EDITORIAL

Charting an Open Future

Michael Fernandez and Rachel E. Scott

Here at *LRTS*, we are excited to mark the conclusion of our third year as a fully open access (OA) journal. The editors feel honored to be able to showcase top-tier research and new developments in best practice within the field of library technical services, brought directly to our readers without paywalls or embargoes and without article fees for our authors. Nonetheless, making content OA is one matter; sustainability for open publishing is another matter altogether.

That sustainability for *LRTS* has been top of mind since we followed the lead of our ALA Core sister journals, *Information Technology and Libraries (ITAL)* and *Library Leadership & Management* (*LL&M*), becoming a fully OA publication in 2023. Since that time, the editorial teams of all three journals have worked closely with Core leadership to devise methods to sustain our commitment to openness. In doing so, we've sought out the support of the library community, looking to proven methods being used in the still nascent area of open publishing. It's now easier than ever for libraries to help sustain the continued excellence and availability of LRTS and the other Core journals to readers worldwide. In partnering with major subscription agents that most libraries already work with—EBSCO and Harrassowitz—libraries can provide continuing support and keep our publications open. Libraries can simply select the "ALA/Core Division Open Access Journals" collection through their agent, and for the annual cost of $300, they can ensure that the high-quality content published in these journals continues to be freely available to all.

By spreading open access publishing costs across many contributing institutions, we can ensure the sustainable and fair funding of the ALA Core Division journals. The ability to use a preferred subscription agent—the same one you use as a primary provider for your library's subscription—makes showing your support as simple as managing any journal subscription. A new mechanism for inviting contributions across multiple institutions has been led by the Core Division Fundraising Committee. They have reached out to various library consortia to facilitate group and individual contributions. Finally, direct contributions can be made to the American Library Association Core Division (https://ec.ala.org/donate) with a designation of support for Core Journals Open Access Publishing. Your participation—whether via subscription agent, consortia, or direct donation—secures the availability and independence of three fundamental library and information science journals into the future. In recognition of your support for open publishing, participating institutions will be acknowledged on the ALA/Core website.

As editors, we carry the same excitement and enthusiasm for keeping *LRTS* open as we did when we began this journey in 2023. So much so that we've re-upped our commitment and will remain on board as the editorial team for the next three years. As always, we're grateful to the dedicated volunteers who

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comprise our Editorial Board. We're also working with new staff within ALA Production Services and are fully confident that we will continue to deliver the same quality of content while maintaining our commitment to openness. We look forward to continuing this journey with you.

Communications on Practice

In "No Little Plans: Constructing a Local Controlled Vocabulary in EXPLORE Chicago Collections," Kate Flynn and Erin Matson detail the collaborative, volunteer-led approach taken by The Chicago Collections Consortium to create a local, regional vocabulary for the EXPLORE Chicago Collections discovery platform. The authors demonstrate how the vocabulary creates uniformity in access points for content and collections across member organizations and contributes to a seamless user interface.

Features

Adrienne Sanders and Karen Snow report findings from a survey conducted among cataloging and metadata professionals. In "Core Competencies in Practice: Exploring Catalogers' Alignment with Professional Standards," they investigate the relationship between librarians' self-assessed knowledge and skills with those described in the 2023 revision of the American Library Association's *Core Competencies for Cataloging and Metadata Professional Librarians*. The authors found that study participants reported having a good or full understanding of most Knowledge core competencies, even if they did not regularly apply many Skill/Ability core competencies. The authors reiterate that the proliferation of standards and technologies, coupled with an increased complexity of cataloging and metadata, have made competence "a seemingly Sisyphean task" and underscores the importance of continually updating the *Core Competencies* and incorporating them into ongoing education and training.

In "It's About Time: Use of the Extended Date/Time Format in the Digital Public Library of America," Annamarie C. Klose, Scott Goldstein, and Morris S. Levy assess the impact of Extended Date/Time Format (EDTF) in one of the largest aggregators of library, archives, and museum metadata. Although values corresponding with EDTF have increased compared to a 2015 study, the percentage of records with at least one date value has decreased. The authors contextualize these findings and provide recommendations for working with the metadata that power browsing, search, and visualization.

Notes on Operations

In "From Niche to Norm: A Case Study of Zines in a Circulating Collection," Emilee Mathews and María Evelia Emerson outline the opportunities and challenges zines pose in terms of access, cataloging, preservation, digitization, special collections, research, and student engagement. This case study details the creation of a social justice–focused zine collection and is contextualized with findings from a literature review and survey on library practices for zine collections.

Frederick C. Carey, Arthur Aguilera, Amanda Rybin Koob, Juleah Swanson, Natalia Tingle Dolan, and Alexander Watkins leverage Diane Gusa's "White Institutional Presence" framework to critically examine collection practices. The "Anti-Racist Collections Workbook: A Tool for Building Inclusive Library Collections" provides questions in several categories—cataloging and classification, selecting materials, purchasing materials, approval profiles, weeding, and community engagement—that enable librarians to reconsider established practices and create inclusive, representative collections that better serve all communities, moving beyond superficial representation to address structural inequities in library systems.

Book Reviews

Books reviewed include *Fundamentals of Collection Development and Management*, Fifth Edition by Peggy Johnson and Mary Beth Weber, and *Records and Information Management*, Third Edition by Patricia C. Franks.

COMMUNICATIONS ON PRACTICE

No Little Plans

Constructing a Local Controlled Vocabulary in EXPLORE Chicago Collections

Kate Flynn and Erin Matson

The Chicago Collections Consortium (CCC), formed in 2012, is a membership organization of libraries, archives, and museums in the Chicago area, whose mission is to collect, preserve, and share freely, openly, and equitably the history and culture of Chicago with the world. One of the ways it supports this mission is through the EXPLORE Chicago Collections (EXPLORE) portal, which brings together the finding aids for archival collections as well as individual digital images from its member organizations into a single online discovery platform. Aggregating digital content from various repositories that utilize different metadata schemas and descriptive standards is notoriously difficult. One way that the Chicago Collections Consortium attempts to streamline the content in EXPLORE is with the creation of a local, regional vocabulary that creates uniformity in access points across the records. This paper explores the creation of the EXPLORE portal, demonstrating how the formation of locally controlled vocabularies was imperative to maintaining a seamless user interface. It will look at what some of the challenges were to implementing such a vocabulary and how the CCC's Controlled Vocabulary Committee (Committee) has been able to sustain this volunteer-led effort. Lastly, it will look at the work that the Committee is currently doing to ensure that the vocabulary is useful, representative, and well supported.

Introduction

As catalogers and librarians, we occasionally decide to use alternative vocabularies to established national vocabularies—namely, Library of Congress Subject Headings (LCSH). There are many reasons why a cataloger would choose an alternative vocabulary to LCSH, such as to avoid using harmful terminology or to provide localized access points. The initial impetus behind the creation of the Chicago Collections Consortium's (CCC) local shared vocabulary was to center the user's experience. When dealing with metadata from various types of finding aids and with varying digital object metadata in a single environment, we inherently end up with metadata that utilizes different schemas and authorities. This is one of the realities of working within a consortial system, even if we strive to standardize our metadata. Centering the user in this case means employing a simple and straightforward tag list that encompasses a range of material found across Chicago collections. We hope our approach will be useful to others who are collocating resources across several institutions into a single digital environment. This case study represents ten years of work in creating a local vocabulary, inclusive of regional terms, for the CCC.

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The CCC, formed in 2012, is a consortium made up of libraries, archives, museums, and organizations in the Chicago region that is centered around the mission of presenting and promoting Chicago history. The initial impetus behind the founding of the CCC was to find a way to bring together the archival collections of area institutions—which cover many of the same topics—into one discovery platform that was easy to use for both beginning and experienced researchers. The result of this work was EXPLORE Chicago Collections (EXPLORE), an online portal that offers access to archival and digital collections from institutions across the Chicago area.[1]

In the development of EXPLORE, however, there existed one critical problem. The initial twelve founding members of the CCC had long been creating their own archival metadata.[2] This meant there was a great deal of variation in archival metadata—everything from Encoded Archival Description (EAD) finding aids for catalog records to Portable Document Format (PDF) files. It also meant that there was no opportunity to set what systems or standards should be used universally. CCC tackled this problem by creating a tool called Metadata Hopper, which allows staff from CCC member institutions to map their distinct metadata fields into a single, standard template. As a result of using this tool, the records in a search result would look similar, even though the metadata records contributed to Explore are very different. Figures 2 and 3 illustrate how local metadata are transformed using the tool. These figures represent a record of an image of a stockyards demonstration in EXPLORE's digital images collection. This record was deposited from the Chicago History Museum's (CHM) Daily News collection. In this record, the metadata was mapped from a Machine-Readable Cataloging (MARC) record in CHM's library catalog and mapped to EXPLORE's standard template for digital images.

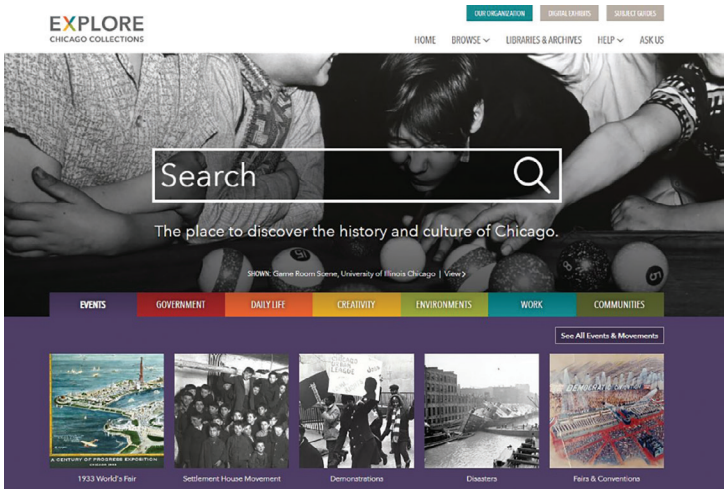


Figure 1. Homepage of Explore Chicago Collections, https://explore.chicagocollections.org/.

These differences are most apparent when reviewing the subject metadata. A sample of metadata taken from five of the founding members shows that 13,139 terms mapped to some sort of subject field.[3] Of these, only 6,318 lead to more than one item, and 1,335 lead to more than one institution. This type of variation meant that it would not be easy to create a general browse interface using the subject terms in the original metadata record. The terms also came from a variety of different controlled vocabularies and sometimes no controlled vocabularies, so terms like "4-H clubs — Illinois — Chicago. — lctgm" lived alongside terms like "Landscapes (Representations)." What this ultimately meant for the CCC was that researchers would enter into



ONLINE: Reference copy
http://chsmedia.org/media/dn/00/0009/DN-0000908.jpg
Thumbnail copy
http://chsmedia.org/media/dn/00/0009/DN-0000908.gif

Restricted: Restriction: Original negatives are fragile and not available to researchers. Please consult the on-line image instead.

[Crowd of children and men near a police ambulance in the stockyards during the 1904 Stockyards Strike] [graphic].

Author/creator: Chicago Daily News, Inc., photographer.

Pub./Made: [ca. 1904 July 7-Sept. 9]

Physical Description: 1 negative : b&w, glass ; 5 x 7 in.

Note: Articles related to this photonegative taken by a Chicago Daily News photographer were published in the newspaper between June and Sept., 1904.

Summary: Image of a crowd of children and men near a police ambulance in the stockyards in the New City community area of Chicago, Illinois, during the 1904 Stockyards Strike.

Citation: Preferred citation: DN-0000908, Chicago Daily News negatives collection, Chicago History Museum.

Usage: The online images are supplied for reference purposes only. All other uses are restricted. To acquire copies, including improved copies, or permission for use, please contact Chicago History Museum, Rights and Reproductions Dept., rightsrepro@chicagohistory.org.

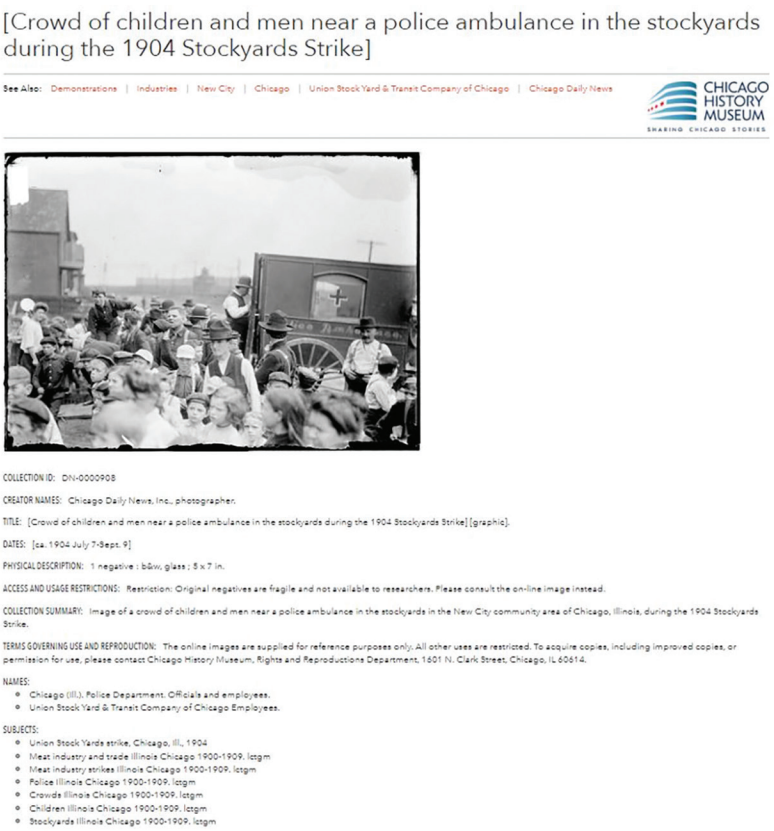
Subject - corporate name: Chicago (Ill.). Police Department. -- Officials and employees.
Union Stock Yard & Transit Company of Chicago -- Employees.

Subject - topic: Union Stock Yards strike, Chicago, Ill., 1904
Meat industry and trade Illinois Chicago 1900-1909. lctgm
Meat industry strikes Illinois Chicago 1900-1909. lctgm
Police Illinois Chicago 1900-1909. lctgm
Crowds Illinois Chicago 1900-1909. lctgm
Children Illinois Chicago 1900-1909. lctgm
Stockyards Illinois Chicago 1900-1909. lctgm

Subject - geographic: Chicago (Ill.) -- 1900-1909.
New City (Chicago, Ill.) -- 1900-1909.



Figure 2. Example of a digital image source record. This image of a stockyards demonstration is pulled from the Chicago History Museum's library catalog and uses MARC metadata.



[Crowd of children and men near a police ambulance in the stockyards during the 1904 Stockyards Strike]

See Also: Demonstrations | Industries | New City | Chicago | Union Stock Yard & Transit Company of Chicago | Chicago Daily News

CHICAGO HISTORY MUSEUM
SHARING CHICAGO STORIES

COLLECTION ID: DN-0000908

CREATOR NAMES: Chicago Daily News, Inc., photographer.

TITLE: [Crowd of children and men near a police ambulance in the stockyards during the 1904 Stockyards Strike] [graphic].

DATES: [ca. 1904 July 7-Sept. 9]

PHYSICAL DESCRIPTION: 1 negative : b&w, glass ; 5 x 7 in.

ACCESS AND USAGE RESTRICTIONS: Restriction: Original negatives are fragile and not available to researchers. Please consult the on-line image instead.

COLLECTION SUMMARY: Image of a crowd of children and men near a police ambulance in the stockyards in the New City community area of Chicago, Illinois, during the 1904 Stockyards Strike.

TERMS GOVERNING USE AND REPRODUCTION: The online images are supplied for reference purposes only. All other uses are restricted. To acquire copies, including improved copies, or permission for use, please contact Chicago History Museum, Rights and Reproductions Department, 1601 N. Clark Street, Chicago, IL 60614.

NAMES:
- Chicago (Ill.). Police Department. Officials and employees.
- Union Stock Yard & Transit Company of Chicago Employees.

SUBJECTS:
- Union Stock Yards strike, Chicago, Ill., 1904
- Meat industry and trade Illinois Chicago 1900-1909. lctgm
- Meat industry strikes Illinois Chicago 1900-1909. lctgm
- Police Illinois Chicago 1900-1909. lctgm
- Crowds Illinois Chicago 1900-1909. lctgm
- Children Illinois Chicago 1900-1909. lctgm
- Stockyards Illinois Chicago 1900-1909. lctgm

Figure 3. The CHM metadata has been ingested into the Explore portal along with the digital image of the stockyards demonstration.

a potentially complex situation. How would researchers, novice and experienced alike, navigate these disparate terms to discover useful information?

Since this could be overwhelming, to novice researchers especially, CCC decided to create controlled vocabularies that could be general and useful alongside the original subject metadata. This would achieve the goal of providing a way to allow users to search for a very specific piece of information but at the same time providing a way to browse. In the spring of 2014, the newly created Controlled Vocabulary Task Force began the process of developing the CCC controlled vocabularies.

The charge of the Controlled Vocabulary Task Force was to create controlled vocabularies that would "ideally integrate perspectives from several different areas, including archives, cataloging, public access and services, and user experience."[4] Before beginning to create the controlled vocabularies, the Controlled Vocabulary Task Force created a series of personas for potential EXPLORE users. This exercise encouraged task force members to think about users: what information they might be looking for and how they would be looking for it. The task force drew its members from both technical services and public services sides of libraries and archives to include diverse perspectives in metadata management and research habits. The task force completed its initial work in spring 2015.

Creating the Controlled Vocabularies

The result of this work is the CCC tag list, which is divided into three main categories: cities, neighborhoods, and topics. Within topics, there are seven top-level categories, each with its own subcategories. Each vocabulary pulls from various source vocabularies, as seen in table 1.

Table 1. Tag categories and source vocabularies.

Chicago Collections tags	Sources
Topics: Events, government, daily life, creativity, environments, work	LCSH, FAST, local terms
Topics: Communities	LCDGT, Census, National Center on Disability and Journalism style guide, Chicago History Museum research on official tribal language, Homosaurus, local terms
Neighborhoods	LCNAF, GeoNames, local sources/terms
Cities	LCNAF, GeoNames, Census, local sources/terms
Names	Institutional records (100/600/700 fields, creator fields)

The initial Controlled Vocabulary Task Force began their work of thinking about potential users by developing personas. The task force considered what types of people may access the portal, what information they may seek, and what search methods they may use. The results included not only traditional scholarly researchers, but also specialized users like genealogists, teachers, artists, and journalists, as well as elementary and undergraduate students. Identifying these various users allowed task force members to think through potential users' specific scenarios, search terms, and search strategies.

