume we completed any relevant action items. Finally, there is the compromise option: reply intermittently. By responding to only higher-priority items or by responding periodically, we can limit email clutter while still avoiding the "black box effect" of inadequate acknowledgment. This option is still insufficient in comparison with the emoji reaction in time, effort, and organization, but it is the option that best suits our needs.

The biggest technical issue so far is the result of a system-wide update to how our organization manages email storage. Emails older than 1 year were moved to a cloud storage archive. For our personal

mailboxes, this had minimal impact. However, the shared inbox archive became inaccessible, locking important negotiation information behind a technical wall. TACO granted temporary access, allowing a few time-sensitive items to be completed, by signing the LAL into the inbox directly; however, this solution was short term and access was soon removed. Eventually, TACO determined there were no viable alternatives, and direct access was again provided.

Technical considerations were not the only considerations. We placed a lot of thought into the social aspect of implementation ahead of time, proactively notifying colleagues of our new workflow and requesting that they update their records to reflect the shared inbox as the primary contact point.

While we anticipated that some colleagues would not immediately adapt to the shared inbox and drafted a response template accordingly, we still sometimes receive licensing-related emails in our personal inboxes. Vendors also may email our personal inboxes. After some investigation, we determined the likely cause for this as being a result of the way emails sent from a shared inbox appear. For example, "John Doe on behalf of Email Inbox." Vendors who are joining the conversation from outside of the email chain often default to our personal emails rather than the shared inbox.

This difficulty is not a problem without a solution, however. Emails from our personal accounts can be moved by dragging and dropping into the shared inbox. Once an email is relocated, a reply will originate from said inbox. This method can redirect the conversation without overt correction. If, after redirection, the conversation is returned to the personal inbox, that action can be marked as potentially deliberate and subsequently addressed. Additionally, periodic library-wide reminders of the existence and purpose of the shared inbox can remind stakeholders of the process.

The final problem concerns volume management. When combining more than one person's tasks into one inbox, there is naturally a greater number of emails within that inbox. Organizing this influx, especially during large renewal periods, can only do so much. Such high-volume periods can become overwhelming if not addressed quickly. Even with the creation of subfolders to appropriately organize the content, the list of subfolders itself can be daunting to weed through when many contracts are active. However, this is simply the nature of contracts management. Sometimes there are few solutions other than being proactive and creating temporary subfolders as needed to further reduce clutter.

Advantages and Benefits

Despite the many challenges, there are clear benefits to a shared inbox. First and foremost, daily functioning is improved in several small ways. With a shared inbox, logistical mistakes—such as failing to maintain a Carbon Copy (CC) when one or both parties forget to reply all or accidentally creating multiple email chains when more than one person replies in quick succession—are reduced.

Questions are easier to answer because context can be gathered by reading through the relevant folder rather than waiting for someone to forward emails. This allows for a faster response time to internal questions because there is no need to wait for a specific person to be available for an answer. Timing in general is easier to manage because, despite disparate schedules, information can be accessed as

needed when collaborating. If there is a problem, the shared inbox allows for parallel and independent collaborative problem-solving. Task distribution occurs in real time with simple color coding, instead of being a back-and-forth communication, which reduces decision fatigue by ensuring it is clear and visible who will be taking on a task.

Working in a shared virtual space can mitigate feelings of isolation or disconnection from the unit, a potential drawback of remote work, by creating a shared sense of responsibility and access. That shared sense of what is happening in the unit also means that we are well positioned to be flexible when someone is out of the office. With information easily accessible, an unexpected illness, planned vacation, or longer absence can all be accommodated without significant delay. Certain questions can be answered, contacts can be redirected, or negotiations can be taken over, depending on the type of absence and the necessary preparations.

This setup also allows for easier training and collaboration. Because everything related to a negotiation is in one place, it can be easily reviewed when needed without additional actions by the negotiator such as adding a CC, which can drop off an email chain if someone forgets to reply all. If this happens, pieces of the negotiation might be lost or opaque to the person doing or receiving the training, unless everything is rediscovered and forwarded. In the shared inbox, no extra action is needed to make negotiations visible to the trainer, which saves time and effort.

Lastly, it protects institutional knowledge. Proper organization and documentation allow for the possibility that, if or when a position is vacated, the communication history with vendors is not lost when an individual email account is discontinued. Archives also allow for backups of files in case they are mistakenly deleted elsewhere. Moreover, the shared inbox can prevent the loss of important notifications, such as renewals or updated licenses, when the person who previously handled such matters has moved on. This protection helps prevent loss of access or other interruptions for our users.

Conclusion

Although it has not been without its challenges, implementing the shared inbox has helped us work better together. Taking steps to develop and manage a shared inbox has contributed to clearer workflows, increased efficiency, and improved organization within the LAU. A key component that contributed to the smooth launch of our shared inbox and filing system was upfront planning. This approach was facilitated by the fact that the LAU did not have an existing shared inbox with preestablished workflows. With the development of the shared inbox coinciding with the creation of the LAU, we set up a fresh filing system and initiated new workflows with a beginner's mind. We did not sacrifice flexibility in the process, however. A combination of Outlook limitations and our practical experience using the shared inbox prompted us to shift parts of our original plan. We continue to maintain agility and open communication as issues arise, shifting parts of our filing system or workflow as necessary to meet our needs. Having a defined method of organization and a flexible mindset when encountering technical issues or gaps in the workflow have been essential components in maintaining a shared inbox that enhances productivity and overall functionality within the LAU.

COMMUNICATIONS ON PRACTICE

The Vanishing Newspaper, Academic Libraries, and Our Withering Democracy

Steven Shapiro

Introduction

During the winter of 2024, the *Star-Ledger*, one of the preeminent newspapers in the state of New Jersey, announced that it would cease production of its print edition by February 2025 and henceforth publish online only. According to a news source, the *Newark Morning Ledger Co.* (owner of the *Star Ledger*) decided to close its print facility and stop production because of "rising costs, decreasing circulation, and reduced demand for print."[1] Around the same time, the *Times of Trenton* and the *South Jersey Times* also decided to transition to online only.[2] Now that New Jersey no longer requires public legal notices to be posted in newspapers, there will probably be further erosion in the number of print news publications statewide as sources of income continue to dry up.[3] Inevitably, more newspapers will either dispense with their print publication and focus solely on their online edition or disappear altogether as circulation and revenue steadily decline. Newspapers, and journalism in general, have become casualties of the internet and the proliferating web-based news outlets, where the quality of reporting runs the gamut from highly professional and factual to wholly fabricated and less than credible. The long-established tradition of reading the Sunday newspaper while sipping a cup of coffee and sitting in an easy chair seems relegated to a bygone era. What do these industry-wide changes portend for the future of newspapers, news, and our democracy, and how does this impact academic libraries and shape their response?

Where Did All the Newspapers Go?

Besides the readily discernable shift to online only, there has been a dramatic decrease in the number of newspapers published in the United States. A report released by Northwestern University's State of Local News Project 2024 indicated that more than one-third of print newspapers (more than 3,200) have ceased production and shuttered their operations since 2005. On average, about two local newspapers a week are closing down and exiting the industry. Eighty percent of the remaining 5,600 newspapers publish on a weekly as opposed to a daily basis. At the same time, newspapers have shed a large number of staff, including news editors and reporters. Between 2022 and 2023, newspapers employed 7,000 fewer professionals, while newsrooms lost 2,000 positions.[4] All told, close to 73 percent of positions in the newspaper industry vanished since 2005, while more than 60 percent of journalists and editors lost employment during the same period.[5] The net result is that there is a dwindling number of people reporting the news and fewer newspapers providing a voice to large segments of the country. Consequently, there are many people and places, especially outside urban centers, that are being disenfranchised, and their voices and opinions are being ignored. In a country that values freedom of speech, this is a disaster in the making.

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Consolidation of the Newspaper Industry

Another concerning trend is the consolidation and merger of newspapers as growing corporate syndicates gobble up smaller local newspapers, resulting in the homogenization of news at the expense of local news coverage. By 2022, 88 percent of New Jersey's daily newspapers were operated by two corporate entities, Gannett and Advance Publications.[6] Early in its history, Advance Publications bought out *The Jersey Journal* in 1945 and then proceeded to purchase *The Bayonne Times*, *Hudson Dispatch*, and *Express-Times*. Other newspapers acquired by Advance Publications include the *South Jersey Times*, *Gloucester County Times*, *Today's Sunbeam*, and *Bridgeton Evening News*. Gannett owns notable New Jersey newspapers such as the *Bergen Record*, *Courier-News*, *Courier-Post*, *Asbury Park Press*, and *Home News Tribune*.[7] The accelerating pace of mergers and consolidation may deprive us of the diverse set of independent media voices that are reflective of a healthy and vibrant, free society.

As newspapers are absorbed by expanding media enterprises, newsrooms are eviscerated when these companies seek to cut costs by laying off staff. One of these companies, the hedge fund firm Alden Capital Group, has a history of purchasing newspapers and upending newsrooms by jettisoning experienced reporters and editors.[8] Over time, Alden acquired the *Chicago Tribune*, *Baltimore Sun*, *New York Daily News*, and *Denver Post*, as well as many other regional newspapers. Between 2015 and 2017, Alden's portfolio of newspapers lost 36 percent of their staff according to the NewsGuild. Not long after the *Chicago Tribune* was bought out by Alden in May of 2021, the paper shed one-quarter of its newsroom through buyouts.[9] The type of budget cuts experienced by the *Tribune* and papers like it have impaired the kind of investigative reporting needed to hold local city governments accountable. There simply are not enough journalists available in these downsized newsrooms devoted to such work.

The AI Conundrum

Newsrooms are also being battered by the growing adoption of artificial intelligence (AI) tools by the industry. The reality, of course, is that more and more routine journalistic tasks, such as "content production and editing," as well as more complex activities such as "data transcription, data analysis, content personalization, and audience analytics," can be performed by AI systems.[10] Existing technologies, however, are limited in that they merely extract information from other sources to produce content. AI cannot engage in investigative reporting or attend the scene of a developing news story. The "zero click" news phenomenon, spawned by AI, where encapsulated news items appear in internet search results without the necessity of following a link has deprived newspaper and publisher websites of visitors and revenue.[11] In response, media companies have started to take legal action against Google. The Helena World Chronicle and Emmerich Newspapers, based in Arkansas and Mississippi, respectively, filed an antitrust lawsuit against Google in the District of Columbia in 2023, claiming that the company's search engine steered traffic away from their websites while utilizing their content.[12] The suit was ultimately dismissed. At the same time, many companies are training their AI systems on newspaper content without compensating the originators of this content.[13] For example, *The New York Times* sued OpenAI and Microsoft for copyright infringement when those companies

trained their systems on millions of *New York Times* articles to deliver news and directly compete with daily newspapers.[14] This was the first suit filed by a news organization but will likely not be the last as technology companies enrich themselves at the expense of newspapers.

The Fourth Estate and Democracy

All this is bad news for democracy according to an article by McKay Coppins that appeared in the November 2021 issue of *The Atlantic*. Coppins reported that the demise of a local newspaper "tends to correspond with lower voter turnout, increased polarization, and a general erosion of civic engagement. Misinformation proliferates, city budgets balloon alongside corruption and bureaucratic dysfunction." Coppins also identified consequences for national politics: "an analysis by Politico found that Donald Trump performed best during the 2016 election in places with limited access to local news."[15] In other words, we need more media publications, not less, if we want to create a public that is better informed and ready to grapple with local issues. Democracies need ongoing tending and are only as strong as their citizens and institutions. A free press helps to educate citizens and maintain the integrity of political institutions. The French chronicler of American democracy and culture, Alexis de Tocqueville, clearly saw the connection between newspapers and what he called voluntary association or citizens banding together for social benefit. He wrote the following about the key role of newspapers in contributing to the vitality of American democracy: "We should underrate their importance if we thought they just guaranteed liberty; they maintain civilization."[16]

Fake News Fills the Void

The scarcity or absence of local newspapers in many parts of the country (more than 206 counties), especially those that are poorer, older, and more rural, leads to a neglect of local issues and an inability to develop a civic culture.[17] More than 55 million people in the United States live in news deserts where they have either few or no choices when it comes to obtaining local news.[18] This results in a situation where most of the local newspapers and news media are concentrated in urban or metropolitan areas, thus creating a deep disparity between the underserved rural communities in the heartland of America and their counterparts in the city.

This gap in local news coverage, the dwindling number of legitimate sources of news, and the decline in the availability of high-quality reporting leaves an opening for purveyors of fake and fabricated news, as well as the propagators of conspiracy theories and extremist dogma based on hearsay rather than evidence. The number of fake local news sites (1,263 as of June 2024) now exceeds the number of US daily newspapers (1,213) in figures released by NewsGuard in 2024.[19] The effect is that news from legitimate sources is being crowded out by propagators of false and misleading information. Because local news providers are more trusted sources of news than the national media according to surveyed opinion, they need to be strengthened to counter the negative and lingering effects of specious news stories emanating from fake news sites.[20]

When Journalists Are Their Own Worst Enemy

Regretfully, there are vexing problems that the news industry was responsible for inflicting upon itself. One example is a growing tendency among news outlets to politicize and editorialize news as opposed to engaging in pure reporting. Although the early history of American journalism was mired in political partisanship, throughout most of the twentieth century, there was a professional commitment to impartial and even-handed reporting that reflected the centrist sentiments of most major dailies.[21] The twentieth century also witnessed the rise of photojournalism and high-tech imaging and communication technology. Newspapers and the media leveraged these to ensure there were no gaps in news coverage and stories. Historian and former Librarian of Congress Daniel J. Boorstin described these conjured news-making events as pseudo-events. According to Boorstin, a pseudo-event "is not spontaneous, but comes about because someone has planned, planted, or incited it."[22] Common examples of pseudo-events include interviews and news leaks (e.g., Daniel Ellsberg's famed leaks during the Vietnam War) used to generate newsworthy content. As a result of this growing phenomena, states Boorstin, "news gathering turned into news making."[23] This has unfortunately served to undermine confidence in newspapers and the news media in general.

Academic Libraries as Advocates for and Consumers of Newspapers

Changes in the news and newspaper industry directly impact academic libraries and the patrons whom we serve. The question is how do we, as librarians, counter the trends that undermine the integrity of the fourth estate and, implicitly, the health of our democracy? As newspapers scale back and pivot from print to online, the cost of doing business increases for libraries. Library subscriptions to individual and newspaper collections hosted online far exceed the cost of print subscriptions. Providing campus-wide access to local newspapers, such as the *Star Ledger*, which is no longer available in print, can be an expensive proposition if you need to rely on commercial databases. Often, libraries cannot secure online access to local newspapers because they do not offer institutional licensing or the full text is unavailable in aggregated databases. Furthermore, faculty often clamor for the digital version of national newspapers such as *The New York Times* and *The Wall Street Journal*, which can be a major financial commitment. In order to provide access to historical content from major newspapers, libraries may be required to license or purchase the archival content separately from current content, which creates an additional financial burden.

Many academic libraries will be forced to make difficult fiscal decisions opting to offer online access to select newspapers to the exclusion of other news sources. This comes at a time when it is more important than ever to expose students to as many different opinions and voices as possible to promote critical thinking skills and respect for democratic values and diverse viewpoints. Academic libraries defend the right to express one's opinions and thoughts in books, media, and the public square while making space for individual and collective voices to be heard. It is incumbent not only for libraries to support local and regional newspapers but also to make sure that we provide access to a variety of news sources that reflect different perspectives and life experiences. My University Libraries subscribes to

local newspapers, including *The Montclair Times* and *Bloomfield Life*, in order to emphasize our ties to the communities we serve.

Although it is important to make local and regional newspaper sources available to our users, it is also critical to provide access to a range of newspaper content from across the country (both regional and local), as well as international content. Libraries usually depend on aggregated databases to furnish this content. The advantage, of course, is the enormous quantity of newspapers and newspaper content contained in these databases. This enables libraries to supply students and faculty with a wide selection of perspectives from diverse places and affiliations.

However, these databases present their own set of problems. For instance, database vendors under publisher direction may place embargoes on publications restricting online availability of more recent material. In many cases, aggregated databases do not include all sections or all editions of a newspaper. There is also no guarantee that a newspaper that appears in an aggregated database one year will be there the next year. And not all newspapers are available in aggregated databases and must be subscribed to separately. Site licenses for some of the major newspapers with national clout can be quite expensive, especially for institutions with a larger full-time equivalent (FTE) and/or multiple campuses.

Librarians Contribute to an Educated Citizenry Through Information Literacy

For academic libraries, there are numerous ways in which we can communicate the importance of journalism to education, civic responsibility, and the development of critical thinking skills. Academic libraries can take concrete steps to encourage the habit of newspaper reading and support the industry and the journalists who are essential to instilling community awareness. At Montclair State University, the librarians attended two full-day workshops in fall 2024 followed by seven weeks of two-hour web-based sessions discussing the library's information literacy program, with an emphasis on supporting the University's new general education (Social Justice & Equity, Educated Citizenry, Engagement, Diversity, Self-Discovery & Self-Care [SEEDS]) curriculum. One of the major pillars of the SEEDS curriculum is the objective to create an Educated Citizenry. The University's SEEDS webpage describes the Educated Citizenry component as a means of teaching students how to "assess, produce, and communicate knowledge as informed and responsible citizens, and learn to critically evaluate the sociopolitical structures that influence information creation."[24] This new curriculum will have a major impact on our information literacy program. In response, the Library has created a rubric that outlines how this can best be accomplished at multiple levels and has offered workshops and discussions that provide a forum for faculty and librarians to share their strategy and vision for implementing the Educated Citizenry component of the new curriculum in the classroom. Now more than ever, it is essential for any basic information literacy program committed to serving the community to familiarize students with all available library news resources so that they are exposed to a wide spectrum of opinion and thought.

These types of resources may be utilized in first-year undergraduate classes for assignments exploring controversial issues and contemporary topics from contrasting viewpoints. Through these

activities, students develop critical thinking skills by assessing bias as well as detecting the cultural and sociopolitical influences implicit in information creation. They learn to ask questions about the information they have gathered and develop a healthy dose of skepticism, two of the qualities that characterize a good reporter. Students also need to know that newspapers and news media heighten civic consciousness and strengthen democratic institutions while educating people about the local issues, such as elections, the budgets of public institutions, and property taxes, that matter to them and their neighbors. Local newspapers also serve as an antidote to the unrelenting spread of fake news that has made it more difficult to separate truth from fiction. Librarians point students to trustworthy news sources and expose them to tools that help students read sources critically. One such example is GPTZero (https://gptzero.me/), which allows users to identify news stories that contain significant amounts of AI-generated content. Other tools, such as BBC Verify (https://www.bbc.com/news/bbcverify), vet AI-generated and professionally created news and information by utilizing "open-source intelligence and satellite imagery" to determine its veracity.[25]

The Importance of Media and News Literacy

Librarians, as well as media studies and journalism faculty, agree that college students need to be exposed to broad-based media literacy instruction as part of any larger information competency requirement. The American Library Association's *Media Literacy in the Library* guide establishes some of the fundamental goals intrinsic to this type of educational enterprise based on the parameters set by the National Association for Media Literacy Education (NAMLE) and librarians with expertise in the field of information literacy.[26] These parameters include "the ability to access, analyze, evaluate, create and act using all forms of communication. In its simplest terms, media literacy builds upon the foundation of traditional literacy and offers new forms of reading and writing. Media literacy empowers people to be critical thinkers and makers, effective communicators and active citizens."[27]

Howard Schneider—a former reporter turned Dean of State University of New York Stony Brook's School of Journalism—took an innovative approach to news literacy, which is a subset of media literacy that teaches how to evaluate and use news sources. Dean Schneider designed a news literacy course open to all undergraduate students regardless of their major. In the course, students are assigned news articles instead of textbooks to engage their critical thinking skills and help them learn how to assess the credibility and bias implicit to news stories, as well as their own biases. The civic component of news literacy helps differentiate it from other media literacy instruction. An important feature of the program is that students are taught to think laterally as well as vertically, meaning that they use the internet to vet the news stories they retrieve from the web in the same manner as a fact checker. Lectures are frequently interspersed with examples and combined with hands-on exercises that give students a realistic understanding of how journalism is conducted. Students are expected to become proficient at discerning "the difference between journalism and other kinds of information," recognizing the distinction between news and opinion, distinguishing "between assertion and verification," assessing news stories based on the credibility of sources and the "quality of evidence," and understanding the difference between media and reader bias.[28] In addition, they are introduced to all media formats where

news can be located, including social media. This enables students to not only assess news received from traditional sources (e.g., newspapers, TV, radio, and websites) but also news shared over social media.

By 2018, more than 10,000 students at Stony Brook had completed the semester-long course. A number of studies have vouched for the effectiveness of this news literacy course in enhancing students' ability to assess the accuracy and quality of the news and information to which they are exposed. According to Dean Schneider, "Studies show that students who have taken the Stony Brook course have significantly higher levels of news media literacy, greater knowledge of current events and a higher motivation to consume news compared to students who have not taken the course, and the effects do not diminish with time."[29] A research article by Dr. Jennifer Fleming at California State University, Long Beach concluded that the Stony Brook curriculum contributed to "high levels of engagement, a greater awareness of current events, and deeper, more nuanced understandings of journalism" among students.[30] Beyond that, the class emphasizes how essential dependable news and news sources are to democracy. At least fifty universities (including international institutions), as well as public schools, have adopted a similar strategy for teaching news literacy.[31] The Stony Brook model provides an opportunity for librarians to pursue a comparable approach to honing their students' news literacy skills.

Newspaper Readership Programs

Ultimately, newspapers will not flourish unless Generation Z students (and future generations of students) become newspaper readers. In terms of personal news consumption, more students rely on social media such as Facebook, Instagram, TikTok, and Twitter rather than traditional news sources to obtain their information, according to a 2022 report issued by The Media Insight Project.[32] One option to address this problem is for universities to promote newspaper readership programs. Academic Libraries instinctively understand the power of words and information in influencing and shaping public discourse, making librarians obvious proponents for such initiatives. One of the earliest and most heralded newspaper readership programs was introduced by Pennsylvania State University (Penn State) starting in 1997.[33] Penn State's president at the time, Graham Spanier, initiated the program with the help of *USA Today* and continued to advocate for its expansion.[34] Students could obtain free print copies of *The New York Times*, *USA Today*, and the *Centre Daily Times* at the University Park campus.[35] The faculty/staff newsletter, the *Intercom Online*, described the program as an "overwhelming success" after a survey revealed that almost half of students responding indicated that "reading newspapers added positively to their overall education."[36] Penn State's Readership Program "served as a model for hundreds of schools from across the nation."[37] Currently, universities such as Penn State, the University of Nebraska at Lincoln, and the University of Kentucky offer their students free online access to major national newspapers like *The New York Times* and *The Wall Street Journal* as part of their campus-wide news readership programs. Academic libraries are active participants in many of these programs. Besides the major dailies, some institutions include access to regional newspapers as well. From 2003 until the onset of the COVID-19 pandemic, Montclair State University in conjunction with *USA Today* offered a newspaper readership program consisting of print copies of

The New York Times, *Star Ledger*, the *Bergen Record*, and *USA Today*, where distribution and delivery was managed by North Jersey Media Group (Gannett, parent company of USA Today).[38] Recently, our library added a site license to the basic news package of the digital *New York Times*, which is available online to the entire campus community.

The Next Generation of Journalists

The future of newspapers will also be shaped by the willingness of young people to pursue careers in journalism. Student newspapers in higher education play an important role in training future generations of journalists. Unfortunately, student news organizations have found it difficult to sustain themselves as interest and readership have plummeted.[39] Nonetheless, there are many ways that academic libraries can support student newspapers and their staff. One option is for the library to assist the student newspaper financially by placing announcements or ads for library programming, services, or events. At Montclair State University, the author collaborated with faculty in organizing a variety of grant-funded lecture series, where part of the budget was earmarked for marketing, including placing large advertisements in our student newspaper, the *Montclarion*. Librarians can also reach out to the newspaper staff to inform them of new library resources, services, or building facilities. Academic libraries may also find it rewarding to consider hiring journalism students as library assistants responsible for reporting news on library activities, or promoting events, new e-resources, and services. One of the most effective ways to serve library users and draw attention to the invaluable treasury of institutional information and history available in student newspapers is by digitizing archival issues of these publications.

Digitizing and Hosting Student Newspapers

In 2006, Sprague Library at Montclair State University tasked a committee to implement a detailed plan to microfilm and digitize issues of the *Montclarion*, the University's student newspaper, spanning the years 1966 to 1976 and upload these images and a collection of earlier images from 1993 to 1996 to OCLC's CONTENTdm digital asset management system. The library decided to expand the project to preserve and digitize additional archival issues of the *Montclarion* in 2015. The ambitious project enlisted the help of an outside contractor in 2016 to digitize issues from 2002 to 2015, as well as the most vulnerable and fragile materials published from 1928 to 1960. By 2017, a generous gift by the *Montclarion* office of its entire collection of back issues enabled the library to fill gaps in its holdings dating from the 1960s to 2017. Later that year, all the digitized images were moved to the new institutional repository, Digital Commons. Serendipitously, two years later in 2019, the Library discovered fifty-three volumes of the *Montclarion* hidden away in its periodicals storage space.[40] According to library archivist Paul Martinez, visitors have downloaded content from the *Montclarion* site more than 124,846 times between October 2017 and March 28, 2025, which works out to close to 16,600 downloads per year.[41] In other words, the digitization project has not only drawn a significant

amount of web traffic but also stoked interest in the student newspaper. Alumni, in particular, have responded quite positively to the online availability of archival issues of the *Montclarion*.