Cities

Colloquially, people will often refer to the greater Chicago metropolitan area as "Chicagoland," and it was important to represent this greater area beyond the physical boundaries of the city. The collections of our members come from all around the greater-Chicago area, and several of our member institutions are located outside of the city proper. Of the categories that came out of this assessment, the cities tag list is perhaps the most straightforward. The list includes cities, villages, towns, and other places in Cook, DuPage, Kane, Kendall, Lake, McHenry, and Will counties in Illinois, and Lake and Porter counties in Indiana. The tags were originally drawn from the 2010 US Census and were mapped to the Library of Congress Name Authority File (LCNAF) and to GeoNames to pull in data like geographic coordinates. Occasionally, a town or village, often a "census-designated place," would use a local term when there was not a Library of Congress term available.

Neighborhoods

Chicago is a city of neighborhoods, so tagging neighborhoods correctly is particularly important. Creating a set of terms for Chicago neighborhoods, however, presents unique challenges. As in any major metropolitan area, Chicago's neighborhood names change over time as different communities move into, out of, and around the city. Often fueled by gentrification, Chicago neighborhoods have a history of name changes and city ward redistricting. Therefore, defining the boundaries and using the right standardized term can at times be difficult, even fraught. The initial task force used a number of resources to create the Neighborhoods controlled vocabulary. A key resource that informed the tag list was the *City of Chicago's 77 Official Community Areas*.[5] This list was created in the 1920s by the

University of Chicago's Local Community Research Committee to provide a consistent way that data could be tracked across the city, as ward boundaries, which were previously used, could shift with each new census.[6] Since the 1920s, the list has changed twice: once to add the O'Hare community area and again to divide the Uptown community area into the current Uptown and Edgewater community areas.

The list of official community areas did not accurately reflect the names people use for the neighborhoods in which they live, however. It arguably sterilized the rich cultural history of the city of Chicago. Consider the neighborhoods of Pilsen, Chinatown, Bronzeville, and Andersonville, all of which were established by or around the same time as the community areas listed but were not reflected in the



Figure 4. Crowd enjoys a performance at Fiesta Del Sol on South Blue Island Avenue and West 18th Street in Pilsen, Chicago, Illinois, 1973. ST-10103837-0005, Chicago Sun-Times collection, Chicago History Museum.



Figure 5. View of Margrette Yuen dancing a Chinese folk dance at a Moon Festival in Chinatown, Chicago, Illinois, August 6, 1982. STM-038207582, Don Bierman/ Chicago Sun-Times.



Figure 6. People in Scandinavian dress cleaning sidewalks at West Foster Avenue and North Clark Street, for a party in Andersonville, Chicago, Illinois. ST-90003245-0015, Chicago Sun-Times collection, Chicago History Museum.



Figure 7. Bud Billiken Day Parade in Bronzeville, Chicago, Illinois, August 14, 1999. Chicago History Museum, ICHi-040866; Lynne Lee, photographer.

list. So, although the community areas list was a good starting point, it did not encompass everything that the task force wanted to include. The task force sought other sources of information, including the *Encyclopedia of Chicago*, the guidebook *Chicago Neighborhoods and Suburbs*, a city map created by the Chicago Department of Planning in 1978, a survey project conducted by DNAInfo Chicago, and our own experiences as people who lived in or near the city of Chicago.[7] The result was an expansive list of 182 tags that were then matched and mapped against LCNAF and GeoNames, where possible.

Topics

The topics section is perhaps the most complex and the one that requires the most ongoing maintenance. This section is divided into seven high-level categories: Creativity and Thought, Daily Life and Identity, Events and Movements, Government and Leadership, Natural and Built Environments, Work, and the latest addition, Communities. These are defined below in table 2.

Table 2. Definitions and scope of the seven categories that make up the topical terms list.

Category	Definition
Communities	Encompasses religious, social, ethnic, national, regional, and some age, medical, disability, and psychological facets of persons depicted or described in Chicago Collections
Creativity and thought	Arts and ideas, covering aesthetic, philosophical, literary, and intellectual pursuits
Events and movements	Historical events and notable efforts to attain specific ends
Daily life and identity	Topics on activities and identities related to everyday life, as well as topics that relate to broader societal and cultural trends arising from these activities
Government and leadership	Topics related to public and private organizations or approaches to social, philanthropic, legal, or policy concerns
Natural and built environments	Landscapes that make up the physical region, whether natural or built, and the materials that describe them
Work	Industries, business enterprises, employment, and the innovations and systems that support them

As with the neighborhoods and cities tags, for the topics section, we also looked to existing controlled vocabularies such as LCSH, Faceted Application of Subject Terminology (FAST), and Book Industry Standards and Communication (BISAC) Subject Codes. The task force performed an overall analysis of the test subjects to assess trends and identify commonly used terms. The task force also drew from their own knowledge of Chicago and brainstormed what events, people, and subjects users might be looking for when they think about Chicago. This led to the creation of local terms like “Early Chicago” to cover content that didn’t have a term in an existing controlled vocabulary but might be something that a user of EXPLORE would be looking for. This work resulted in a list of eighty-eight different topics.

A revived Controlled Vocabulary Task Force reviewed these terms in the summer of 2016, one year after the launch of EXPLORE Chicago Collections. This review aimed to see how tags were being applied

by contributors to the EXPLORE portal. By this time, member institutions had begun uploading and tagging content from their collections using the Metadata Hopper. This review attempted to uncover if any gaps existed in the type of content that was being contributed to EXPLORE. The task force also reviewed data from searches, in an attempt to uncover if there was anything that was being searched for consistently but was not a tag. The task force reviewed member institutions' contributions to EXPLORE, analyzing how often tags were used. They also reviewed Google Analytics search data, looking for search trends that did not utilize the currently provided tags. From this review, five additional topic tags were added, four were revised, and two were removed. The removed tags were accompanied by suggestions on how to map content to the remaining tags.

The task force convened again in 2021 to create a new subcategory for topics—Communities. The goal was to add terms for the various community groups represented in Chicago and its collections. These were largely based on Library of Congress Demographic Group Terms (LCDGT) but with several exceptions. For example, the task force decided to include "people" after some religious terms, such as "Buddhist People" instead of "Buddhists." Overall, the Communities section encompasses religious, social, ethnic, national, regional, and some age, medical, disability, and psychological facets of persons depicted or described in EXPLORE Chicago Collections. It was decided that some potential demographic terms that were covered by other tags and categories, such as "gender," "education," and "work," would not be included.

The task force then looked at the metadata from our members' imported records. Wrangling the large dataset of subject headings with variants in the source vocabulary and identifying common terms proved challenging. There were many considerations, such as which source vocabulary to draw from or whether to develop local terms, which might better suit the personal identities of the users. For instance, instead of using the Library of Congress Demographic Group Terms term "Hispanic Americans," we opted to use a local term, "Latino and/or Hispanic Americans," which was modeled in part on the census.[8]

Names

One area that has not been addressed yet is name authorities. Although name authorities are considered a controlled vocabulary in EXPLORE Chicago Collections, they act differently from the other controlled vocabularies (topics, neighborhoods, and cities). The controlled vocabulary for names in EXPLORE consists of an initial list of curated tags as well as tags automatically added from metadata records uploaded to the portal. How fields are populated—whether they are imported "as is" or mapped to one of the controlled terms—occurs first during the Import Rule Mapping Process. This is a process that happens prior to uploading metadata into the Metadata Hopper. At the start of the process, the person uploading content tells the system in what metadata fields to expect specific pieces of information, such as title or names. Depending on what kind of record is being uploaded, this could mean mapping these pieces of information to a MARC field, such as 600—Subject Added Entry-Personal Name, or an EAD or XML tag, such as <persname>.[9] Then, any metadata field that is mapped to names is matched

against the existing list of names and automatically added if there is no match.[10] The matching does not always work as expected, however, and sometimes non-name data appears in these fields. Other times, metadata is formatted in a way that does not allow for separate name matching. The next section discusses interventions and maintenance that the CCC is taking to address such discrepancies.

Ongoing Maintenance and Future Goals

As with any major digital initiative, this work is ongoing and requires continued maintenance to ensure users' needs are being met. New members are able to find representative terms for their own collections, and these vocabularies are kept up-to-date with source vocabularies and general language changes over time. In order to keep up with this continuous and iterative maintenance, in 2023, the Controlled Vocabulary Task Force restructured itself from a task force to a standing committee. The Committee is made up of volunteers from member institutions, much like the task force was, and as of 2024 had nine members. This work was, and continues to be, well supported.

Each year, the Committee has a set of goals. In 2024, the Committee shared eight goals among the group. The Committee crafted the goals with an eye toward improving the controlled vocabulary and performing the ongoing maintenance work. This maintenance work includes controlled vocabulary training for staff who upload content to EXPLORE and loading new tags into the system when they are approved. There is a public feedback form for submission of new tags or recommendations for changes from members. Part of the ongoing maintenance work involves ensuring these submissions get reviewed by the Committee and changes are reported out to the appropriate audiences. Besides maintenance, the other goals can broadly be divided into four general categories, which continue to provide a framework for future goals of the Committee: reconciliation work, analysis, outreach, and name authorities.

The reconciliation work for this kind of local vocabulary centers on establishing workflows and automations to keep up with source vocabularies, such as LCSH and LCDGT, which can be a moving target. These are dynamic and varied vocabularies, which make setting up these automations complex. Although some library systems have built-in tools for automatic reconciliation, Metadata Hopper was not built with this kind of complex integration in mind, creating technical hurdles in implementing consistent reconciliations. Therefore, this process is largely manual for now, but the Committee is exploring ways to use tools like OpenRefine and WikiData to automate the reconciliation process. Committee members have also been looking into using JSON, developing scripts, and seeing what other tools are available through GitHub, such as "idloc," which could help with parsing LCSH bulk downloads.[11]

Along with these dominant vocabularies, the Committee has also looked to smaller and more narrowly focused source vocabularies, particularly for the Communities tag list, in order to ensure the most up-to-date and least harm-inducing terminology is used. Vocabularies such as Homosaurus and inclusive language style guides—such as the National Center on Disability, and Journalism Style

Guide—informed this work. On a related note, Committee members are considering ways to reduce harmful language in non-tag metadata. One idea is to provide education and guidelines to members relating to terminology in uncontrolled fields such as titles or descriptions. Keeping up with language changes in this regard requires dedicated and persistent staff or volunteer time to ensure there is a representative tag list for the community, and that CCC is providing useful, well-researched, and thoughtful guidance in this area to its members.

It is imperative that CCC has a useful and representative vocabulary for the collections in EXPLORE, and that is why analysis has proven to be so central to the Committee's ongoing goals. In order to accomplish this, Committee members have been reviewing search queries in Google Analytics to evaluate whether to add or change a tag. Reviewing pageviews helps to illuminate whether any tags are not used or are not needed. The Committee has also looked at internal data to see how tags are applied to items by institutional members when resources are uploaded, which allows for assessment of how members are interacting with these tags. As work like this is often iterative, knowing how members are interacting with the tags informs the workshops and instruction that CCC provides, which relates to the general maintenance work of the committee.

Outreach is another goal that ensures the continued usage and usefulness of the tag list over time. This has primarily been accomplished through collaboration with the Communications Committee, another CCC committee made up of a team of volunteers, to reach out directly to members. For instance, Controlled Vocabulary Committee members implemented a "buddy system" in which Controlled Vocabulary Committee members are matched with institutions that use the Metadata Hopper but are not frequent contributors. This partnership provides customized support that helps institutions understand how to tag their items, encourages them to provide feedback, and provides a knowledgeable contact person to answer their questions. Committee members are also designing a more robust workflow for communicating our changes to the tag list with membership. Once again, this has involved collaborating with the Communications Committee to send out regular emails about new tags and to highlight collection items from member institutions. So far, this has had a successful audience reach and has helped remind members that this vocabulary is constantly evolving.

The Controlled Vocabulary Committee also works to provide public outreach resources. One example of public outreach engagement is a public-facing guide that explains the vocabulary and current tag list.[12] The Committee created this guide to provide transparency in the tagging process and to achieve the broader goal of information sharing. The public-facing guide includes an FAQ to help a more generalized audience understand how the CCC creates and uses these vocabularies. It includes a link to an open-ended form where users can submit suggestions for a new term or provide feedback on the list more broadly.[13] Our hope is that users outside of our member institutions also submit feedback so that the tag list continues to evolve with CCC's growing user base.

Another potential audience for a controlled vocabulary like this would be other information professionals. In order to instill confidence in the security of the list, the committee established a MARC

Subject Heading and Term Source code.[14] The hope is to see this list being used in other contexts in the library and archives community. So far, at least one member institution has used it beyond the EXPLORE platform. When faced with a newly acquired collection of over five million mostly digital images from the *Chicago Sun-Times,* and limited resources for processing and describing such a massive collection, the Chicago History Museum looked to this vocabulary to provide quick and local subject access to the collection.[15]

Management of name authorities has become its own goal, as it requires a great deal of data clean-up and is generally labor-intensive. As noted above, the name authorities did not receive the same treatment as the subjects. The metadata for names, which totals over 43,000 entries, has a great number of variants due to formatting inconsistencies. Another issue that was found is inconsistencies among institutions on how this data was populated; for example, non-name metadata, such as street addresses, were found in name authority fields. The first phase of assessing this metadata is to simply attempt to determine the extent of its inconsistencies and idiosyncrasies, before developing a way to clean it up. This process begins with an initial report and assessment of the data. Next, the Committee looks at ways to make this category more useful; for example, the ability to have consistent facets and the ability to feature names on the EXPLORE home page. The committee is also looking for examples of other successful name authority sources, such as the Western Name Authority File.[16] At the same time, Committee members are mining search data to see how users are currently searching for names, which terms they are using, and in what form. From this initial report of search data and this multipronged approach, the committee will initiate a strategy for improving the name authorities in EXPLORE and plans to continue the work into 2025 and beyond.

Spring 2024 was the ten-year anniversary of the formation of the CCC Controlled Vocabulary Task Force/Committee. Throughout these ten years, many people have contributed and shaped the CCC-controlled vocabularies, and it has become apparent that creating and maintaining controlled vocabularies can only be done through sustained and careful effort. Looking toward the future, there are many challenges to work through. However, the past ten years of careful and meaningful stewardship of the CCC controlled vocabularies have established a solid foundation ready to meet those challenges and the new challenges of our users and members.

Notes

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3. The institutions that contributed content to this initial test were the Art Institute of Chicago, Illinois Institute of Technology, the Newberry Library, the University of Chicago, and the University of Illinois Chicago.

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FEATURE

Core Competencies in Practice

Exploring Catalogers' Alignment with Professional Standards

Adrienne Sanders and Karen Snow

The purpose of this article is to report on a recent study that explores how well the self-assessed knowledge and skills of cataloging and metadata librarians correlate with the knowledge and skills described in the Core Competencies for Cataloging and Metadata Professional Librarians that was revised in 2023 by a group formed by the American Library Association's Core Metadata & Collections Leadership Team. A questionnaire gathered basic demographic information and invited participants to rate their understanding of the Knowledge core competencies, as well as rate how often they utilize the Skill/Ability core competencies. The results suggest that cataloging and metadata professional librarian participants of this study view themselves as having a good or full understanding of most Knowledge core competencies, even if many participants did not regularly use the Skill/Ability core competencies that include that knowledge.

Introduction

Identifying the core competencies of a profession is an important part of understanding what skills, abilities, knowledge, and behavior are expected in that profession. The *Core Competences of Librarianship*, published by the American Library Association (ALA), for example, was last updated in 2023 and provides what is considered to be foundational knowledge for librarians that should be acquired and refreshed throughout their careers.[1] The document also encourages "specialized and advanced knowledge beyond those specified in this Core Competences document," which highlights the necessity of additional core competencies documents and the importance of the *Core Competencies for Cataloging and Metadata Professional Librarians* (first published in 2017 and revised in 2023) to fill this gap for those in cataloging and metadata roles.[2]

The purpose of this article is to report on a recent exploratory study that investigates how well the self-assessed knowledge and skills of cataloging and metadata librarians correlate with the knowledge and skills described in the *Core Competencies for Cataloging and Metadata Professional Librarians* (hereafter *Core Competencies*). Background information on the *Core Competencies* will be provided first, as well as a literature review to supply the needed context for the *Core Competencies* and the study. Next, we will describe the study methodology and report the results, then finally discuss the importance of the results as well as limitations and future research.

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Background

Evans et al. offer a comprehensive account of the creation of the 2017 *Core Competencies,* and therefore, we will not go into great detail about the history of the document here.[3] Nonetheless, it is important to note that the process for creating the *Core Competencies*, which began in 2015, was meant to be collaborative and data-driven. The group tasked to create the document, the Cataloging Competencies Task Force, reviewed research and professional literature, as well as job descriptions that helped to inform multiple drafts. Additionally, the Task Force offered several opportunities online and during in-person conference sessions for the cataloging and metadata community to provide feedback on drafts. After several draft iterations of the *Core Competencies*, the Cataloging Competencies Task Force agreed on a document that included language meant to be agnostic of platform and schema, among other considerations, with examples provided to illustrate the competency statements. The final version of the *Core Competencies* is divided into three areas—Knowledge, Skill/Ability, and Behavioral Competencies—that reinforce and supplement the ALA's *Core Competences of Librarianship*.

The *Core Competencies* was published and endorsed by ALA in 2017 and states that the document "defines competencies in broad terms to acknowledge the wide variety of work performed by cataloging and metadata professionals in libraries of all types and sizes, regardless of developments in a particular standard or technology."[4] The Task Force notes that it has always seen the *Core Competencies* as a living document meant to be revised on a regular schedule with different people involved to bring fresh perspectives to the work and keep up with rapidly changing cataloging and metadata environments.[5]

In 2022, the Task Force surveyed the cataloging and metadata community to gauge their awareness and usage of the *Core Competencies*.[6] The 2022 study also asked for feedback on the *Core Competencies* that could be used for a future revision to the document. Overall, respondents to the questionnaire ($n = 434$) were supportive of the *Core Competencies* as presented in 2017 and felt the document needed little to no revisions, assuming study participants were aware of the existence of the document prior to completing the questionnaire (a significant number were not).[7] Some respondents recommended the inclusion of trends and standards that emerged since the *Core Competencies* was published in 2017, such as International Federation of Library Associations and Institutions' (IFLA's) Library Reference Model, and areas they felt needed more emphasis, such as ethics and diversity, equity, and inclusion (DEI) principles, and knowledge of linked data and artificial intelligence.[8]

The *Core Competencies* was revised throughout 2023 at the request of the leadership of the ALA Core Metadata & Collections section. The revision team was led by former Task Force member Karen Snow and included a diverse group of cataloging and metadata librarians. The revision team reviewed and seriously considered the feedback from the 2022 study of the *Core Competencies* and subsequently chose to keep the framework of the document intact (Knowledge, Skill/Ability, and Behavioral competencies), but updated the language, added statements representing new knowledge and skills since the 2017 document, and relocated the examples to an appendix at the end of the document. The study that is the focus of this article was inspired by a discussion of the revised *Core Competencies* in

a February 2024 webinar.[9] More specifically, the current study focuses on the frequency of skills and abilities used and knowledge of the competencies listed in the revised document.

Review of Related Literature

This study is unique. No other studies ask cataloging or metadata professionals to assess their knowledge and skills according to a prescribed list. However, there is a plethora of research that examines what qualities are in high demand for cataloging and metadata jobs. Studies like the ones found in the literature on this topic inform the background of the *Core Competencies* and are worth discussing briefly here because they touch on many of the qualities found in the *Core Competencies* and are impacted by the same trends found in the research literature, addressed below.

Competencies are the underlying skills and knowledge abilities needed within a domain, in this case, a professional domain. Across studies that address the competencies needed in professional cataloging and metadata work, there is a continued, uniform requirement for an ALA-accredited master's degree, which will not be further discussed here. Otherwise, there have been shifts over time regarding the desired skills and knowledge of catalogers and metadata librarians.

The rise of the internet beginning in the 1990s brought notable changes to the cataloging world, eventually leading to the modern cataloging and metadata environment that is reflected by the *Core Competencies*. Two studies that looked at how cataloging jobs changed over this period were "Requirements for Cataloguing Positions in the Electronic Environment" by Chaudry and Komathi and "The Impact of Information Technology on Job Requirements and Qualifications for Catalogers" by Khurshid. Chaudhry and Komathi compare job advertisements from 1990 to 1994 with job advertisements from 1995 to 1999, setting 1995 as the year the internet began to influence cataloging jobs.[10] The first mentions of metadata standards in reference to standards other than traditional Machine-Readable Cataloging (MARC) begin to appear during this time, bringing to light qualities and language that would eventually appear in the *Core Competencies*. Kurshid also gives an overview of how cataloging jobs have changed over time, from the beginning of the MARC standard in the 1960s, into the twenty-first century.[11] Kurshid looks at the impact of technology changes on position titles, degree requirements, and required skills of catalogers by analyzing job advertisements published in 2000 and 2001. Kurshid also identifies changes to position titles and requirements that reflect the desire for librarians familiar with emerging technologies, and notes the emergence of the word metadata in job titles.[12] As these articles and the following continue to show, with the rise of environments that require standards other than MARC, metadata became a term often used with or instead of cataloging to describe the work of describing and classifying library materials.

Into the 2010s, researchers continued to focus on the term metadata as an indicator of something new and different in the cataloging world. Han and Hswe (2010) focus on the presence of the term "metadata" in job advertisements.[13] They note that librarians tend to "use the term 'metadata' to refer to non-MARC descriptive metadata encompassing a variety of standards, schema, and so on."[14] The

term metadata is sometimes, but not always, used to include traditional cataloging as well. Perhaps because of this ambiguity, Han and Hswe find that the responsibilities and competencies of metadata librarians have yet to be clearly defined, and job descriptions vary in terms of the requirements and preferred qualifications listed. The *Core Competencies*, still several years from being written, had yet to bring clarity and unity to the desired qualities of cataloging and metadata librarians. In 2020, Turner's analysis of job descriptions found that "cataloging" librarians still outnumbered "metadata" librarians two to one by title. Turner also confirms Han and Hswe's usage of the term "metadata" to refer to non-MARC metadata.[15]

Turning to studies on library and information science (LIS) education, we find that educators strive, and sometimes struggle, to teach the breadth of topics involved in cataloging and metadata. Hall-Ellis uses results from previous studies of position descriptions and divides them into five domains: education, theoretical knowledge, cataloging competencies, communication skills, and interpersonal skills, the latter four of which correspond well to what would become the three sections of the *Core Competencies*.[16] Hall-Ellis concludes that cataloging courses will not entirely prepare catalogers for what employers want, and acknowledges that teaching new catalogers everything they need to know is a difficult and constantly changing assignment. Snow and Hoffman looked at the issue from the students' point of view and found that a balance of practical experience and theoretical knowledge in cataloging was most useful to their learning experience.[17] Although many students also recognized the need to balance theory and practice, they preferred practice. Smith, Daugherty, and Lowry looked at a broader variety of technical services skills and asked how well librarians felt library LIS programs prepared them for their job duties.[18] Cataloging and metadata management was one of only three categories where participants indicated they felt better than "not well at all" prepared by their coursework; 31.9 percent reported feeling "moderately well" prepared by cataloging and metadata coursework. Despite the difficulty of their task, it appears LIS educators in cataloging and metadata are finding some success in their methods.

The 2023 revision of the *Core Competencies* looked toward the future by adding a knowledge competency relating to artificial intelligence: "The impact, limitations, and possible usage of artificial intelligence (AI) applications and large language models (LLM)."[19] Chen and Li's study is one of the first research studies to look at librarians' use of and attitudes toward AI in cataloging.[20] They discovered that as of early 2024, most cataloging and metadata librarians were not using AI in their cataloging work, nor were they receiving training or formal education about AI. However, a significant number were able to correctly identify areas where artificial intelligence is likely to be useful and areas where it is likely to struggle to meet the needs of quality cataloging. Catalogers and metadata librarians absolutely anticipate using AI in their future work.

"Soft skills" are also seen as critical to cataloging and metadata work, as evidenced by their inclusion as the "Behavioral" competencies in the *Core Competencies*, but also in studies such as Lowry, who surveyed technical services librarians about their use and importance of soft skills in their work.[21]

Even though a significant number of participants indicated they received little formal education and training in developing soft skills, they nonetheless noted that skills such as teamwork and interpersonal communication were foundational competencies for technical services work.[22]

The articles and documents reviewed above describe the same qualities reflected in the *Core Competencies* and grapple with issues such as the need for cataloging and metadata librarians to understand both the theory behind and the practice of cataloging. They show the addition of new titles and job responsibilities that develop in parallel with technology, as well as the need to focus on developing "soft skills" as well as specific cataloging and metadata knowledge and abilities. All of these ultimately inform the knowledge and skills that make up the *Core Competencies*. Learning more about how current cataloging and metadata professional librarians assess their understanding and use of the *Core Competencies* is an important next step in identifying how well cataloging and metadata professional librarians are being prepared for their roles, as well as where education and training are successful and where they fall short.

Methodology

The questionnaire developed to gather data for this study (see appendix) was created based upon the Knowledge and Skill/Ability core competency statements found in the 2023 revision of the *Core Competencies*. We intentionally chose to exclude the Behavioral competencies from the questionnaire for two main reasons. First, we were most interested in learning more about the competencies that are specific to cataloging and metadata work, which are the Knowledge and Skill/Ability competencies. Though important, the Behavioral competencies have much broader applicability. Second, we worried that adding the Behavioral competencies to an already lengthy questionnaire would extend the time needed to complete it beyond what many participants were willing to spend. We recommend a future study on the Behavioral competencies specifically.

The questionnaire was placed in the online survey creation, dissemination, and analysis tool Qualtrics. In some cases, the wording used in the questionnaire duplicated what is in the 2023 *Core Competencies*; in other cases, complex statements were slightly reworded for clarity or broken up into multiple responses to ensure that participants were responding to specific competencies. For example, the Skill/Ability competency statement, "Formulates consistent and complete data by selecting, adapting, and applying a metadata content standard," was broken into three separate responses: "Select a metadata content standard," "Adapt a metadata content standard," and "Apply a metadata content standard."

After applying for and receiving institutional review board (IRB) approval from our respective institutions, the Qualtrics questionnaire was disseminated by both researchers to the following online email discussion lists and forums: OLAC, AUTOCAT, MOUG-L, OCLC-CAT, PUB-LIB, LM_NET, RADCAT, Troublesome Catalogers and Magical Metadata Fairies Facebook group, and ALA Connect. These lists and forums were chosen because they either have a cataloging/metadata focus or they cater to specific areas of librarianship, such as school librarianship or public librarianship. We invited anyone who is currently working as a professional cataloging or metadata librarian to participate.

The questionnaire was open to receive responses from July 10, 2024, through July 25, 2024, with one reminder sent to all lists and forums about halfway through that time period.

Once participants entered the questionnaire, they first provided their informed consent to participate in the study. The next four closed-ended questions collected demographic data, asking participants the type of library in which they primarily work, the country in which they primarily work, the percentage of time they spend cataloging during an average week, and how many years of experience they have cataloging and/or working with metadata.

The bulk of the questionnaire is divided into Knowledge and Skill/Ability areas with the modified competency statements from the 2023 revision of the *Core Competencies* mentioned earlier. Participants were asked to use a Likert scale of 1 to 4 in each section to self-assess their knowledge and the frequency of use of the skills/abilities, with the additional option to indicate that they do not know what is meant by the knowledge or skill/ability competency presented. In the Knowledge section, "1" represents no knowledge of a particular competency and "4" represents full understanding. In the Skill/Ability section, "1" indicates that the participant never uses the skill/ability, and "4" indicates the skill/ability is used all the time. Each section closes with a question requesting an open-ended response from participants who wanted to comment further on their earlier responses. We used Qualtrics data analysis tools, as well as Microsoft Excel, to complete the data analysis of the responses collected.

Results

Of the 604 participants who agreed to participate in the study by affirming their consent, 141 did not provide answers beyond the demographic questions; therefore, they were removed from the data set. A total of 463 responses remained. Although not every participant answered every question, all 463 respondents answered at least one question beyond the demographic questions.

Demographics

The first question after the participant provided their informed consent was, "For which type of library or institution do you primarily work?" As shown in table 1, of the 463 responses, the majority of respondents worked for academic or research libraries, and a significant number work for public libraries. Librarians who marked "Other" worked at library consortia or systems; federal, national, and state libraries; or libraries that fell into more than one given category.

Table 1. Question 2: For which type of library or institution do you primarily work? (n=463)

Answer options	Number of respondents	Percentage of respondents
Academic/research library	251	54.21%
Public library	126	27.21%
Special library (e.g., law, corporate)	27	5.83%

Answer options	Number of respondents	Percentage of respondents
Other (please explain)	23	4.97%
School library	14	3.02%
Museum	11	2.38%
Vendor/publisher	6	1.3%
Archive	3	0.65%
Historical society	2	0.43%
Total	463	100%

In response to the question, "In which country do you primarily work?," the preponderance—90 percent—of the 463 participants answered, "United States." Participants from Canada made up 5 percent, and less than 1 percent were from the United Kingdom. Respondents who marked "Other" made up 4 percent of the total, and they were asked to type their location in a text box. A total of 1.5 percent of survey respondents were from Australia, with seven respondents. The Netherlands and Ireland had two participants each, and one each from Barbados, Brazil, Bulgaria, Cambodia, France, New Zealand, Singapore, South Africa, and Uganda.

When asked, "What percentage of your time do you spend cataloging during an average week?," 47 percent of those surveyed said they spent more than half of their time cataloging. Only 18 percent of librarians spent between 31 and 50 percent of their time cataloging, and 20 percent spent between 11 and 30 percent of their time cataloging. A smaller but not insignificant group, 15 percent, spent less than ten percent of their work time cataloging.

The final demographic question asked, "How many years of experience do you have cataloging and/or working with metadata? Please include experience in professional and non-professional roles." There were again 463 respondents, with a broadly distributed range of experience, as shown in table 2, with the majority of participants (57 percent) having fifteen or fewer years of experience in cataloging and/or metadata work.

Table 2. Question 5: How many years of experience do you have cataloging and/or working with metadata? Please include experience in professional and non-professional roles. (n=463)

Answer options	Number of respondents	Percentage of respondents
0-5 years	95	20.52%
6–10 years	85	18.36%
11–15 years	82	17.71%
16–20 years	63	13.61%
21–25 years	47	10.15%
26–30 years	41	8.86%
More than 30 years	50	10.80%
Total	463	100%

Knowledge Competencies

The remainder of the questionnaire asked participants to rate their knowledge and skills competencies. In order to determine the overall knowledge of cataloging and metadata librarians, the results of respondents who answered both "Full" and "Good" to the knowledge competencies were added together to show the total number of respondents confident in their knowledge. Table 3 shows the ranking of competencies by percentage. The percentage of competent librarians ranges from as high as 96 percent to as low as 24 percent. It is notable that of the thirty-six listed knowledge competencies, study participants selected "Full" or "Good" at least 50 percent of the time for twenty-eight of the knowledge competencies. The Knowledge competency with the smallest percentage of participants (25 percent) choosing "Full" or "Good" is "The impact, limitations, and possible usage of artificial intelligence (AI) applications and large language models (LLM)."

Table 3. Knowledge competencies by percentage who marked "Full" or "Good" (n=463)

Competency	Number of respondents marking "Full" or "Good"	Percentage of respondents
Purpose and use of controlled vocabularies	449	96.56%
Descriptive standards that provide guidelines for describing library resources	443	95.27%
Purpose and use of classification schema	443	95.27%
Commonly used controlled vocabularies	437	93.98%
Value standards such as controlled vocabularies	435	93.55%
Commonly used classification schema	435	93.55%
Appropriate methods to organize library resources	423	90.97%
Benefits and purpose of identity management and authority control	417	89.68%
How metadata supports core library functions such as reference, liaison, and circulation work	409	87.96%
Impact of metadata on discovery and access to resources	409	87.96%
Information contained in an authority record	393	84.52%
Sources of authority records	388	83.44%
Principles of identity management and authority control	385	82.80%
Bias in metadata standards and awareness of how personal experiences may inform description	383	82.37%
The relationship of cataloging outputs to discovery and access use cases	377	81.08%
Theoretical foundation and evolution of metadata frameworks, ethics, principles, standards, and practices	365	78.49%
Major trends in cataloging and metadata	358	76.99%
Function and structure of library data management platforms, such as library management systems, institutional repositories, and content management systems	329	70.75%

Competency	Number of respondents marking "Full" or "Good"	Percentage of respondents
Data structure standards or schemas that define element sets for a particular descriptive domain	326	70.11%
Methods and approaches for metadata creation, editing, analysis, and transformation	325	69.89%
Metadata quality within different contexts, and create principles and practices to address metadata quality	314	67.53%
Ethical and transparent data	311	66.88%
Data encoding, format, and exchange standards that provide technical specifications for machine readability, computer processing, and data exchange	310	66.67%
Nature and function of cooperative databases and initiatives	303	65.16%
Historical context for current metadata practices	303	65.16%
Conceptual models for library data	272	58.49%
How metadata is stored, processed, and retrieved	263	56.56%
Indexing and database structure	241	51.83%
Usage rights and copyright for library resources	227	48.82%
Administrative and structural data standards that are machine-readable or machine-created to provide structure to objects and to track data modifications	223	47.96%
Differences and benefits of various ways to structure data (flat, hierarchical, graph, relational, semantic, etc.)	193	41.51%
Machine-generated metadata	183	39.35%
Principles of data provenance and how to track modifications of library data	171	36.77%
Computational accessibility of metadata	154	33.12%
Impact, limitations, and possible usage of artificial intelligence (AI) applications and large language models (LLM)	115	24.73%

Totals for participants who marked "None" or "I don't know what this means" were also compiled. Participants indicated no working knowledge of some concepts, with 11 percent indicating "None" when asked about their understanding of "The differences and the benefits of various ways to structure data (flat, hierarchical, graph, relational, semantic, etc.)." Another 8 percent of participants indicated no understanding of how metadata is stored, processed, or retrieved. Two competencies, "Administrative and structural data standards that are machine-readable or machine-created to provide structure to objects and to track data modifications" and "Indexing and database structure," were marked as "none" by 8 percent of participants.

Participants marked "I don't know what this means" if they did not understand what an option meant. The competencies in this category that participants selected most often were "Computational accessibility of metadata," at 15 percent of respondents, "Administrative and structural data standards

that are machine-readable or machine-created to provide structure to objects and to track data modifications," at 10 percent of respondents, and "Metadata quality within different contexts and create principles and practices to address metadata quality," with slightly less than 6 percent of respondents.

Skill/Ability Competencies

The rating of the skills section of the *Core Competencies* provides insight into what duties cataloging and metadata professional librarians actually perform. Results for "All the time" and "Often" were compiled in order to discover which skills the 422 respondents to this question commonly used. There are fewer responses to the Skill/Ability competencies than the Knowledge competencies because some participants chose to complete the former and not the latter.

Averages for these results are somewhat lower than those for knowledge competencies; nonetheless, twenty out of the thirty skills competencies listed were performed "Often" or "All the time" by the majority (over 50 percent) of participants. Of those who responded, 83 percent of study participants "Assign controlled vocabularies" often or all the time; 82 percent "Assign authorized access points for agents" (e.g., persons, families, and corporate bodies), and another 82 percent "Perform subject analysis" all the time or often. At the bottom of the range, only 17 percent regularly "Map/crosswalk metadata," and only 18 percent either "Modify metadata application profiles" or "Design metadata application profiles."

Other tasks were also infrequently performed, with 45 percent of participants indicating "Never" for "Create authority records for non-agents (e.g., work titles, series titles)." Other qualities most marked "Never" overlap with the lowest rankings of "All the time" and "Often," with nearly 40 percent indicating they never "Map/crosswalk metadata," and 39 percent indicating that they do not design metadata application profiles. Again, participants had the opportunity to mark "I don't know what this means," and the statement chosen most often was "Recognize the role of interoperability in metadata ecosystems" (16 percent of respondents). Some participants also did not understand the meaning of "Design metadata application profiles" or "Modify metadata application profiles," each chosen by 14 percent of respondents.

Open-Ended Comments

The Knowledge and Skill/Ability sections of the questionnaire contained an option to add further explanation of the answers chosen in the Likert scale. The Knowledge section of the questionnaire received thirty-nine comments in the free text box, and the Skill/Ability section received thirty-seven comments. Many of the comments provided context for how participants' knowledge relates to their work. One respondent said, "For some of these I know the specific tool we use very well, but if you're asking about theory behind it or the theoretical higher concept, I don't know *that concept* well. Examples: MARC very well; but 'Data structure standards and schemas . . .' not so well." Another librarian stated, "As a metadata librarian working on digital collections, I don't do much work with

classification." A handful of comments explicitly stated that the librarian was new to cataloging, and in a few cases was also a solo cataloger with no institutional knowledge to rely on. A few commenters mentioned how some of the *Core Competencies* skills may be appropriate to management roles but not to most other cataloging and metadata librarians.