Library Programming and Community Engagement

Another way of communicating the importance of newspapers and news reporters in sustaining our democracy is by inviting journalists to lecture or participate in panel sessions hosted by academic libraries.[42] At Montclair State University, our library sponsored a variety of lecture programs for almost a decade where we invited scholars and authors to speak on campus. In 2014, we organized a grant-funded lecture series consisting of seventeen events with the Global Studies Department entitled "Rescue in Budapest." The series commemorated the seventieth anniversary of Swedish diplomat Raoul Wallenberg's rescue mission to Hungary, which saved the lives of close to 100,000 Jews. The keynote speaker for the program series was the British-born author and journalist Alex Kershaw.[43] As an author, he published a well-received biography of Wallenberg entitled *The Envoy*. Kershaw presented two lectures on Raoul Wallenberg. The first lecture was hosted on the Montclair State University campus, while the second talk occurred at Montclair Public Library. Following the event at Montclair Public Library, Kershaw was interviewed by a reporter from the local newspaper, *The Montclair Times*. Both events were well attended and widely publicized with ads appearing in local newspapers and the *Montclarion*. All programs were open to the public and featured question and answer sessions where lively discussions ensued with many different opinions expressed. The lecture series was a successful effort to educate the public about the Holocaust while cultivating an informed citizenry capable of countering the growing menace of Holocaust denial and the normalization of antisemitism, which have unfortunately become more commonplace.

Conclusion

The primary purpose of a free press is to make sure that all voices in a community are heard and to act as a check and balance to our elected government officials and government institutions to prevent abuse of power and corruption. In terms of collection development, academic libraries play a role in ensuring that our users, especially students, have access to a broad array of resources, including news sources representing a spectrum of opinions and ideas. This supports students' development as independent thinkers capable of analyzing and evaluating information for credibility and sound reasoning. At the same time, academic libraries can advocate for news literacy programs within the university curriculum to help students become independent thinkers. The future of our democracy depends on educated citizens who are well-informed and willing to openly discuss difficult issues. In an increasingly technology-dependent world, this demands a certain level of scientific and information literacy but also a firm grasp of local issues and needs. State and small-town newspapers and media outlets help people feel more rooted and connected to their communities. They also encourage individuals to be more actively immersed in their communities since they are better informed of what is happening on the local, state, and national level. In addition, they contribute to a society that is more tolerant and open

to a wide range of opinions and perspectives. This is critical in a country that is becoming increasingly polarized politically. Universities are uniquely empowered to advocate for free speech and foster a safe space for examining diverse ideas and perspectives. Academic libraries play an active role in providing access to news sources and a wide assortment of resources representing the variety of human thought; doing so is fundamental to a library's mission and essential for sustaining a free press and ultimately our democracy.

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FEATURE

The Paper Shelflist in the Twenty-First Century

A Survey Report

Elizabeth Hobart

For more than 100 years, library catalogs were chiefly maintained in card files, including a public card catalog and a shelflist, which was organized in call number order and typically shelved in a staff-only area. Although the shift to online catalogs led many libraries to close their card catalogs, the important functions served by the shelflist, including collection maintenance and security, led some libraries to continue to maintain paper shelflists after discontinuing their card catalogs. Until recently, the security guidelines of the Rare Books and Manuscripts Section directed special collections libraries to maintain a secure shelflist, with a further instruction to prefer paper. This instruction was removed in June 2023. Following this change, in 2024, a survey was conducted to ascertain the current status of paper shelflists in rare books, archives, and special collections, including whether libraries continue to maintain a paper shelflist, why or why not, and the effects. This article reports on the results of the survey and shares recommendations based on the findings.

Introduction

For more than 100 years, library catalogs were chiefly maintained in card files. Patrons typically used the card catalog, defined as "descriptions of materials, with each entry on a separate card (or cards), systematically arranged to facilitate access" and containing "enough information to help patrons assess whether the material is likely to be useful."[1] In addition, libraries usually had another card file: the shelflist, defined as "a description of a repository's holdings that is organized in the same order that the materials are stored."[2] Although the shelflist was not used for discovery, it was vital for library staff and, at one time, was considered "the most valuable record in the library."[3]

The development of MAchine-Readable Cataloging (MARC) in the 1960s led to the decline of card catalogs. Due to the important functions served by the shelflist and the early difficulty of replicating these functions on computers, some libraries kept their shelflists open, sometimes long after discontinuing the card catalog. Until June 2023, the security guidelines of the Rare Books and Manuscripts Section (RBMS) of the Association of College and Research Libraries (ACRL) directed libraries to "maintain a shelflist, preferably in paper form for special collections, in a secure area."[4] The most recent revision no longer includes this statement.[5] OCLC, founded as the Ohio College Library Center, discontinued its card printing service in October 2015, making it more difficult for libraries with shelflists to continue to receive printed cards.[6]

Despite these changes, some rare books, special collections, and archives continue to add to and maintain their paper shelflists. This article reports the results of a survey conducted in 2024 to learn more about the current state of paper shelflists in these libraries. The survey included both libraries

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that continue to maintain a shelflist and libraries that have closed theirs. Both sets of respondents were asked why the decision was made to either continue or discontinue the shelflist and the effects of this decision. Respondents who noted that they no longer maintained a shelflist were further asked when this decision was made, whether the shelflist was retained, and the effects.

History and Literature Review

The earliest catalogs were in book form, either printed or in manuscript. Book catalogs worked well when library collections grew slowly. However, in the eighteenth and nineteenth centuries, book production increased. As a result, "library holdings thus increased as well, which led to difficulties in keeping up with an inventory of the items held."[7] By the mid-nineteenth century, the card catalog began to take shape, although it would not be standard until the end of the century. One of the earliest prominent card catalogs in the United States was Harvard's, created by assistant librarian Ezra Abbot.[8] Abbot's system allowed for the separation of a staff shelflist and a public card catalog. It allowed for patron browsing of the catalog ("most other catalogs at the time were only handled by library staff") and used a "master record" to generate two additional cards: one for an alphabetic index and one for a subject index.[9] Carter notes, "This enabled a library's catalog to expand in other directions and offer alternative access points to the resources of the library's collection. Indeed, catalogs were often initially thought of as indexes to the shelflist."[10]

Abbot began work on his card catalog on October 22, 1861.[11] From there, libraries began to steadily adopt the card format for their catalogs. One of the last major US libraries to implement the card catalog, however, was the Library of Congress.[12] Although the groundwork had been laid for a while, it was not until the 1901 annual report that the Library of Congress officially announced that the main catalog would be on cards.[13] Starting in 1897, before implementing the card catalog and shelflist, the Library of Congress started keeping a sheet shelflist, in which information was recorded on sheets of paper housed in folders.[14] For several decades, the sheet shelflist continued to be used in conjunction with the card shelflist. Librarians ceased updating the sheet shelflist in the early 1940s, adding new entries only to the card shelflist.[15] Before the Library of Congress implemented an integrated library system in the 1990s, a contractor was hired to transfer information from the sheet shelflist to the main shelflist, which contained 2,200 portfolios and approximately 1 million entries.[16]

In October 1901, Herbert Putnam, then Librarian of Congress, announced that the Library of Congress would sell its printed catalog cards.[17] This allowed for easy dissemination of high-quality cataloging, without the need for libraries to duplicate work. Creating a shelflist was as simple as ordering an additional card. In their 1956 book on university libraries, Wilson and Tauber note that "[The shelf list] is most economically produced by making an extra card at the time other records are being prepared. By purchasing an extra Library of Congress card or by typing or otherwise reproducing an extra card for books for which there are not printed cards, a shelf list is built up simultaneously with the card catalog."[18] In 1971, OCLC introduced a shared cataloging system, which also allowed for automated card printing.

By the middle of the twentieth century, shelflists were "found in practically every library."[19] The Library of Congress card printing service continued to grow, hitting a peak in 1969, when "approximately seventy-nine million cards were printed and distributed annually."[20] Around this same time, development began on the MARC format. As the twentieth century progressed, shelflists began to migrate to electronic formats. Harvard was again an early adopter, starting to input the Widener Library's sheet shelflist in a machine-readable format as early as 1964 and moving into full production in 1965.[21] By 1979, Carter noted that, while most shelflists were still in card form, shelflists were "frequently being converted to machine-readable format."[22] That same year, John Kountz argued that "there is a single activity that will propel you the farthest into the future with the least amount of wheel spinning in the present: convert your shelf-list file data to machine-readable form and maintain it in that form."[23]

In 1986, Margie Epple and Bernice Grinder conducted a survey of eighty-seven Association of Research Libraries (ARL) member libraries with online catalogs to ascertain the state of shelflists.[24] The survey results indicated that, at that time, shelflists were still largely maintained in paper form. Of the eighty-seven respondents, seventy-seven were continuing to file cards for new materials. Only five respondents had ceased filing shelflist cards. An additional two respondents filed only some cards (e.g., for certain locations). The article did not indicate how the remaining three libraries responded to this question. Of the seventy-seven libraries continuing to file cards, thirty-three planned to eventually close the shelflist, whereas thirty-six did not. Nineteen of the libraries planning to close the shelflist had not set a target date. Ten planned to close it between 1987 and 1988, two years after the survey. The single greatest factor affecting closing of the shelflist, selected by sixteen respondents, was the ability to reproduce the functions of the shelflist online. Although the survey showed a strong trend toward online public catalogs, more libraries planned to keep their shelflists open: "A comparison of libraries that have not closed their public card catalog or shelflist shows that 92% plan to close their card catalogs, but only 48% have made the decision to close their shelflist files, even after implementing online systems."[25]

The trend of closing paper shelflists grew in the 1990s. The 1992 meeting of the Cataloging Management Discussion Group of the Cataloging and Classification Section of the Association of Library Collections and Technical Services placed this topic first on its agenda.[26] In 1996, Rhonda Marker published results of a survey of 165 libraries in her region, which found that only 44 percent of respondents planned to keep their card shelflist open.[27] The remaining responses were split; 26 percent had discarded or planned to discard their shelflist and 27 percent were uncertain. When asked why they continued to maintain a paper shelflist, librarians "expressed concern about quality control in the database, especially human error; the possibility of a system 'crash' and the resulting loss of item information or even whole records; and the perceived inadequacies of automated systems that do not mirror routines built around manual files."[28]

At the 1998 midwinter meeting of the American Library Association, the Bibliographic Standards Committee of RBMS issued a survey about retrospective conversion projects to rare materials libraries, to which twenty-three libraries responded. In response to the question "Have you discarded, or do

you plan to discard, all or part of your paper records upon completion of RECON [i.e., retrospective conversion]?," seven respondents selected "yes" and ten selected "no." The results include a note that "most libraries that answered yes indicated that they are retaining only the shelflist or certain special files."[29]

In 1996, the Library of Congress announced their decision to close their paper shelflist.[30] Gene Kinnaly estimated that the shelflist contained approximately 13,335,000 cards. While the scope of the project was huge, he observed that "the continued use of and reliance on a manual, 3×5 card shelflist seems almost medieval. Indeed, every other major component of LC's cataloging process is automated."[31] The Library of Congress charged a Shelflist Task Group in October 1994, which made recommendations, including completing retrospective conversion of the card shelflist and implementing an online system for call number assignment and inventory. The Library of Congress card service printed its last cards in 1997.[32] The Library of Congress closed their shelflist two years later, when they adopted the Voyager integrated library system.[33] The OCLC card printing service persisted nearly two decades longer, printing their final cards on October 1, 2015.[34]

Methodology

To investigate the questions outlined in the introduction, the author created and circulated a survey (see appendix). The survey was conducted in Qualtrics. It was shared through professional electronic discussion lists and message boards, including ALA Connect, the ExLibris email list, the Society for American Archivists announcements, and the Descriptive Cataloging of Rare Materials email list. The survey began collecting responses on July 10, 2024, and closed on August 12, 2024. This research was designed to be descriptive rather than comprehensive, capturing diverse perspectives on the paper shelflist. Multiple responses from a single institution were permitted. Determining a target number for responses was challenging because there is no current data indicating how many institutions continue to maintain a paper shelflist. The most recent data was from the 1990s. With significant changes in technology and staffing in the intervening years, it was not possible to extrapolate current prevalence. Instead, this study sought perspectives from employees across a range of institution types (including different types of colleges and universities), job functions, and years of experience. A minimum target of sixty responses was established to ensure a range of responses while remaining feasible for a likely smaller sample size.

The survey was approved as exempt from formal review by Penn State's Institutional Review Board on June 11, 2024. Respondents were provided with a consent form at the start of the survey with the principal investigator's contact information, description of the study, and notification that participation is voluntary. The consent form also noted the risk of loss of confidentiality, with a reassurance that the investigator would take appropriate measures to prevent this from happening.

Following the consent form, the survey opened with demographic questions. The first question asked if respondents worked in rare books, archives, or special collections. The survey ended for respondents who indicated that they had never worked in one of these environments. Respondents who answered

that they had previously worked in this area were asked to complete the survey for their most recent job in rare books, special collections, or archives. Remaining demographic questions asked about the type of library at which respondents were employed, job functions, and how long they had worked at their institution.

The final demographic question asked whether the library continued to add or make changes to a paper shelflist, defining "paper shelflist" as "any paper file (typically though not exclusively card), filed in call number order and housed in a staff-only area." The survey ended for respondents selecting "Unsure" because all successive questions related to the shelflist. Respondents selecting "Yes" were asked further questions about why they continue to maintain a shelflist, what information it contains, how they maintain it, and positive and negative effects. Respondents who selected "No" were asked whether their library had ever had a paper shelflist. The survey ended for respondents selecting "No" or "Unsure" because all remaining questions related to effects of discontinuing the shelflist, including when and why the shelflist had closed, whether it was retained, and positive and negative effects.

Results

In total, seventy-eight responses were received. Eleven respondents (14.1 percent) did not complete the survey. Of the remaining sixty-seven responses, five (7.5 percent) indicated that they had never worked in rare books, special collections, or archives. Sixty respondents indicated that they currently work in rare books, special collections, or archives. Two respondents noted that they had previously worked in this area and answered the survey for their most recent job in rare books, special collections, or archives.

These sixty-two respondents were next asked about the type of institution at which they were employed (figure 1). Thirty-four respondents (54.8 percent) reported working at academic libraries. Eight (12.9 percent) worked at independent research libraries. Four (6.5 percent) worked at public libraries and three (4.8 percent) at national libraries. The remaining thirteen respondents (21 percent) selected "Other," with free-text answers indicating they worked at archives, state and other government libraries, special libraries (including museum libraries and botanic garden libraries), or historical societies.

The thirty-four respondents working at academic libraries were next asked more about their university. Twenty-two respondents (64.7 percent) worked at a doctoral/research university. Eleven (32.4 percent) worked at a four-year college/university, with or without master's programs. One respondent selected "Other," noting in the text box that they worked at a theological seminary.

Respondents were next asked to indicate their job function, selecting from nine options: acquisitions, administration/management, archival arrangement and processing, cataloging and metadata, conservation/preservation, curation/collection development, digitization, instruction/reference, and other. Respondents were able to select more than one primary job function (figure 2). Of the sixty-two survey responses, thirty-seven (59.7 percent) indicated holding more than one job function. Four (6.5

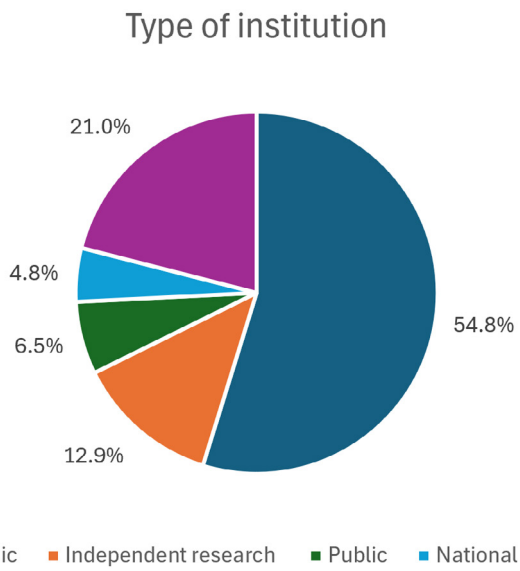


Figure 1. Type of institution where survey respondents were employed.

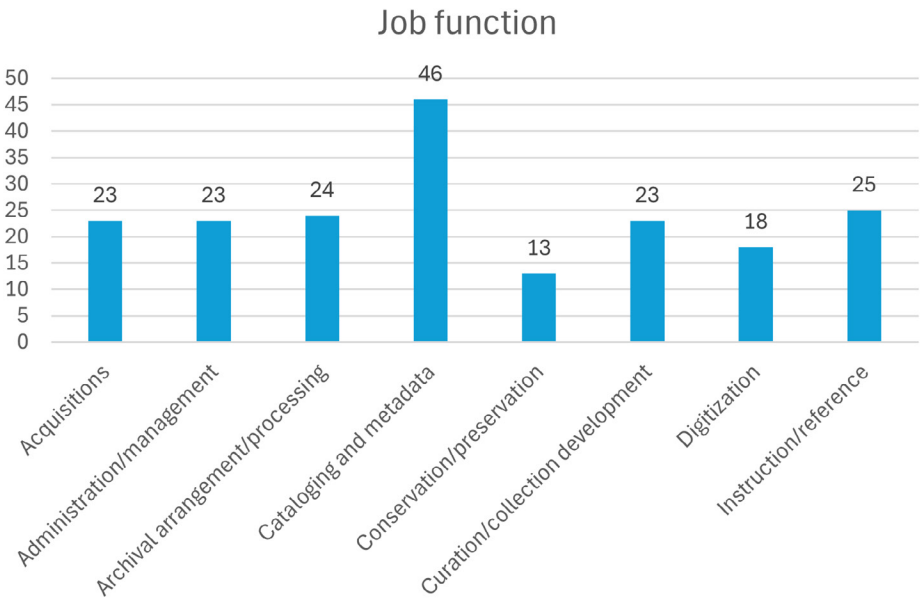


Figure 2. Job functions of survey respondents.

percent) selected "other," with three stating "all of the above" and one stating "Head of department that does all of these." Responses stating "all of the above" were coded with each of the eight job functions. The response stating "Head of department" was coded as administration/management. The most frequently indicated job function was cataloging and metadata, selected by forty-six (74.2 percent) respondents. Acquisitions, administration/management, archival arrangement and processing, curation, and instruction/reference received between twenty-three and twenty-five responses

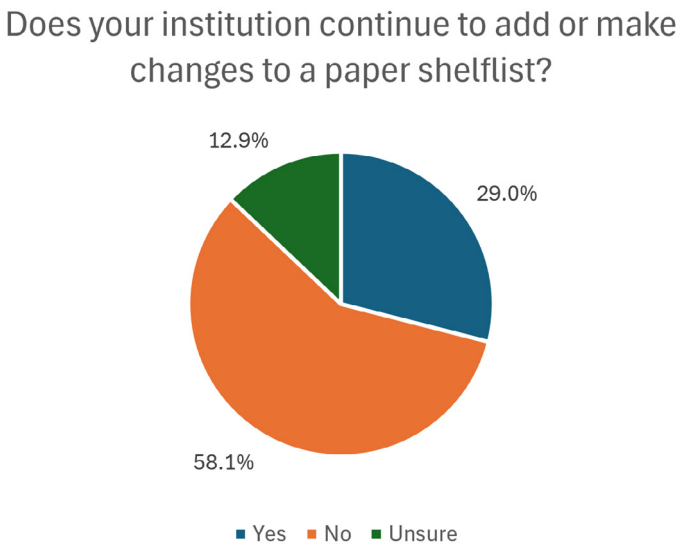


Figure 3. Does your institution continue to add or make changes to a paper shelflist?

each (37.1–40.3 percent). Digitization was slightly lower, with eighteen respondents (29 percent). Conservation/preservation was the least frequently selected, with thirteen (21 percent) respondents.

Most respondents had long tenures at their institutions. Thirty-two (51.6 percent) worked at their institutions more than ten years. Nine (14.5 percent) had worked at their institution for six to ten years. Thirteen (21 percent) had been with their employer for two to five years, and eight (12.9 percent) had worked at their institution for less than two years.

When asked if their library continues to add or make changes to the paper shelflist, eighteen respondents (29 percent) selected "yes," thirty-six (58.1 percent) selected "no," and the remaining eight (12.9 percent) were unsure (figure 3).

Libraries That Continue to Maintain a Shelflist

Respondents who indicated that their library continues to maintain a paper shelflist were asked free-text questions. The first asked, "Why have you decided to continue to add or make changes to the paper shelflist?" (figure 4). Six respondents (33.3 percent) replied that the shelflist is the most complete record of the collection. Responses included: "The paper shelf list is the only record of items that have not yet appeared in the online catalog," "To ensure new acquisitions are accessible and older items are more fully described," and "The shelf list remains our primary inventory in terms of collections accountability." Security and data backups were cited by four respondents (22.2 percent). "Electronic records and files can be subject to corruption through data rot, hacking, and improper data modifications (such as use of global 'search and replace')" and "in case of catastrophic online catalog failure" were two examples. Three respondents (16.7 percent) were unsure of the reasoning or suggested that the practice should discontinue, stating that they were "not in the position to decide" or "I do not have the authority." The remaining five responses (27.8 percent) indicated a variety of uses, such as

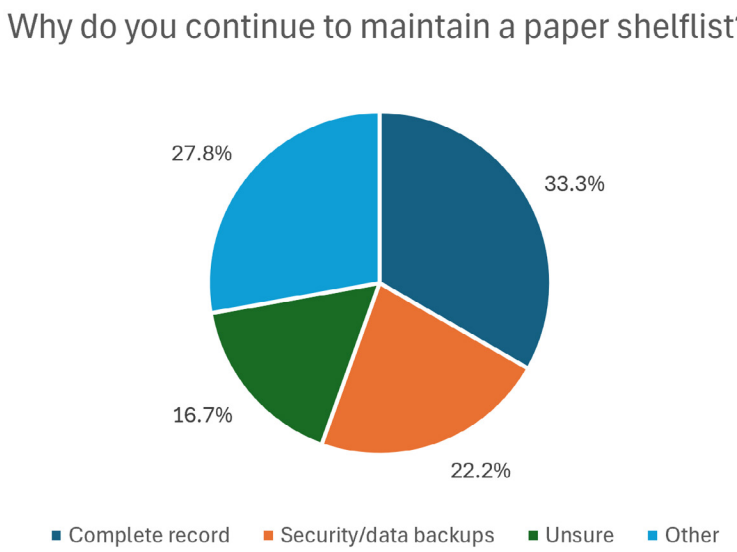


Figure 4. Why have you decided to continue to add or make changes to the paper shelflist?

assisting with local classification schemes that are not well supported by the integrated library system, storing barcodes, tracking usage, and tracking small collections. One specific use was assisting the work of student employees: "Having a paper record makes the locations list accessible to all student and staff workers without requiring account permissions."

Respondents were asked how they create and/or edit entries. Some misunderstood the question, providing answers such as "Sometimes" or describing editing an online record rather than a paper card. Three respondents indicated that they only edit existing cards and do not produce new ones. In all three cases, these edits were for administrative information, including adding OCLC numbers, indicating that an item had been inventoried, or updating locations. Twelve respondents indicated that they created new cards. Of these, four both created new cards and edited existing ones. All four indicated that such edits are handwritten at least a portion of the time. One respondent handwrote edits only. One indicated both writing and using a typewriter for edits. Two others indicated that manuscript edits were employed for smaller edits; if extensive edits were needed, the card was reprinted.

Of the twelve libraries that produce new cards, two respondents did not specify the method. One mentioned that they have existing files that are updated and printed off as needed. Two respondents copied and pasted information from online catalog records. Two used a template (one specified that the template is a Microsoft Word document). Two exported data from the online catalog. Three typed cards manually.

Respondents were next asked about positive and negative aspects of continuing to maintain a paper shelflist. Most positive aspects related to collection security and/or collection management. One respondent noted: "Not all past data is in the online catalog," indicating that the paper shelflist often provides a more complete record of collection data. Another said that the shelflist cards "serve as a terrific investigation tool" when looking into collection irregularities such as changed locators, missing

items, or improperly documented deaccessions. Another noted that "it really helps to have a basic, hard-copy version of the records at your fingertips."

Others noted the "extra layer of security" or ongoing access when "the network has issues, or the power is out, which occurs fairly often." One respondent mentioned continuity, saying "we recently migrated to a new online system, and I saw firsthand how easy it is to introduce errors during that process." The same respondent noted concerns about hacking, as their institution had been targeted before (though not the catalog). Another mentioned the cyberattack on the British Library as a justification for continuing to maintain the paper shelflist, also saying that the shelflist "delights and impresses VIP guests/prospective donors."

Others noted the importance of the paper shelflist for call number assignment, especially if not all items are in the online catalog. One also noted the role of the shelflist in public services, mentioning the "specific, targeted information for users in the Reading Room." Employees can remove a drawer from the shelflist and allow patrons to browse the collection in call number order. Some, but not all, discovery layers offer similar functionality, making it potentially difficult for institutions to replicate this experience online.

The most common negative cited was the labor and time required to maintain the paper shelflist. Nine respondents (50 percent) noted this. "With a large special collections library that has materials continuously coming in, it takes a lot of time to create each card, file them, and occasionally shift the drawers to accommodate." Another described the process as "kind of onerous and kind off *[sic]* time consuming." One noted that, anecdotally, "99% of students hate filing cards." One said that, in addition to issues relating to time, the shelflist "takes up a lot of valuable space." Despite the labor, however, two respondents said that they support continuing the shelflist, with one stating that the shelflist "takes time to maintain, but [is] worth it in terms of use."

Other negatives were more diverse. One respondent did not provide any negatives to continuing to maintain the shelflist. One expressed frustration with information silos: "There is no one location where we can go to look for the physical location of collection materials. It can be frustrating for library staff and patrons alike." Another noted that "knowledge of the shelf list and what's in it is increasingly obscure for newer staff members." Only one person stated that they do not feel the shelflist is needed anymore: "At this point it is a nice to have but not need to have." The same respondent said that "it only takes a few minutes to create a new card," so they did not feel that this was a huge burden on their time.

Libraries Who Have Discontinued Their Shelflist

Respondents who indicated that their library no longer adds to or makes changes to their shelflist were asked first whether their library previously had a paper shelflist (figure 5). Thirty respondents (83.3 percent) stated that their libraries had previously maintained a paper shelflist. Five (13.9 percent) were unsure, and one (2.8 percent) replied "no." For respondents who answered "no" or "unsure," the survey ended because all of the following questions were about prior use of paper shelflists.