Other comments focused on the language of the *Core Competencies* or the rating system used for the survey. Multiple librarians stated that full understanding would be hard to achieve: "I'm answering 'good' for things that I feel very competent in. I'm not sure I could ever have 'full' understanding of these concepts." In the Skills/Abilities section, respondents said they would have liked to answer "sometimes," which was not a given option.

The language of the survey was taken directly from the *Core Competencies*, and although it is accurate, it is admittedly sometimes obscure. Some librarians' comments indicated it was a barrier to self-assessment during the survey. One respondent wrote that "in the efficacy of your pedagogy, most will get lost in your nomenclature." Others put it more plainly, writing "Potentially have done and heard of what you are asking but do not understand what is being asked" and "I am probably using metadata every day, but I am not aware of it."

Academic Libraries

After reviewing the data for all respondents, the data were separated by library type. The majority of respondents worked at academic or research libraries, and 241 of them responded to the Knowledge competencies. Due to the small sample size in other categories of libraries, data from those library types were not compared. The competencies to which the most of this subset of respondents chose "Full" as their answer were "The purpose and use of controlled vocabularies," at 74 percent; "The purpose and use of classification schema," at 67 percent; and "The impact of metadata on discovery and access to resources," at 63 percent. Smaller percentages of academic librarians chose "None," indicating that 17 percent lack knowledge on "The impact, limitations, and possible usage of artificial intelligence (AI) applications and large language models (LLM)." Another 15 percent have no knowledge of principles of data provenance and how to track modifications of library data, and 14 percent indicated "None" for the competency, "Machine-generated metadata." Finally, some of the academic library respondents chose "I don't know what this means" for the competencies "Computational accessibility of metadata," at 12 percent; "Administrative and structural data standards that are machine-readable or machine-created to provide structure to objects and to track data modifications," at 8 percent; and "Metadata quality within different contexts and create principles and practices to address metadata quality," with 6 percent.

Turning to the Skills competencies, 230 respondents primarily work in academic libraries. Of those, 62 percent answered that they "Apply a metadata content standard" all the time. The next most common skills were "Perform subject analysis" and "Assign controlled vocabularies," both at 60 percent. The percentage of cataloging and metadata librarians in academic libraries who indicated that they never "Create authority records for non-agents (e.g., work titles, series titles)" is

44 percent. Another 34 percent do not "Map/crosswalk metadata," and 33 percent do not "Design metadata application profiles." Smaller percentages of this subset of librarians marked "I don't know what this means," with 15 percent selecting "Create and manage machine-actionable data using formatting standards, serialization standards, and structural standards"; 13 percent choosing "Assign notation from a classification standard"; and 13 percent marking "Modify metadata application profiles."

Public Libraries

One hundred twenty-four metadata and cataloging librarians in public libraries rated the Knowledge competencies. Public librarians indicated full competence of "The purpose and use of controlled vocabularies," at 67 percent; "Benefits and purpose of identity management," with 57 percent, and "Value standards such as controlled vocabularies," at 55 percent. Smaller percentages of these respondents indicated "None," with 26 percent indicating no knowledge of "The impact, limitations, and possible usage of artificial intelligence (AI) applications and large language models (LLM)." Twenty-four percent chose "None" for their knowledge of "Principles of data provenance and how to track modifications of library data," and 20 percent chose "Machine-generated metadata." Finally, a few public librarians chose "I don't know what this means," with 19 percent indicating "Computational accessibility of metadata," and 12 percent choosing "Administrative and structural data standards that are machine-readable or machine-created to provide structure to objects and to track data modifications." Finally, 7 percent of participants indicated that they do not know the meaning of competencies: "Data structure standards or schemas that define element sets for a particular descriptive domain," and "Metadata quality within different contexts and create principles and practices to address metadata quality."

Years of Experience

Data separated by years of service gives insight into the ongoing development of knowledge and skills of cataloging and metadata librarians. When data for librarians with zero to five years of experience and six to ten years of experience are combined to look at all librarians with ten or fewer years of experience, we find that only four *Core Competencies* had more than 50 percent of librarians marked "Full" in the Knowledge section of the survey. Conversely, combined data for librarians with more than twenty years of experience showed that over half marked "Full" knowledge for fourteen of the *Core Competencies*. Table 4 compares the competencies where the most respondents marked that they had "Full" knowledge of the competency in question. In total, eight competencies are listed due to partial overlap of top competencies across both groups, and a tie for the fifth most commonly known competency in the group with more than twenty years of experience. The results show higher percentages of "Full" knowledge across the board for more experienced librarians.

Table 4. "Full" knowledge by years of service.

	10 or fewer years (*n=180*)		20 or more years (*n=138*)	
Knowledge competency	**Number of respondents marking "Full"**	**Percentage of respondents**	**Number of respondents marking "Full"**	**Percentage of respondents**
Purpose and use of controlled vocabularies	116	64.44%	110	79.71%
Commonly used controlled vocabularies	97	53.89%	95	68.84%
Impact of metadata on discovery and access to resources	93	51.67%	84	60.87%
How metadata supports core library functions such as reference, liaison, and circulation work	91	50.56%	88	63.77%
Purpose and use of classification schema	86	47.78%	110	79.71%
Value standards such as controlled vocabularies	83	46.11%	95	68.84%
Benefits and purpose of identity management and authority control	82	45.56%	102	73.91%
Descriptive standards that provide guidelines for describing library resources	53	29.44%	104	75.36%

Table 5. "None" knowledge by years of service.

	10 or fewer years (*n=180*)		20 or more years (*n=138*)	
Knowledge competency	**Number of respondents marking "None"**	**Percentage of respondents**	**Number of respondents marking "None"**	**Percentage of respondents**
Impact, limitations, and possible usage of artificial intelligence (AI) applications and large language models (LLM)	42	23.33%	32	23.19%
Principles of data provenance and how to track modifications of library data	35	19.44%	22	15.94%
Machine-generated metadata	31	17.22%	18	13.04%
Differences and benefits of various ways to structure data (flat, hierarchical, graph, relational, semantic, etc.)	24	13.33%	13	9.42%
Usage rights and copyright for library resources	22	12.22%	8	5.8%
Computational accessibility of metadata	20	11.11%	16	11.59%

As table 5 shows, smaller percentages of respondents marked "None" for competencies where they lacked knowledge, and four of the five least known competencies were the same for both groups. The three least known were: "The impact, limitations, and possible usage of artificial intelligence (AI) applications and large language models (LLM)," with 23 percent for both the newest and most experienced librarians; "Principles of data provenance and how to track modifications of library data," with 19 percent for librarians with ten years or less of experience and 16 percent for those with over twenty years of experience marking "None"; and "Machine-generated metadata," with 17 percent of librarians with ten years or fewer of experience, and 13 percent for those with over twenty years of experience.

In the Skills section, librarians with the most and least experience marked "All the time" for the same top three competencies. Librarians "Assign authorized access points for agents (e.g., persons, families, & corporate bodies)," "Perform subject analysis," and "Assign controlled vocabularies" most frequently regardless of their years of experience. However, the cataloging and metadata librarians with more than twenty years of experience indicated that they did between 64 percent and 69 percent of the time. Those with ten or fewer years' experience demonstrated those same skills between 50 percent and 53 percent of the time.

Discussion

This study sought to provide a snapshot of professional cataloging and metadata librarian self-assessed levels of knowledge and use of the *Core Competencies*. Even though the responses of the study participants may not be fully representative of the entire cataloging and metadata librarian population, the results of this study nonetheless shed light on cataloging and metadata librarian competencies that are at once encouraging as well as concerning.

On a positive note, most of the study participants indicated they have either "Good" or "Full" understanding of the Knowledge competencies, which is remarkable considering the number of Knowledge competencies and the wide range of knowledge cataloging and metadata librarians are expected to learn throughout their careers. We were expecting that participants would not choose the equivalent options "Often" or "All the time" for the Skill/Ability competencies due to the very different expectations in cataloging and metadata librarian roles and environments. For instance, it is understandable that participants would not "Design metadata application profiles" regularly if that is not part of their job description, even if they know how to do so. Nonetheless, many of the study participants indicated that they engaged with the listed Skill/Ability competencies "Often" or "All the time."

Across all demographics, most participants assign controlled vocabularies and classification numbers regularly, as well as perform subject analysis. The majority also felt confident in their knowledge of controlled vocabularies and classification systems, as well as the controlled vocabularies commonly

used in libraries, so it is heartening to see that most participants felt that they have the needed knowledge to perform the commonly used skill.

On the other hand, a significant number of participants struggled with understanding "The differences and the benefits of various ways to structure data (flat, hierarchical, graph, relational, semantic, etc.)" and "How metadata is stored, processed, and retrieved," as well as "Computational accessibility of metadata," the latter being a competency 15 percent of participants said they did not know what it means. The data suggest that there may be a lack of education or training for cataloging and metadata librarians on the systems side of the work. Even if cataloging and metadata librarians fully understand how to assign a Library of Congress Subject Heading and place it in a MARC record, they may not grasp the underlying structure of the metadata they create or how it is stored, processed, and retrieved by computer systems. This point is driven home by the respondent mentioned earlier in this paper, who noted that they understood MARC well, but not the "theory behind it."

In addition, a significant number of participants indicated that they not only never design or utilize metadata application profiles, 14 percent did not even understand what the competencies relating to metadata application profiles mean. This lack of understanding of metadata application profiles may be particularly problematic for the transition to official RDA, which will require cataloging and metadata librarians to rely heavily on metadata application profiles. Finally, and perhaps unsurprisingly, the majority of participants noted their lack of knowledge of AI applications and LLM. Since the use and impact of AI and LLM tools have come to the attention of many cataloging and metadata librarians only recently, this result was somewhat predictable, but still an important data point considering the likelihood of increased usage of AI and LLM applications in cataloging and metadata work going forward.

Additionally, the language of the competency statements themselves was a barrier to some participants, so it is difficult to know if a competency is truly not utilized or if it is simply not understood. As noted above, one participant commented that they "Potentially have done and heard of what you are asking but do not understand what is being asked." This issue is possibly one of training and education but also could point to the need for revised language in the *Core Competencies* that better reflects the understanding of cataloging and metadata practitioners.

The results related to years of experience confirm the *Core Competencies* assertion that "competence in cataloging and metadata is obtained over the course of an individual's career" rather than through formal education alone.[23] While the most and least well-known Knowledge competencies were the same for the groups with the least and most experience, the number of competencies where more than 50 percent of librarians marked "Full" was significantly greater among the more experienced librarians. Those with twenty or more years of experience have greater knowledge of more competencies than any other group. Across their careers, librarians may be solidifying existing knowledge, learning new things, or a mixture of both. Regardless, it is evident that much of cataloging and metadata librarians' learning is done "on the job" or through professional development, after formal education is completed.

The top three Skill/Ability competencies were again the same for the most and least experienced librarians, as they were for librarians across the board. However, more experienced librarians perform the tasks more frequently, by about 15 percent. This could be due to a difference between what is asked for in entry-level positions versus more advanced cataloging or metadata positions. Results may also reflect differing levels of understanding of skills to which the competency refers.

Limitations

This study provides a unique and valuable window into cataloging and metadata librarians' level of understanding of, as well as use of, the Knowledge and Skill/Ability core competencies listed in the 2023 *Core Competencies for Cataloging and Metadata Professional Librarians*. However, there are limitations to the study. One limitation is that we asked participants to self-assess their level of understanding of the Knowledge core competencies and use of the Skill/Ability core competencies, which may not be truly accurate. Participants may over- or underestimate their understanding or ability for a variety of reasons, so the results of self-assessments need to be viewed with this in mind.[24] Further research asking participants to directly explain their understanding or perform a skill may more accurately measure participants' actual knowledge and skills.

Furthermore, this study used convenience sampling by recruiting participants primarily from online forums, email discussion lists, and social media sites. As a result, the voices of cataloging and metadata librarians not on any of the above platforms are absent. Additional research that explicitly includes this population would be useful.

Finally, another potential limitation is the language of the *Core Competencies* themselves, as mentioned in the Discussion section above. The results of the study could potentially be different if definitions and/or examples were provided on the questionnaire.

Conclusion

This study contributes to the research literature on cataloging and metadata competencies, education, and training by exploring the extent to which cataloging and metadata professional librarians understand and use the Knowledge and Skill/Ability *Core Competencies*, respectively. The results highlight areas of strength and areas in need of attention by the cataloging and metadata community. One area is the education and training of future and current cataloging and metadata professional librarians. The results suggest that many of the study participants feel competent in their understanding of most of the Knowledge *Core Competencies*. However, the Knowledge competencies with lower rates of understanding should receive greater attention in cataloging/metadata education and training, such as knowledge of how metadata is structured, processed, and accessed, as well as the design and modification of metadata application profiles, and the use and impact of AI and LLM.

Additionally, this study illuminates what many cataloging and metadata librarians likely already know: not only is cataloging and metadata work becoming more complex, but the proliferation of standards and technologies makes the idea of being—much less *feeling*—competent a seemingly Sisyphean task. The IFLA *Trend Report 2024* points toward this when it cites as trend four: "Skills and abilities are becoming more complex."[25] In their document intended to inspire libraries and librarians to think about and plan for future success, they cite an increased demand for complex digital skills, which is already evident in the *Core Competencies*. This challenge underscores the importance not only of having the *Core Competencies* but also of continually updating and intentionally incorporating them into cataloging and metadata education and training.

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Appendix

Questionnaire Text

Q1. *Informed Consent*

1. I agree (and wish to participate)

2. I disagree (and do not wish to participate)

Q2. *For which type of library or institution do you primarily work?*

1. Academic/Research Library

2. Public Library

3. School Library

4. Special Library (e.g., law, medical)

5. Archive

6. Museum

7. Historical Society

8. Vendor/Publisher

9. Other (please explain)

Q3. *In which country do you primarily work?*

1. United States

2. Canada

3. United Kingdom

4. Other (please specify)

Q4. *What percentage of your time do you spend cataloging during an average week?*

1. Less than 10 percent

2. 11–30 percent

3. 31–50 percent

4. Greater than 50 percent

Q5. *How many years of experience do you have cataloging and/or working with metadata? Please include experience in professional and nonprofessional roles.*

1. 0–5 years

2. 6–10 years

3. 11–15 years

4. 16–20 years

5. 21–25 years

6. 26–30 years

7. 30+ years

Q6. *Knowledge Competencies*

On a scale of 1 to 4, with **1 being none at all** and **4 being full understanding**, rate your understanding of the following concepts related to cataloging—please note that you are not rating frequency of use, only understanding. If you do not understand what an option means, choose "I don't know what this means"

	I don't know what this means	**(1) None**	**(2) A little**	**(3) Good**	**(4) Full**
Theoretical foundation and evolution of metadata frameworks, ethics, principles, standards, and practices					
Descriptive standards that provide guidelines for describing library resources					
Data structure standards or schemas that define element sets for a particular descriptive domain					
Data encoding, format, and exchange standards that provide technical specifications for machine readability, computer processing, and data exchange					
Value standards such as controlled vocabularies					
Administrative and structural data standards that are machine-readable or machine-created to provide structure to objects and to track data modifications					
Principles of identity management and authority control					
Benefits and purpose of identity management and authority control					
Information contained in an authority record					
Sources of authority records					
Purpose and use of controlled vocabularies					
Commonly used controlled vocabularies					
Purpose and use of classification schema					
Commonly used classification schema					
Appropriate methods to organize library resources					
Conceptual models for library data					
Differences and benefits of various ways to structure data (flat, hierarchical, graph, relational, semantic, etc.)					
How metadata is stored, processed, and retrieved					
Indexing and database structure					
Relationship of cataloging outputs to discovery and access use cases					

	I don't know what this means	(1) None	(2) A little	(3) Good	(4) Full
Function and structure of library data management platforms, such as library management systems, institutional repositories, and content management systems					
Nature and function of cooperative databases and initiatives					
Historical context for current metadata practices					
Methods and approaches for metadata creation, editing, analysis, and transformation					
How metadata supports core library functions such as reference, liaison, and circulation work					
Metadata quality within different contexts, and create principles and practices to address metadata quality					
Impact of metadata on discovery and access to resources					
Major trends in cataloging and metadata					
Impact, limitations, and possible usage of artificial intelligence (AI) applications and large language models (LLMs)					
Bias in metadata standards and awareness of how personal experiences may inform description					
Ethical and transparent data					
Computational accessibility of metadata					
Principles of data provenance and how to track modifications of library data					
Usage rights and copyright for library resources					
Machine-generated metadata					

Please add further explanation of your answers, if needed:

Q7. *Skill/Ability Competencies*

On a scale of 1 to 4, with **1 being never** and **4 being all the time**, rate how frequently you engage in the following activities related to skills/ability competencies. If you do not understand what an option means, choose: "I don't know what this means"

	I don't know what this means	(1) Never	(2) Rarely	(3) Often	(4) All the time
Select a metadata content standard					
Adapt a metadata content standard					
Apply a metadata content standard					
Identify controlled vocabularies					
Evaluate controlled vocabularies					

	I don't know what this means	(1) Never	(2) Rarely	(3) Often	(4) All the time
Assign controlled vocabularies					
Assign authorized access points for agents (e.g., persons, families, and corporate bodies)					
Assign authorized access points for non-agents (e.g., work titles, series titles)					
Create authority records for agents (e.g., persons, families, and corporate bodies)					
Create authority records for non-agents (e.g., work titles, series titles)					
Perform subject analysis					
Assign notation from a classification standard					
Create and manage machine-actionable data using formatting standards, serialization standards, and structural standards					
Emphasize relationships between entities (e.g., relationship designators)					
Evaluate metadata value standards for accessibility and inclusion					
Evaluate user metadata needs					
Advise on local metadata practice and decisions					
Document local metadata practice and decisions					
Explain local metadata practice and decisions					
Review periodically local metadata practice and decisions					
Design metadata workflow processes					
Modify metadata workflow processes					
Design metadata application profiles					
Modify metadata application profiles					
Evaluate quality of externally-produced metadata					
Map/crosswalk metadata					
Employ standards to normalize metadata					
Recognize role of interoperability in metadata ecosystems					
Formulate methods for quality control					
Document metadata management practices					

Please add further explanation of your answers, if needed:

FEATURE

It's About Time

Use of The Extended Date/Time Format in the Digital Public Library of America

Annamarie C. Klose, Scott Goldstein, and Morris S. Levy

Date metadata can be a powerful tool for browsing, search, and visualization. Although metadata quality and consistency are key, a broad array of practices exists in the Libraries, Archives, and Museums (LAMs) community's metadata, which is stored in repositories, library catalogs, and other platforms. Cultural heritage materials with "squishy" dates can be difficult to express and display. While institutions may find local approaches, challenges arise when the metadata is shared elsewhere. The Extended Date/Time Format (EDTF) is a solution to encode dates that conform to a broad variety of scenarios, including ambiguous and circa dates. This article assesses the impact of EDTF in the Digital Public Library of America (DPLA), an aggregator of LAMs metadata. Compared to a prior study in 2015, date values that correspond with EDTF have increased. The overall number of records with any date value, however, has declined. The authors note nuances regarding the results and provide recommendations for the community.