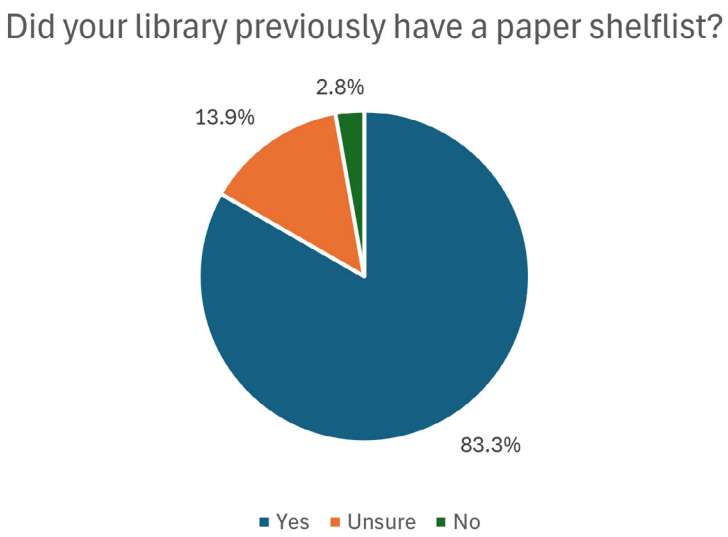


Figure 5. Did your library previously have a paper shelflist?

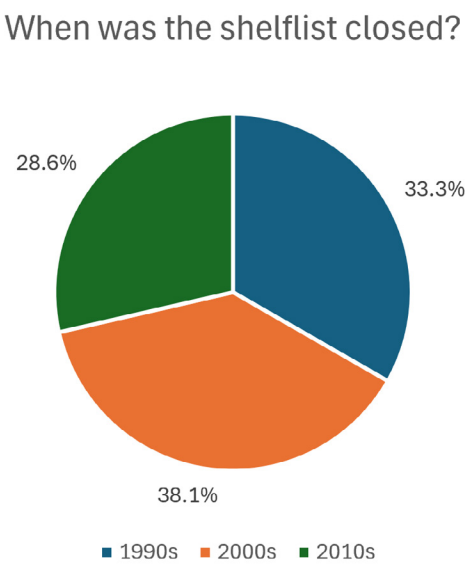


Figure 6. When was the shelflist closed?

The thirty respondents who indicated that their libraries had previously maintained paper shelflists were next asked when they closed the shelflist (if known) and why. Twenty-one respondents provided date information, either an exact year or an approximate date. Nine provided an exact year; the remaining respondents provided an approximate date, such as "circa 1996," or a range, such as "2004–2007?" or "1990s." To normalize the data, the researcher grouped responses by decade and found a fairly even split (figure 6). Seven respondents (33.3 percent) indicated that their institution discontinued the paper shelflist in the 1990s, eight (38.1 percent) discontinued it in the 2000s, and six (28.6 percent) discontinued in the 2010s. No respondents indicated closing the shelflist prior to 1990 or after 2018.

Twenty-five respondents provided a reason for closing the shelflist (figure 7). Of these twenty-five responses, the most common reason for discontinuing the shelflist, provided by fifteen respondents (60 percent), was due to the shift to the online catalog. One noted, however, that "the data from the existing shelf list did not fully migrate to the online," making this an imperfect replacement. Nine of these respondents also provided a date: four had discontinued the shelflist in the 1990s, three in the 2000s, and two in the 2010s.

Another reason for closing the shelflist was cost and staff time, cited by four respondents (16 percent). Three of these respondents had closed the shelflist in the 2000s and one in the 2010s; this was not cited as a reason by any respondents who had closed the shelflist in the 1990s. One respondent mentioned that cost included "staff time and card printing," which was unnecessary when the "online system met the same need."

Four respondents (16 percent) noted additional reasons relating to technology. One mentioned closing the shelflist in 2018 due to a system migration, indicating that the initial move to an online catalog did not lead to closing the shelflist, but rather a later change in technology: "while our old ILS had

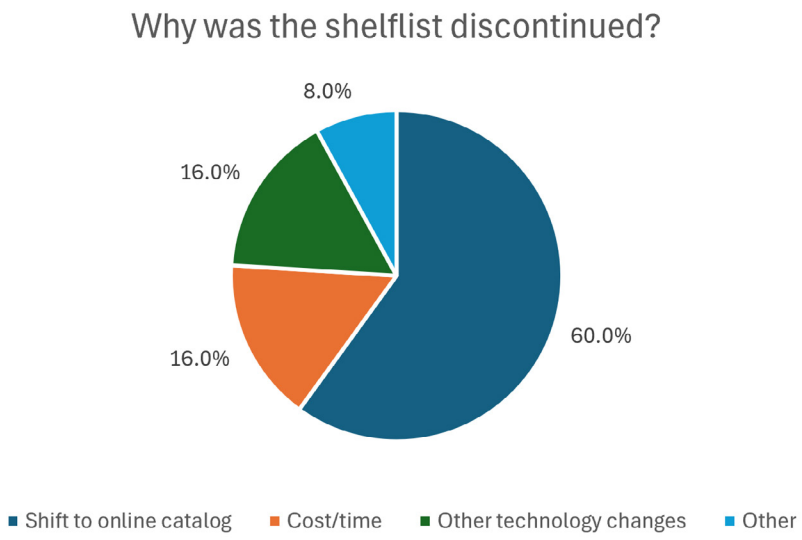


Figure 7. Why did your library discontinue adding or making changes to the paper shelflist?

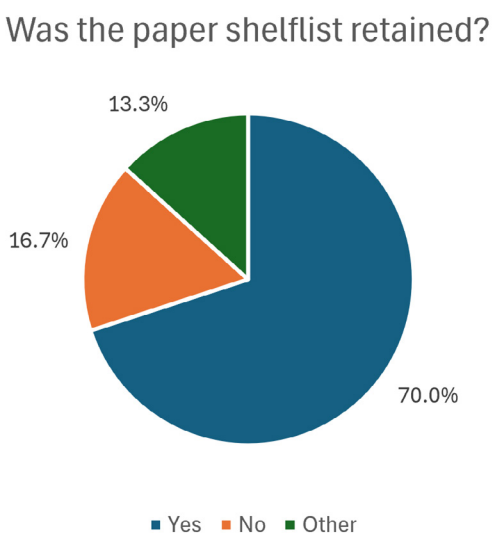


Figure 8. Was the paper shelflist retained?

a built-in function for printing shelf list cards, the new one (OCLC) does not." Another respondent mentioned moving to a digital system, but not the online catalog, instead using a system that used Access and Excel for shelf reads. One said that the shelflist was closed once all cards were digitized in 1994. Another indicated that the impetus had been their institution ending its membership with OCLC due to cost.

The remaining two respondents (8 percent) gave unique reasons. One stated simply that "nobody consulted it." The other noted that the shelflist had closed in 1999 because "the Luddite retired."

Respondents were next asked whether the paper shelflist had been retained (figure 8). Twenty-one respondents (70 percent) stated that it had been. Five (16.7 percent) indicated that it had been discarded. Of these, three noted that the cards did not contain any additional information, and one left that question blank. The remaining respondent noted that the shelflist contained an inventory of the vertical files, which were "largely uncataloged." Four respondents (13.3 percent) replied "Other" and provided an explanation. These explanations included the following: cards were retained but removed from cabinets and placed in boxes, or cards are being scanned with plans to discard them when this work is complete. Two indicated that the shelflist was partially retained, one stating it was kept for rare books only and one that "small parts of it still exist in a vintage card catalog" shelved in a staff-only location.

The five respondents who indicated that the shelflist was discarded were further asked to provide the year, if known, and any effects. Two left the date blank, one noting that discarding the shelflist had the benefit of gaining more space. Two of the remaining three responses both indicated that the shelflist had been discarded in 2008 and that there had been no effects. The final respondent noted that the shelflist had been discarded in 2018 and had the effect of "creating more physical space." This same

respondent had also mentioned the vertical files, but also noted that "cards were scanned and typed into a spreadsheet before discarding," so this information was not lost.

Respondents who indicated that the shelflist had been retained or selected "other" were asked about effects of retaining the shelflist. Eighteen of these respondents (72 percent) noted that it has been beneficial because the shelflist has more complete data: "we know that there are titles in the shelf list that got missed in the online conversion" and "the paper shelf list … is still the database of record for about 40% of the collection (things that have no online description)." The cards also sometimes contain data that does not appear in the online catalog, including handwritten notes and information on the backs of cards. Respondents noted that the shelflist is helpful for cataloging, including double-checking call numbers or researching former call numbers of items that have been reclassified. Provenance information, price, and date of acquisition are sometimes only on cards. One respondent noted, "The paper shelf list has proven to be an invaluable data source and we use it **regularly**." Another stated that it "acts as a little piece of the history of information management, which fits nicely with our collection." One response was more tepid: "It is helpful sometimes." Another noted that, although the shelflist was retained, it is not usable: "It was boxed haphazardly into records cartons and is completely unusable due to lack of processing and physical arrangement of the containers." Another did not see a benefit in retaining it: "It still exists, but it remains unused." Another stated that they "have to justify its presence repeatedly."

Respondents were next asked about effects of ceasing to maintain a shelflist (figure 9). Two respondents (6.7 percent) did not list any positives to closing the shelflist. The remaining twenty-eight all listed at least one positive, with some listing more than one, resulting in totals over 100 percent. One respondent stated simply that "moving overnight from the 18th century method of information retrieval to a 20yh [sic] century method has more advantages than I can list." The most common positive, listed by nineteen respondents (63.3 percent), was saving time and effort while also getting information more quickly. One noted, "We have real-time information about the collection and we don't have to waste time adding cards." Another described the shelflist as an "outdated process that took a lot of time but returned little actionable information." Another mentioned that there is now "no duplication of work/effort." One noted that the shelflist "basically provides the same info as the online catalog but is not publicly accessible, which defeats the purpose of 21st century research." They further noted, "I'm basically the only person working my subunit, and I have more than enough to do to last a lifetime." Another also cited the difficulties of "track[ing] down cardmaking software and catalogue card stock necessary to continue to maintain a paper shelf list for an entirely online catalogue." Three respondents (10 percent) noted space saving; even if the shelflist was retained, it could be compressed because there was no need for growth space. Collection maintenance was cited by eleven respondents (36.7 percent). One described the online records as "more durable, searchable and sortable in a wider variety of ways, and are more accessible for users both on- and off-site." Another described the electronic data as "more easily shared" and "more portable," allowing for easier shelf reads in off-site storage. Other stated benefits included increased inquiries, as an online catalog can be searched from anywhere, and

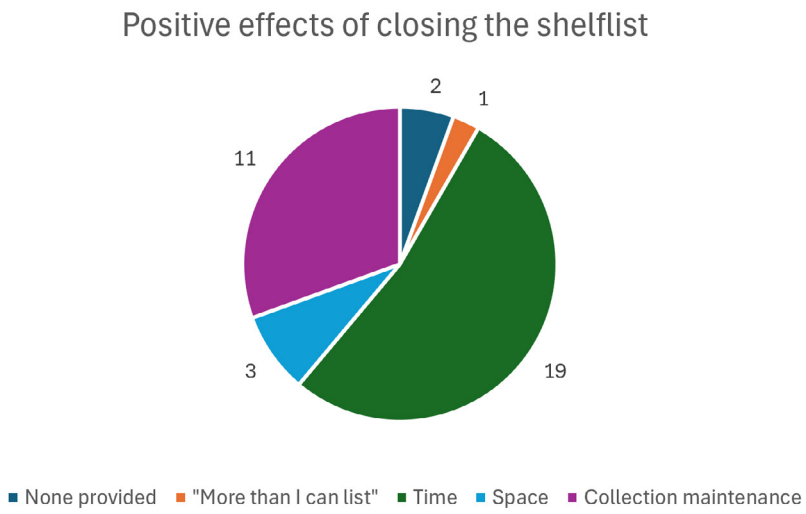


Figure 9. What has been positive about ceasing to add or make changes to the paper shelflist (Number of responses)?

streamlining workflows, especially for archival collections, which no longer needed to be represented in the OPAC.

When asked about negatives, thirteen respondents (43.3 percent) did not report any (figure 10). Five respondents (16.7 percent) have not experienced any negative impacts but are worried about future problems, especially noting concerns about data maintenance. One mentioned that they "might lose some information in future if we migrate to a new catalogue again." Another mentioned "not having a backup in case something were to go wrong with the online catalog." Another expressed worry about relying on proprietary software and the internet, stating "if those things were to become obsolete/ go away somehow, decades of work building an online catalog would go down the drain." This same respondent noted that closing the shelflist was necessary due to time, but given infinite time and energy, they would have preferred to continue to maintain it: "It would help with future-proofing our catalog. In my experience, the paper stuff lasts longer than the digital, even if it's not as convenient." Another noted that, because items acquired after 1994 were not represented in the card files, "if there were every [sic] any catastrophic failure of the catalogue host, thousands of items would need to be re-catalogued from the shelf rather than from cards."

Another problem, reported by eleven respondents (36.7 percent), was the disconnect between the shelflist and the online catalog, placing data in two different locations. One respondent noted the difficulty of having some data in the paper shelflist only: "Because some data is stored nowhere else, it is difficult for staff to understand the limits of the shelf list as a source of information." Another, whose institution is scanning the cards to discard them, noted that the main drawback was vendor and donor information that was not included in retrospective conversion, stating that they have "been glad to retain the older paper shelf list" and worry about finding this information in the future. Another, whose institution had boxed the cards, noted that "not all relevant information was copied during the retro

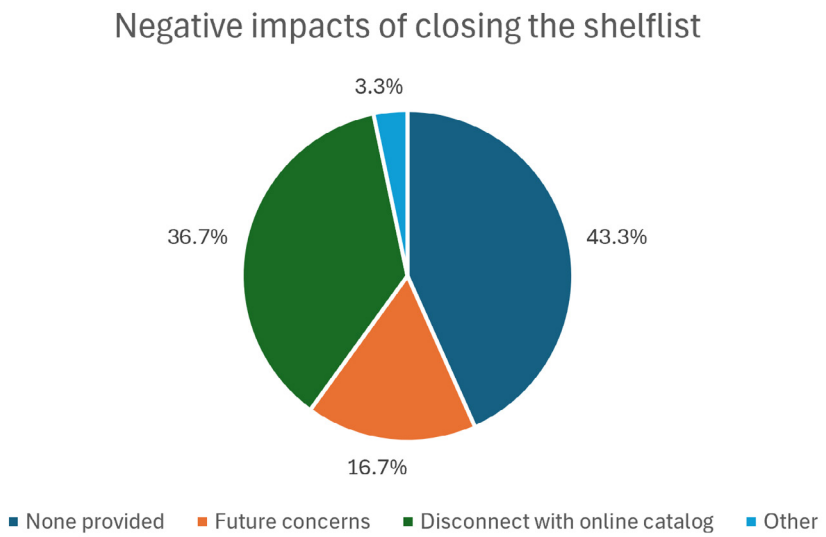


Figure 10. What drawbacks have you seen from ceasing to add or make changes to the paper shelflist?

process," and that data that was copied "isn't always accurate." Another said that, in 2004, some cards were marked to note that the item was missing, but these were not updated if the item was found in the twenty years since, making this data unreliable. One respondent also reported that the online catalog has not been able to fully replicate the function of the paper shelflist, especially noting "the ease and universality of being able to add information about items."

One respondent stated that online cataloging actually takes more time: "It's pretty fast to just make a shelf list entry, put the thing on a shelf and declare 'job done.' No backlog."

A few respondents provided additional comments, mostly noting that the historic file is still useful for reference but no longer practical to maintain. One felt that the shelflist remains a valuable tool: "I don't use it every day or even every week, but when I need historical information about the collection, I can go to it for clues." They did say, however, that it is not well understood by management, who are concerned with saving space. Another felt that their shelflist was safe, as it is stored in a nonpublic area, but worried about the future of their card catalog: "Administration, not believing in any need, has pressured us to discard the card catalogue that students no longer recognise much less know how to use. Arguments of retaining as backup for some portion of the collection in case of catastrophic electronic failure have so far been reluctantly accepted, but the danger of being compelled to discard is always present." Another respondent mentioned that they wish retrospective conversion had been managed differently, as not all relevant data was added to the online catalog, but felt that continuing to maintain the shelflist would be unsustainable. Another said that they "do love the card system, but it's impractical."

Discussion

Marker's 1996 survey had indicated that only 44 percent of libraries planned to keep their shelflist open. Nearly thirty years later, the present survey showed a lower number, with only 29 percent of

respondents indicating that they continue to maintain a paper shelflist. The majority of these favored continuing to maintain the shelflist, with only three mentioning that they either did not know why the shelflist continued to be maintained or expressing a desire for it to cease. For the 58.1 percent of respondents who no longer maintain a shelflist, the most common reason for closing the shelflist was that more modern technology had replaced it, with an additional four respondents citing staff time. Most cited benefits to closing the shelflist, including increased staff time, faster updating and retrieval in the online catalog, and being able to access data from anywhere.

Notably, none of the institutions who had closed their shelflist reported catastrophic problems, and 43.3 percent did not report any negative consequences. A minority (16.7 percent) expressed concerns about possible problems that had not yet materialized. This mirrored some of the positive aspects other respondents cited to keeping the shelflist open; they had noted concerns about data loss during systems migrations or as a result of cyberattacks. The cyberattack on the British Library shows that this concern is not misplaced, although it is not common. More than twenty-five years into the twenty-first century, it is questionable whether library administrators are likely to be swayed by this argument for maintaining a card file. Of the twenty-three respondents who included administration or management as part of their role, only five (21.7 percent) noted that their institution continues to maintain a shelflist, which is slightly lower than the overall results (29 percent). However, the concern around data security and long-term maintenance does point to a need for strong security and backup protocols.

Staff time was an issue for both those who had continued to maintain a paper shelflist and those who had not. Although this was mentioned by people with varying job functions, the group who cited this most frequently was catalogers who are still maintaining a shelflist, with 75 percent of respondents in this group citing the time required as an issue. This is logical because this group would be the most likely to be actively creating, editing, and filing cards. On the other hand, the group least likely to cite time as an issue was respondents at institutions that still have a paper shelflist but who do not have cataloging responsibilities. Of this group, only 33.3 percent noted time as an issue, suggesting that, while this group finds the shelflist useful, they may be unaware of the staff time required to maintain it or willing to accept this as a trade-off.

Length of tenure had little bearing on opinions about the shelflist. While some people who had been in their job less than two years were more likely to state that they were unsure of why a decision was made, other comments were similar to colleagues with much longer tenures. In particular, respondents with less than two years in their jobs expressed appreciation for having access to shelflist cards for conducting research, with observations such as the following: “The retro conversion of the card catalog was incomplete, so there are many books that are only discoverable through the card catalog. Also, even for those books that are represented in the online catalog, the card catalog often includes more descriptive info such as binding details and provenance” and “We have used it to check for missing copies, to create temporary placeholder records for items that did not make it to the online catalogue, to get a rough estimate of when we accessed some items during a period without consistent recordkeeping.” Respondents with more than ten years at their institution had similar observations,

including: “The shelf list can furnish information for missing electronic records or information (about provenance, acquisition history) that does not appear in the OPAC record” and “the cards are great if there is any question about the piece.” It was interesting to see that new employees quickly understood the historic value of the cards. However, this question asked about tenure only at their current institution, not length of time in the field. It would be interesting to repeat this research with recent library school graduates.

With most responses coming from academic libraries (54.8 percent), it is not possible to make any inferences about differences in different types of libraries. Public libraries and national libraries were each represented by less than 10 percent of the responses, with independent research libraries only slightly higher (12.9 percent). Among responses from academic libraries, 64.7 percent were from doctoral/research universities and 32.4 percent from four-year college/universities. Both groups closed their paper shelflists with similar frequency: 63.3 percent for four-years universities and 63.4 percent for doctoral/research universities. Respondents from both research and four-year institutions indicated similar reasons for discontinuing the paper shelflist, chiefly the switch to an online catalog. More respondents from doctoral/research universities (31.8 percent) indicated that they continued to add to a shelflist, compared to only 18.2 percent of responses from four-year schools. However, more respondents from four-year institutions (18.2 percent) indicated that they were unsure of whether they had a shelflist.

Although a majority of respondents had ceased to maintain their shelflists, 88 percent of these respondents had retained either all or some of their shelflist cards. Responses generally indicated that retaining the cards is helpful. Of these respondents, 72.8 percent felt that retention was beneficial due to the more complete record provided by the shelflist and for conducting historical research. Few negatives were cited about retaining a closed shelflist, with space being the most common concern. However, as survey responses indicated, it is not uncommon for some information to be included only in the cards and not in the online catalog. In some cases, this was due to ongoing retrospective conversion. Eighteen respondents noted that the cards contained nonpublic information, such as accession information (purchase dates, vendors, donors, prices, and funding sources), arrival dates for serials, historic loans, call number changes, data from previous shelf reads, and memoranda. One respondent noted that cards sometimes exist for books that have gone missing, providing evidence for items no longer present in the collection. Additionally, some information that may be useful to researchers, such as provenance, binding notes, and other local notes, often appears in the cards only, so discarding the shelflist should only be done with care. Other options, such as scanning or boxing the cards, are possibilities, but again need to be approached thoughtfully, as indicated by the respondent whose shelflist was unusable due to haphazard boxing. Scanning, similarly, can pose problems, especially for handwritten information, which may be more difficult for optical character recognition, or information appearing only on the back of the card.

Survey responses indicated that the distinction between the shelflist and the card catalog is fading. Responses from institutions that continue to maintain a shelflist were clear on the distinction, but

responses from institutions that do not sometimes conflate the two. For example, in response to the question about discontinuing maintenance of the paper shelflist, one respondent noted, "We gradually stopped amending our card catalogue after switching to our first Library Management System." The question was about the shelflist (nonpublic file in call number order) and not the card catalog (public file organized by title, author, or subject). This created some problems in interpreting data because it was not always clear whether the answer did indeed apply to a shelflist or whether it referred instead to the public card catalog.

Conclusion

Marker found that "the most striking characteristic of the responses was the psychological role of the card shelflist....The shelflist is the last manual file in the cataloging department."[35] At the same time, she found that "those libraries that accepted automated shelflisting almost uniformly reported that the specter of disaster evaporated with the actual closing or disposal of the card shelflist."[36] Almost thirty years later, this survey found similar data. The libraries that maintain a paper shelflist largely wish to continue doing so, but those that have ceased have faced no major consequences, although they have concerns about the long-term viability of their data. Many problems regarding collection maintenance and retaining historical information can be mitigated by retaining the shelflist, even if it is no longer added to.

The future of the paper shelflist is tenuous, with the changes in the RBMS security guidelines and removal of vended options for card printing. In addition, the MARC format was developed initially to assist in the printing of cards. As libraries move from MARC to linked data, it is not clear how cards could be produced. However, care must be taken before closing or discarding a paper shelflist. The reasons for continuing to edit or retain a paper shelflist are not merely psychological. Before making this decision, administrators are advised to consult with regular users of the shelflist, including catalogers, public service librarians, and curators, to learn about their use cases. Establish a strong data maintenance plan for the online catalog, including regular, secure backups should data be lost due to technology issues or (worse) a cyberattack. Although the RBMS security guidelines have removed the recommendation to maintain a shelflist in paper form, they do still instruct that "if the shelf list is the library catalog and/or finding aid database, it should be secure from tampering."[37] Ensure that all data represented in the cards has been entered into the online catalog in some way before discarding and ensure that this data also is backed up.

RBMS's decision to remove the guidance to maintain a paper shelflist inspired this research. It would be interesting to repeat this study in another ten years to learn if more shelflists close as the new guidelines become more integrated into current practice. In addition, many libraries are experiencing significant shifts right now in terms of personnel, budget, and systems. Long-time employees are retiring and roles are not always refilled. Will more paper shelflists close as a result of these changes? For libraries that do wish to continue their paper shelflist, what will workflows look like in a linked data environment? Many surveys indicated security concerns that had not yet emerged. Will this change in the future? Will the

perception of the shelflist change as the card catalog generation retires? Do younger employees, who have only used online catalogs, continue to find historic cards useful? In addition, allowing more than one response per institution also makes it difficult to ascertain the total number of institutions with an extant shelflist. These questions will be addressed in future studies, as the use and maintenance of the paper shelflist continues to shift.

Notes

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Appendix

Survey

Demographics

Q1 Do you work with rare books, archives, or special collections?

- Yes (go to Q2)
- No, but I have previously. NOTE: if selecting this option, please answer all following questions for your most recent job in rare books, archives, or special collections. (go to Q2)
- No, never (end survey)

Q2 Which best describes your library?

- Academic library (go to Q3)
- National library (go to Q4)
- Local public library (go to Q4)
- Independent research library (go to Q4)
- Other: _____ (go to Q4)

Q3 If you selected "Academic library," how would you describe your parent institution?

- Doctoral/research university
- 4-year college/university (with or without master's programs)
- Community college
- Other: _____

Q4 Please indicate your primary job function(s) (select all that apply)

- Acquisitions
- Administration/management
- Archival arrangement and processing
- Cataloging and metadata
- Conservation/preservation
- Curation/collection development
- Digitization
- Instruction/reference
- Other: _____

Q5 How long have you worked at your current institution (or last institution if answering for a previous position)?

- <2 years
- 2–5 years
- 6–10 years
- More than 10 years

Q6 Does your library continue to add or make changes to a paper shelflist? For the purpose of this study, "paper shelflist" refers to any paper file (typically though not exclusively cards), filed in call number order and housed in a staff-only area.

- Yes (go to Q7)
- No (go to Q14)
- Unsure (end survey)

Questions for libraries continuing to maintain a paper shelflist

Q7 Why have you decided to continue to add or make changes to the paper shelflist? _____

Q8 Do you maintain a paper shelflist for all materials or only some materials? Please specify _____

Q9 How do you create and/or edit entries in the paper shelflist? _____

Q10 Are you aware of any information contained in your paper shelflist that is not available in your online catalog? _____

Q11 What has been positive about continuing to add or make changes to the paper shelflist? _____

Q12 What drawbacks have you seen from continuing to maintain the paper shelflist? _____

Q13 Other comments: _____

Questions for libraries that have discontinued a paper shelflist

Q14 Did your library previously have a paper shelflist?

- Yes (go to Q15)
- No (end survey)
- Unsure (end survey)

Q15 When did your library cease adding to or editing your paper shelflist? Please skip if uncertain. _____

Q16 Why did your library discontinue adding or making changes to the paper shelflist? _____

Q17 Did your library retain the paper shelflist?

- Yes
- No (please indicate year discarded, if known) _____
- Unsure
- Other: _____

Q18 What were the effects of either retaining or not retaining the paper shelflist? _____

Q19 Are you aware of any information contained in your paper shelflist that is not available in your online catalog? _____

Q20 What has been positive about ceasing to add or make changes to the paper shelflist? _____

Q21 What drawbacks have you seen from ceasing to add or make changes to the paper shelflist? _____

Other comments: _____

FEATURE

Approaches to Rare Books Cataloging and Reducing Backlogs of Hidden Collections

A Review of the Literature

Mary Burns

As rare books and special collections have become a focal point in libraries, the need to reduce backlogs or hidden collections has become even more of a priority for the rare books cataloging community. This literature review examines methods and approaches librarians have used to catalog rare books to reduce backlogs of these materials. As rare books catalogers are pressed to eliminate backlogs more quickly while balancing the needs of description and access, an evaluation of past cataloging practices may be used to help inform their future efforts to catalog rare books and reduce backlogs. The findings indicate minimal-level and phased cataloging approaches have been used, and various forms of cross-departmental collaboration have been incorporated into workflows. Also, new technology and online tools have been adopted as they have been developed. This review identifies upcoming areas where future research is needed, such as the application of artificial intelligence to rare books cataloging and the implications for rare books cataloging workflows in the Linked Data environment.

Introduction

In 1998, Judith Panitch conducted an Association of Research Libraries (ARL) survey of special collections in ARL libraries that spawned an ARL Special Collections Task Force (2002–2006). The task force developed an action plan to "enhance access to collections and backlogs, surface 'hidden collections.'"[1] The results of the ARL survey and White Paper by Barbara Jones reporting on the work of the task force are credited with bringing the issue of rare books backlogs to the forefront of the rare books and special collections community.[2] However, several years before the survey, rare books catalogers were discussing the existence of backlogs and how to address them.[3] The need for creating fuller bibliographic records to describe and provide access to the artifactual aspects of a rare book, as well as a lack of records in major bibliographic utilities, has fostered the development of rare books backlogs.[4] A shortage of staff with the specialized skills necessary to create catalog records for rare books has also contributed.[5]

Rare books professionals have not only acknowledged the issue of backlogs, they have been committed to finding ways to reduce them. Suzy Taraba wrote, "How to reduce dramatically and ultimately eliminate our backlogs without throwing quality to the winds is an enormous challenge that must be met. Who better to address this issue than catalogers?"[6] Beth M. Russell conducted a second survey of ARL libraries in 2004 that revealed "no clearly dominant trends in organization, staffing, or workflow" but "a commitment to providing access to special collections was evident."[7] In their 2010 survey,

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Melissa A. Hubbard and Anna K.D. Myers found that catalogers were making significant strides in formulating practices to boost productivity.[8] In 2011, Jackie M. Dooley shared that the OCLC research survey of special collections and archives in the United States and Canada showed "56% of backlogs of printed volumes have decreased in size."[9] Although there has been considerable discussion and focus on eliminating rare books backlogs and the factors that contribute to their development, the ways that catalogers have cataloged rare books and attempted to reduce backlogs have not been systematically assessed. This study aims to identify methods and approaches rare books catalogers have employed or discussed to help inform future rare books cataloging practice and efforts to reduce backlogs. For the purposes of this literature review, the term "rare books" will be used to refer to books that are held as part of a rare books collection or a special collection. Based on the literature, this article will discuss approaches such as minimal-level cataloging, phased cataloging, cross-departmental collaborations, and the technology and online tools that have been employed to facilitate workflows.

Method

To determine the methods used or discussed by rare books catalogers to catalog rare books and reduce backlogs, the author searched the Library, Information Science and Technology Abstracts (EBSCO) database in the summer of 2025 and spring of 2026 for journal articles and reports related to keywords such as "hidden collections," "distinctive collections," "rare books cataloging," "special collections cataloging," "cataloging," "rare book backlogs," "special collections backlogs," "backlogs," "rare books," and "special collections." The following subject headings for the database were also searched: "Cataloging of Rare Books," "Cataloging of Special Collections in Libraries," "Rare Books," and "Rare Book Libraries." In addition, the archived contents of past issues of *Rare Books and Manuscripts Librarianship* (1986–1999) and *RBM: A Journal of Rare Books, Manuscripts, and Cultural Heritage* (2000–2002) were manually searched for articles related to hidden collections, distinctive collections, rare books cataloging, special collections cataloging, rare book backlogs, special collections backlogs, rare books, and special collections. This article reviews fifty-six articles published between 1984 and 2026 and will identify methods and approaches used by rare books catalogers to catalog their collections and reduce backlogs.[10]

Minimal-Level Cataloging

The most frequently discussed approach for eliminating rare books backlogs is some form of minimal-level cataloging. Minimal-level standards for books were recognized in 1978 with the National Level Bibliographic Record—Books (NLBR).[11] These records include the title proper, first statement of responsibility, publisher name, date of publication, and extent. These records do not have fuller levels of description used to describe the artifactual aspects of a rare book or access points to provide access to the artifactual aspects.[12] The greatest advantage to minimal-level cataloging is that the presence of the rare book in the library's collection can be more quickly communicated to potential users. The rare books cataloging community has supported the philosophy that some level of access at a more minimal

level is better than no access at all. In 1992, Taraba proposed that one of the cutting-edge approaches to making materials accessible is minimal-level cataloging. She observed, "Forms of access to materials are changing. 'Hot' approaches are not the elegant, detailed full-level records we all know and love—and love to create."[13] Writing on cataloging backlogs at the University of Virginia, Beth Picknally Camden and Jean L. Cooper reported that 4,664 provisional records were created in 1991 and 1992 for items in the rare books backlog. Before these records became available, there was no other way for patrons to find these books held in the collection.[14] Elaine Beckley Bradshaw and Stephen C. Wagner wrote that in the future, priority may be given to eliminating backlogs and ensuring there is minimal access to all of the items in a collection using less full levels of cataloging instead of creating fuller level cataloging records for every item.[15] Jones reported in the White Paper on the ARL Special Collections Task Force's work, "Though this issue needs further discussion, most believe that it is better to provide some level of access to all materials than to provide comprehensive access to some materials and no access at all to others."[16] Richard W. Clement's observations are in line with Jones's and support minimal-level cataloging. He stated that in order to eliminate backlogs, rare books catalogers must "break our collective mindset." He explained this "mindset" was the result of striving to produce fuller level cataloging records for huge backlogs without the resources needed to create them.[17] Beth M. Whittaker, writing on new challenges to providing access to special collections, shared her observations on creating "perfect" special collections cataloging:

> I am also coming to believe that we can never achieve perfection, even with all the time and expertise in the world. Any mode of access (MARC record, finding aid, etc.) may be a thing of beauty and elegance, providing every conceivable piece of information and meshing perfectly with existing records in the catalog, but its only actual purpose is to link users and materials. Since we can never really anticipate what users will be looking for, the extra effort required to create a "perfect" record is (to my mind) often unjustifiable.[18]

Two cataloging approaches based on levels of fullness, Lawrence J. McCrank's "phased cataloging" and James R. Ascher's "progressive bibliography" method, begin with minimal-level records.[19] The Hubbard and Myers survey results showed that respondents accepted less than full-level records.[20]

Defining a set of guidelines for minimal-level rare books cataloging is not easily accomplished. Karen Nipps reminded us of Paul S. Dunkin's comments in *How to Catalog a Rare Book*. Dunkin stated, "Anything written on rare-book cataloging just now is bound to be controversial" and "Probably no two catalogers will probably agree" on how much is enough.[21] M. Winslow Lundy pointed out that Bradshaw and Wagner acknowledged that when working to eliminate a rare books backlog, there is always a "tension" between creating fuller level records for every item in a collection and providing access to the complete collection with less full records.[22] Hubbard and Myers cited Stanley N. Katz who "recommends streamlining cataloging" because he thinks "that good metadata (as opposed to perfect metadata) is sufficient for access despite the trade-offs involved."[23] Hubbard and Myers's view on less than full levels of cataloging aligns with those of Katz. However, they maintained that "sufficient metadata" is not easily defined, and less full records with copy-specific notes can provide a sufficient description of a book.

They further stated that "adequate" is not "ideal," but if backlogs are going to be kept under control, "good enough" records need to be considered for some books.[24]

The rare books cataloging community addressed the question of "how much is enough" by calling for and developing standards for minimal-level rare books records. In 1986, Melissa C. Flannery, writing on recent developments in rare books cataloging during the very early days of automation, insisted "there is a more pressing need now than ever before to determine 'minimal standards of completeness for both current and retrospective cataloging of rare books."[25] Stephen Paul Davis wrote that the usefulness of using minimal-level cataloging for rare books should be investigated so it might be used to catalog new acquisitions faster, reduce backlogs, or replace full-level cataloging if it becomes too expensive. With these points in mind, he called for a minimal-level standard for rare books records to be defined.[26] Writing on the future directions for automated rare books cataloging, Susan A. Adkins proposed, "With the inclusion of new MARC format fields for rare book cataloging, a standard is needed for minimal level completeness and full-level cataloging guidelines to facilitate consistency and database sharing on a national and international basis."[27] The revised version of *The Bibliographic Description of Rare Books* (1981), renamed *The Descriptive Cataloging of Rare Books* (1991), includes an appendix to help guide minimal-level cataloging.[28] In 1992, Belinda D. Urquiza wrote on the use of this appendix in conjunction with AACR2 to apply enhanced minimal-level cataloging to the Bound Pamphlet Collection held by the Library of Congress. Although the collection had been recognized for quite some time for its wealth of historical resources related to American and British history in the late eighteenth and nineteenth centuries, only about half of the pamphlets were cataloged and available for discovery by researchers.[29]

In 1999, the *Descriptive Cataloging of Rare Books Core Standard* was established. It is based on *Core Standards for Books (Books Core)* and the full standard, *Descriptive Cataloging of Rare Books (DCRB)*. The core standards written for the BIBCO program are meant to encourage "'faster, better, cheaper cataloging."[30] It is interesting to note the results of a survey conducted by Lundy in 2001 on the use of this standard. It was undertaken shortly after the results of the 1998 ARL survey that showed backlogs were a concern for special collections departments. The majority of libraries that responded to the survey reported that they did not use the DCRB Core and chose to use full standards, the *Descriptive Cataloging of Rare Books* (DCRB) or *Anglo-American Cataloging Rules* (AACR2). Some respondents reported that descriptions created according to the standard were "not accurate enough" and there were "not enough access points."[31] A revision of DCRB followed in 2007 with the publication of *Descriptive Cataloging of Rare Materials (Books)* (DCRMB). It includes guidelines for creating Minimal-Level records (appendix D), as well as Collection-Level records (appendix B) and Core-Level records (appendix C). Whittaker wrote in 2006 that collection-level cataloging has not solved the backlog problem as expected. However, she proposed that collection-level records could play a significant role in making special collections materials accessible.[32] The current standard for rare books cataloging, the *Descriptive Cataloging of Rare Materials (RDA version)* (DCRMR), was released as an online tool in 2022. Minimal Level Cataloging (appendix D) is currently under construction.[33]

In addition to minimal-level cataloging, the literature highlights what can be called "very minimal cataloging." In 2017, Marcella Tam suggested making materials available for public before they are cataloged. Furthermore, she acknowledged that special collections professionals might be reluctant to do this but then highlighted how a few were doing so with positive results. Tam highlighted the Beineke Rare Book & Manuscript Library's Uncataloged Acquisitions database. This database contains a very brief descriptive record of uncataloged acquisitions that allows these materials to be seen and more quickly accessed.[34] This approach is similar to that taken by the University of Colorado Boulder (UCB) Libraries. Lundy wrote about their attempt to train a graduate student to download bibliographic records from WorldCat into the local catalog to serve as in-process records and provide access to collections. The student was not trained to do copy cataloging. Permanent staff would then complete the cataloging in the future.[35] She reported the initial findings from the UCB project support the notion that minimal-level records contribute to greater collection use.[36]

Phased Cataloging and Progressive Bibliography

Some of the approaches proposed for cataloging rare books involve handling the rare book more than once. Writing in 1984 during the early days of online catalogs, McCrank described a "phased cataloging" method that consists of ten levels. With new technology allowing for continuing updates to records, it assumes minimal-level records can be developed into fuller records over a considerable period of time. When it becomes cost-effective to rehandle the book, records can be enhanced and new data added from ongoing research. Level four provides for item-level cataloging, level five for descriptive bibliographic cataloging, and level six for advanced descriptive cataloging.[37] McCrank posited, "It may be a justifiable trade-off to have developing collections controlled at lower levels of description in order to have premiere collections where development has been comprehensive, cataloged with greater precision and accuracy than normal."[38] In 2000, Bradshaw and Wagner wrote they "believe that the wisest course is to build slowly and steadily a high-quality catalog rather than face the possibility of either cataloging every item twice or never cataloging materials to rare book standards."[39] Lundy also commented, "McCrank's phased cataloging, the handling of materials more than once in the cataloging process is a luxury few libraries can currently afford."[40] Writing soon after Lundy, Ascher observed that using in-process records to provide access is based in part on the idea of McCrank's phased cataloging. He advocated for the use of "progressive bibliography" because the "touch-it once mentality" does not work for special collections materials. Ascher cited McCrank's levels of bibliographic description as support for the process of progressive bibliographic description that proceeds from minimal-level to fuller level descriptions. Like McCrank, he saw the possibilities for continuing enhancements to records in online catalogs over time that were not possible in the card catalog environment. Also, like McCrank, he stated important additional information may become known about a rare book after it has been cataloged.[41]

Rare books cataloging projects that used a phased cataloging approach are recorded in the literature. In 2015, Briony Aitchison and Christine Megowan reported on a project to eliminate a backlog of 135,000 rare books within ten years at the University of St. Andrews Library. With only one full-time

rare books cataloger, they devised a two-tiered phased approach. Phase 1 books were given basic bibliographic records to identify them to users. Phase 2 books were set aside for full-level DCRM(B) cataloging. Phase 1 books were to be upgraded to Phase 2 when they had the cataloging resources needed to enhance the records.[42] Writing in 2017, Yvette Campbell and Barbara McCormack described a project to catalog the rare books using a phased approach. In order to allow access to the collection as quickly as possible, they adopted a two-part process. For phase 1 they compiled a list of items in the collection and cataloged each at a minimal level. They also cataloged fourteen books considered to be too rare for minimal treatment according to the *Descriptive Cataloging of Rare Materials (Books)*. After phase 1 was completed, they planned to move to phase 2 and provide all of the materials with full-level descriptions according to DCRM(B).[43] Although some catalogers suggested phased cataloging approaches are not practical, others embraced them as a way of making rare books more quickly available to users but with a commitment to providing fuller cataloging in the future.

Collaboration and Cataloging Staff

Forms of collaboration is another common theme throughout the literature dedicated to rare books cataloging. Samuel T. Barber also noted that collaboration was a solution suggested for addressing hidden collections or backlogs.[44] Bradshaw and Wagner's "customized cataloging" that "ultimately ends with the fullest use possible of the collections for scholarship and teaching" is frequently cited.[45] The key to this approach is a close collaboration between the rare books cataloger and special collections curator on cataloging policy and practice. Customized cataloging is the practice of joining together subject expertise with cataloging skills "to customize the catalog" to produce the best match between catalog records and the items in the collection they represent.[46] Issues to be considered before cataloging work begins include deciding which books to catalog first, appropriate level of cataloging for the collection from minimal to fullest, and which records will be customized and in what ways. Levels of description for cataloging are proposed: "(1) A minimal AACR2Rev records for all incoming materials, (2) A full AACR2Rev records for currently published secondary source materials and nineteenth and twentieth machine press books, (3) A full DCRB records for all hand-press books and some machine-press."[47] Bradshaw and Wagner asserted the greatest opportunity for customization exists within notes area. Other areas for potential collaboration are access points and genre terms in bibliographic records.

The literature contains several accounts of how collaboration was used to facilitate cataloging projects and workflows. Tatiana G. Barr wrote that in order to refine cataloging policy at her institution, the paraprofessionals, original cataloger, and unit head confer on a regular basis with the rare books curator. The curator shares details about access points he needs in bibliographic records.[48] She concluded, "Given the right institutional support and attitude, curators and bibliographers can collaborate with catalogers to provide access to special collections."[49] Jacqueline Vigilanti reported on her project that was just underway to catalog the rare books in the Reverend Allan Longworth Collection held by the Manchester Wesley Research Centre (MWRC). They took a customized cataloging approach. Before any rare books were cataloged she met with the director and associate director of the MWRC and their librarian. They considered which characteristics of the rare books were of the greatest

value and needed to be included in the records in order to benefit users searching the collection.[50] James H. Cho and Elayne Gardstein cited Bradshaw and Wagner in their report on cataloging the Alice Hoffman Collection. They stated that "the discussion of collaboration between cataloger and curator was relevant. Settling on appropriate subject headings, access points, relator terms and notes serve the goal of providing access and the ultimate use of special collections."[51] They determined that continuing discussions between catalogers and curators enhanced cataloging accuracy.[52] Ruthann E. Mowry and Bing Wang described a partnership between the Area Studies and Special Collections to catalog Chinese materials that were underutilized and rarely accessed. They reported that the collaboration between the Chinese studies librarian and a special collections curator demonstrates "the transformative potential of such partnerships."[53]

Catalogers who are not rare books catalogers have also collaborated and contributed to rare books cataloging projects. Rachel Berman Turner and David Schuster related how they forged closer collaborations and improved communication between Special Collections and Technical Services catalogers. As a result, "Librarians from both departments began to talk about how to best ensure items would get cataloged, and how to facilitate working through the backlog."[54] M. Winslow Lundy and Deborah R. Hollis reported on a backlog pilot project in progress at the UCB that involved the collaboration of Special Collections department staff and original catalogers and copy catalogers in the cataloging department. The Special Collections department had lost its cataloging positions. They utilized a "participatory management" approach based on the premise that issues are too complex for one person to address alone. Instead, decisions are made by taking into consideration "the collective expertise, experience, and wisdom of their employees."[55] Together they cataloged the mountaineering collection, a relatively small but significant collection. After being underway for a year and a half the pilot project was yielding positive results, including increased use of the collection.[56] Barr gave an extensive overview of how the University of Florida's Contributed Cataloging Section (CCS), which performs original and complex cataloging and Central Bibliographic Services (CBS), responsible for copy cataloging, contribute rare books cataloging. Both the CCS and CBS collaborate with the Special and Area Studies Collections Department (SASC) to most effectively utilize their resources to catalog special collections materials. A number of the cataloging unit's staff provide cataloging to the SASC as a part of their regular workload. Paraprofessionals who would like to work with SASC materials can spend some of their time on special collections projects.[57] Barr also suggested curators who are not catalogers "might be asked or volunteer themselves to provide some form of cataloging."[58] A trend reported by the Hubbard and Myers survey was using staff members who had not previously cataloged rare books to contribute cataloging.[59] In addition, Abigail Connick et al. explained in detail how subject specialists can help with cataloging tasks.[60]

Employing students to work on special cataloging projects to facilitate workflows is discussed in the literature. Russell's 2004 survey reported on the use of student assistants for special collections cataloging. Respondents were asked approximately how many graduate students or student assistants were responsible for special collections cataloging. She noted that many respondents left this section blank rather than indicate less than one full-time equivalent (FTE) student. More than 46 percent

of respondents reported less than one FTE student. All the other respondents, 13 percent, answered between one and three FTE students were assigned to special collections cataloging tasks. Although information about the types of special collections cataloging tasks the students performed was not collected by the survey Russell proposed, "Special collections in academic libraries have long relied on student assistants for paging of materials and patron assistance; there is no reason why similar attention cannot be given to cataloging tasks."[61] Janice Braun and Lola Raykovic Hopkins used student assistants to input the cataloging data for a project to collection-level catalog the Hoover Institution Pamphlet Collection on Revolutionary Change in Twentieth Century Europe.[62] Barr reported on students helping with cataloging for the Baldwin Library of Historical Children's Literature at the University of Florida. She described how a Ph.D. student interested in the Golden Book series volunteered to catalog them so she could review each one for her dissertation project. As a result, several hundred were cataloged by the student. The library's curator, who has done original cataloging, "has a student working for her who is trained to bring in copy, edit it, and enhance it with access points specific to the Baldwin collection."[63] A comprehensive overview of utilizing students for rare materials cataloging tasks was provided by Connick et al.[64] Lundy's project to train a graduate student to download bibliographic records from WorldCat into the local catalog to serve as in-process records and provide access to collections was noted previously.

Not all the literature depicts collaboration as being a useful approach to reducing backlogs. An attempt to address special collections backlogs by collaborating at the national level stemmed from the working conference, "Exposing Hidden Collections," held at the Library of Congress in 2003. A survey of hidden collections was conducted to identify backlogs of materials in specific subject areas. The aim was to find materials on specific subjects held in common by other institutions to support an attempt to secure funding for processing them. The survey focused on five topics: "women, advertising, pamphlets and printed ephemera, materials from the end of the American Civil War in 1865 through the end of World War I in 1918, and collections highlighting ethnic histories and cultures."[65] The literature shows a lack of support for a national collaborative effort. Carol Mandel stated, "Although the problem is national, the solution has to be local."[66] Katz wrote, "The notion of a national collaborative plan is extremely interesting, but most of the fundamental problems are local. The core institutions are local, and I have much greater concern about getting it right at the local level than I have for vast schemes, which have a way, in my experience, of not happening."[67] The literature review shows many forms of collaboration have been employed to facilitate rare books and special collections cataloging workflows. These involve both professional and paraprofessional staff from both rare books departments and cataloging departments, as well as area studies faculty and students.

Tools and Other Approaches

It is important to summarize what the literature records about the application of older technologies such as computers to rare books cataloging. Catalogers currently practicing who have experience working with card catalogs are becoming fewer and fewer. It is easy to take the initial impact of older technologies on workflows for granted or overlook them altogether when they have been in use for

several decades. It must be noted that this area in the literature clearly demonstrates that the rare books cataloging community was actively investigating the application of computer technology to the rare books cataloging process early on. In 1979, the Independent Research Libraries Association (IRLA) reported on the significant activities of its Ad Hoc Committee on Standards for Rare Book Cataloging in Machine Readable Form. The committee was investigating the potential for computerized cataloging to serve as a beneficial tool for rare books and research collections.[68] Flannery wrote that "it was the possibilities inherent in computer technology that engendered a reexamination of rare book cataloging, and indeed it is the implications of computer applications that are at the heart of current issues in rare book cataloging today."[69] As noted previously, Flannery, Davis, and Adkins called for minimal-level standards for rare book records in response to the development of automated rare books cataloging. The literature shows that opinions on whether automation speeded up the cataloging process were mixed. Taraba observed in 1992 that automation did not facilitate the cataloging process in practice. The reasons for this included unrealistic assumptions about how much computers could increase production, along with unanticipated downtime and changes in technology that necessitated rethinking workflows.[70]

Writing several years later in 2000, Bradshaw and Wagner concluded that automation had speeded up the process of rare books cataloging. They credited the development of the bibliographic utilities, OCLC and RLN, which made it possible to download and modify bibliographic records instead of filling in all of the necessary MARC fields in a blank bibliographic workform.[71] However, Whittaker pointed out a significant limitation to OCLC, noting that its structure is based on one master record that makes it impossible to include the level of detail rare books catalogers often enter into records in their local catalogs.[72] Davis went so far as to question whether online bibliographic records are really superior to old-fashioned card catalogs.[73] The pitfalls of retrospective conversion of rare books and special collections records were discussed. Howard Pasternick, a systems librarian, advised:

> Do not try to save money by converting less than the full record for special collections. Once an institution has invested substantial sums of money in acquiring and preserving rare and unique materials, it makes little sense to try and save a few dollars by converting a less than full record. Full bibliographic information about these items should be included in the online catalog, including copy-specific local notes.[74]

There is a lack of confidence in including rare books in the same retrospective conversion project as books in general library collections. Brad Oftely reported that curators at the James Ford Bell Library did not want the rare books records to be included in the library-wide retrospective conversion project. They had significant concerns about the quality of the records produced as part of these large-scale projects. He pointed to Nicolas Baker's evaluation of retrospective conversion: "Recon project records, particularly those for rare books, can be notoriously incomplete or inaccurate."[75] Davis advocated for standards for retrospective conversion of special collections records. He reasoned that without these standards there was a very real risk that special collections records could be converted according to the same standards as nonspecial collections records determined by a local vendor or computer center.[76]

Bradshaw and Wagner reported that a number of retrospective conversion projects had not fulfilled initial expectations. They blamed these shortcomings on overly optimistic projections of the cost and labor necessary to carry out the work. They stated:

> In fact, the motivation behind retrospective projects is a rapid and straightforward conversion of the card catalog into a new, very useful form … Not only do retrospective conversions typically work from existing, often brief, cataloging cards and not the actual item (either straight data input from the existing cataloging card or a match to an existing OCLC record), but they also rarely allow for cataloging to current rare book standards, which requires much additional time, research, and expertise. In effect, this means re-cataloging the rare books, a process that runs counter to the goal of relatively inexpensive retrospective conversion.[77]

The literature does include retrospective conversion success stories. Pasternick reported on the successful grant-funded retrospective conversion project for the monographs in the John Hay Library at Brown using the OCLC Retrocon service.[78] Oftely described the successful outcome of the James Ford Bell Library retrospective conversion project. It took longer to complete because they worked through the collection in-house with the items in hand. However, they produced complete and accurate records that were in keeping with the library's standard of quality.[79] As online catalogs transition away from MARC records to Linked Data, some of the lessons learned from rare books retrospective conversion projects may apply. It may be more beneficial to invest the time and money necessary to ensure the most successful outcome than to try and save money by cutting corners.