Introduction

Within the Library, Archives, and Museums (LAMs) community, date metadata is a challenge. Digital collections can exist in a variety of platforms, including library catalogs, repositories, digital asset management systems, and digital exhibits—all with their own unique architecture and limitations. A work may have one or more dates associated with its life cycle. It can be difficult to express various uncertain dates and date ranges. Date searching is also important to users but frustrating due to various issues.[1] Meanwhile, one survey demonstrates date as the third most evaluated field by metadata creators.[2]

Machine-readable values support discovery in terms of search limits, results grouping, and sort options.[3] Consequently, encoding standards bridge the gap between humans and computers. As per Shaw and Maloney, "an encoding scheme is a specialized writing system or syntax for particular types of values."[4] For instance, the date September 17, 1873, can be expressed as 1873-09-17 as defined by the encoding standard International Organization for Standardization (ISO) 8601. Unfortunately, encoded values often do not appear as human-readable for display and require query parsing for search indexing.[5] Additionally, encoding standards for more challenging date scenarios in relation to cultural heritage materials have only been provided fairly recently.

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The creation of the Extended Date/Time Format standard (EDTF), now a profile of ISO 8601, provides solutions for encoding many complex date scenarios. However, it is unclear how often this standard is used. This article discusses the current state of date metadata encoding with EDTF in the Digital Public Library of America (DPLA). With millions of records harvested from thousands of institutions across the United States, DPLA serves as a microcosm of metadata entry trends in the community. The authors use a 2015 study from Zavalina, Phillips, Alemneh, Tarver, and Kizhakkethill as a point of comparison and find that there has been progress with EDTF. However, there is still a need to standardize date metadata entry in the community with machine-readable dates in order to support search and retrieval.

Literature Review

Cultural heritage metadata—how it is created, stored, and displayed—is diverse. Across the literature and related guidance, however, some themes emerge, particularly for date metadata. Standards and guidelines have evolved. Although this section is arranged thematically, the concepts are interconnected.

Best Practices for Metadata and Sharing It

There are best practices to improve outcomes for metadata locally and for sharing via aggregators. Shreeves, Riley, and Milewicz define the six C's of shareable metadata: content, consistency, coherence, context, communication, and conformance to standards.[6] Bruce and Hillman's quality measures for metadata are completeness, accuracy, provenance, conformance to expectations, logical consistency and coherence, timeliness, and accessibility.[7] When sharing metadata, interoperability is key. Shreeves, Riley, and Milewicz point out that shareable metadata should support search interoperability.[8] Caplan states that search interoperability is "the ability to perform a search over diverse sets of metadata records and obtain meaningful results."[9] Foulonneau and Riley defined interoperability as "the ability of different systems to talk to each other."[10] They designated interoperability factors as "facets": technical interoperability, content-related interoperability, and organization interoperability.[11] Recently, the FAIR Principles for data and metadata provided guidance in terms of Findability, Accessibility, Interoperability, and Reuse.[12] Within FAIR, the second findability (F2) and first interoperability (I1) principles, respectively, speak to the importance of rich metadata and interoperability through language and syntax, i.e., machine readability. Although FAIR was intended for scientific data and metadata, it has gained international attention for cultural heritage.[13] FAIR has been evaluated in terms of describing digital cultural heritage and MAchine-Readable Cataloging (MARC) bibliographic records.[14]

The literature highlights various challenges. A lack of consistency can inhibit crosswalking metadata easily.[15] "Localisms"—data used to facilitate searching or display in a local system—lose context when the records are shared.[16] Also, one-to-one relationships between metadata standards are easier than converting between records or standards with one-to-many and many-to-many relationships.[17] Normalization is frequently mentioned as a solution to remediate metadata values. Programmatic approaches can be addressed at an aggregator level; however, metadata creators themselves best know their materials.[18] In addition, the concept of technical debt has been extended to library metadata

quality.[19] Intentional metadata code debt includes cataloging issues meant to be fixed later in response to current constraints. Unintentional metadata code debt includes errors unwittingly made during cataloging, such as typos. Other debt issues with metadata are applied to design and architecture, the environment, documentation, and requirements.

Date Encoding Standards

Machine readability matters. Globally, there are different colloquial representations of dates. This can lead to confusion for both humans and computers. For example, the date May 19, 2013, could also be expressed as 19th of May 2013, 19 de mayo de 2013, 2013-05-19, 201300519, 19.05.2013, 05/19/2013, and 19/05/2013. Despite not being comprehensive, this nonetheless demonstrates why date encoding can be useful if applied consistently. For encoding date and time values, ISO 8601 is widely referenced and used in a variety of industries. It established YYYYMMDD in its basic format, or YYYY-MM-DD in its extended format, as the de facto date format. It has rules for various scenarios for expressing date and time.[20] The World Wide Web Consortium's Date and Time Formats (W3CDTF) may be the best-known profile of ISO 8601's extended format. Formalized in 1998, it provides a simple way to encode and display date and time with six levels of precision.[21]

Gaps remained for cultural heritage institutions in terms of common date scenarios, including Before Common Era (BCE) dates, questionable dates, approximate dates, and open-ended date ranges.[22] In 2012, the Library of Congress (LOC) drafted the Extended Date/Time Format with the intention to build on ISO 8601-2004 while addressing more date scenarios with "various semantic qualifiers and concepts," including ambiguous and approximate date ranges in applications.[23] These had been supported "using ad hoc conventions; EDTF provides a standard syntax for their representation."[24] The standard was subsequently revised in 2019 and adopted as an extension of ISO 8601-2019.[25]

EDTF has three levels: 0, 1, and 2. Level 0 is the most basic. In terms of encoding dates and time, part of it matches W3CDTF. Consequently, it is the most recognizable part of the standard. For time intervals, i.e., date ranges, it employs a "/" as a separator. This may seem foreign to metadata creators who are used to using a hyphen between date ranges. Other separators have clear usage as well. For instance, a hyphen is used between calendar components, e.g., YYYY-MM, and a colon is used for clock components. In Level 1, the concepts that can be encoded get more complicated. Some examples include seasons, unspecified digits, open intervals, and negative calendar years (i.e., Before Common Era dates). Level 2 introduces more encoding options for increasingly complex date scenarios, including sub-year groupings and set representation. The levels build upon each other like rules. For instance, intervals can have negative, circa, and questionable dates in Level 1. EDTF gets complicated as one goes through the levels and its logic. In addition, LOC provides the EDTF datatypes scheme.[26]

Adoption of EDTF has grown. University of North Texas (UNT) Libraries, the Portal to Texas History, and the Gateway to Oklahoma History were early adopters when EDTF was a draft standard.[27] UNT Libraries also found the EDTF seasons' usefulness for serials' dates.[28] In 2015, Zavalina, Phillips, Alemneh, Tarver, and Kizhakkethill analyzed the use of EDTF in the Digital Public Library of America

(DPLA). They presented a picture that EDTF was slowly being adopted by LAMs. This paper was used significantly as a point of comparison in this study. In a survey of twenty-four Metadata Application Profiles (MAPs), Green reported that EDTF and W3CDTF were both indicated in five, while ISO-8601 was indicated in nine.[29] EDTF has been used in MARC records at institutions including Yale.[30] But recent literature has noted challenges. McGrath opined about the complexities of using EDTF in the MARC 046 field.[31] Klose, Goldstein, and Levy reflected on problems with using EDTF for BCE dates in Metadata Object Description Schema (MODS) records when minting digital object identifiers (DOIs) through DataCite.[32] Meanwhile, Manifold et al. noted the successful application of EDTF dates with Dublin Core in Samvera Hyrax repositories.[33] In this case, scripting was used to convert encoded EDTF dates to human-readable date values in the display. Meanwhile, the EDTF values were utilized to support search by date with a timeline slider.

Date-Specific Metadata Issues

Date metadata is well researched. Issues include the values, the metadata fields used, and how metadata is transformed, e.g., for harvesting. The authors provide this summary of metadata date issues highlighted in the literature:

- Location of values: Dates may be recorded in multiple locations in a single record.[34] For instance, the date of creation may be found in the free text in a description field.[35]
- Data entry errors: Misspellings and various errors occur.[36] For example, "(ca.)" without any date information.[37]
- Syntax differences: Using both numeric and text values.[38] Different encoding standards, e.g., YYYY-MM-DD and MM-DD-YYYY.[39]
- Linguistic differences: Dates in different languages in records.[40]
- Ambiguity: There are unclear strings and characters, such as "c" could represent circa or copyright.[41]
- Vague values: Values such as "unknown" and "no date" as colloquially referred to as "noise"[42] or "garbage values."[43] Those are not useful for search and retrieval.
- Lack of values: According to one survey, date was only required at 45 percent of the participants' institutions.[44]

Date value encoding variations are perceived as inhibiting searching.[45] The use of a single encoding standard, e.g., W3CDTF, is frequently recommended.[46] Indeed, user-focused studies point to issues related to searching and browsing for records by it.[47] Normalization, a process of transforming data to make it consistent, is also recommended.

Dublin Core-Specific Date Metadata Issues

Although various metadata standards are used by LAMs, Dublin Core metadata is referenced and used frequently. Unqualified Dublin Core, also referred to as Simple Dublin Core, provides one date field,

while Qualified Dublin Core has more granular options, e.g., creation and copyright date. In addition, Unqualified Dublin Core is a minimum requirement for harvesting records through the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH).[48] A summary of issues follows:

- Semantic interpretation: Institutions apply fields differently. For instance, the date and coverage elements are often used interchangeably.[49]
- One-to-one principle: Dublin Core has a one-to-one principle that states an original work and its digital representation should be described separately.[50] In practice, this principle is often dismissed. Consequently, a record's date values may include when the work was created, when it was digitized, or both. Yet the date of creation may be considered the most useful for searching regardless.[51]
- Harvesting issues: When converting from a robust metadata standard, such as MARC, to a simpler standard, such as Dublin Core, there is often data loss.[52]
- Pseudoqualifiers: Sometimes metadata creators add pseudo-qualifiers, e.g., "Digitized:" at the start of the value.[53]
- Custom date fields: Local date fields often get muddled when shared outside their local environments.
- Loss of context: In some cases, different date fields, e.g., created date and digitized date, are mapped together to the unqualified date field. Lumped together, they lack context about their values.
- Mismapping: Non-date values, e.g., publishing information, sometimes get mismapped to date fields. In other cases, date metadata sometimes does not get mapped at all.

Consequently, users searching for content by a specific date range may not find the content at all.[54]

Dates in MARC

MARC metadata can be transformed into other standards for digital objects and harvesting. The predominant areas for recording encoded date metadata in the *MARC 21 Format for Bibliographic Data* are the 008 field bytes 06-14 (Type of date/Publication status; Date 1; Date 2) and the 046 field (Special Coded Dates).[55] The code in 008/06 provides context for the date(s) in 008/07-14. Field 046 can be used to record BCE dates, incorrect dates, creation dates, modification dates for electronic resources, as well as starting and ending dates for aggregated content or the validity period of a resource.[56] It can also be used to specify the type of date when the information in the 008/06-14 is ambiguous. By the nature of only having four bytes available for Date 1 and Date 2, respectively, it is only possible to record years (known and unknown) in the 008 field. One can also use a more detailed date with code e. Across those eight bytes, one can then express an individual date as a month and year (YYYY and MM) or month, day, and year (YYYY and MMDD). The default format for recording dates in the 046 field is ISO 8601, which requires 8 numeric characters in the pattern YYYYMMDD. It is possible to use the EDTF field in the 046 field if it is appropriately coded as such in the subfield $2. However, EDTF was a later development.

Research Methods

Launched in 2013, DPLA aggregates metadata from cultural heritage institutions, including libraries, archives, and museums. Records are received through organizations referred to as hubs. Large organizations can serve as content hubs. Smaller organizations often band together as service hubs, typically via state and regional collaborations. Metadata comes from a variety of formats, including MARC, MODS, Dublin Core, and local customized standards. A common scenario is sharing Dublin Core metadata through OAI-PMH. But standards and harvesting differ by hub. DPLA has a date field labeled in the interface as Created Date.[57] According to DPLA's metadata application profile, it maps to dc:date, and the usage is "Date values as supplied by Data Provider."[58] It is a recommended field but not required. It can also store multiple date values or strings. DPLA recommends the use of the Extended Date/Time Format in this field.[59] Harvested date values may then be repurposed for the Date search feature in DPLA. The temporal enrichment process converts date values, as applicable, to begin and end dates.

The complete data set is available as a Bulk Download from DPLA.[60] The February 2021 data set was downloaded as JSON files from their public Amazon Simple Storage Service (S3) bucket. The data was processed using R and Python with the help of an advanced research computing cluster.[61] In the process of analyzing data, it was discovered that duplicated records were present in the data set, comprising about 0.1 percent of the total number of records. They were deduplicated before continuing with further analysis. Zavalina et al. did not mention any duplicate records in their data set. Consequently, it is unclear how often this issue occurs in the data sets supplied by DPLA in buckets or its Application Programming Interface (API).

Within the Date field, multiple values or strings can be in a record. As with the prior study, the values in the records were separated for analysis. In the following results, common syntax for values, e.g., YYYY, is referred to as patterns. To identify common patterns, all dates were run through a function that performed the following transformations: (1) each digit was converted to a 9, (2) each full month name (e.g., April) was converted to "Month," and (3) each abbreviated month name (e.g., Aug) was converted to "Mon." The rest of the content of the date field was left untouched. As examples, "November 20, 1913" would be transformed into "Month 99, 9999" whereas "Afternoon of 10 Feb 2011" would be transformed into "Afternoon of 99 Mon 9999." By transforming the dates in this manner, similarly formatted dates could be collapsed together to calculate cross-tabulations.

This study utilized the University of North Texas's EDTF validation Python library to identify EDTF date values.[62] The date patterns were reviewed according to the EDTF rules. Consequently, six patterns (>600 values) were eliminated as invalid according to EDTF rules. In addition, further analysis was needed to present this study's results. In the case of 9999-99 date patterns, it was necessary to separate which values represented calendar dates with reduced precision for month and year (YYYY-MM), seasons, sub-year groupings, or invalid patterns.

Findings

From 8,012,390 records in Zavalina et al.'s study, the DPLA had grown significantly to 41,740,821 records.

Frequency of Date Values

The total number of date values was 26,358,343. While trending toward fewer values, the number of date values in a record varied from zero to as many as 881. There were also 16,598,377 records without dates. Compared to 83 percent of records having at least one date value in the prior study, there was a drop to 60 percent of records having at least one date.[63] The newer percentage is in line with prior studies.[64] Content hubs had results on both extremes (figure 1). David Rumsey's records all had at least one date value. Meanwhile, the National Archives and Records Administration had the most records with no date values—more than 80 percent of their records in DPLA. Service hubs were more consistent as a set and fared better (figure 2). On the low end, less than 1 percent of Digital Maryland records lacked any date value. On the other extreme, 45 percent of Digital Library of Tennessee records lacked dates. Overall, content hubs and service hubs had dates, respectively, for 48.9 percent and 84.5 percent of records. These results stand in contrast to Zavalina et al., who found little difference between content and service hubs, respectively, with 83.4 percent and 80.9 percent of records including dates.

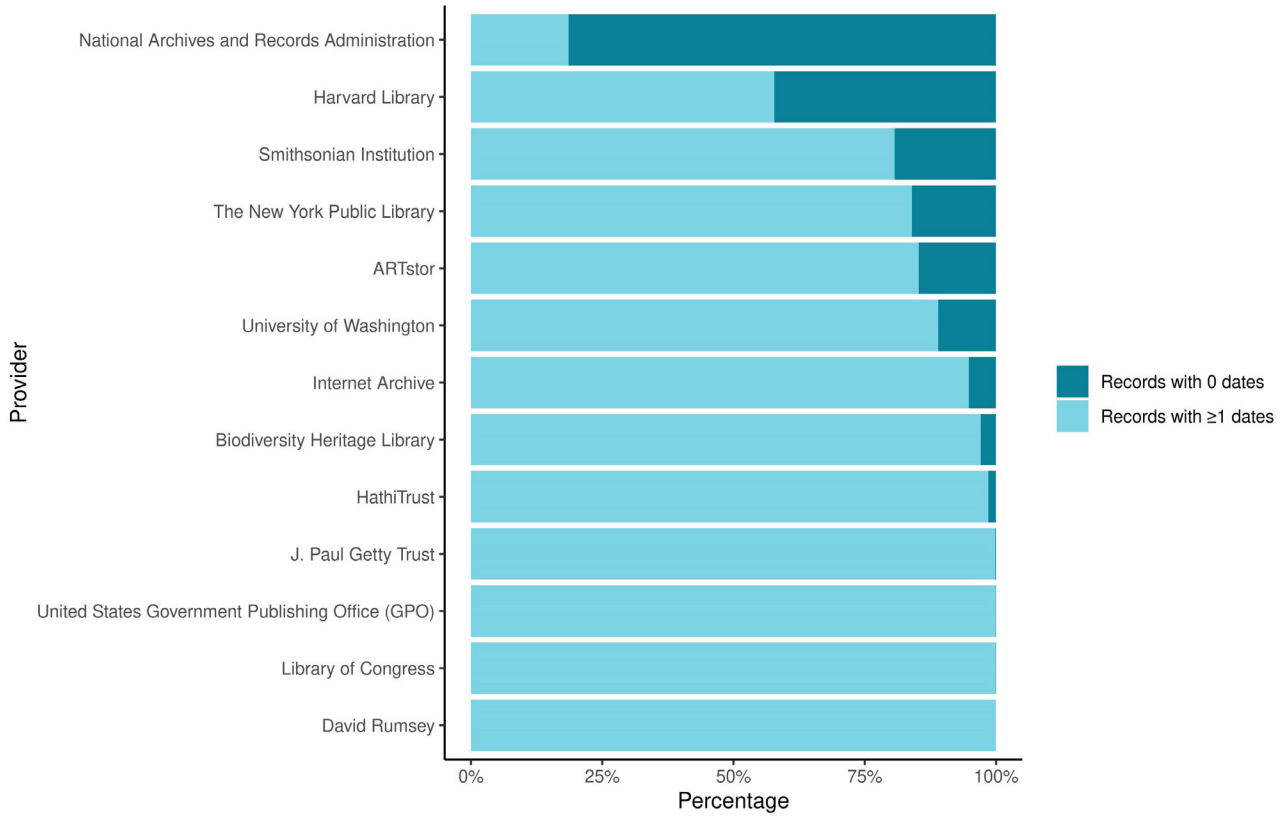


Figure 1. Bar chart for DPLA content hub records with and without date values.

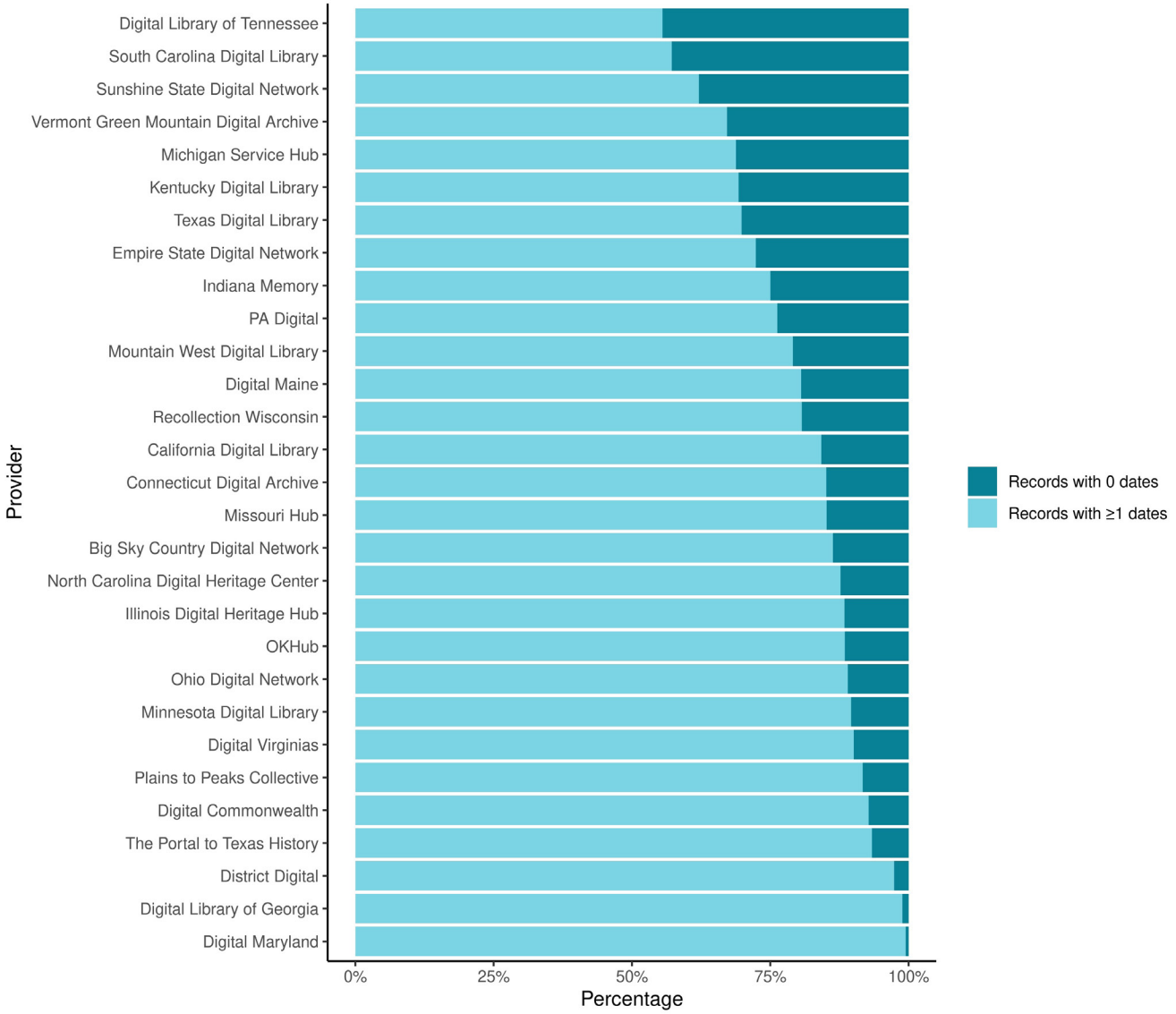


Figure 2. Bar chart for DPLA service hub records with and without date values.

EDTF Compliance

Of 26,358,343 date patterns, 68 percent were initially deemed valid according to EDTF rules and represented 176 different types of valid date patterns. This is an increase compared to the 51 percent EDTF validity for date values in 2015, according to Zavalina et al.[65] While 67 percent of the values conformed to Level 0, a mere 0.5 percent and 0.3 percent of values followed Levels 1 and 2, respectively (figure 3). The following sections detail this study's findings in detail for each EDTF level.

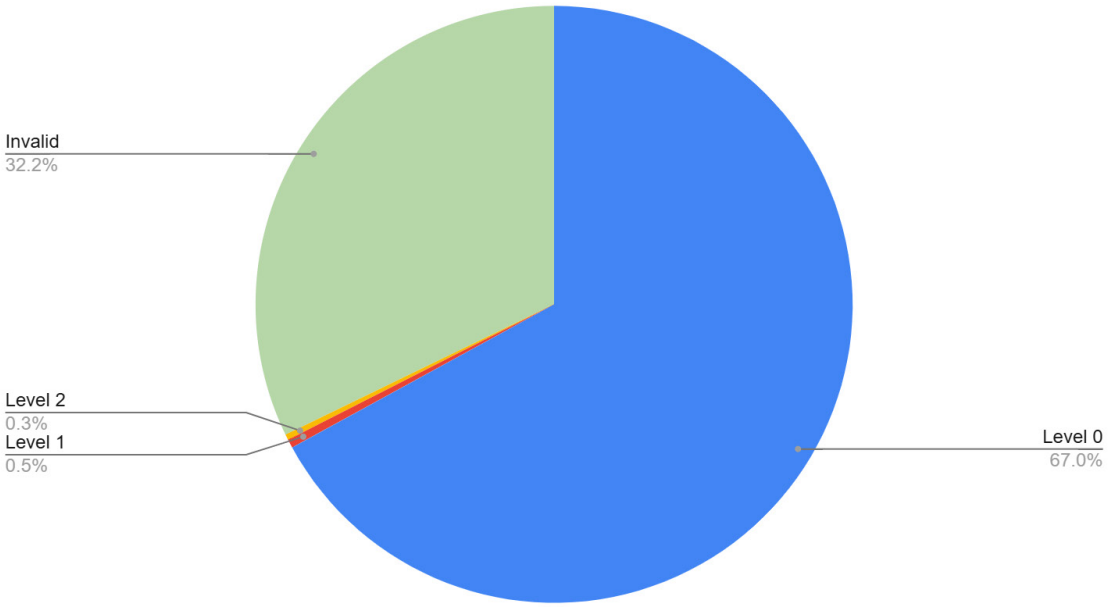


Figure 3. Pie chart comparing date patterns by EDTF validity.

Level 0

Level 0 (L0) date patterns represented 98.9 percent of EDTF-compliant date strings. This is a less than 1 percent drop from 2015, as per Zavalina et al. The widely available W3CDTF date patterns represent the bulk of the results. Every hub had values that matched L0 and overlapped with WC3DTF—58.6 percent of all date patterns in DPLA. As per tables 1 and 2, the most common patterns, in order of results, were year (YYYY), exact date (YYYY-MM-DD), and time intervals with exact date (9999-99-99/9999-99-99). The YYYY and YYYY-MM-DD patterns were also the most used of all date patterns in the DPLA, regardless of compliance with EDTF.

Table 1. EDTF Level 0 patterns that conform to W3CDTF and ISO 8601

Pattern	Number of patterns	Percentage of all patterns
9999	8,292,952	31.5
YYYY-MM	641,777	2.4
9999-99-99	5,741,424	21.8
9999-99-99T99:99:99	126,941	0.5
9999-99-99T99:99:99Z	655,142	2.5

There are fewer results for intervals, i.e., date ranges with a solidus (/) between them. An example with calendar year precision is "1993/1994," which indicates that the date begins sometime in 1993 and ends sometime in 1994. Some variations provide more or less precision in terms of whether a month and day are known. While every hub had date patterns that matched at least one W3CDTF date pattern, fifteen

hubs did not use time intervals at all. The National Archives and Records Administration had the most significant number of L0 time intervals: 67 percent of values. However, most hubs with results in this category had far fewer. The 9999-99-99/9999-99-99 and 9999/9999 patterns are most common in this set, with the latter representing less than 1 percent of all date values.

Table 2. EDTF Level 0 time intervals

Pattern	Number of patterns	Percentage of all patterns
9999-99-99/9999	636	<0.1
9999-99-99/9999-99	114	<0.1
9999-99-99/9999-99-99	2,002,535	7.6
9999-99/9999	46	<0.1
9999-99/9999-99	6,160	<0.1
9999-99/9999-99-99	318	<0.1
9999/9999	201,918	0.8
9999/9999-99	48	<0.1
9999/9999-99-99	845	<0.1

Level 1

For Level 1 (L1), more rules are added to the basics established for Level 0 dates. However, the results were far fewer than Level 0 at 0.5 percent. A total of 121,919 values represent fifty-five date pattern types. Theoretically, the rules allow for more patterns, but there were as few as one result for some patterns identified. Nine patterns have 1,000 or more values (table 3). Notably, there were no values that conformed to a letter-prefixed calendar year, i.e., dates that exceeded four digits—either before -9999 or after 9999—with a Y at the start of the string. Theoretically, these could be used for items such as prehistoric artifacts.

Some L1 date patterns in this set may express the same meaning in EDTF but overlap with another content standard. The most common pattern in this set is "YYYY?" with 39,395 instances. This format was valid under the *Anglo-American Cataloguing Rules*, Second Edition (AACR2) and had been used in MARC records for many years before the introduction of EDTF. Another interesting case is seasons: patterns of YYYY-21, YYYY-22, YYYY-23, and YYYY-24 where 21, 22, 23, and 24 represent spring, summer, autumn, and winter, respectively. The authors sampled values for review. Except for the Portal to Texas History, most season values are likely non-EDTF values. This is discussed more in the Analysis section. Nine hubs do not utilize L1 patterns at all: Biodiversity Heritage Library, David Rumsey, Digital Commonwealth, Digital Maine, Internet Archive, Kentucky Digital Library, Library of Congress, National Archives and Records Administration, and Texas Digital Library.[66]

Table 3. Level 1 patterns with 1,000 or more results

L0 Rules	L1 Rules	Pattern(s)	Number of results
Date	Seasons	YYYY-21 YYYY-22 YYYY-23 YYYY-24	6,370[a]
Date	Qualification of a date (complete)	9999-99~	3,566
Date	Qualification of a date (complete)	9999?	39,395
Date	Qualification of date (complete)	9999~	27,107
Date	Unspecified digit(s) from the right	999X	10,144
Date	Negative calendar year	-9999	3,489
Time Interval	Negative calendar year	1	4,004
Time Interval	Negative calendar year	-1	1,068
Time Interval	Qualification of date (complete)	9999/9999?	19,256
Time Interval	Qualification of date (complete)	9999~/9999~	4,666

[a] Due to sampling, many of these values may be considered invalid. While they match EDTF season encoding, they appear to be improperly formatted date spans, i.e., YYYY-YY. The Portal of Texas History's 3,166 values may be the only valid season patterns.

Level 2

Level 2's (L2) options build upon the rules of L0 and L1 dates. However, they were little utilized at 0.3 percent of all date values. With an infinite number of potential date patterns, 109 L1 patterns were observed in a total of 80,460 date values. There were no Level 2 patterns that aligned to the rules for exponential years, significant digits, or intervals. While L2 rules are robust, they can be confusing. As with L1's validation results, some matches may be considered false hits. As with the L1 seasons, sub-year groupings were sampled. No valid examples were found.

Table 4. Level 2 patterns with 100 or more results

L0 Rules	L1 Rules	L2 Rules	Pattern	Number of results
Date	Seasons	Sub-year groupings	YYYY-21 to YYYY-31	6,441[a]
Date	N/A	Set representation - All members	{9999-99-99,9999-99-99}	105
Date	N/A	Set representation - One of a set	[9999-99-99,9999-99-99]	650
Date	N/A	Set representation - One of a set	[9999-99-99..9999-99-99]	49,994
Date	N/A	Set representation - One of a set	[9999-99..9999-99]	204
Date	N/A	Set representation - One of a set	[9999,9999]	3,831
Date	N/A	Set representation - One of a set	[9999..]	2,825
Date	N/A	Set representation - One of a set	[9999..9999]	15,624

[a] Due to sampling, most or all of these values may be considered invalid. While they match EDTF season encoding, they appear to be improperly formatted date spans, i.e., YYYY-YY.

Compliance at the Hub Level

Content and service hubs represented both the highest and lowest percentages of EDTF valid records, with service hubs faring only slightly better than content hubs. Only three hubs had all their values in complete compliance with EDTF: Biodiversity Heritage Library, Digital Maine, and Kentucky Digital Library. However, they utilized fewer date pattern types and only complied with Level 0. Digital Maine solely used YYYY-MM-DD, while the Biodiversity Heritage Library and Kentucky Digital Library restrict values to the YYYY pattern. As the YYYY and YYYY-MM-DD patterns are well established in ISO 8601 and W3CDTF, the compliance with EDTF may be correlational only. Some hubs only employed a single date pattern within Level 0. Though each had results that did not match EDTF, David Rumsey typically used the YYYY pattern, while the Internet Archive results often matched the 9999-99-99 and 9999-99-99T99:99:99Z patterns. Eleven hubs had 90 percent to nearly 100 percent of EDTF valid date patterns. In this set, the Portal to Texas History was a standout, which employed more than 100 unique EDTF date pattern types with nearly 100 percent EDTF validity across a million and a half date patterns. When complex EDTF date examples from this hub were sampled, the examination proved satisfactory regarding their accuracy. This hub's results demonstrate both the value of EDTF encoding to express complicated dates and provide human-readable values in its own repository through scripting.

Non-EDTF Values

As with Zavalina et al., the results included a wide variety of date patterns that encompassed encoded dates, text dates, and values with both text and encoded dates. Including EDTF date patterns, at least 40,000 unique date patterns were recognized. Assorted languages and syntax were observed. Some values include text as pseudo-qualifiers, e.g., "Digitized:" and "Transcribed:" at the beginning. There were historical periods and dynasties. However, some values were unclear in terms of their semantics. For example, "c." before a string may correspond to copyright or circa. There were also garbage values, e.g., "undated" and "unknown." Some values were mismapped to the date field, including publisher name and location.

Analysis

The findings show mixed results. In relation to Zavalina et al. in 2015, EDTF compliance rose 17 percent by 2021. Some hubs only utilized one date pattern that corresponds to a Level 0 pattern. In addition, some hubs complied with Level 0 but did not support Levels 1 and 2. Biodiversity Heritage Library, Digital Commonwealth, Kentucky Digital Library, Library of Congress, National Archives and Records Administration, and Texas Digital Library fell in that category. Conversely, the number of records with any date values decreased by 23 percent. EDTF has the potential to be a useful encoding standard, and its adoption is slowly rising. But the results suggest that the more complicated the date scenarios and rules, the less likely they are to be employed. In addition, date metadata in an unruly form may be preferable to a growing number of records without any date metadata. The robust options in Levels 1

and 2 appear to be less frequently used by LAMs. It is not clear if it is because they are confused or if the standard is not mature enough. The Portal to Texas History shows that EDTF can be used extensively. However, time will tell if this vanguard institution will have more join it in this endeavor.

Levels of Precision

Level 0 had the most use in DPLA. However, EDTF intervals, e.g., YYYY/YYYY, remain an oddity. The non-EDTF pattern YYYY-YYYY was more common by comparison. Another consideration is that DPLA encourages the use of EDTF but uses YYYY-YYYY for its temporal enrichment process to support searching. It is not clear if that impacts the use of this non-standard pattern that is commonly used. There is flexibility when applying EDTF rules in terms of precision. These considerations may be subjective or practical. For instance, the National Archives and Records Administration (NARA) has a record with a date of 1941-01-01/1945-12-31.[67] One can infer from the value that the month and day related to this work may be unknown. With a large date range of 1941 to 1945, it could be equally appropriate to reduce precision to 1941/1945. The source record has collection-level text that suggests a date range of 1942 to 1945.[68] In addition, the Internet Archive uses zeroes as placeholders for minutes and seconds in date values, e.g., "1986-01-01T00:00:00Z."[69] This level of precision, while not erroneous, could be deemed excessive.

Platform-Specific EDTF Inaccuracies

However, rigid compliance with EDTF rules did not necessarily ensure metadata accuracy. Through sampling, it was revealed that Digital Maine has a large number of records dated January 1 of a specific year, i.e., YYYY-01-01. But most of these do not correspond to January 1. The hub's metadata documentation indicates that there are four date patterns that are permitted with a text box to enter the year.[70] It also notes issues with bulk entering dates that its Bepress platform changes to the first date of the year. For instance, a record has the date value of "1940-01-01" but states that it is "dated June 14, 1940" in the description field.[71]

False Matches to EDTF

Conversely, there are cases where the EDTF validation matches a pattern but is likely a false match. A case is L1 dates with hyphens for negative dates, i.e., BCE dates. As per Klose, Goldstein, and Levy (2021), date values that fall into this category are sometimes modern dates that represent open date ranges.[72] Another set of false matches was supposed EDTF Seasons (Level 1) and sub-year groupings (Level 2). Most appeared to be improperly created date intervals, i.e., YYYY-YY, where the second year in the date span was only indicated with the last two digits. Of the 6,370 values that matched EDTF seasons encoding, only sampled values from the Portal of Texas History's 3,166 records were true EDTF encoded seasons. In these cases, the Portal to Texas History has converted the values into human-readable dates in its platform for display. For instance, a harvested DPLA record has "2017-21" as Created Date.[73] In the institution's portal, this record displays as "Spring 2017" as the Creation Date.[74]

Non-EDTF Values

The non-EDTF values mimicked what was observed in Zavalina et al. and prior studies. While a percentage of these values could be converted easily to EDTF, the diverse variations are largely outside of the capacity of an aggregator, including the DPLA, to normalize. Some of the date patterns represented commonly understood syntax that could easily be converted to EDTF. However, some values require interpretation, e.g., historical periods and dynasties, to convert to a Gregorian calendar for EDTF. In addition, historical periods are more appropriate for the coverage field and its temporal qualifier. Some values would require the source institution to review the records due to ambiguous syntax, localizations, and mismappings. The UNT EDTF Python script identified six date patterns, which were eliminated in this study as invalid. These represented a mere 619 date values. Owing to the complexity of EDTF and the reality of metadata creation, programmatic approaches to EDTF validation may be challenging.