Although easily taken for granted today, the impact of the emergence of the internet and its resources on rare books cataloging at the time was indeed revolutionary. This impact is recorded in the literature. Eric v.d. Luft highlighted how "with the Internet, the cataloger is able to complete the record in a cheaper and faster way, with less effort, and with a better quality result."[80] A diverse pool of resources both historical and bibliographic are made available to catalogers who can draw from them to create or enhance bibliographic records "in less time and with less legwork." He also pointed out these resources can facilitate the work of catalogers who do not work for large universities with extensive reference collections. Other vast improvements at the time, for example, listservs such as ExLibris and email, could be used by catalogers to exchange information to aid their work more quickly and efficiently than faxes and expensive long-distance phone calls.[81] Of interest to rare materials catalogers, Chris Evin Long conducted a survey to determine "for which areas of cataloging the internet was a valuable tool and for which areas it was not useful."[82] Respondents remarked that the internet served catalogers as a beneficial resource because it facilitated better access to cataloging documentation, especially the documentation found on the Library of Congress website. It also had a positive impact on their ability to perform authority work.[83] The review results do include compilations of online resources with sections devoted to rare books and special collections.[84] The link to the rich listing of resources available on the ACRL RBMS Bibliographic Standards Committee website now included in the American Library Association's Resource Guide "Cataloging Tools and Resources" is highlighted. It can be found in the "Rare Books Cataloging" section under "Specialized Cataloging Issues" and is the only resource

listed.[85] Bradshaw and Wagner concluded the ability to access other libraries' online catalogs helped catalogers because they could see how other practitioners had augmented or revised minimal records by enhancing their descriptive elements, adding genre terms for artifactual aspects of the rare book, and assigning subject headings.[86]

There is very little mention in the literature of the possibilities or the use of outsourcing to help eliminate backlogs of rare materials. Bradshaw and Wagner identified outsourcing as a specific trend in cataloging in 2000 but wrote, "In special collections, outsourcing is useful only for a limited range of materials." They further wrote:

> Even drawing up the profile for adequate cataloging is highly labor-intensive, as is reviewing cataloging records and making any in-house enhancement of inadequate records. Moreover, for preservation and security reasons most curators would never consider sending special collections materials outside the library.[87]

Allen B. Ashman and Delinda Stephens Buie shared how the OCLC Tech Pro service cataloged many of their rare monographs at the University of Louisville. They reported, "This fee-based program has been crucial in cataloging materials in Icelandic and Hungarian, as well as in such non-European languages as Urdu, Japanese, Chinese, and Korean."[88]

Joy DuBose wrote about a case study that investigated the different kinds of processes and online tools the Special Collections cataloger at Mississippi State University used to catalog foreign language materials in the Todd A. Herring, Major William Starling, and John Grisham collections. The languages included "Slovak, Portuguese, Iceland, Albanian, Swedish, French, German, Norwegian, Latvian, Bulgarian, Hungarian, Russian, Japanese, Latin, and Greek."[89] Freely available online tools capable of both identifying and translating ancient and Asian languages in addition to European languages were required. Stars 21 and Google Translate were chosen to help catalog the collection. Dubose noted Stars 21 has a virtual keyboard function that allows the user to input non-Roman script characters into the translator itself, and Google Translate's strength is its "detect language" function. Stars 21 was used more than Google Translate because it offers multiple translations of a word. DuBose reported:

> Google Translate was more widely used with more modern materials and those that use Roman characters. However, the older the piece in hand, the more likely Stars 21 was used. While Google Translate was used for 20th century French, Stars 21 was used for 17th century French. This is simply because of how the language has changed and some words are no longer used in the current vernacular.[90]

Although their study did not focus on rare books cataloging, Harriet E. Wintermute and Mary K. Bolin described a successful cataloging project at the University of Nebraska-Lincoln (UNL) that may be relevant for other types of special collections. The Metadata Maker, an open-source product developed by the University of Illinois at Urbana-Champaign (UIUC) that can be used to quickly generate MARC records for print monographs with a minimum of training, was used to catalog a collection of local publications in English. These are ephemeral in nature with local significance and created or issued by

UNL faculty, departments, or units or by Nebraska authors. There were no records available in OCLC. Using the Metadata Maker, less experienced staff were able to create "good enough" records for this backlog of 44 monographs.[91] Jennifer A. Maddox Abbott reported on cataloging a large backlog of Spanish plays at the University of Illinois Library using the Metadata Maker. She shared that they were able "to make good enough records, which cleared up a large backlog of unique items stored in the main bookstacks sub-basement."[92]

New models for addressing rare books and special collections cataloging have been proposed. Anna Dysert noted Joyce Chapman and Elizabeth Yakel emphasize the new focus on data-driven management in library and university administration. They assert that archives and special collections must increase their efforts to adjust to this different kind of environment. Dysert stated, "The drive to promote hidden collections, combined with this interest in data driven management, has launched many initiatives designed to systematically evaluate collections to determine their level of processing, preservation needs, and research value."[93] Ruth Fischer, Rick Lugg, and Kent C. Boese suggested applying a business model to cataloging. They wrote, "In many cases, though not all, backlogs exist because cataloging departments still seek to provide a level of service that is not supported by the institution. Backlogs can be eliminated by changing either the process or the product."[94] They listed ten business principles, including control the "expert mentality," adhere to standards, design and produce an economically viable product, and establish production goals and measure performance. They stated, "Applying these principles to non-English, music, multi-media formats, serials and rare book cataloging may result in even more library efficiency."[95] While arguably not an approach to reducing backlogs, Jaime Groetsema wrote that rare materials catalogers should stop thinking in terms of backlogs and number of books cataloged and emphasize the other things they do. She suggested changes to the ways that catalogers characterize their work:

> For example, moving away from a purely statistical view of the number of items cataloged as "original" or "copy" within a specified timeframe, to prioritizing DEI collections, supporting reference requests and instruction, and working with communities to provide a human-centered approach to analysis and description. With a shift in emphasis, we can develop a more holistic understanding of Rare Materials Cataloging work and find frameworks that advocate for catalogers and cataloging as impactful to library users and to public services.[96]

Future Research

The search results for this literature review did not include writings on the application of open-source editing tools such as MarcEdit and OpenRefine to support rare books and special collections cataloging projects. This may be in part because of the nature of rare books cataloging and its emphasis on the copy-specific, artifactual aspects of the books being described in bibliographic records. This focus may limit the usefulness of batch processing and editing tools. The benefits of using macros and constant data to facilitate the rare books cataloging processes are also not addressed. However, Jawahir Javaid stated, "Macros have long been the industry standard to automate MARC field creation and editing in

the OCLC Connexion Client," but they "have become less reliable" in Client 3.X.[97] He concluded, "The ability to change large quantities of records without running into technical problems makes MarcEdit more powerful than OCLC macros."[98]

Writings on the specific implications of artificial intelligence (AI) on rare books cataloging were also not included in the search results for this review. However, Edward M. Corrado suggested that AI could help librarians create and assign subject headings and create content for descriptive fields. Even so, he maintained librarians must evaluate the metadata created by AI to verify its quality and that it serves user needs.[99] Richard Brzustowicz also cautioned that more research development of AI technology is needed to make certain "its responsible implementation in the field of library cataloging."[100] Heather Moulaison-Sandy and Zach Coble stated, "The notion that freely-available general purpose AI systems are able to solve cataloging problems easily, with the click of a button, if only the right prompt is created, is problematic to perpetuate-at least for now."[101] They pointed out a danger of using large language model (LLM) tools for cataloging is spreading bias from the models into library catalog and knowledge bases.[102] Further research into the possibilities of applying AI to rare materials cataloging workflows is needed to determine whether it can facilitate the process.

Studies on the implications for rare materials cataloging workflows in the Linked Data environment or more specifically how they may be enhanced using a BIBFRAME editor do not appear in the search results. However, the results do include a description of the Linked Data for Production (LDP4) project that was underway at Princeton University to encode handwritten dedications on books in the library of Jacques Derrida as linked open data, an important artifactual aspect of his library.[103] The creation of the RBMS Controlled Vocabulary for Rare Materials Cataloging (RBMS CVRMC), which published the vocabularies as linked open data in March 2023, is also noted in the review results.[104] In addition, music cataloging practitioners discussed the potential for MARC data from notes and statements of responsibility to provide bibliographic relationship information for the linked data environment.[105] For example, music catalogers often include name access points based on 245 subfield $c (Statement of Responsibility). They may choose to record the name of a lyricist in a 700 field found in the 245 $c with the relationship designator $e lyricist. Rare books catalogers may find they can advocate for creating fuller levels of cataloging to bring out bibliographic relationship information contained in fields such as the 260 and 264 (Publication Statement), including 700 fields with $e publisher and $e printer or the names of former owners and inscriber contained in the 590 (Local note).

Although Bradshaw and Wagner and also Luft and Long highlighted the benefits of cataloging resources available on the internet, the search results do not include a recent overview and evaluation of resources currently available for rare materials catalogers. A review of both the benefits and pitfalls of catalogers' use and potential dependence on these resources would be timely in light of the British Museum hack in 2023, which cut off access to the English Short Title Catalogue (ESTC) for an extended period of time until it was migrated to a new host, the Consortium of European Research Libraries (CERL), in 2024. The survey results show there are several areas that need further research. Studies are currently lacking on how macros and constant data and online tools such as MarcEdit and OpenRefine may be used to

facilitate rare books cataloging projects. The advantages and disadvantages of using AI to enhance rare books cataloging workflows have yet to be investigated. Finally, there is a need for an updated overview of freely available online resources for rare books cataloging.

Conclusion

The literature review shows that the rare books and special collections cataloging community has consistently sought to find better methods and approaches to facilitate rare books cataloging and bring materials into the hands of users more quickly. They have been cognizant of backlogs and tried various methods to reduce them. Although rare books with artifactual value benefit from fuller level cataloging records that provide more description and access points for users, minimal-level or less full-level standards that can speed up the cataloging process have been considered and used. Gradually enhancing the bibliographic record of a rare book over time, phased cataloging and progressive bibliography have also been discussed. During the early days of automation, minimal-level standards for rare book records were called for in the online environment. New rare books cataloging standards were crafted that contained appendices with guidance on creating minimal-level and collection-level records. Rare books librarians and curators have collaborated with rare books catalogers and other cataloging staff, as well as faculty within their institutions with relevant subject expertise. Students have been trained to minimally process and make available some special collections. Rare books catalogers have embraced technology adopting their workflows to automation and utilizing internet cataloging resources and online tools such as Google Translate, Stars 21, and Metadata Maker. The review also shows that although rare books catalogers have been focused on less full levels of cataloging, there continues to be interest in making the artifactual aspects of rare materials discoverable.[106] It has been suggested that rare books catalogers stop focusing on number of items cataloged and backlogs and emphasize how their work supports other priorities such as reference and teaching. It has also been suggested that a “less process more product” approach could benefit rare books cataloging.
The review results point to a need for an updated bibliography of current online resources for rare books cataloging. They show that the potential benefits of using batch editing tools in rare books cataloging processes have not been reported on, as well as the utilization of macros and constant data. The implications, if any, of AI as a viable tool for rare books cataloging are yet to be discussed. Also, the riches of MARC data contained in full-level rare book records and its role in the linked data environment need to be evaluated. There may be justification to include more descriptive fields and access points in bibliographic records because they provide bibliographic relationship information. Also, the potential for BIBFRAME editors to speed the rare books cataloging process needs to be investigated. A careful consideration of the results of this study reveals that rare books catalogers have employed a wide variety of methods and approaches in terms of levels of cataloging, staff resources, and technology to effectively facilitate cataloging workflows and successfully reduce backlogs.

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FEATURE

Accessibility Analysis of Academic Library EPUBs

Adina Mulliken

The European Accessibility Act requires accessible ebooks as of June 28, 2025, and the Americans with Disabilities Act requires digital content used by Title II educational institutions to be accessible, with a strong emphasis on course content, as of April 2027 and 2028. It is therefore increasingly important for librarians and others who select digital collections that may be used as course material to understand the current landscape of full-text accessibility.

The EPUB specification has promise because it includes accessibility features tailored to ebooks, is generally easier to make accessible than PDF, and allows content to be downloaded. However, the extent to which the accessibility features in the specification are implemented by publishers and vendors has not been widely examined in the literature.

The first part of this study assessed nineteen EPUBs from four vendors and eleven publishers. The evaluation included visual, manual checks in Thorium e-reader; automated checks using Ace by DAISY; and manual spot-checks in Calibre ebook manager. The study assessed whether tables of contents, references, notes, and indexes were linked; whether alt text and extended descriptions of images were present where needed; whether headings were appropriately structured; whether MathML was used for mathematical content, if any; whether Ace identified significant specification violations; how thorough publisher-provided accessibility metadata was; and the degree of alignment between publisher metadata and observed accessibility features. In the second part of the study, accessibility metadata for five books each from nine publishers was analyzed. This paper also includes a brief summary of publicly available accessibility information from several library EPUB vendors. The findings indicate substantial inconsistencies among accessibility potential, actual implementation, and reported metadata.

Introduction

The European Accessibility Act (EAA) required accessible ebooks as of June 28, 2025, and the Americans with Disabilities Act (ADA) requires digital content used by Title II educational institutions to be accessible, with a strong emphasis on course content, as of April 2027 and 2028.[1] EPUB, short for "electronic publication," is a standard for reflowable ebooks and other digital publications. The EPUB specification includes accessibility requirements that build on the Web Content Accessibility Guidelines (WCAG).

Although the EAA does not explicitly reference the EPUB standard, its wording and criteria closely align with EPUB accessibility requirements. Authors of the EPUB specification describe how the standard can be used to fulfill EAA requirements.[2]

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The ADA requires digital content to meet WCAG 2.1 Level AA and explicitly declines to require conformance to EPUB.[3] However, it states that "public entities could still choose to comply with additional standards or guidance related to … digital textbooks to the extent that the standard or technique used provides substantially equivalent or greater accessibility and usability." Additionally, under the ADA, ebooks must provide "effective communication, reasonable modifications, and an equal opportunity to participate in or benefit from their services, programs, and activities."[4] It might be argued that features such as accessible page numbers, which are outlined in the EPUB specification but not addressed in other guidance such as WCAG or Portable Document File/Universal Accessibility (PDF/UA), are necessary for effective communication in classroom contexts.

PDFs of journal articles and typical course reading formats are widely understood to be problematic for accessibility in that most are not fully accessible and they are difficult to remediate.[5] Websites avoid the potential for misrecognized text present in PDFs and tend to be easier to remediate for accessibility. Pitfalls for websites include that the website on which the ebook is located may be complex to navigate or have accessibility problems; saving and organizing books or chapters posted as websites can be complicated or unfamiliar to users; and the accessibility specification for websites, WCAG, does not include important accessibility features specific to books. The EPUB specification has promise in that it includes accessibility features tailored to books, is easier to make accessible than PDFs, and can be downloadable. Especially because of potential accessibility advantages of EPUBs, the implementation of accessibility features in EPUBs among library vendors and publishers is important to understand.

A brief overview of accessibility of several library EPUB vendors, based on the vendor's publicly available information, is included in this study. The overview incorporates critical accessibility issues such as use of digital rights management (DRM). The Accessible Publishing knowledge base for EPUBs says, "The most important of these [distribution] issues is to not apply digital rights management schemes to a publication that limit access to the content. When this occurs, a perfectly accessible publication might no longer be readable at all if, for example, assistive technologies are prevented from reading out the text."[6] However, this study selected only titles that were DRM-free and downloadable because that was necessary to allow the books to be examined.

This study assessed nineteen EPUBs for conformance to certain accessibility criteria. The EPUBs were from four library vendors and eleven publishers. The study used visual, manual checks in Thorium e-reader, automated checks in Ace by DAISY, and spot checks in Calibre ebook manager to identify accessibility issues. Additionally, publishers' reported accessibility metadata was compared with accessibility criteria observed.

Besides the nineteen EPUBs assessed, this study examined accessibility metadata for a separate five books each from nine publishers. The thoroughness, or lack thereof, of the metadata offers some indication of the publishers' attention to EPUB accessibility.

By examining both implementation and metadata, the study aims to illuminate gaps between accessibility standards, actual practice, and user-facing representations of accessibility. The findings

indicate substantial inconsistencies between accessibility potential, actual implementation, and reported metadata.

What Is an Accessible EPUB?

EPUBs are created using "Open Web Platform technologies like HTML and CSS."[7] EPUBs are required, by the EPUB specification, to meet WCAG 2.0 Level A but are encouraged to meet the most current version of WCAG at level AA.[8] EPUB extends WCAG by including accessibility features that are uniquely necessary for document-specific and book-specific content, such as "accessibility metadata, page navigation, audio-text synchronization and Digital Rights Management guidance."[9] As the DAISY Accessible Knowledge Publishing Base explains, "Unlike the general web, where each site's design often brings its own unique [accessibility] issues, books are more often composed of the same sets of building blocks, making accessibility mappings useful to a broad range of publishers."[10] In comparison with WCAG, the EPUB Accessibility specification offers a more specific way to make ebooks work for people with disabilities, including assistive technology (AT) users who need to be able to locate and navigate to the features of a book. Speaking at a 2018 Charleston Conference panel, Kasdorf and colleagues explained, "EPUB 3 uses the markup that publishers and vendors routinely use: HTML 5 is the structural semantic foundation; WAI- ARIA augments it for Web accessibility; and DPUB- ARIA adds publication-specific terms like 'doc- chapter' and 'doc- footnote.' This is spelled out in EPUB Accessibility 1.0, which specifies EPUB features for accessibility; proper navigation and structure so AT can find things and skip to them (e.g., going straight to Chapter 5), or skip over them (for example, choosing not to bother reading the footnotes); and accessibility metadata describes how accessible the pub is (using the identical accessibility properties in schema .org)."[11] EPUB Accessibility 1.1 is now current, but Kasdorf's explanation is still relevant.

Further requirements and recommendations for aspects of accessible EPUBs that are relevant to this study are described here.

Required Metadata

Accessibility metadata is intended to help users determine whether a publication meets their needs prior to accessing it. The EPUB Accessibility 1.1 specification identifies schema.org accessibility metadata that publishers must include:

- A list of all accessibility features
- The modes in which the content is expressed and modes that are sufficient to consume the book
- Any potential physical hazards presented by the content[12]

The specification offers an extensive list of "accessibility features" that can be included, such as alt text, extended descriptions, described math, MathML, reading order, structural navigation (accurate headings), index, and more.[13]

The "access modes" that can be listed are auditory, textual, tactile, and visual.[14] This lets users know whether a book is accessible to their senses. For example, a Deaf person would not want to select a book with an exclusively auditory mode of expression. The access modes of "textual" and "visual" are relevant to the EPUBs in this study. Textual is used for "a publication [that] contains information encoded as text character data," not images of text that must be read visually.[15] Visual "indicates that the resource contains information encoded in visual form," such as images that are necessary to understand the content, not only images like cover art or corporate logos.[16] More than one access mode is often included.

The specification states metadata should also include "sufficient access modes" for the book. This is defined as "a set of one or more access modes sufficient to consume the content without significant loss of information. An EPUB publication can have more than one set of sufficient access modes for its consumption depending on the types of content it includes (i.e., unlike access modes, this property takes into account any alternatives for content that is not broadly accessible, such as the inclusion of transcripts for audio content)."[17] A sufficient access mode of "textual" ensures that the whole publication can be consumed through the text alone, meaning that screen readers will be able to provide all the information to a blind user.

The potential hazards include flashing, motion, and sound, which could trigger seizures.[18] It is also recommended to include a "brief, human-readable summary of any information that cannot be expressed through the other schema.org metadata."[19]

Besides metadata required by EPUB Accessibility 1.1, recommendations for displaying metadata are offered by the publication "Accessibility Metadata Display Guide for Digital Publications 2.1,"[20] put out by a W3C Community Group. These are not requirements, but Community Group recommendations sometimes evolve to become standards.[21]

Pagination

EPUB Accessibility 1.1 requires identifying the source of the pagination in the EPUB metadata in many situations, such as when the EPUB is a recreation of a print book or can reasonably be expected to be used as such.[22] The relevant technique explains, "A student in a classroom, for example, needs to know whether the pagination was derived from the same version of a print book that the rest of their class is using." If the EPUB is not a recreation of another source, "none" can be listed as the source.[23]

EPUB Accessibility Techniques

As noted earlier, meeting WCAG 2.0 or better is required by EPUB Accessibility. The EPUB Accessibility specification and techniques do not repeat the success criteria or techniques provided by WCAG.[24] However, particular WCAG techniques that tend to be relevant for EPUBs are summarized by EPUB Accessibility Techniques 1.1.[25] Both WCAG and EPUB separate their specification from their "techniques." Techniques are examples of ways to meet the requirements, although other methods are also allowable.

The WCAG techniques summarized by EPUB and relevant to this study include EPUB Accessibility 4.2.2, which mentions the requirement for a table of contents and encourages providing an index in order to meet WCAG Success Criterion 2.4.5 regarding "more than one way to locate a web page within a set of web pages."[26] Linked indexes are convenient for everyone, but it can be especially time-consuming for blind readers to locate relevant sections from a table of contents or index if they are not linked. Furthermore, EPUB Accessibility 4.4 describes methods to meet the requirements for headings, and 4.5.1 offers resources about creating the required alt text and extended descriptions.

EPUB Accessibility Techniques points to the DAISY Knowledge Base for additional guidance. The latter document describes ways to meet the WCAG Success Criteria related to color contrast and using alternatives to color to convey meaning.[27] It also explains how to make footnotes and endnotes identifiable, and prescribes backlinks, which are links from notes back to the related location or locations in the text.[28]

Finally, "links to reference marks," such as endnotes or footnotes, are explained: "two-way linking is also beneficial as many reading systems lack a back button, so once a user has followed a link, the only way they can return to where they were is manually." This is inconvenient for everyone, but blind AT users must listen to extensive content to find the place in the text they were reading when they left to follow a reference.[29] However, there is now an effort to make this backlinking unnecessary by promoting e-readers with a back button.[30]

Besides the WCAG techniques summarized by the EPUB Accessibility specification and techniques, accessible math and extended descriptions are important. Math is often challenging for accessibility because mathematical notation is sometimes conveyed by images or LaTeX and is not interpretable by text-to-speech technology. Accessible math is required by several related WCAG Success Criteria, including 1.1.1, which requires "providing a text equivalent for nontext content." MathML is one way of rendering accessible math, and the DAISY Accessible Publishing Knowledge Base explains that this is the preferred method.[31]

Extended descriptions are required by WCAG if a short alt text does not fully describe the information conveyed by an image. For example, a complex diagram may be impossible to explain briefly. An extended description can be skipped by the reader, if desired, more easily than alt text can be skipped.[32]

Literature Review

In 2020, Zhang et al. performed a systematic review of accessibility in Open Educational Resources (OERs). Although many EPUBs are OERs, they did not mention EPUB specifically.[33] In 2019, Schindler reviewed DRM use and ebook platform accessibility. These are important and related issues for the present study, but they do not examine the accessibility of ebooks or EPUBs themselves.[34] In 2018, Reed and Turner examined the accessibility of open-access ebooks from several established OER publishers but mentioned the EPUB format only once and did not focus on it.[35]

Two studies examining accessibility of ebooks that included EPUBs were located. A 2024 poster by Hellman and Snijder examined 1,144 EPUBs and 36,000 open-access ebooks for accessibility. They found that only 156 of the EPUBs had useful descriptions of images in alt text, 226 had "accessibility data but no useful alt text." They did not include an explanation of what they considered to be "accessibility data." It is possible that they were referring to metadata. Their poster did not describe their methods in any detail, but their findings indicate the remaining 785 EPUBs were more problematic for accessibility.[36] A 2021 article by Azadbakht, Schultz, and Arellano also tested open-access ebooks, including EPUBs, for accessibility. Theirs was the most in-depth analysis located. They found that "Overall, most of the books did not meet basic accessibility requirements, such as including alternative text for any images, properly coding/tagging any tables and following a logical heading order structure."[37] For EPUB titles, the maximum number of failures was nine of fourteen rubric criteria. Two EPUBs received no failures. Regarding specific criteria, 71.60 percent of EPUBs failed for alternative text, 58.72 percent failed for content order ("is the content ordered to make sense for someone tabbing through the document?"), and 73.39 percent failed for ordered headings ("are headings properly ordered, such as a Heading 2 falls under a Heading 1, a Heading 3 falls under a Heading 2, and so on?").

They found a higher percentage of alt text (28.4 percent) than Hellman and Snijder (14 percent), but this likely reflects methodological differences. Azadbakht, Schultz, and Arellano assessed whether any nontext content had alternative text, whereas Hellman and Snijder evaluated whether the alt text was useful. This study counted useful alt text and found a somewhat higher percentage of relevant alt text (26 percent) than Hellman and Snijder (14 percent). Due to this study's small sample size, however, these findings should not be considered representative.

This study examined heading structure but looked at different criteria than Azadbakht, Schultz, and Arellano. The latter studied whether headings were properly nested, whereas this study looked at whether heading levels corresponded to the hierarchy visually presented in the table of contents. Because this criterion extends beyond proper nesting, the findings are not directly comparable.

This study did not examine content order and other criteria used by Azadbakht, Schultz, and Arellano. Although content order is important, it was not feasible to examine all aspects of WCAG conformance.

Another difference between the studies is that Hellman and Snijder examined books from OAPEN, whereas Azadbakht, Schultz, and Arellano focused on criteria that "were most likely to be under a textbook author's control as opposed to a web developer's or publisher's." Both of these samples are more likely to include works published by individual professors than those in this study. In contrast, implementation of the criteria examined in this study is more likely to be controlled by publishers because the books analyzed here were produced by commercial publishers, both large and small. This study also differs in the data examined: it is the only one that examined both publisher-supplied accessibility metadata and library vendor accessibility metadata, when available, and compared those claims with findings from direct examination of the books. It is also the only one that examined links

for tables of contents, references, and indexes; backlinks for references; and indications of math accessibility.

The author also located several articles addressing ebook and EPUB accessibility from the perspective of publishers. Carey discusses industry debate regarding the EAA's application to previously published ebook titles.[38] Enis reports publishers' views regarding accessibility practices and challenges. Enis notes that "according to surveys of more than 1,400 academic publishers conducted in 2020 and 2023 by EBSCO Information Services, 'For ebooks with publication years 2022–2023, 77 percent were provided in EPUB, contrasting with 68 percent of ebooks with publication years 2020–2021,'"[39] which is movement in an accessible direction, suggesting increased adoption of EPUB. However, he also reports that only 30 percent of survey respondents indicated that their organization had a dedicated "accessibility program," and 42 percent were not aware of the EAA.[40] Stacy Scott, accessibility lead at Taylor & Francis, describes the company's efforts to improve accessibility, including avoiding DRM and converting some ebooks to EPUB3 "to improve the structural integrity and navigation of these files, with accessibility in mind."[41]

Vendors' Accessibility and Selection

This study examined ebooks from four major academic library ebook products or vendors: EBSCO Ebooks, Ebook Central (ProQuest), Springer Nature, and Taylor & Francis. Some vendors provide extensive accessibility information online, including accessibility statements, Voluntary Product Accessibility Templates (VPATs), sometimes called Accessibility Conformance Reports (ACRs), information for users and librarians, and recordings of presentations about accessibility. Others provide relatively limited publicly available information, although this does not always reflect a lack of attention to accessibility. Accessibility reviews by the Library Accessibility Alliance (LAA) also provide useful information about certain vendors' platforms. These reviews tend to focus primarily on platform accessibility rather than full text.[42]

EBSCO and ProQuest both provide extensive information about their accessibility. A concern with both vendors is the use of DRM. Both offer alternatives for users with disabilities who are excluded by DRM restrictions, but it is unclear whether these workarounds fully meet requirements to provide "substantially equivalent ease of use" and "equally effective" access,[43] as the alternatives can be burdensome.

For downloaded books, ProQuest uses Adobe Digital Editions (ADE), which manages DRM. Until April 2026, EBSCO did as well. Inclusive Publishing, an initiative of the DAISY Consortium, states, "Our evaluators found [Adobe] Digital Editions on Windows to be unstable and it struggled with larger books. Reliability issues are also reported on iOS and Android. Navigating the table of contents with a screen reader was unsatisfactory."[44] Users with and without disabilities may find installing and using ADE cumbersome.

ProQuest offers a "text-only mode" for users with disabilities to access their PDF format DRM-protected titles. ProQuest says its EPUB format does not need "text only mode" and is natively accessible.[45] Text-only mode provides text but does not necessarily include markup necessary to meet WCAG, such as headings, alt text, and more. Lack of this markup introduces significant accessibility barriers. ProQuest also states, "If the existing content does not meet the needs of users, remediation options are available and can be requested via the Support team."[46] No time frame for responses was identified. It is unclear whether ProQuest could create a fully remediated, WCAG-compliant ebook or only a DRM-free file. A DRM-free file allows a library or disability office to remediate the ebook, but this is time-consuming. ProQuest indicates that end users with disabilities can contact them and they will "work with you [end users] to identify the best option for remediation, subject to content licensing restrictions and technical capability."[47] ProQuest does not appear to have contact information dedicated for accessibility or remediation requests but offers its general contact information.

In April 2026, EBSCO rolled out Readium LCP, a DRM system that is more compatible with AT than ADE. Readium integrates with the Thorium e-reader, which is free e-reader software for Windows, Mac, and Linux. Thorium's website states that "massive efforts are … made to make Thorium Reader highly accessible for visually impaired and dyslexic people."[48] EBSCO also offers to provide a DRM-free version for users or librarians, who can obtain these by using the "Accessibility Support" button on the ebook interface. This is typically available in three to five business days, according to EBSCO, but occasionally can take up to thirty days if files have to be requested from a publisher.[49]

The author requested one ebook for two students with disabilities in fall 2025. She was routed from the EBSCO email, to its form, and then to Bookshare because the publisher of that book deposits its books in Bookshare. Bookshare is a service that provides more accessible versions of ebooks to users who register with a disability through Bookshare or through their school so that the school can distribute the Bookshare books. Finally, Bookshare routed her to her school's accessibility office, where the book was eventually obtained for the students. The accessibility office then added the author as a sponsor on the school's Bookshare account. This allows the author to search Bookshare, view book files, and make them available to users who have been added to Bookshare by the disability office. This reduces the delay in getting books to users. Now she checks Bookshare either before or at the same time as requesting through EBSCO. In May 2026, the author communicated by email with a director from EBSCO who said that typically EBSCO has access to the remediated files of EBSCO ebooks that Bookshare would have.[50] Therefore, if she was routed to Bookshare, the author might email accessibility@ebsco.com to request EBSCO's copy if it would be preferable to the Bookshare copy. If a user did not yet have a Bookshare account, this could be an additional minor impediment or delay, although she finds many students do have a Bookshare account. She finds Bookshare books tend to be fairly accessible but do not always entirely meet WCAG and sometimes need further remediation.

It is not entirely clear whether EBSCO will fully remediate an ebook to meet WCAG. However, in the experience of the author and others at her school, EBSCO does fully and quickly remediate journal

articles using the same Accessibility Support request form as is available to request ebooks. This vendor remediation is extremely valuable in reducing the delay for users.

Taylor & Francis offers to provide more accessible alternative formats and uses DRM infrequently. Per their platform's accessibility documentation:

> When a work is unavailable for purchase in a suitable format, we aim to provide one within three working days.…The texts we provide are Digital Rights Management (DRM)-free and are mostly available in searchable PDF format. This works with most screen reading software. We can also supply texts in Word, EPUB, or XML format.…Some content in PDF format may not have been designed for accessibility. For example, older archive content reproduced from original printed sources may be presented as scanned PDFs, or images of text. We will always attempt to supply an OCR PDF (with optical character recognition) for screen reading, but this may not always be possible.[51]

Taylor & Francis provides a VPAT, a detailed accessibility statement, and reports improvements such as incorporating alt text for all relevant images in some of their books, including all books published from June 2024 forward.[52]

Springer Nature provides an accessibility statement, a VPAT, and an option to request alternative format for accessibility reasons.[53] A 2023 LAA evaluation was fairly positive, saying, "There are very few WCAG 2.1 compliance issues with the platform. Those identified are very minor overall.…The evaluation of the PDF documents, however, did reveal major accessibility issues."[54] Notably, Springer Nature does not use DRM on its ebooks.[55]

Additional vendors at the author's institution were considered but not included. ACLS Humanities E-books has given extensive attention to accessibility, but its EPUBs are not downloadable for analysis. Ovid was excluded because its EPUBs are not downloadable. Although no information about accessibility in Ovid was found online, a third-party review from LAA gave Ovid Medline a relatively positive review in 2024. The review said, "There are very few WCAG 2.1 compliance issues with Ovid Medline and they are very minor overall with the most pressing issue being with ARIA implementation and a few color issues."[56] Based on the screenshots in the review, Ovid Medline seems to use a separate section of the same interface as its ebooks, so the review may be partially relevant to its ebooks. Gale, JSTOR, and APA were examined but do not offer EPUB; all are DRM-free.[57]

The selected vendors meet two criteria: they are available through the author's institution, and they offer EPUBs that are downloadable without DRM, allowing examination using Ace by DAISY, Thorium, and Calibre. These were typically open-access EPUBs.

EPUB Selection

This study focuses on books because adoption of EPUB format is more common for books, although the specification is intended for other professional publication formats as well. "The expectation is that

publishers will utilize the EPUB 3 format for a broad range of content, including books, magazines, and educational, professional, and scientific publications."[58] For example, Sage publishes journal articles in EPUB format. Because several criteria examined in this study are not relevant to journal articles, however, the analysis focuses exclusively on ebooks.

For the first part of the study, EPUBs were selected from each vendor based on several criteria. Only titles in English were examined because this is the author's only fluent language. Titles had to be downloadable without DRM for the reasons described above. At the time the study was conducted, all vendors in the study except Springer offered some EPUBs that were either restricted to online viewing or protected by a version of DRM that limited the ebook to use within ADE. After the study was completed, EBSCO changed from ADE to Readium LCP for DRM. The number of titles that were downloadable and without DRM limited the selection considerably.

Titles were chosen to represent a range of publishers available through the vendor at the author's institution. When multiple titles were available from a publisher, an effort was made to select the most recent publication because newer titles may reflect more current accessibility practices. When possible, titles in math and science were included to allow examination of accessibility features relevant to mathematical content, complex images, and tables.

For the second part of the study, which examined only metadata, EPUBs were again limited to those that were in English and available through the author's institution. Then EBSCO's filter by publisher option was used to view how many books by each publisher were available. Because EBSCO's filter by publisher option was especially useful to focus on publishers, only EBSCO was used. The publishers that had the most results were prioritized. Five of the most recent EPUBs for each publisher were selected.

Methods for Examining Books

The author selected Thorium Reader to examine the books because accessibility features within the EPUB were unlikely to be blocked by the reader's functionality. She also examined some books within the vendors' ebook viewers. She used either Thorium or the vendor viewer to check the following:

- Linked table of contents
- Linked in-text citations or footnotes
- Links from references back to in-text citations or footnote numerals
- Linked indexes, where present

Ace by DAISY is an automated, open-source tool designed to assist in evaluating conformance with the EPUB Accessibility Specification.[59] Ace reports violations of WCAG 2.0, EPUB, and issues it categorizes at "best practices." It displays a table listing the violations of each specification and of Ace's list of "best practices." It classifies the violations as serious, moderate, or minor. The number of violations should not be interpreted as a direct measure of a book's overall accessibility. In Ace, the following issues were examined:

- Presence and adequacy of alt text

- Appropriateness of headings compared with the table of contents
- Violations identified by Ace
- Metadata violations identified by Ace
- Accessibility features reported in publisher metadata
- Accessibility hazards reported
- Publisher accessibility summaries in metadata

The author documented discrepancies between publisher metadata and findings from manual or automated examination. For EBSCO books, she recorded the vendor's "Ace by DAISY" score; for Springer titles, she noted accessibility descriptions on the Springer interface.

For books in which mathematical notation was observed visually, mentioned by Ace, or indicated in metadata, Calibre was used to examine the EPUB code for the presence of MathML. Calibre can expose the ebook code, which was searched for indicators of MathML such as the <math> element. Calibre was also used to check for extended descriptions that may not have been visible through other methods. At least one chapter requiring an extended description was examined for code indicators such as aria-describedby, desc, details, summary, or longdesc, and for relevant hyperlinks near images. The list of sections outside the chapter was also reviewed for files such as descriptions.xhtml.

In addition to direct examination of EPUB files, accessibility metadata available via EBSCO was examined for five books each from nine publishers.

Findings and Discussion

Tables of Contents and Access Modes

Findings are shown in Spreadsheet 1, EPUB Analysis. All of the books the author examined included linked tables of contents, which supports accessibility, as noted earlier. All books also reported an "access mode" of "textual, visual." This indicates that the default modes of consuming the book is reading text—either visually, via text-to-speech AT, or through refreshable Braille—and perceiving visual content such as images.

In the "access mode Sufficient" field, seven of the books examined listed sufficient access modes of both "textual, visual" and "textual" alone, indicating that they claimed to be fully accessible without vision. One additional book listed "textual" alone as a sufficient access mode.

Of these eight books that claimed full accessibility without vision, three were judged by the author to provide adequate alt text or extended descriptions. One of these three included alt text that duplicated figure captions; although this practice is not ideal, it would still allow access without vision. The remaining five books that claimed full accessibility without vision were judged to require additional extended descriptions, as discussed further below.

Eight books listed "textual, visual" as the only sufficient access mode, indicating that not all nontext content was described and that the books were therefore not fully accessible to users without vision. In

four of these cases, alt text was missing for some or all relevant images, and the metadata accurately reflected this limitation. In two cases, alt text likely would have duplicated figure captions and therefore may not have been necessary. In one case, the only images identified were a cover image and logos. In these three cases, it is possible that the books could have claimed "textual" as a sufficient access mode, meaning that they would comply with WCAG in this respect. However, because this study did not examine every image in each book exhaustively, it remains possible that some nontext content was not accessible without vision. In the remaining case, detailed alt text was present, but additional extended descriptions were judged to be necessary; the metadata therefore appeared to report this limitation accurately because the book was not fully accessible without that.

Three books did not include any accessibility metadata, making assessment of metadata accuracy inapplicable.

Table 1. Access Mode Sufficient

Publisher metadata	Reported accurately?	Reported inaccurately?	Not applicable
Textual, visual; textual (vision not necessary)	2	5 Extended descriptions were needed or possibly needed	
Textual (vision not necessary)	1		
Textual, visual (vision necessary, does not meet WCAG)	4 Some or all alt text was missing	2 Possibly not accurate, alt text likely would have duplicated captions and so not needed. Possibly could have claimed textual, visual; textual (meets WCAG) 1 Possibly not accurate, no meaningful images were located; possibly could have claimed textual, visual; textual (meets WCAG)	
Textual, visual (vision necessary, does not meet WCAG)	1 Alt text was present but extended descriptions needed		
No accessibility metadata present (violates EPUB specification)			3
Totals	**8**	**8**	**3**

Alt Text and Extended Descriptions

Alt text in the books examined was marked "Yes" in Spreadsheet 1 when it was present for most images where relevant and provided a meaningful description. Five books met this criterion. Of these, three were marked "yes, detailed," indicating that comparatively rich alt text was provided. In one of these cases, the author judged the alt text to be clearer and easier to understand than the diagram it described. One book was marked "Yes, but duplicative," indicating that alt text was present but repeated information already conveyed in figure captions. In this case, null alt text likely would have been more appropriate so that screen reader users would not hear the same description twice.

One book was marked "Yes, detailed but not adequate," reflecting the presence of a comparatively lengthy description of a complex image that nevertheless failed to convey the image's full meaning. Three additional books were marked "Yes, but may not be adequate," where it was unclear whether the alt text sufficiently conveyed the information presented in the images.

Seven books were marked "No" for alt text when descriptions were missing or not meaningful, such as cases in which random strings of characters appeared in the alt attribute. Three books were marked "Not applicable" when alt text was not present but also not needed, such as when figure captions fully described the images and additional alt text would have been improperly redundant. Further detail for each book is provided in Spreadsheet 1.

Extended descriptions provide a mechanism for conveying information about complex images that cannot be adequately described using short alt text alone. Extended descriptions were identified in only one book. Of the remaining nine books that included alt text, additional extended descriptions were judged to be necessary in three books, potentially necessary in three additional books, not necessary in two books, and in one book the images were too complex for the author to determine whether extended descriptions were needed. Books that lacked alt text entirely were marked "not even alts" in the extended-description column and were not examined further for the presence of extended descriptions.

Table 2. Alt Text and Extended Descriptions

Alt text	Number	Extended description needed?	Extended description present if needed?
Present and descriptive/ relevant	6 Total 2 of them had detailed alt text 1 of them had duplicative alt text	2: Needed 1: Possibly needed 2: Not needed 1: Unsure/Image too complex for author to determine	1: Yes 2: None found
Not present and not needed	2	2: Not needed	N/A
Present and detailed, but not adequate	1	1: Needed	1: None found
Present but may not be adequate	3	1: Needed 2: Possibly needed	3: None found
Not present or relevant for all images when needed	7	1: Not needed (most images in this book had adequate descriptions in fig captions, but some images needed alt text) 6: Did not even have any alt text, so were not examined for extended descriptions	N/A

Notes, Indexes, Headings, and Math

References, footnotes, and endnotes—referred to here collectively as *notes*—should be hyperlinked to the portions of the text to which they refer. Fifteen of the books examined included notes, whereas four did not. None of the books that included notes were missing hyperlinks from the text to the corresponding notes.

In addition to links from the text to notes, accessible navigation requires a mechanism for users to return to their original location in the text after following a note reference. Backlinks are a common solution. Six books included backlinks from notes to the text. In four books, selecting a note reference opened a callout box rather than navigating to a different location; in these cases, users could close the callout box to return to their place in the text, and a backlink was therefore unnecessary. This is a feature of Thorium reader and might not work as well in other readers. Two books contained multiple sets of notes, with some sets implemented using callout boxes and others using links and backlinks. Five books did not include any mechanism to return readers to their place in the text after accessing a note.

As mentioned, efforts to create an e-reader with a "go back" button might obviate the need for backlinks in the future.[60]

Table 3. Return mechanism for references, footnotes, endnotes

Mechanism to return to user's place in text	Number
Backlinks	6
Callout boxes	2
Backlinks and callout boxes	2
No mechanism to return	5
Not applicable, No references, footnotes or endnotes in book	4

Indexes should be similarly linked to the portions of the book to which they refer. Fourteen of the books examined included indexes. Of these, ten provided links from index entries to the relevant content, whereas four did not.

Headings play a critical role in navigation for blind readers and other AT users. Headings should be marked using appropriate heading levels so that screen readers can identify section structure and hierarchy. To assess heading quality, the headings identified by the Ace checker were compared with the corresponding tables of contents. Six books included more heading levels than appeared in their tables of contents, which is likely to support more granular navigation. Eight books included heading structures that corresponded adequately to their tables of contents. Four books included fewer headings or fewer levels of headings than their tables of contents suggested, indicating insufficient structural markup. Two books used separate headings for chapter numerals and chapter titles, which is unnecessary and duplicative. In one case, the headings were otherwise adequate, and in the other there were fewer headings than needed. One book included headings that differed substantially from its table of contents, suggesting inaccurate or inconsistent heading structure.

Mathematical content was identified in three books. Two of these included MathML, as required for accessible math; however, the author is unable to assess the accuracy of MathML. One book contained only one short equation and did not have MathML. In cases involving simple equations, it is sometimes possible to provide accessibility by describing the equation in alt text; however, no such description was provided in this instance.

Violations Found in Ace Checker

Violations of relevant accessibility specifications identified by Ace are summarized for each book in Spreadsheet 1. The total number of violations reported by Ace should not be interpreted as a direct measure of a book's overall accessibility. Like other automated checkers, Ace reports the same issue repeatedly when it occurs multiple times within a publication. For example, if a book's standard link text has insufficient color contrast, Ace reports a separate violation for each instance of that link. As a result, books with many repeated instances of a single issue may appear to have more violations than books with fewer but more substantive accessibility problems.

In addition, Ace cannot always interpret contextual factors that affect the practical severity of violations for ebook users. For these reasons, the author's assessment of the significance of the reported violations is summarized alongside Ace's findings in Spreadsheet 1. For example, in five books accessed through EBSCO, Ace reported numerous violations related to a small link regarding EBSCO terms and conditions that appears at the end of book sections. Although these violations increased the total count, the author judges them to be unlikely to have a meaningful impact on most users. These issues appear to be vendor related rather than indicative of publisher attention to EPUB accessibility.

Six books had no violations reported by Ace. Four additional books were judged by the author not to have significant accessibility issues based on Ace's findings because they contained very few violations and those present were unlikely to substantially affect user experience. The remaining nine books were judged by the author to have more significant accessibility concerns.

Seven of the books with more significant issues had problems identifying the source of pagination. In instructional or classroom contexts, this can pose a serious barrier when users need to locate the same page numbers as peers using a print version of the same text or when citing the book. Six books had color-contrast issues, which may make content difficult or impossible to perceive for users with certain visual disabilities. Three books did not specify a language, which can impede AT's ability to interpret and present content correctly. Three books were missing all accessibility metadata, which presents a substantial barrier for users who need to determine whether a book will be usable before purchasing or spending time to obtain it.

Publisher's Metadata

Ace reports specific violations related to accessibility metadata requirements in addition to content-level issues. Aside from cases in which all accessibility metadata was missing, the only metadata-specific violation identified by Ace concerned a single book that lacked an accessibility summary. Because that same book also incorrectly reported the presence of alt text when no alt text was found, the publisher's metadata for that title appeared to be unreliable.

Most books reported "none" for accessibility hazards. Four books are marked "not applicable" in Spreadsheet 1, EPUB Analysis, because they did not include any accessibility hazard metadata. One anomalous case involved the ebook *Flowing Progress* by Purdue University Press, for which ProQuest's

hazards field stated, “Accessibility Hazards: No California Proposition 65 hazard warning necessary.” California Proposition 65 concerns exposure to toxic substances and is not relevant in this context. However, the publisher’s hazard metadata embedded in the EPUB itself was more substantive than most, specifying “noFlashingHazard,” “noSoundHazard,” and “noMotionSimulationHazard,” whereas many other books simply listed “none.”

The content of accessibility summaries varied widely across books, as shown in Spreadsheet 1. Many, but not all, summaries claimed conformance with a version of WCAG, EPUB, or both. In several cases, summaries explicitly acknowledged accessibility limitations, but most did not. For example, one Springer book stated, “This publication is missing alternative text for complex diagrams. The publication otherwise conforms to the EPUB Accessibility specification at WCAG Level A.”[61] Another Springer book acknowledged the absence of backlinks. A Taylor & Francis Group book summary noted that “some images and tables may appear on pages different from the print version,” information that may be especially relevant to readers working alongside others using print copies.

Some accessibility summaries listed certain aspects of accessibility, whereas others did not, even if such features were present. For instance, Amsterdam University Press stated, “When necessary, short alt texts and/or extended longer descriptions are provided.”[62] A Purdue University Press summary described a range of features, including alternative text, tables of contents, page lists, landmarks, structural navigation, indexes, and semantic structure.”[63] Several summaries mentioned the presence of structural markup and others did not, even when such markup was observed.

Beyond summaries, the accessibility features fields also varied substantially. These are displayed in Spreadsheet 1. In at least four cases, information listed in the features field was largely duplicated in the summary, limiting its usefulness. Some books listed structural markup, alt text, tables of contents, and other accessibility features, whereas other books with similar features did not report them. Although the EPUB Accessibility specification does not require standardized content for these fields, at the present stage of adoption it may be helpful for publishers to describe accessibility elements explicitly in either the summary or features fields because many EPUBs still lack required accessibility elements and users cannot assume their presence.

Discrepancies between publisher-supplied metadata versus accessibility findings based on Ace and manual examination are summarized in Spreadsheet 1. For four books, no discrepancies were identified. For three books that lacked publisher metadata entirely, discrepancies could not be assessed. The remaining twelve books all exhibited some form of inconsistency. In one case, alt text was reported but not found. More commonly, publishers claimed conformance with a version or level of WCAG or EPUB Accessibility while the book lacked alt text, extended descriptions, appropriate heading structure, or sufficient color contrast, any of which means it does not fully meet the version or level of WCAG claimed. Several books were missing page source metadata, which is a violation of EPUB Accessibility 1.1, while the publishers claimed to meet it. Two books from one publisher listed a print page source as an accessibility feature in the summary but did not correctly enter it into the relevant metadata field, causing Ace to identify pagination source violations.

Vendor Metadata

Several vendors provide book-level accessibility-related metadata in their platform interfaces. In EBSCO eBooks, each title is given a score labeled "EPUB [×]% pass (provided by Ace by DAISY)." EBSCO developed its own automated checker based on the DAISY Consortium's Ace tool. In the seven EBSCO books examined in this study, reported pass rates ranged from 98 to 99 percent. No explanation of how these percentages are calculated was located. The scores appear potentially misleading, as one book with a reported 99 percent pass rate lacked alt text, had heading problems, omitted accessibility metadata, and did not specify a language. Based on the author's sampling, EBSCO's "Ace by DAISY" score does not appear to be a reliable indicator of overall accessibility.

On the positive side, EBSCO provides access to publisher-supplied accessibility metadata through a "view all metadata" link on each title's record. This allows users who seek accessibility information to locate it without opening the ebook itself. However, some metadata elements are presented in a technical format that may be difficult for readers to interpret. For example, "schema:accessMode: textual, visual" is unlikely to be meaningful to most users without additional explanation. In comparison, Thorium's user-facing explanations of EPUB accessibility metadata—such as "all content can be read as read-aloud speech or dynamic Braille"—are clearer. Thorium's explanation conforms with the guidance of "Accessibility Metadata Display Guide for Digital Publications 2.1."[64]

In Ebook Central, ProQuest provides its own accessibility-related fields for each title, which differ from the metadata required by the EPUB specification. Not all fields are populated for every book. Titles with more extensive metadata may include fields such as:

- "Screen Reader Friendly,"
- "Accessibility Summary,"
- "Accessibility Information,"
- "No reading system accessibility options actively disabled (except),"
- "Table of contents navigation,"
- "Single logical reading order,"
- "Short alternative textual descriptions,"
- "Use of color is not sole means of conveying information,"
- "Use of high contrast between text and background color,"
- "Next / Previous structural navigation,"
- "All non-decorative content supports reading without sight," and
- "Publisher contact for further accessibility information."

One concern identified is that, for all eight books examined in Ebook Central, ProQuest listed "Accessibility summary: not provided by publisher," even when the publisher's EPUB metadata did include an accessibility summary. Even if ProQuest means that the summary was not provided through a separate metadata exchange process, the presentation is misleading because it ignores information embedded in the EPUB itself. Another concern is the use of the phrase "screen reader friendly," which

is not clearly defined. Many accessibility criteria specified by WCAG and EPUB affect screen reader behavior, and without further explanation users are left to guess which features are included.

Springer's platform provided a notably detailed accessibility description for one ebook, covering both the PDF and EPUB versions. The EPUB description stated that the ebook was designed to meet EPUB Accessibility 1.0 AA and WCAG 2.2 Level AA, highlighting navigable tables of contents, structured headings, alternative text for images, reflowable and resizable text, sufficient contrast, and Springer's email address for accessibility queries. However, the metadata embedded in the EPUB itself stated that the publication "conforms to EPUB Accessibility specification at WCAG 2.2 Level AA," a stronger claim than the platform's phrasing of "aiming to meet." This distinction between intent and conformance is significant. In addition, Springer's platform description did not mention accessible math features that were present in the book, whereas the ebook metadata did. Another Springer title with more accessibility issues simply indicated that accessibility information was forthcoming.