Date Issues with Representing Works

Various oddities and inconsistencies were observed and explored through sampling. A monograph, *The Sneads of Fluvanna* by Oranie Virginia Snead, had radically different date values depending on the source. One institution had 880 valid YYYY dates from 1000 to 1910. However, the broad date range is related to aboutness rather than creation. The publication's title page lists a date of 1910. Two other records for this book avoid this error. As with prior studies, there were mismappings and conflicts with the one-to-one principle. For instance, the Smithsonian Institution hub has records for amphoras—tall, handled jars or vases—entered in different ways. Depending on the museum, the date values were mapped from the date of the artifact, the accession date, or there was no date at all.

Limitations

The results still leave knowledge gaps. First, metadata records are in a state of flux. As per sampling, some metadata records had their values updated later. In addition, records remain in place for lapsed hubs. Second, metadata mappings vary across institutions and hubs. They can also change over time. There is likely relevant date metadata in records that did not get mapped to the DPLA's date field. The DPLA field label "Created Date," for instance, is problematic semantically. Lastly, date values that correlate to EDTF rules do not necessarily mean they were intended to do so. While the source metadata from the institution or hub may or may not indicate an encoding standard, the resulting DPLA record does not include that information.[75] Hubs may also convert data before sending it to DPLA. Another consideration with these findings is the high number of date patterns that are valid in another descriptive cataloging standard but do not conform to EDTF. Essentially, one would need to analyze the source records to get a more complete picture of EDTF compliance.

Recommendations

While EDTF use may be slowly growing in LAMs, there are ways to increase its implementation and improve outcomes for searching by date. Some recommendations are to create shareable metadata from the outset, be consistent and normalize values, think programmatically, document your decisions, check your mappings, educate and update guidelines, and advocate for date encoding support. These recommendations are not ranked. Their application depends on each institution's capability to do so.

Create shareable Metadata from the Outset

If metadata is not consistent in a collection or platform, it will have less usefulness for users, whether or not it is shared. Consequently, it is best to create metadata that is shareable from the outset, preferably with encoded date values. Even if your platform(s) do not support all of EDTF, normalizing applicable date values to W3CDTF or a subset of EDTF is usually an improvement. There is a potential workaround for platforms that do not support EDTF. Martin notes using a hidden encoded date field and a public text date field in CONTENTdm.[76] However, that requires careful mapping for harvesting. Even if there are no current plans to share metadata, consider the potential impact for researchers. Data sets for cultural heritage materials are beneficial in aggregate, e.g., collections as data.

Be Consistent and Normalize Values

Normalize values in legacy records. They may represent a wide variety of metadata creators, content standards, and local practices. Periodically review your institution's metadata to ensure consistency through remediation. Look for gaps. Avoid garbage values like "undated" as they do not help users. Sometimes, a broad date range, e.g., a century, based on a collection-level date range or educated assessment, may be appropriate. Details about the creation date found in the description could be used to augment records lacking suitable values.[77]

Think Programmatically

When possible, organizations should look for programmatic solutions for remediating date metadata. For example, Phillips and Tarver show strategies for normalizing EDTF dates with OpenRefine.[78] In addition, there is a UNT tool to aid with identifying or validating EDTF date strings, which is highly beneficial to metadata creators with varying experience levels.[79] Even with simpler date patterns, e.g., YYYY-MM-DD, audit tools that automate error checking can be beneficial to ensure consistency.[80] Automation can also be employed to remove characters that may impact the interoperability of date metadata for harvesting. For instance, square brackets for dates in AACR2 and *Resource Description & Access* (RDA) have a different meaning than in EDTF.

Remediation

There will always be legacy records that do not reflect the current best practices. Remediation of records is often time-consuming and expensive. However, it is a worthwhile process for providing access to LAMs' content, including digital collections. While cataloging and metadata creation have often been

seen as a one-time activity, they should be seen as part of an iterative process in terms of providing impact.[81] A useful framework is Tarver and Phillips' EPIC model.[82]

Document Decisions

Document internal metadata decisions for platforms(s) and specific projects so that there is an understanding of why and how values are entered. As staff turnover and memories fade, internal platform and project documentation (including application profiles) is critical. If there are barriers to moving forward with encoded values, understanding the *why, how*, and *where* can ensure that future staff can pick up where current efforts cannot. An example is local workarounds for platform limitations, e.g., having separate fields for text and searchable date values.

Check Your Mappings

Institutions that decide to share their metadata should check their metadata mappings. Often, large-scale crosswalks and metadata transformations available are a one-size-fits-all approach. As there are often localizations, reviewing metadata mapped for sharing, e.g., OAI feed, can lead to useful discoveries. In addition, it is helpful to crosswalk your local metadata to ensure a best fit for sharing metadata. By understanding the strengths and weaknesses in your institutional and/or project metadata, you can better find ways to deal with them. This also goes hand-in-hand with normalizing metadata and documentation. As encoded date values are preferable to text date values, knowing which ones are appropriate matters. This task can also help with discovering what you do not want to share, e.g., date digitized and publisher name, and what you do want to share, e.g., date created and date published. Even sampling records can be advantageous.

When mapping from catalog records, there are also better and worse options. MARC's encoded dates are not displayable to users. Mapping from fixed fields in MARC, e.g., the 008 field, rather than display fields, could be beneficial. In display dates, square brackets have a clear meaning. Those characters in MARC could be used to convert existing values into EDTF as well. This concept could be extended to text dates that apply AACR2 and RDA with non-MARC metadata. However, this means spending time converting dates to be consistent. Also, there are limitations to using the 046 field. Not every system—if any—knows what to do with a 19uu. As EDTF is a newer innovation, it is not clear how many MARC catalogers use EDTF in the 046 field in bibliographic records. In the past, catalogers were discouraged from using this field. It is only meant to be used as an expansion of the 008 field. The user-friendly way of creating dates is in the 264 field. Encoding is used in case libraries convert to a system that could use this information, much like preparation for the conversion to the Bibliographic Framework Initiative (BIBFRAME). Time periods can be addressed in the 388 field.

Educate and Update Guidelines

EDTF can be confusing, and education is necessary. If catalogers and metadata creators do not understand it, they will not use it. Within the American Library Association, the Association for Library Collections & Technical Services (ALCTS) approved the Core Competencies for Cataloging and Metadata Professional Librarians in January 2017.[83] It pointed to knowledge competencies in relation to data standardization, structure standards, data encoding, format, exchange standards, and value standards.[84] The December 2023 revision of the Core Competencies, which incorporated survey feedback from the library and metadata community, added EDTF and W3C among data value encoding schemes in its appendix.[85] Therefore, it is hopeful that resources such as this will serve as a model for LAMs in terms of best practices and that an awareness of EDTF can permeate the field.

Advocate

Platforms that host metadata for cultural objects need to support date encoding, including EDTF. Standards are only beneficial if leveraged to support search and browse while also presenting dates with a human-readable output. In addition to the list of EDTF implementations on its website,[86] there are additional GitHub repositories that support it in various programming languages. The future of EDTF support depends on coders and implementers. One such example is a Ruby-based GitHub repository that supports a subset of EDTF.[87] The Marva BIBFRAME Editor supports EDTF.[88] In terms of repositories, some Samvera Hyrax adopters have utilized a subset of EDTF. But date encoding support is not a given on many platforms. Therefore, it behooves institutions to demand encoded date support from vendors. EDTF may seem odd initially. However, every technological innovation seemed new when it was first introduced.

Conclusion

Date metadata needs to be standardized to be useful. Traditionally, dates and date ranges have been expressed in diverse ways through both text and encoding. The values themselves can be confusing to many users. While there have been gaps in how to encode more complex date scenarios, including "squishy" dates, EDTF supports those.[89] Consequently, there is a need for LAMs to use and advocate for this standard to provide a baseline for consistent, quality date metadata. Not only is EDTF useful for providing discovery across diverse records, but it could also allow the records to be leveraged in new and exciting ways, including scholarship and visualization. This requires the aid of coders and an investment by vendors.

Sadly, date metadata can be aggravating for metadata creators and end users alike. It is particularly relevant to users searching digital collections for cultural heritage. Unfortunately, date metadata inconsistency inhibits search and retrieval. A delay in providing machine-readable dates also hampers the progress of big data and collections as data projects. The plethora of date patterns observed in the DPLA suggests there is still work to be done. The variety of date strings suggests that much of it is

beyond the scope of an aggregator, including the DPLA, to normalize through automation. This work of standardizing date metadata is best approached by the metadata creators themselves. In addition, there is related work that can be addressed by LAMs.

Increasing the number of records that both have dates and conform to EDTF would have a significant impact on search and retrieval, as well as users' comprehension of records. Lastly, the most troubling aspect of this study is the rise of records that have no date values at all. Sampling also found structural and semantic issues that have plagued the community for decades. More research is needed to understand the choices and challenges that metadata creators face with date metadata.

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NOTES ON OPERATIONS

From Niche to Norm: A Case Study of Zines in a Circulating Collection

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Zines present unique opportunities and challenges across traditional library functions: access, cataloging, preservation, digitization, and special collections. They also provide incredible possibilities to redefine what research looks like and to engage students in a new way. This article tracks our goals and process for conceptualizing and implementing a social justice–focused zine collection. We contextualize our case study with both a literature review and a survey to establish current practices and reflect on how former practices have changed. Our findings indicate that zines are becoming more readily incorporated into library collections and are more frequently cataloged and allowed to circulate than in previous years.

Introduction

Zines, underground publications that exist outside of mainstream publishing and distribution sources, are often used to express and create a community based around experiences and opinions underrepresented in traditional publishing. At their essence, they are stalwarts of self-expression and freedom from censorship: covering all conceivable topics, passed in informal networks from person to person, for free or minimal cost. However, their variety in topics, design, and format makes them complex, and zines continue to be edged out of most library processes—too ephemeral to be cataloged, too undervalued to be preserved, too fragile to circulate, too sporadic to be ingested as serials, and too continuous to be processed as monographs.

The University Library at the University of Illinois Urbana-Champaign (U. of I.) launched the Social Justice Zine Collection (SJZC) in the fall semester of 2023. The two authors, Emilee Mathews, Head of the Ricker Library of Architecture and Art, and María Evelia Emerson, Student Success Librarian, collaborated with our colleague Mara Thacker, South Asian Studies and Global Popular Culture Librarian, to create the SJZC. Our goal was to foster a sense of belonging and enhance student engagement with library materials. To that end, the scope of the collection is focused on zines that center on different social justice issues. In this context, social justice is defined as advocating for equity across underrepresented groups, including but not limited to race and ethnicity, gender, sexuality, neurodiversity, and ability. Zines and social justice have a mutually enriching relationship: social justice champions the identity, perspectives, and rights of those not in majority groups, while zines are tools commonly used by underrepresented groups to create community and advance agendas. The

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combination of social justice and zines reflects Bishop's "windows and mirrors" metaphor she coined in 1990.[1] Social justice–focused zines, many of which share personal experiences, can serve as the "mirror," reflecting shared experiences for those seeking solidarity, or the "window," showing different lives and experiences than those of the reader.

Zines are a subcultural phenomenon, and as such, libraries seeking to build more diverse collections outside the mainstream canon would be well served to acquire zines scoped to the interests and needs of their patron base. By examining past and current practices, our article provides insights into how the evolution of these workflows can make library zine collections more impactful and accessible to our communities. Our article explores how library zine collections have evolved by presenting a case study on the implementation of the Social Justice Zine Collection, supported by a literature review of past zine collection practices and a survey analysis of current zine collection procedures. We also share lessons learned and recommendations about starting a new zine collection, and how to maximize the impact of existing collections based on our experience with the SJZC at the U. of I.

Literature Review

Library, Information Science & Technology Abstracts shows that zines first appeared in library literature discourse in 1995 when Chris Dodge and Julie Herrada separately introduced zines as important publications for libraries to collect.[2] Herrada articulated the importance of zines' ability to diversify the viewpoints in a collection but also cautioned library workers to exercise patience and open-mindedness in their acquisitions and cataloging. Nine years later, in 2004, Richard A. Stoddart and Teresa Kiser conducted a survey to better understand current practices in zine collecting.[3] They identified twenty libraries with zine collections and received fourteen responses. They found that few collections cataloged their zines, and only two of these libraries circulated their collections. Overall, Stoddart and Kiser's findings showed that libraries still had trouble acquiring and cataloging zines, and approaches to circulation, preservation, cataloging, and shelving practices varied widely. The same year, Julie Bartel offered a comprehensive view on the evolution of starting the zine collection at Salt Lake City Public Library (SLCPL), including their eventual decision to both catalog and circulate their zines.[4] In 2022, Lauren DeVoe and Sara Duff's edited volume *Zines in Libraries: Selecting, Purchasing, and Processing* extensively demonstrated not only Herrada's original point about the clear importance of zines in library collections, but also provided documentation on the many challenges still inherent in incorporating zines into library collections.[5]

Finding Shared Community

As Berthoud says, "Zines are built around community, and so is zine librarianship."[6] In the United States, the website Zinelibraries.info, created by a zine librarians' interest group, brings together expertise and resources for colleagues to learn more about zines and ways to incorporate them into libraries. This community has created several important tools for zine librarianship: the Code of Ethics,

which compiles best practices for acquiring and cataloging zines, the Zine Union Catalog, and the zinelibraries listserv. The group organizes a zine pavilion at the American Library Association (ALA) annual conference, as well as a Zine Librarians unconference. In the United Kingdom, Callaghan describes a vibrant community among art librarians and zinemakers who collaborated to make the UK and Ireland Zine Librarians zine.[7]

Starting a Zine Collection

All approaches to starting a zine collection must consider the institution's mission, as well as resource needs, including staffing. Some collections start through a large gift, such as the Factsheet Five archive donated to the New York State Library.[8] Others are instigated through librarian involvement in zine communities, such as the zine collections at Vassar College, SLCPL, Barnard College, and Los Angeles Public Library (LAPL).[9]

The importance of top-level administrative buy-in to ensure success is emphasized by both Freedman and Perez.[10] Some reasons for failure include unfamiliarity with the material, lack of flexibility in acquisition policies and procedures, and complex cataloging requirements. Furthermore, different libraries have varied comfort levels in being early adopters versus letting other libraries establish best practices first.[11] Many sources recommend putting together a proposal to gain institutional support.[12]

Ethical Considerations for Institutions Collecting Zines

One of the challenges for libraries that collect zines is the tension between what zines are created for—a free, independent, person-to-person exchange—versus how libraries operate. As Siobhan Britton cautions, libraries and zines can be challenging partners, since "the controlled, owned, nature of something like a library collection seems to be the antithesis of many of the fundamental ideas that are central to zine making: independence, estrangement from mainstream culture, and the zine as an ephemeral object."[13] Andy "Sunfrog" Smith provides a zine author's perspective: at first, they were reluctant to have their zine in a library, for the reasons Britton discusses above.[14] However, Smith came to decide that library "collections are as vital as the struggle to keep controversial classics on the shelves when threatened with censorship. Along with the post office, libraries comprise one of the few public services actually worth treasuring."[15]

Kassir explains "that there is a tension inherent in collecting the material culture of radical or subcultural movements," going on to say that it created ". . . contradictions and compromises . . ."[16] Librarians have worked through this conundrum in multiple ways. Callaghan suggests only acquiring zines if there are multiple copies, reasoning that with enough duplication, taking one for a research library does not unduly reduce accessibility to others.[17] By contrast, Collingwood and Kassir reason that because access for all is part of their library's mandate, adding zines to the collection does not interfere with their ability to be used by the public.[18]

Berthoud recommends making acquisition decisions based on transparency: ". . . remember that it is best practice to pay creators directly for zine content whenever possible and always, *always* notify sellers that you are a library, not a private individual, and that their content will be available on the shelf for all to enjoy."[19] Although acquiring zines can be accompanied by difficult decisions, such as how to catalog and whether to circulate, Herrada argues that "[zine] collections will provide an understanding for future generations of how our society has challenged and transformed the walls of censorship and control of information by mainstream mass media."[20]

Collection Development

As Abel states, "Library zine collections are generally small and reflective of their communities, so collection development policies, selection processes, and promotional strategies will differ according to the impetus for and evolution of each collection."[21] The Zine Code of Ethics recommends using collection development policies in order to demonstrate the library's vision to the public, the zine creators whose work is or may be part of the collection, and the administration.[22] Collection development policies for zines, as with other collection types, articulate how the collection furthers the particular library's overall mission as well as define what constitutes the collection.[23] This is helpful for accepting—as well as soliciting—donations, and can provide inspiration for marketing materials. Further, these policies are helpful to libraries as they consider how the zine collection overlaps with other aspects of their collections, such as periodicals or comics, as zines can be issued in a periodical style, or sometimes include comics. Defining what a zine is in relation to similar types of publications can help ensure materials are organized intentionally within a library's collection.[24] Additionally, policies can help by limiting by type of zine, allowing for clear-minded acquisitions and collections.[25]

Zines cover anything and everything: from the highly introspective perzine or "personal zine," to the DIY (do-it-yourself) zine, which focuses on breaking down steps to do a task so that the intended audience can be better informed and more independent, to many more topics. An important reason that many libraries invest in zines is that they help them increase their collection's diversity in creators, content, and publishers. Zine collections are often curated to complement the institution's mission; for example, Barnard's emphasis on "womxn and non-binary people, with a collection emphasis on zines by womxn of color and new (2019) effort to acquire more zines by transwomen . . ." intentionally reflects their student population.[26] Vassar's zine collection emphasizes the institution's pedagogical practice of using primary sources.[27] The University of Michigan's Labadie Collection, which documents protest materials, contains many zines whose content fits that collection's parameters.[28] Cox describes how zines enhance the British Library's mission to reflect the United Kingdom's cultural record, as examples of living knowledge and contemporary culture.[29] The London College of Communication Library's collection focuses on design in communication; consequently, Collingwood and Kassir collect zines through this lens.[30] Additionally, many libraries document local and regional culture through their zine collection.[31]

Acquisition Processes

As DeVoe states, acquiring zines using the general library acquisitions workflow can be an "adventure and conundrum."[32] Many acquisition departments predominantly work with mainstream publishers and vendors rather than self-published authors, small businesses, or nonprofit distributors, which are hallmarks of zine production. However, as Berthoud points out, best practices remain: ". . . build a network of preferred sources, forge relationships, and be a good consumer."[33] Describing more granular levels of acquisitions, Collingwood and Kassir work with the finance team to use receipts and release advance funds when zine fairs are imminent; Grimes and Freedman each describe a similar process.[34] Most libraries accept donations as a way to acquire zines, with some relying solely on donations.[35] Collection development policies help to make prudent and consistent decisions on what to add as in scope with the collection, and are especially helpful when donations are at play.