In Taylor & Francis's platform interface, accessibility information on search results was limited to an icon labeled "Global Certified Accessible by Benetech EPUB Accessibility 1.1 WCAG 2.1 level AA." This certification applies to the publisher's workflow rather than to individual books. Publishers certified under this program may include Benetech-certified metadata in each EPUB, but certification is awarded for one year"[65] and does not guarantee that every title meets the stated criteria. The author learned from Taylor & Francis that its Taylor & Francis eBooks, Reference Works and Collections product does have detailed accessibility information on its interface for each book; however, that was not the case for the product to which the author has access.[66]

Rather than vendors wrestling with these issues and inventing their own metadata, using the "Accessibility Metadata Display Guide for Digital Publications 2.1" would likely be effective. Avenues for recommending changes to these guidelines are available.

Additional Books' Metadata Examined by Publisher

Spreadsheet 2, Metadata Analysis by Publisher, and Spreadsheet 3, Publishers with No Metadata, present data for five books each from nine publishers. Metadata was collected from EBSCO's display for each book. To account for the possibility that metadata practices have improved over time, the most recent titles available to the author through her library were selected. These titles ranged in publication year from 2019 to 2022, and the most recent year examined for each publisher is indicated in Spreadsheet 2.

For six of the nine publishers, none of the five books examined included any accessibility metadata. Three publishers included accessibility metadata for the majority of the books examined: Routledge; University of North Carolina Press; and University of Nebraska Press and its imprint, Potomac Books. In the case of the University of Nebraska Press, identical accessibility metadata was reported across all five books examined. Four of these titles were also included in the first book analysis and were found to have multiple discrepancies between publisher metadata and accessibility findings based on Ace and manual examination. This pattern suggests that metadata may have been reused across titles without verification against the actual accessibility of individual books.

Routledge's and the University of North Carolina Press's metadata varied. The University of North Carolina Press's "summary" fields metadata offered lists of features mostly the same as what they listed in the "features" field. Routledge's "summary" fields, however, offered more robust and human readable descriptions than what was in their "features" field.

Conclusions

It is positive that most of the books in the first analysis—sixteen of nineteen—included accessibility metadata; however, the examination of additional titles by the publisher did not bear this out, as only three of nine publishers had any accessibility metadata, and one of the three appeared to be unreliable. Of the books in the first analysis, slightly more than half accurately reported their "access mode sufficient" so that users with disabilities could predict whether the books would work for them. At this level of accuracy, it seems unlikely that users with disabilities would want to rely on this information. Less than half of the books examined had adequate alt text, and only one book was found to include longer descriptions, so improvement seems to be needed in this area.

In the first analysis, all of the books had linked tables of contents and notes, if they contained notes, and the majority contained linked indexes if they had indexes. More than half of the books that had notes included a mechanism for readers to return to their place in the text after accessing a note. Almost two-thirds of the books had adequate headings. Just over half of the books were found to have either no errors as detected by Ace or no significant errors. Areas for improvement in the remaining books included color contrast, specifying language, and identifying the source of pagination. Most books did not report any hazards. Although this type of content is probably not extremely common in academic EPUBs, it is important to identify hazards for those impacted.

It would be useful for publishers to increase their identification of accessibility features in metadata or summaries because many EPUBs still do not include these features, even though they are often required; therefore, users cannot yet take them for granted. Publishers' self-reported metadata claiming conformance with WCAG or EPUB accessibility criteria was not found to be fully reliable.

Generally, vendors' interfaces seemed less reliable than ebook metadata, with the exception of EBSCO's direct display of the publisher's metadata itself. EBSCO's Ace by DAISY score did not seem helpful, and ProQuest's metadata was misleading at times. Springer's interface seemed hesitant to mention accessibility features in one case. Taylor & Francis did not have any metadata on its search results interface that was unique to each book in the product to which the author has access. Use of the "Accessibility Metadata Display Guide for Digital Publications 2.1" could improve vendor display of metadata.

The examination of metadata by publisher revealed some patterns. Routledge and the University of North Carolina consistently included accessibility metadata. However, one University of North Carolina title in the first analysis did not include accessibility metadata. Routledge and its parent company, Taylor & Francis, were found to have consistently robust accessibility metadata in three books in the

first analysis. The other seven publishers examined consistently did not include accessibility metadata, or the metadata seemed unreliable in the case of the University of Nebraska Press.

Although there are many areas for improvement in EPUB accessibility, it is encouraging that some features of the accessibility specifications were used in more than half of the books examined. It is reasonable to hope that, with the European Accessibility Act and the new regulations under the ADA, future studies will find further improvements. Additional studies examining larger numbers of EPUBs and publishers would be useful so that reliable generalizations could be made.

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NOTES ON OPERATIONS

To Weed or Not to Weed?

Undertaking a Large-Scale Print Serials Withdrawal Project

Jylisa Kenyon, Ramirose Attebury, and Jeremy Kenyon

Many academic libraries continue to deal with a large footprint of print serials, even years after ongoing print subscriptions are canceled. Calls for additional student-focused spaces in libraries make this stagnant footprint difficult to justify, and even though many libraries want their spaces to be used, they might be reticent to undertake the changes necessary to accommodate these requests. This case study documents how a land-grant research library, previously averse to weeding, planned for and implemented its own large-scale print serials withdrawal project during the 2025–2026 academic year. By highlighting prior weeding projects, as well as the technical details and workflow processes from the most recent project—including the use of scoring metrics to facilitate data analysis and decision-making—this study provides practical steps that other libraries can investigate before taking on their own large-scale weeding projects.

Introduction

In 2007 when one of the authors, Attebury, started working at the University of Idaho Library, there was a strong aversion among library faculty to weeding. As employees of the state's largest library, many librarians and administrators felt it a point of pride to hold the largest physical collection in the state. More seasoned librarians as well as recent retirees who had spent their careers on meticulous collection development of both books and serials were understandably hesitant to see their work undone. Concerns about the durability of online equivalents were still prevalent, and large-scale weeding projects were a subject never broached.

Throughout the 2010s, our library's electronic resources manager would occasionally offer liaison subject librarians lists of electronic journal titles available in stable journal packages, like JSTOR, that matched our print collection holdings. Although librarians could have chosen to withdraw the print equivalents after purchasing these backfiles, few librarians took advantage of the opportunity, and very little was weeded as a result of those title lists.

By 2022, as the library was revving back to life postpandemic, space considerations had to be addressed. Although the library's print serials represent an impressive body of knowledge, use of the physical collection had dwindled as more content had been made available in an electronic format.

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At the same time, the need for physical study spaces and additional student-centered services in the library, such as tutoring and a writing center, had grown alongside the university's population. Thus, the University of Idaho Library decided to begin a weeding project of print serials in late 2023, with the goal of decreasing the print serials' footprint in the library.

This article describes the novel process the library used to undertake a large-scale weeding program in a previously weeding-averse library. In it, we discuss how we managed change in a library that has been very resistant to withdrawing material, and we propose that title-by-title evaluations might not be the only, or even the best, way to systematically withdraw items. We begin, though, with an overview of the library, followed by a review of existing literature related to large-scale weeding projects.

The Library Setting

The University of Idaho Library serves a full-time enrollment (FTE) of approximately 9,750 students. It has seen continuous enrollment growth during the postpandemic years. Although some of this growth has been the result of online programs, the university is still largely a traditional residential campus. Located in a rural part of northern Idaho, the university itself is a land-grant institution. Just eight miles from the much larger Washington State University, the University of Idaho Library is the largest library in the state. The library is also a member of the Orbis Cascade Alliance, a consortium of thirty-eight academic libraries in Oregon, Washington, and Idaho.

The library is composed of four publicly accessible floors, along with a basement containing closed stacks of special collections and archives, book and journal storage, and the library's large Federal Depository Library Program (FDLP) government documents collection. The second floor of the library contains tables and student study space, one classroom, the university's undergraduate-facing writing center, tutoring and academic support programs, a computer lab, the library's digital humanities lab, monograph stacks with call numbers T–Z, and the vast majority of the library's physical serials.

Physical journals not located publicly on the library's second floor are housed in the basement, interspersed with book storage items by call number. A subset of the basement storage collection is, rather unfortunately, housed in a special collections and archives caged area. Although staff are able to ask special collections personnel for access to retrieve journals and books from the area as needed, the locked cage area presents a barrier to quick and easy access.

The University of Idaho Library is also a member of the Western Regional Storage Trust (WEST), a distributed print journal repository program. Founded in 2010, WEST is composed of member libraries that commit to retain physical journal titles. After sharing information about their journal holdings with the program, libraries are then asked to commit to retain specific titles for a set period, typically through 2035. The goal of the program is to ensure the continued physical existence of journal titles while at the same time allowing other libraries to comfortably withdraw those titles.

Literature Review

Many case studies have been published related to print journal withdrawals. Most often, print journal withdrawal projects are necessitated by ongoing space issues in libraries or the desire to repurpose existing space to serve student interests or the needs of other library departments, budgetary concerns, and patrons' changing preferences for electronic rather than print journals.[1]

Overarching Approach

Overarching this literature is the question of whether print journal withdrawal projects should be incremental or all-at-once. As with evaluation criteria, each library's context will inform the timeline and review mode. However, as noted by Bracke and Martin, libraries should consider whether their collection decisions, including projects to withdraw print journals, reflect a "muddling through" or "transforming the institution" approach.[2] Although originally discussed in the context of fiscal problems, Bracke and Martin highlight how Guskin and Marcy's documentation of these approaches is relevant to libraries.[3] For example, a "muddling through" approach views issues as short term and involves solutions that are incremental and selective in nature.[4] In contrast, a "transforming the institution" approach recognizes that "long-term problems require long-term solutions and involves solutions that change underlying systems, approaches, and processes."[5]

When making collection decisions, the process should involve "analyzing the entire situation," which includes the overall collection goals for a library, whether a library should be a repository for print collections,[6] and whether patron access preferences are reflected in print journal holdings. Using a "transformative" approach when withdrawing print journals can lead to more challenging optics. But in the long run, this type of approach could help libraries avoid "a pattern of continual crisis, leaping from one bad situation to another" and actually result in a more coherent and pragmatic vision for their collections.[7]

Large-scale library projects can be disconcerting to both staff and patrons. Managing human emotions and the psychological impacts of change are essential when shifting strategies or the philosophies that guide those strategies in a library. Part of the overarching approach to journal weeding includes a consideration of how the changes will come across to staff and patrons. Common approaches to facilitating change are informing library staff about evolving best practices, including "right-sizing" the library collection, eliminating redundancy and increasing services and efficiencies, and drawing on "tacit knowledge," that is, librarians' own knowledge specific to their organization and patron base.[8]

Criteria for Evaluation

Although each library used slightly different processes, evaluation criteria remained consistent. Comparing print holdings with perpetual online access via backfiles, especially those purchased from JSTOR and other publishers, was a go-to method for libraries.[9] This criterion was explicitly detailed by Schonfeld, and many libraries followed Ithaka's proposal to immediately withdraw those text-based, rather than image-based, print journals that had been previously digitized by JSTOR or other publishers.[10]

Relevancy of print journal subjects to current programs and curriculum and feedback from subject librarians and constituents,[11] most often disciplinary faculty, was also considered and influenced decisions to retain or withdraw items.

Usage, via circulations or in-house use, or lending via interlibrary loan (ILL); journal run completeness; and current/ongoing subscription status[12] were also used consistently as criteria.

Duplication within the library system and holdings among partners, consortia, or other libraries and funds were used less frequently.[13] The use of varied criteria demonstrates that print journal withdrawal is not a one-size-fits-all process; libraries engaged in these projects need to identify the criteria that are most relevant to their context and identify the most effective ways to utilize them.

Weeding Workflows

In addition to discussing the reasons for print journal withdrawal projects and the criteria used, some articles also focused on the workflows undertaken by employees in circulation and/or technical services.[14] A handful of articles detailed how they used their integrated library system (ILS) to generate and pull data relevant to their withdrawal projects, but only one identified that their library used Alma as its ILS (which is also used at the University of Idaho Library), and as a result detailed their use of Alma features, including Alma Analytics.[15] Others discussed their offering of volumes to print preservation consortia; the strategies they used to mark items that were being retained or withdrawn; process and staff challenges associated with withdrawal projects, including those related to item disposal; and the timing for removing holdings from OCLC.[16] These workflow pieces are useful for libraries to understand before undertaking print journal withdrawal projects, especially those that are larger in scale, because they can provide strategies that other libraries can follow.

One area available for further exploration is the use of scoring metrics to facilitate data analysis and decision-making during print journal evaluation projects. Glazier and Spratt highlighted how they streamlined data analysis via the use of Excel formulas and functions.[17] These features focused on cleaning up the spreadsheets for clarity by identifying duplicates between print and JSTOR holdings, removing characters from titles to facilitate alphabetizing, and merging cells, which are useful undertakings.[18] Our article contributes to the scoring metrics discussion by presenting how we used Excel formulas to add new information, including a weighted score for each print journal based on distinct data points and functions to create a color-coded representation of scores. This made the initial data analysis easier and removed much of the title-level evaluation that had been required in our library's earlier evaluation projects and those documented by existing literature.

Easing into Withdrawals

Phase One: Strict Criteria

In 2023, the initial criteria used to determine whether a print title was eligible for withdrawal were strict, with two criteria needing to be met. First, all titles eligible for withdrawal needed to be freely

available online via an open-access platform. The second criterion was for titles to be part of a WEST retention commitment. Specifically, titles were eligible for withdrawal only if another WEST library had committed to retain the exact titles, volumes, and issues that we were considering for withdrawal. Meeting two criteria would render a title eligible for withdrawal, and liaison librarians would have final decision-making power.

The initial list of potential titles given to liaison librarians was generated with Alma Analytics. The titles were subsequently run through WEST's AGUA system by the project lead so that the list included University of Idaho Library holdings and the holdings from other libraries that had a commitment to retain the titles. Also included were dates to which the committed libraries had agreed to retain the items. A technical services staff member added a column to the spreadsheet with information about online availability, including open, aggregator, and subscription access, of each title after searching for each title manually. The spreadsheet contained only titles for which WEST libraries had equivalent coverage and for which online access was available, reflecting the initial conservative approach to weeding.

Throughout the following year, a number of alphabetical title lists were sent to liaison librarians with titles eligible for withdrawal. Liaisons were given a time frame for reviewing the lists, typically two to three weeks, during which time they could request that any title they wanted to retain be taken out of consideration for withdrawal. Surprisingly, given the library's long aversion to weeding, no liaisons requested that we retain any of the titles identified for potential withdrawal.

Phase Two: Loosened Criteria

In the second half of 2024, at a faculty meeting, librarians at the University of Idaho began discussing an expansion of the project. A growing space shortage in a small range of movable electronic shelves, plus the shelves' propensity for malfunctioning, prompted technical services staff to suggest beginning in that range. Shortly thereafter, librarians were provided with a call number title list of all journals in that section that began with the call letter *A* that met newly revised criteria: (1) *any* form of online access, including subscription or aggregator access; and (2) exact title, volume, and issue commitment by WEST libraries or similar print repository libraries whose holdings were also indicated in the AGUA system.

Librarians were asked to review the spreadsheet and indicate if they felt a title should be retained. Project leads did not require librarians to provide any justification for their decision to retain a title; instead, we simply trusted their judgment. Despite the invitation to retain any titles that they deemed appropriate, only one librarian at the time suggested that we retain one title from the list. During the subsequent four months, librarians received three additional spreadsheets, corresponding to call number ranges *B*–*D*. Each spreadsheet contained the same information. No further requests to retain any titles came from liaison librarians, further solidifying the notion that we were no longer a weeding-averse library.

Phase Three: Expanded and Expedited

By summer of 2025, although progress had been made on withdrawing journals, two events transpired to expand and expedite the project. In addition to the limited access to print journals in the special collections cage, the university obtained a new insurer, and one of the primary areas of concern for that insurer was the crowded shelves in special collections and archives. The physical journals and books in the caged area of special collections and archives were taking up space that could be used to more safely and securely store the library's unique collections, and the impetus to move the serials out of the cage grew even greater. The push to expand weeding was further hastened by three separate water leak incidents that occurred as rainwater overwhelmed the building's exterior and water descended into a portion of the caged basement area. Project leads began to realize it was time to stop "muddling through" weeding and instead adopt Guskin and Marcy's "transformative" approach.[19]

Creating the Eligibility List

Given the decision to stop using electronic access as an inviolable criterion for withdrawal eligibility, but still wanting to be thoughtful about withdrawing titles, the library decided to add a new criterion into consideration, and that was the number of print holdings in other OCLC libraries. But how to find that information? Although it is certainly possible and quite easy to use WorldCat or Connexion Client to manually look up individual titles to determine how many other libraries hold a specific title, it would be time-consuming and tedious to do this for thousands of journal titles. Instead, Attebury decided to investigate the possibility of looking up a large number of titles in batch. A somewhat naive assumption that Connexion Client would allow uploading of a spreadsheet was dashed by a bit of documentation searching; however, Google eventually led her to the BookOps Application Programming Interface (API) and eventually a method for identifying holdings en masse.

BookOps API

BookOps-WorldCat is a Python wrapper for use with the WorldCat Metadata API, which itself allows libraries to obtain summary holdings, as well as shared print retention information (such as retention commitments by WEST members).[20] Any library that maintains an OCLC Cataloging and Metadata subscription is eligible to use the API. A simple request to OCLC led to the University of Idaho Library obtaining an API key, and from there, the GitHub site dedicated to BookOps provided instructions for installation. Even for a librarian with extremely limited Python experience, installation was fairly simple after sharing some of the instructions with ChatGPT and asking for guidance on the process.

Alma Analytics

Before the API could be used, however, the first step in identifying OCLC holdings for a large number of journal titles was to identify those titles in the first place. As mentioned earlier, Alma Analytics was initially used to create a list of journal titles in specific call number ranges, both in the main stacks and in the basement of the library. Using Analytics's Physical Items functionality, an expanded report was

built that included material type, permanent call number, title, publication date, publisher, LC subject, OCLC control number (035a), MMS ID (a unique identifier used in Alma), and number of loans for all call number ranges. The material type and loan information were included because the basement collection includes both books and journals, and the librarians working on this project decided that as long as they were pulling reports and identifying holdings, they might as well include the books alongside the journals.

Prompts Used in Script Creation

Creation of the Python script itself was an adventure. Armed with little more than the knowledge that a Python script of some sort, when paired with the aforementioned API key, should ostensibly be enough to batch pull holdings from WorldCat, Attebury set about asking ChatGPT for more help. The initial prompt of what eventually became a very long, multiweek conversation (because of the free ChatGPT account's token limits) was simply:

> I have a list of books with OCLC#s, and I need to see how many libraries have holdings attached to those titles. I have access to the WorldCat Search API. Can you suggest a python script that will let me accomplish this task?

A slew of initial error messages and subsequent explanations for them from ChatGPT finally led the librarian to mention what would have obviously been helpful from the start: "I'm still getting an error message. Just to clarify, I'm using the BookOps-WorldCat API." With that extra information, ChatGPT offered different suggestions and eventually a sample cleaned-up script, into which the librarian could plug in the API key and secret, and input file names. Although far from perfect, by explaining the ensuing error messages to ChatGPT and trying out the revised suggestions, eventually a working script was created. From there, a spreadsheet of only OCLC numbers was quickly transformed into a spreadsheet of OCLC numbers and the corresponding number of libraries that held each title plus a count of the libraries in WEST that held commitments as well.

Applying a Formula

Now that we had a spreadsheet of titles alongside their OCLC and WEST holdings, plus loan information, we still needed a systematic approach to sorting the titles.

For organizing the spreadsheet, we opted to create a composite index number that weighed various data points. As mentioned earlier, Attebury obtained three major data points outside of standard bibliographic metadata: number of loans since 2015, number of OCLC libraries that held the serial, and the number of libraries in WEST that had committed to retain the serial. To this, we added a fourth data point, which was local geographic relevance based on a text search of the subject and title fields. In each case, we opted to treat the entire data set as a proxy that communicated the value of the material, either among our users or the broader library community. Following are the criteria we set for each number:

- Loans since 2015: Given the low usage of this material, we estimated that any circulation was considered positive and thus applied a heavy weight to each loan. The more times the item circulated, the heavier the weight and larger the index number, specifically, multiplying each loan by twenty to create a large separation between the used materials and the unused materials.
- Held by OCLC Libraries: Taking into account a principle of high redundancy, we opted to divide OCLC Library holdings into three intervals. Those that exceeded 100 libraries were considered redundant and unlikely to be lost. Therefore, we imposed a penalty of −5 for these items. For those items held at between 100 and 20 libraries, we considered them to be fairly accessible, but not so frequently that we could ignore them. These received a weight of 5. Those items held by fewer than twenty libraries were considered at risk if we eliminated the item from our holdings. In those cases, the item received a weight of 20.
- Libraries with WEST commitments: Again, we divided these items into three intervals based on the metrics we observed. Items with more than ten WEST libraries committed to retaining have made a strong preservation pledge. Given our lack of commitment to that item, we felt that retention was no longer necessary and weighted those items with a penalty of −10. For items with between ten and five libraries committed to retaining, we gave the weight of 5. For items with fewer than five WEST libraries committed to retaining, we gave a weight of 30. We felt this was one of the strongest indicators that the item was not necessarily guaranteed to be preserved, despite some WEST commitments.
- Geographic terms: Here we searched the title and subject fields for any reference to our state or our neighboring ones (including Canadian provinces), as well as common geographic terms used in our region, such as Palouse, Rockies, Columbia, Pacific, or Northwest. Admittedly, this is not a perfect approach and primarily valuable in limited call number ranges, but it afforded a check against material that is particularly valuable to a land-grant university with an emphasis on agriculture, natural resources, and the environment. If any of these terms were found, the item was weighted with 30.

After calculation, index numbers were sorted from highest to lowest, with higher index numbers reflecting items to retain and lower index numbers reflecting items that could be withdrawn. All faculty librarians were then given the opportunity to review the list and select serial titles slated for withdrawal that they wanted to retain; selected serials were removed and placed in a new spreadsheet. In total, seventy-nine serial titles were selected by librarians. Additionally, the 151 serial titles that we had committed to retain through WEST were also retained, regardless of the calculated index number. After removing items selected or committed for retention, Attebury reviewed the percentage of titles associated with each index number and identified that we could withdrawal 19 percent of serials on our second floor and 50 percent of serials in our basement.

These variables formed a series of value decisions about our community and our network of libraries. Usage by our patrons, regional value, few holdings by OCLC libraries, and few commitments by WEST meant that we could not remove the item, based on these criteria. Items that were widely held and

widely committed to long-term storage and preservation were considered good candidates for removal, especially if they had not been used in more than a decade or were not relevant to our local context.

Of course, there is a broad spectrum of outcomes with this approach. If our subject search failed to identify a locally relevant item, it may still very well be "protected" from withdrawal by the lack of wide holdings in OCLC or WEST commitments. Indeed, given that there are not that many land-grant institutions in existence, some materials are likely to be kept merely because of the lack of wider holdings.

Implementation

WEST Process

After identifying serials that were slated for withdrawal, the next stage was to offer these holdings to our partners in WEST. Member libraries commit to retain specific titles, either at their own libraries or in off-site storage facilities to "ensure access to the scholarly print record and allow member institutions to optimize campus library space."[21] Retention commitments are available within WEST's AGUA system, where members can use their On Demand Collection Comparison Report to "compare their local journal and serial holdings against holdings stored in the AGUA database."[22] To most effectively use the On Demand Collection Comparison Report, we had to first update our original print serials scoring spreadsheet to include local holdings information. This was accomplished by identifying the OCLC numbers associated with serials slated for withdrawal and using Alma Analytics to pull holdings information for these numbers, ensuring that any duplicate holdings in our Special Collections and Archives were excluded. With the updated spreadsheet ready, we downloaded a CSV copy, ensured that OCLC number was the first column, and ran the report, limiting the scope to WEST libraries and the WEST archiving program. We ran this report three times: first for a subset of serials in prime student study space on our second-floor, second for the serials that were located in a basement cage that Special Collections & Archives needed for their own holdings, and third for the remaining serials on the second floor and in the basement. Each row in this report corresponded to a specific OCLC number and therefore a specific serial title; multiple rows could exist for each OCLC number as more than one library might have retained each title. Each row also includes the name and contact information of the archiving library, their local holdings, completeness validation notes (e.g., if specific volumes/issues are not yet retained), estimated percent of the title that is archived, count of WEST institutions with archived and unarchived holdings, count of US OCLC institutions with holdings, archiving program, date when retention was committed, and retention period expiration date.[23] The Head of Discovery and Acquisitions then went through these generated spreadsheets, row by row, and compared our local holdings with the holdings of those libraries with commitments to retain the title. A new column in the spreadsheet titled "Email" was added and used to identify which libraries we would contact, such as in cases where our holdings could potentially fill gaps in their holdings, and which we would not, for when our holdings would not fill gaps. This column was also used to identify serials slated for withdrawal that still had ongoing subscriptions; any serials with current issues going to the library's display shelf on the

first floor were automatically excluded from the list of WEST consideration, whereas those serials with current issues going directly to the library's second-floor stacks were included, and a note was made to cancel the subscription when it came up for renewal. This list of cancellations was shared with the library's e-resources manager.

Creating three separate reports allowed the Head of Discovery and Acquisitions and Technical Services staff to more successfully manage the process of contacting WEST members about overlapping holdings and the eventual pulling of items for withdraw and transfer. Those with overlapping holdings in the prime student study space on our second floor were contacted first in December 2025, followed by those with overlapping holdings in the basement cage in March 2026, and finally those with overlapping holdings for our remaining serials across the library in April. Template email language was created and used, with slight modifications, for each email sent to member libraries (see appendix). If a member library had only one overlapping holding, this information was shared within the body of the email in tabular form. In cases where member libraries had more than one overlapping holding, the Head of Discovery and Acquisitions created a new spreadsheet that listed all overlapping holdings for their library and attached it to the email. Member libraries were given approximately one month to review these overlaps and let us know if they were interested in any volumes or issues, but we indicated timeline flexibility, if needed, because some libraries had many rows of holdings to review. In our emails, which also copied our internal technical services email list, we contacted fourteen partners with overlapping holdings in the first round, seven in the second round, and twenty-six in the third round.

Transfer and Withdrawal Process

The timeline for our transfer and withdrawal progress was staggered based on the round of emails sent and time in the semester. When WEST libraries responded that they were interested in specific volumes, our e-resources assistant began pulling the items for withdrawal and collaborated with our e-resources manager to package them for shipping. Title lists, detailing the specific volumes and issues included in the packages and the total number of items were included with each shipment. Spreadsheets were also used to track the number of boxes mailed to each WEST library and the shipping costs. Most often, libraries did not elect to take our entire holdings, so holdings records were updated to remove those we transferred and keep those that were not. As of the end of April 2026, eight libraries have requested that we transfer holdings to them, resulting in a total of 690 items shipped.[24] Due to the large number of items requested by some WEST libraries starting in the second round, the University of Idaho Library pivoted and intends to use pallets to send large shipments to specific libraries. Looking back at the WEST process, we could have better anticipated the need to purchase additional shipping supplies or use pallets for mailing items to our WEST partners. Our library was able to accommodate these purchases and change our shipping methods on the fly, as needed, but thinking through these needs prior to jumping into the "transfer to WEST libraries" phase would have reduced the slight delays we experienced as we searched the library for empty boxes and identified whether the university's internal mail service or an external service was needed for pallet shipments.

In mid-May 2026, after the semester ended, a ten-yard disposal bin was delivered. We started the disposal process for the remaining items slated for withdrawal, again staggering how we pulled items based on the order in which we emailed WEST partners: second-floor student space, basement cage, remaining serials throughout the library. Unfortunately, because of the nature and condition of many of these items, including glued spines in bound issues, cloth covers, and the potential for mold, recycling withdrawal items was not possible. Leading up to the delivery of the disposal bin in mid-May, Technical Services staff and faculty built upon the processes detailed by Dietsch et al. and Glazier and Spratt to avoid mistakes in our withdrawal or retention decisions.[25] The main task, completed earlier in spring 2026, was to add a retention note in the 583 field of print journals that the library selected to retain, either based on their score or based on decisions from librarians. This note, which read, "Score above withdrawal baseline for 2026 print journal withdrawal project" or "Elected to retain by liaisons during 2026 print journal withdrawal project," respectively, was added in bulk within Alma. To do this, the Head of Discovery and Acquisitions duplicated and edited an existing 583 normalization rule, ensuring that it would apply only to Main Library holdings and exclude holdings in Special Collections & Archives and any branch libraries; created an itemized set of physical titles for each version of the new 583 rule—e.g., retained based on score and retained based on librarian decision—and ran the "change holdings information" job on each set, specifying which of the new 583 field normalization rules to add. The addition of this note will not only ensure that any items mistakenly pulled for withdrawal can be caught before they are disposed, it will also add documentation that the decision to retain was made during the course of this specific project, so in the future, the library would be better informed as to why we still held specific print journals.

The first step in the withdrawal process was for the e-resources assistant and e-resources manager to use a permanent marker to draw an *X* through the call number and apply a withdrawn stamp on every item slated for withdrawal. This ensures that library employees, including student employees, can pull items for withdrawal without needing to refer to a spreadsheet first. Marking is an ongoing, phased approach that focuses first on the student study space on the library's second floor, then the basement cage, and finally the spaces across the library. At the time of marking, or shortly after, the e-resources assistant is also removing withdrawn holdings from our library system and OCLC. Ongoing print subscriptions for any withdrawn serials will also be canceled when they come up for renewal. Finally, items are placed in the bin for disposal, with any items pulled by non–Technical Services employees placed in a staging room and double-checked prior to disposal. This phased approach for marking, holdings withdrawal, and disposal will help us manage our limited staging space and account for the extra staff time needed to complete this project.

University Faculty Input (Or Lack Thereof)

There is an obvious omission in the University of Idaho Library's process for withdrawing a significant portion of its print journal collection: faculty input. There are several reasons why university faculty were not consulted about the library's plans. The first is one of the recurring themes of our library's engagement with campus—a lack of strong university faculty feedback about changes to library collections.

For example, we opted to cancel a significant publisher contract in 2018 because of budget constraints. This contract—a major publisher—had implications for all research on campus, especially in our STEM fields. Although we made a significant effort to educate the campus, reinvest in resource-sharing tools, and give the campus a voice, we found that the cancellation had a much smaller response than expected. In fact, it is fair to say in retrospect that cancellation was beneficial as a long-term negotiating strategy with the vendor without causing much harm to the university's research and teaching enterprise. In essence, we ran a real-world test against a regular fear in collection management, that removal of important content would create a backlash toward library decision-making, and found that backlash nonexistent.

The lack of faculty consultation on this withdrawal project stems from our librarians' tacit knowledge of our campus community. We discovered that librarians sometimes need to take a strong decision-making role on behalf of the campus regardless of perceived fears because that might be the best way to move the management of collections forward. In the case of this large-scale withdrawal, it can be scary to imagine removing large amounts of material from the library. However, that is what librarians are for—to make decisions about what needs to be kept or removed, including at scale.

The second reason librarians were comfortable proceeding with a large-scale withdrawal is the understanding that if university faculty or students needed any of the withdrawn content, options still existed for obtaining it. With the growth of resource-sharing opportunities at the University of Idaho Library via the adoption of Rapido and RapidILL (combined with Illiad as a lender of last resort), patrons can now easily request materials and receive most of them in a short time frame, usually twenty-four to forty-eight hours for PDFs of journal articles. In addition, our continued partnership with WEST libraries means that physical copies of withdrawn materials are still likely to exist elsewhere in the United States, ensuring that access remains available when needed.

Discussion

An Urgent Need for Change

One common change management strategy is for change leaders to create a sense of urgency.[26] In the case of the formerly weeding-averse University of Idaho Library, no artificially created sense of urgency was needed: water leaks, space concerns, and insurance challenges coalesced to authentically create an urgent need for change.

Although a title-by-title evaluation of withdrawal candidates makes sense in a conservative, change-averse organization, when confronted with the need for quicker decision-making, librarians at the University of Idaho Library understood the need to move beyond a title-by-title decision-making process and toward a streamlined, systematic process that could be applied quickly to thousands of titles simultaneously.

An Identity Shift

Large-scale withdrawal undoubtedly stirs up concern for the profession. For many in our field, especially those who began in the 1970s or 1980s, adding content and building collections was the point and occurred on the heels of a uniquely historic expansion of the US university system. Eliminating or removing large amounts of library collections threatens a certain idea of what the library profession is. This is amplified when a library does not have access to an auxiliary storage facility and withdrawing means permanent loss. Even patron perceptions of what a library is supposed to look like can have an impact on how librarians see themselves and their work. For example, it has not been uncommon over the years for patrons to walk into the University of Idaho Library's first floor, which contains an abundance of study spaces and few books save for the reference collection, new books, and graphic novels, and ask, "Where are the books?"

In some ways, the best driver of an identity shift, one that allows for a major reconsideration of years' worth of collected physical materials, is time. With the librarians who meticulously collected the library's physical journals—to be clear, a valuable and noteworthy effort at the time—now retired, much of the sentiment connected to those collections has faded. Current librarians, while aware of the work that went into building the collection, recognize that access to those collections is altered, but not eliminated, and nevertheless understand that the library's physical space is now valued more for its study opportunities and student educational services than for the bound journals contained within it, and they would serve the library and its patrons more.

Conclusion

Collection management and change go hand in hand. At the University of Idaho Library, perspectives on weeding have shifted over time as space concerns have expanded and new library staff and faculty have moved into their positions. In concert with these changes have been shifts in the library's perspective on how best to accomplish weeding projects. Initially, title-by-title evaluation with the goal of receiving input from faculty across the university was the go-to method for weeding print serials. But over time, it became evident that this tedious and repetitive workflow resulted in uninterested librarians and led to the library continuing to muddle through necessary weeding changes.[27] For our library, the decision to pursue a transformative approach to print journal weeding was a game-changer. By clearly connecting our most recent weeding project to the ongoing space concerns, leveraging OCLC and WEST holdings data, and utilizing formula-based scoring metrics that facilitated data analysis and decision-making, we were able to create more buy-in among librarians and remove some of the subjectivity that is inherent in weeding decisions. Additionally, the use of a phased approach, with decisions on what to retain and withdrawal made at the beginning of the project, transfer to WEST libraries undertaken in the middle, and actual weeding and disposal staggered and completed at the end, ensured that time-based sticking points were minimized as much as possible. In the future, if additional space concerns arise and another review of print journals is necessary, the library now has the tools and established workflows in place to facilitate this type of project.

Notes

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5. Guskin and Marcy, "Dealing with the Future Now," 13.
6. Bracke and Martin, "Developing Criteria for the Withdrawal of Print Content Available Online," 61; Dietsch et al., "Sweeping It All Away."
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Appendix

Email Template

Dear [CONTACT NAME],

The University of Idaho Library is undertaking the first stage of a large-scale print serial withdraw project and we are sending preliminary emails to other WEST libraries that might have an interest in filling gaps with these items.

Attached is a list of print serials that are related to your archived holdings. Many of our print serials are contained in bound volumes and we'd be glad to offer more specific details on which issues are bound together if you have an interest in any of these holdings. Please let us know by [DATE] if you'd like more information about any of these; we can be flexible with the timeline, so please let us know if you need more time.

Any volumes/issues you select will undergo a condition check before we send them to you. Depending on the physical state of the materials (e.g., binding integrity or damage), we may determine that certain volumes are not suitable for shipment.

Best,
Jylisa Kenyon
Head of Discovery and Acquisitions
University of Idaho Library

Book Review

Compact Copyright: Quick Answers to Common Questions, Second Edition. By Sara R. Benson. Chicago: ALA Editions, 2026. 227 p. $54.99 softcover (ISBN 9798892552653); $43.99 ebook (ISBN 9798892552752).

Now in its second edition, *Compact Copyright: Quick Answers to Common Questions* remains a practical introduction and ready-reference guide to United States copyright law in library and library-adjacent settings. This revised edition builds on the strengths of the first by incorporating targeted updates to the original content and expanding its scope with five new chapters covering issues related to copyright and data; separability; the Music Modernization Act (MMA); artificial intelligence (AI); and contracts, licensing, and contractual override.

Sara R. Benson aims to make copyright more accessible and support informed decision-making when dealing with complicated copyright issues. Benson's knowledge and expertise in the book's subject matter is evident from her background: she is an attorney who holds both a juris doctor and master of laws, and she currently works as the copyright librarian at the University of Illinois Urbana-Champaign Library. She also teaches copyright law at the University of Illinois School of Information Sciences. As Benson states in the Preface, "this book is like having an at-your-fingertips copyright expert sitting by your side as you engage with copyright issues" (ix); however, readers should be aware that "nothing in this book constitutes legal advice" (x).

The book is very well organized, covers a range of topics that are highly relevant to the field, and is written in a straightforward style. Each chapter explores a specific aspect of copyright law, and the contents of the chapters are organized into five sections. "The Law" section lays out the actual letter of the law as it pertains to the aspect of copyright law covered by the chapter. The "Discussion of the Law" section translates the letter of the law into more accessible language, and the "Common Scenarios" section provides between two and five examples of common issues and suggested solutions. The "Discussion Questions" section is new for the second edition and includes two to four questions intended to encourage deeper engagement with the concepts covered in the chapter. The "Tools & Resources" section includes a list of resources that may help readers find answers to questions that were not addressed in the chapter. With this organizational strategy, Benson ensures that readers can navigate directly to specific topics and chapter sections to find answers to questions at the point of need.

Compact Copyright is indeed compact, but it is also comprehensive. The book opens with a chapter on the basics of copyright law, and subsequent chapters address key concepts such as the first sale doctrine, public domain, making copies for preservation, interlibrary loan and unsupervised patron copying, access to copyrighted material for patrons with disabilities, the TEACH Act, fair use, controlled digital lending, Digital Millennium Copyright Act provisions, Creative Commons licensing, and more. In the appendices, Benson provides a fair use checklist, copyright and film screening best practices, and additional recommended reading and materials.

The newly added chapters expand on concepts briefly discussed in other chapters and delve into evolving areas of copyright law. "Copyright and Data" concisely breaks down Section 102(b) of the

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Copyright Act as it pertains to the copyrightability of arrangements or compilations of facts or data. Benson references the *Feist Publications, Inc.* case to illustrate how "an arrangement or compilation of facts or data, if sufficiently original, can have a thin layer of copyright" (41) and explains the role of the merger doctrine in determining the copyrightability of these types of works. Librarians engaged in research support will likely find this chapter to be helpful when trying to determine whether published data is protected by copyright or if it can be reused without requesting permission from the copyright owner.

In a similar vein, the chapter on separability examines the boundary between copyright and design patent protections, focusing on the copyrightability of pictorial, graphic, or sculptural work incorporated into functional items and the ways in which physical and conceptual separability come into play. Benson notes that this topic is relevant to academic librarians who work with industrial design students, as well as "libraries associated with a museum or an archival collection" (46). While the chapter does not explore potential implications for 3D printing or similar services, Benson's discussion of the law may still be of interest to makerspace librarians and professionals in related roles.

Of particular interest for librarians and archivists working with audio collections, chapter 12 covers Title II of the MMA, which federalized copyright protection for sound recordings published prior to 1972. By framing her discussion of the law around the exceptions applicable to libraries and archives, Benson translates a complex area of copyright law into practical guidance on the permissible uses of pre-1972 sound recordings.

The chapter on AI is timely, but as Benson states, "the law in the area of copyright and artificial intelligence (AI) is still developing, as are generative AI tools and technologies" (127). As such, the chapter focuses on the US Copyright Office's guidance regarding the registration of copyrights in AI and discusses legal issues and arguments related to training generative AI, the copyrightability of prompts and outputs, AI outputs and copyright infringement, implied consent for inclusion of copyrighted material in AI datasets, and copyright preemption of contractual terms of service. Benson is thorough in her explanations of these issues, and the examples in the chapter's "Common Scenarios" section are particularly helpful because they address questions with which many librarians—this reviewer included—are already grappling.

In "Contracts, Licensing, and Contractual Override," Benson describes the ways in which copyright provisions can and cannot be modified by contracts, and she stresses the importance of thoroughly reading and understanding license agreements. This chapter is especially relevant to readers who are new to licensing because it highlights the ways in which contracts can restrict rights typically available to libraries under copyright law.

Benson's second edition of *Compact Copyright* is an accessible, easy-to-understand guide to copyright in libraries. The book's logical organization, comprehensive scope, straightforward style, and inclusion of example scenarios set it apart from similar titles in this subject area. Its focus on helping readers make informed decisions by providing both quick answers and resources for further study rather

than in-depth legal analysis makes it a very useful resource for anyone who encounters copyright conundrums in their day-to-day work. —*Jessie London (jessie.j.london@ttu.edu*), Texas Tech University, Lubbock, Texas

Book Review

Library Technical Services: Future Forward. Edited by Mary Beth Weber and Melissa De Fino. New York: Bloomsbury Libraries Unlimited, 2025. 177 p. $36.00 softcover (ISBN 9781538197837).

Library Technical Services: Future Forward aims to guide both new and experienced professionals through an increasingly complex technical services landscape—and largely succeeds in doing so. This volume expands on a previous work edited by Mary Beth Weber, *Rethinking Library Technical Services: Redefining Our Profession for the Future*.[1] As Melissa De Fino notes in the conclusion, "This follow-up to *Rethinking* is more of a sequel than a revision" (144). Whereas *Rethinking* focused on technical service operations and professional roles at the time of its 2015 publication—as well as their historical foundations—*Library Technical Services* looks ahead, emphasizing evolving skill sets and strategies for managing continual change.

The book is broken into six chapters, in addition to a "Preface" and "Conclusion." These sections, written by the editors, outline the purpose of the volume and clarify how it differs from *Rethinking*. The first four chapters focus on core areas within technical services: collection development, acquisitions, resource description, and electronic resources. These chapters combine historical context with discussion of emerging trends in each area, effectively grounding future-oriented conversations in established practice. Read together, these chapters emphasize the increasingly interconnected nature of technical services work. Rather than presenting each functional area as siloed, the contributors repeatedly acknowledge overlapping responsibilities, share technologies, and demonstrate the cumulative impact of local decisions and workflows. This integrated perspective reflects current professional realities, in which changes in one area—such as licensing models or descriptive standards—have immediate and often unintended consequences for others.

Each of the first four chapters articulates clear goals and generally succeeds in achieving them. Notable strengths include discussions of trends that technical services professionals should monitor as the environment continues to evolve, along with concise lists of skills anticipated to be increasingly important. A unifying theme across these chapters—and throughout the volume—is the necessity of strong communication skills, whether interacting within the library, negotiating with vendors, or engaging with external stakeholders. Additional recurring themes include the importance of adaptability and attention to issues related to diversity, equity, and ethics within technical services work.

Beyond outlining shared themes, the first four chapters also speak directly to the distinct responsibilities of individual technical services roles. For collection development librarians, the first chapter by Qiana Johnson and Stephanie Rodriguez emphasizes policy development and decision-making frameworks, reinforcing the importance of articulating priorities in an environment shaped by shifting formats, access models, and changing institutional needs. Acquisitions librarians are likely to find the second chapter by Kavita Mundle and Laura Sill particularly relevant because its focus on

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licensing, negotiation, and vendor relationships reflects the increasing complexity of procurement workflows and the growing prominence of open-access and alternative publishing models.

Chapter 3, "The Future of Resource Description" by Sungmin Park and Autumn Faulkner addresses cataloging and metadata librarians by situating changes to standards such as Resource Description and Access (RDA) within broader ethical and technological contexts, including emerging issues around automation and artificial intelligence. Rather than framing cataloging as purely rules-based work, the chapter emphasizes professional judgment, adaptability, and critical engagement with evolving tools. Similarly, chapter 4, "State of the Area" by Elyssa M. Gould, highlights how electronic resources management rarely exists in isolation, intersecting with acquisitions, resource description, and access services. By emphasizing cross-functional impact, the chapter underscores the need for electronic resource librarians to maintain strong communication and coordination across departments.

The fifth chapter, "'Because It Is Anomalous'" by Catherine Oliver and Jessica Schomberg, addresses assessment and offers useful and informative content but fits less cohesively with the rest of the volume. Although assessment is essential within technical services, its placement as a standalone chapter disrupts the otherwise skill-centered organization of the book. Moreover, the chapter functions largely as a literature review of assessment efforts at other institutions. As a result, it does not fully achieve its stated goal of focusing on "practical ways that library personnel at individual institutions have carried out and might want to conduct local assessment projects for their own purposes" (97). Including more concrete examples and actionable guidance in this chapter would have aligned it better with the skill-focused and forward-looking structure of the book.

Chapter 6, "Timeless Skills, Evolving Roles" by Gretchen L. Hoffman and Karen Snow, draws together themes of the first four chapters by focusing more explicitly on the skills required of contemporary technical services professionals. The authors reference the American Library Association's (ALA's) Core Competencies of Librarianship, along with the additional competency documents for specialized roles, synthesizing them into a comprehensive list.[2] While extensive, the resulting compilation effectively illustrates the breadth of knowledge, flexibility, and interpersonal skill increasingly expected in technical services work, reinforcing arguments made throughout the volume rather than introducing new priorities. The chapter encapsulates the volume's central argument that technical expertise alone is no longer sufficient and must be complemented by collaboration, communication, and adaptability.

Overall, *Library Technical Services: Future Forward* meets its stated goal of informing both new and experienced professionals about the ongoing changes shaping technical services work. The book is not intended as a textbook or procedural manual, but rather as a strategic examination of where technical services is heading and what professionals need in order to succeed in that environment. Its focus on evolving skill sets and adaptability makes it broadly applicable across library types and settings. As such, it represents a valuable contribution to current conversations about the future of technical services and the professionals who sustain it. *—Leah McAlister (*lmcalister@usi.edu*), University of Southern Indiana, Evansville, Indiana*

Notes

1. Mary Beth Weber, ed., Rethinking Library Technical Services: Redefining Our Profession for the Future (Rowman & Littfield, 2015).
2. "ALA's Core Competencies of Librarianship," American Library Association, approved and adopted January 28, 2023, https://www.ala.org/educationcareers/careers/corecomp.

Book Review

Working with Library Collections: An Introduction to Technical Services for Support Staff, Second Edition. By Hali R. Keeler. New York: Bloomsbury Libraries Unlimited, 2025. 208 p. $37.00 softcover (ISBN 9798765156254); $95.00 hardback (ISBN 9798765156247).

Working with Library Collections: An Introduction to Technical Services for Support Staff is a comprehensive and approachable guide to various aspects of technical services for library collections. This book addresses all ten of the competencies included in the "Collections" competency set of the Library Support Staff Certification (LSSC) program designed by the American Library Association-Allied Professional Association (ALA-APA).[1] The LSSC program and this book are both aimed at students in library certification programs and current library support staff in a range of positions looking to build their skills and knowledge. The author, Hali R. Keeler, wrote this book to address a "lack of appropriate instructional materials for the non-MLS student" (xv) that she noticed through her experience teaching in certification programs.

Now in its second edition, *Working with Library Collections* features three overarching sections: "Collections"; "Tools and Technology," which includes a new chapter introducing cataloging and classification; and "Collections Care." Each chapter begins by listing the competency or competencies that will be addressed and an outline of topics. This is followed by key terms with definitions that will be used throughout the chapter. These definitions are used consistently in subsequent chapters and match entries in a glossary at the end of the volume. Within each chapter, there are textboxes, tables, and images to reinforce and illustrate concepts as they are discussed. A succinct summary, discussion questions, activities, notes, and a bibliography with suggested readings and websites conclude each chapter. The discussion questions and activities are particularly useful for readers as knowledge checks that encourage reflection and application of key concepts.

Part I, "Collections," is the largest section of the volume and contains six chapters. The first two chapters provide an overview of library missions and collections, assessment of a library's community and needs, collection development and analysis, and library funding and budgets. Selection philosophies, selection criteria, and evaluative sources for print and nonprint resources—such as CDs, DVDs, and databases—are covered in chapter 3. These first three chapters provide a balanced perspective across library types with examples, diagrams, and special considerations for public libraries, school libraries, academic libraries, and specialized libraries.

The next three chapters delve into acquisitions, collection management, inventory, and deselection. The explanations of different types of publishers, vendors, and the services they can provide, acquisition procedures and methods, and receiving procedures given in chapter 4 are thorough and practical. Chapter 5 on collection management acknowledges promotion and marketing as well as shelving and stack maintenance, among other topics, which can be overlooked in instructional materials. Part I concludes with a discussion on inventory and deselection policies, processes, and criteria, such as CREW (Continuous Revision Evaluation Weeding).

Part II, "Tools and Technology," begins with chapter 7, which sets out to cover a wide range of library technologies such as integrated library systems (ILSs), library service platforms (LSPs), application programming interfaces (APIs), and cloud apps. This chapter also mentions databases, networks, and discovery systems. It addresses artificial intelligence (AI), an evolving technology deployed increasingly in libraries, through a brief quote from PressReader's "Public Library Trends and Innovations to Watch for in 2024."[2] Further discussion on this topic may have been beneficial because library support staff may be expected to learn about and use AI in their work.

Chapter 8 expands on ILSs and how they can be used to gather statistics and generate reports, and how this data can be used to evaluate a collection and inform planning and budgets for libraries. This chapter is explicitly stated to focus on public libraries because they have specific requirements for statistical surveys. The author acknowledges that other library types do participate in statistics with a "slightly different focus than what is required of public libraries" (112) but does not give a thorough explanation of what those differences are or what they could mean for library support staff.

The conclusion of part II, a chapter new to the second edition, reviews the fundamentals of cataloging. This includes MARC21, authority control, classification, conceptual models, Resource Description and Access (RDA), and the Bibliographic Framework (BIBFRAME) initiative. The chapter accomplishes its goal of providing an overview of cataloging, and I feel it is beneficial to include. However, I will point out that the associated competencies listed at the beginning of the chapter are not associated with the "Collections" competency set and are not labeled under their respective competency sets or numbers. This information might have been helpful for readers who want to understand cataloging in the broader context of library collections or learn more about this topic.

The third and final part of the book, "Collection Care," starts by walking readers through procedures for processing physical materials, including marking items for ownership and tracking purposes. Chapter 11 introduces preservation principles, physical treatment of materials, digitization, and disaster planning. The final chapter outlines basic repair principles for book and nonbook materials. The list of book repair materials, instructions for basic repairs, and images with examples are particularly valuable and can be used by library support staff as a guide to get started with "quick and dirty" repairs.

This title, designed to align with the LSSC "Collections" competencies set, addresses complex topics in technical services using clear language, illustrations, real-life library experiences, and questions and activities to engage readers. The book largely considers collections in public, academic, school, and special libraries, but some passages do lean toward public libraries. In terms of content, many topics are effectively introduced, but some could benefit from expansion to further empower readers, most notably in part II, "Tools and Technology." Regardless, *Working with Library Collections* is an effective textbook for individuals in LSSC programs and a helpful reference source for current library support staff. *—Armin Lopez (*ralopez18@uh.edu*), University of Houston Libraries, Houston, Texas*

Notes

1. "Collections," American Library Association-Allied Professional Association: Library Support Staff Certification, October 2012, https://ala-apa.org/lssc/for-candidates/competency-sets/collection-management/.
2. "Public Library Trends and Innovations to Watch for in 2024," PressReader, February 5, 2024, https://about.pressreader.com/blog/libraries/public-library-trends-and-innovations-to-watch-for-in-2024/.