Cataloging

Catalogers use many different strategies to catalog zines. The zinelibraries.info group coordinated several cataloging initiatives, including xZinecorex and the Zine Union Catalog, to help with the complexity of cataloging zines.[36] Additionally, zine catalogers have identified a need for controlled vocabulary and worked toward sharing thesauri, such as that maintained by the Anchor Zine Archive Library.[37] Berthoud, as well as Freedman and Kauffman, provide excellent in-depth discussions of cataloging zines, including common issues and real examples.[38] Freedman and Kauffman provide the sound advice that "When cataloging unruly materials like zines, it's a good idea to be adaptable."[39]

Bartel discusses title, author, subject, and other notable entry points.[40] In reality, however, catalog records vary much like zines themselves; some zines lack even the most basic bibliographic metadata, such as title and author. Perez describes a minimal approach used for the LAPL zine collection, which only catalogs title, author, and size of the zine.[41] Freedman and Kauffman consider the end user's needs, recommending "invaluable" information such as ". . . subject, title, author, and summaries . . ."[42] Subject headings are useful, yet few zine topics are adequately covered through controlled vocabularies.[43] Both Berthoud and Freedman and Kauffman recommend utilizing keywords and summaries, particularly with student input, to make the zines more reflective of natural language and therefore searchable in the catalog.[44] Freedman's earlier essay focused on the AACR2 cataloging framework describes the "flexibility" needed to fit zines into that cataloging framework.[45] O'Dell's findings suggest that Resource Description and Access (RDA) would overall facilitate better description and access to zines and other alternative publications because of increased plasticity in rules about authors and titles, but lacks instruction in how to handle intellectual property and has limited applicability for graphics-based description.[46] Berthoud also discusses adding zine genres as well as more specific local genre types in her cataloging-focused article.[47]

Due to the complexity of and resultant time commitment for cataloging zines, some libraries intentionally choose not to add zines to their library catalog.[48] Instead, they help users locate zines

in other ways, such as creating a separate database or spreadsheet. Several libraries make these publicly accessible, although for some, this is an intermediary step before cataloging as the final discovery tool.[49] Others use a finding aid approach to describe zines at the collection level rather than the item level.[50] However, Freedman and Kauffman argue against this method, saying that item-level cataloging is more likely to be useful to the end user and therefore increases the likelihood that the zines will be used.[51]

Processes differ in terms of classification and organization. Vassar originally shelved their zines by author name but feedback indicated greater interest in topical groupings.[52] At LAPL, zines are sorted by size, then alphabetized by title.[53] In its early stages, SLCPL created a homegrown subject classification scheme rather than utilizing the more commonly used Library of Congress or Dewey Decimal classification systems in order to create a flexible, user-friendly browsing schema prior to its decision to catalog the collection.[54]

Circulation

Per the literature, many libraries elect not to circulate their collection due to cataloging and preservation considerations.[55] One exception is Vassar, who, as Berthoud describes it, planned for circulation and cataloging from the outset.[56] Libraries that center the zine's ephemeral nature tend to treat them either as special collections with restricted use or as something they leave uncatalogued and thus do not monitor their use. Barnard splits the difference by collecting two copies each: one for preservation and one for circulation.[57] The Zine Archive and Publishing Project aims for three copies.[58] Bartel describes an evolution to their library's approach but explicitly connects the decision to circulate to the ability to catalog. Discussing a potential collaboration with their technical services department to catalog the zine collection, Bartel remarks that "Being able to move from in-house use to a circulati[ng] collection was a huge bonus, and together with the immeasurably improved access that cataloging would give patrons, convinced us that this was the right thing to do."[59] Adding zines to the catalog allows more patrons to discover these materials, and also enables them to be requested, which is helpful for libraries with multiple branch locations.[60]

Preservation

Format-wise, a "one-page folding zine" is a frequently used structure that uses a typical 8.5-by-11-inch piece of paper that quickly transforms into an eight-page booklet through simple folding and cutting techniques, or a compilation zine (also known as a comp zine), which brings together multiple authors, to contribute multiple perspectives on a given topic. Freedman and Kauffman's 2014 article provides a non-exhaustive list of common content types and formats.[61] Zines typically have few pages, small overall dimensions, and frequently lack sturdy covers to protect the pages. As such, preservation treatments can be warranted but are ultimately determined by the intended use and context of the item. For example, in a special collections or noncirculating environment, zines can be put into folders but are otherwise unmarked, minimizing preservation labor.[62] This has implications for cataloging as well—a

collection-level finding aid can easily be subdivided into folders; however, under that system, individual titles are harder to locate. In some cases, the lack of cataloging is interpreted to increase access and preservation needs. For example, Botimer and Peach detail a practice to leave zines uncatalogued, and instead digitize everything that flows into the collection.[63] Brett confirms that digital preservation can be "the wisest, most practical, and resource-effective course of action."[64] Yet Brett also acknowledges the need for buy-in and permission from the creators of the zines themselves. Wooten argues against digitizing zines as this practice can be ethically murky. Additionally, it can fundamentally alter the original presentation of the object.[65]

When considering the general public's ability to access and check out zines, measures should be implemented to ensure a longer shelf life for the materials. Some form of protective enclosure, such as clear folders, a covering, or simply reinforcing spines with tape, is frequently used to boost the sturdiness of the objects for eventual shelving and patron use.[66]

In summary, the literature demonstrates that zines are still under-collected, yet there is a plethora of practices and possibilities developed to suit a wide variety of library types and missions, as discussed in the zine *Zines in Libraries: Collecting, Cataloging, Community*.[67] As more libraries start to collect zines and best practices around zine materials continue to evolve and coalesce, these unique works are becoming less challenging to ingest due to the increase in example procedures and processes from others.

The Library Social Justice Zine Collection

In the spring semester of 2022, coauthor María Evelia Emerson, Student Success Librarian, began to explore the possibility of starting a zine collection in the Library. She had started a social justice zine collection in her previous position at a small, liberal arts college, and saw firsthand how well students connected with the materials. However, the U. of I. is an R1 doctoral institution with very high research activity, and home to the fifth largest library in the United States.[68] Differences in the environment and scale required an adapted strategy.

María sought librarians to partner with to develop the collection. After several exploratory meetings and discussions with different librarians, María partnered with coauthor Emilee and Mara to develop and establish a social justice zine collection as discussed above. We collaborated to access collection funds, secure space to house the collection, and build capacity to promote the collection and incorporate it into library programming and campus teaching and learning.

Zines are not new to the Champaign-Urbana area, both within the university as well as within the local community. Prior to the founding of the SJZC, the Library already had some zines in the collection, such as the zines collected by the Global Popular Culture Librarian from buying trips to India. The University Laboratory High School Library, a high school that works closely with and is located on the university campus, also collects zines and offers them for in-house use only for the high school

students. The University Archives offers *Pandora's Rag*, a student-run zine from the 1990s. Meanwhile, the Ricker Library of Architecture and Art (Ricker) at U. of I. has a small but burgeoning collection of zines, which they collected alongside artists' books and other independent, creative publishing. Beyond the Library, the city of Urbana is also home to an impressive collection of zines at the Independent Media Center's Zine Library. Additionally, there is a biannual Small Press Fest that brings attention to alternative publishing, including zines.

Although zines and their community already had a presence at the university and local area, we designed the SJZC to support the students at the university by providing a collection that is cataloged, collocated together, and circulating in one location rather than dispersed across multiple locations. As mentioned previously, U. of I. is a R1 university with over 55,000 students as of fall 2023, with a library collection comprising over 15,000,000 volumes and twenty-five service points.[69] Although that provides us with a wealth of opportunity to provide comprehensive and unique materials for research and teaching, the sheer scale of resources—in terms of collections as well as campus libraries—tends to overwhelm our undergraduates. Additionally, U. of I. is a land grant institution, which makes the broader public's needs fundamental to our mission. We are charged not only with serving our university's faculty, staff, and students, but also to better our state and add value to Illinois residents' lives.

Our institution's land grant and educational missions affected our development of the zine collection. We envisioned that the collection would specifically focus on undergraduate students' needs through developing a collection of materials that enhanced their sense of belonging. Zines have always served to let the reader know that they are not alone. By their nature, zines provide space for underrepresented voices and experiences and have a prominent history as a mechanism to share information and messages that are often missing in mainstream media.[70]

Collection Scope

Social justice encompasses a wide range of topics, subjects, creators, and stories. Examples of topics that can be found in the social justice zine collection range from body image, sexuality, microaggressions, mental health, social class, physical health, and more. Students can use the SJZC for personal reading and comfort or as sources in research assignments, providing a holistic approach to research through the lived experiences conveyed in zines.

Circulation

The three SJZC collaborators discussed ways that students can use the collection, and how those factor into cataloging, preservation, budget, and circulation. As seen in the literature review, zine collections vary widely across libraries. Like the essence of zines, no library zine collection is identical. Since one of our goals with the SJZC was to make the library more approachable and inclusive, we decided to circulate materials, as that could encourage student use and allow for readers to engage with zines in a less public setting than the library. This is especially important since, despite the Champaign-Urbana area being home to several amazing zine collections, none are

circulating aside from the SJZC. A circulating collection also enables the zines to easily be brought to workshops, classes, and campus resource fairs. Workshop leaders can bring a laptop and let students check out zines at the event, thus increasing visibility and lowering barriers to use. Circulation helps us serve our core land grant mission as well—by allowing the zines to circulate, we enable them to be used beyond our building. Anyone who has an Illinois identification card can apply for a free library card. Moreover, SJZC items may be requested through the statewide consortial system or interlibrary loan, thus increasing access to the materials not only beyond the university but also beyond the state and country. Further, the focus on social justice as a topic creates more information equity for the state and regional population.

Originally, we envisioned the zine collection to function similarly to Ricker's new books temporary location. This location shows in the item record in the Online Public Access Catalog and has a more restricted circulation rule with shorter loan periods and is limited to local requests only. Our circulation colleagues have strict parameters for establishing a new sublocation, however, and encouraged us to try other options before moving in that direction. After further consideration, we determined that our access-oriented mission for providing the collection would be further served by allowing the items to circulate freely.

Acquisitions

As cited in the literature, zines are not sold at mainstream vendors, which can challenge the typical library acquisition methods. We select and purchase zines through different zine distros that have a strong social justice focus instead of using the library's typical vendors. Zine distros are typically businesses but sometimes individuals that sell and distribute zines. As Berthoud noted, building a relationship with small vendors such as zine distros is a good practice to develop.[71] We recently saw the benefits of relationship building when a distro we frequently purchase from included several free zines in a recent shipment to thank us for our loyal purchasing. Although we typically purchase print zines for the collection, we occasionally receive zines in a digital format. After discussing this with other librarians who work with niche materials like sheet music, we learned that digital files can be sent to the campus document services to be printed and added to the collection. Another issue that sometimes arises is that a zine may sell out before we can purchase it. If the zine is reprinted, we purchase it. However, due to the small print runs of zines, we often lose the opportunity to add that zine to our collection.

Cataloging

Due to a long and complicated history, some U. of I. library units classify collections with Dewey call numbers while others utilize the Library of Congress classification system; several libraries use both. Although Ricker has used a specialized Dewey system for decades, Dewey does not have a specific call number for zines. The two main options in the Library of Congress Classification system are the genre-focused Z692.Z56 versus analyzing each by subject. We elected to use the former, to keep



Figure 1. Word cloud of subject headings for the SJZC. In addition to general stop words, we also added "zines, fanzines, periodicals." Visualization created by Voyant Tools, February 7, 2025.

all the zines in the SJZC together into Z692.Z56. This especially made sense since many zines have subjects that do not make up any substantive collections in Ricker, such as reproductive justice, race relations, and more (see figure 1 for a word cloud visualization of common subjects).

Classifying by format also echoes the rationale for why we located the zines in Ricker: as modes of creative expression. Still, we wanted to have a distinction in the catalog for the SJZC collection, to make it easier for both patrons and staff to locate the materials, so we included a public note on the record stating "Social Justice Zine Collection" (see figure 2).

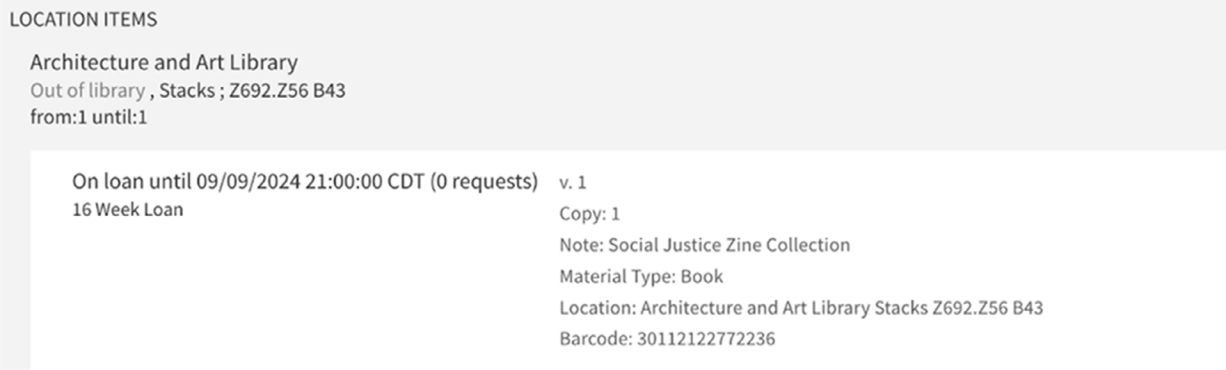


Figure 2. Example of a catalog record in Primo with a public note.

The zines are treated as any other monograph or serial in cataloging. All records received the level of information called for in general cataloging guidelines: author (person or organization), title, physical description (e.g., size, illustration, color or black and white), publication information (place of publication, publisher, and date of publication and/or copyright date), any additional descriptions, and subjects. These are added in both fixed and descriptive sections of the record, with codes, free text, or controlled vocabularies. The cataloger applies Library of Congress Subject Headings (LCSH), the number of which depends on the number of subjects covered by the item. The cataloging rules for the general (circulating) collection across the Library are to use LCSH. In special instances, catalogers will use other controlled vocabularies or local metadata, but this treatment requires advocacy and approval from the cataloging advisory team. The only additions are that all zines receive the 655 field genre "zine" and the special application of the LC classification, despite the general Dewey guidance for the location. The Ricker cataloger did original cataloging for approximately 40 percent of the zine titles, adapting the rest from Online Computer Library Center (OCLC) records. Per our catalogers' assessment, these records came from approximately fifty-five different libraries and, overall, were of high quality and complete.

Space Allotment and Location at Ricker

While the Z692.Z56 classification made it possible to achieve our goal to collocate the zines together, the physical location within Ricker where that call number range would normally be shelved is one of the most hidden places in the library. We identified a new space just for this collection where the zines would be treated akin to a display, complete with bold signage to make the collection visible and accessible (see figure 3). The items themselves are housed using a different preservation treatment than those already in Ricker: a distinctive, clear front pamphlet binder labeled on the back near the barcode with an orange label, "Social Justice Zine Collection." Our revised treatment, discussed below, replaces the pamphlet binder with a plastic bag with a cardboard insert behind the zine, which was also distinctive from the usual Ricker collections' housing.



Figure 3. Social Justice Zine Collection (SJZC) in its display style setting at Ricker.

Preservation

Zines are a format known for limited durability. In light of our decision to circulate these materials, we sought a proactive preservation strategy. We needed to provide a sturdy, external structure because most zines are only a few pages and would lean, bend, and suffer damage to their corners. The fragility of these materials not only risks the need for repair and replacement but also carries implications for shelf reading and browsability.

We worked with the preservation unit to determine a solution flexible enough for most zines while being sensitive to our budget and processing time constraints. We first used clear-front, 7-by-9-inch pamphlet binders. These worked for most zine dimensions and provided structure through their paperboard backing, while also permitting visual browsing through the transparent cover. Zines could be pocketed or stapled to their housing; Emilee chose staples since zines are often bound by stapling, reasoning that it would fit the aesthetic and material properties of the zines before preservation treatment and therefore be a more naturalistic fit. However, since the zines tended to be so much smaller than the binder, the cloth tape reinforced-hinge hid a significant portion of the zine cover, thus reducing the suitability of the preservation treatment whose purpose was to retain the visibility of the covers while protecting the contents (see figure 4). To address this issue, we asked for more pockets mounted toward the fore edge rather than stapling, especially for smaller materials. We no longer staple zines.

Not all zines in the collection required pamphlet binders. Sturdier zines did not require any housing, while moderately thin zines need structure but are too thick for pamphlet binders (see figure 5). The preservation department created custom enclosures with clear fronts for zines in this latter category.



Figure 4. Examples of small zines in clear-front 7-by-9-in. pamphlet binders.

After acquisitions and cataloging, each zine requires an individual preservation work order, but they are sent over as a group. After housing the zine in a binder or custom enclosure, the zines are sent back to Ricker and affixed with a call number, barcode, and given a special "Social Justice Zine Collection" sticker before shelving. The circuitous workflow from the point of placing the order until the item was available for checkout could take months, depending on supplies and student staffing ebbs and flows.

It is worth noting that over recent years, our preservation unit has had to absorb several budget reductions, impacted further by the global supply chain crisis instigated by the COVID-19 pandemic. Compounding this challenge, preservation supplies prices have risen, and reliable suppliers have become increasingly scarce. Altogether, these problems created instances in which zines awaited preservation treatment for months. Simultaneously, we began to host zine workshops and market the materials, which entailed time-intensive pre-planning and coordination across multiple units.

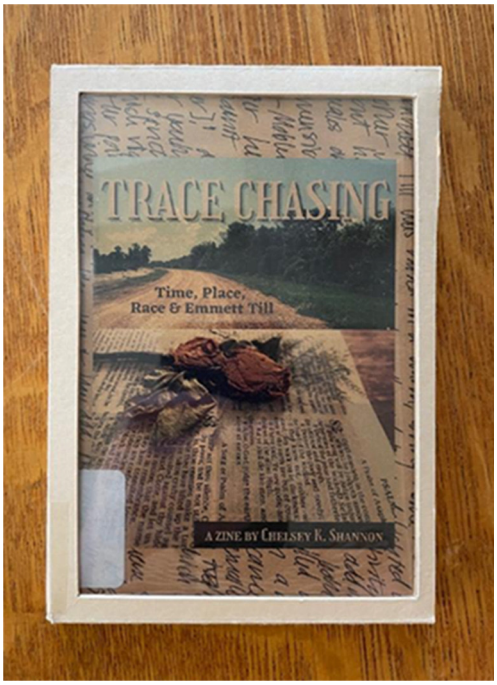


Figure 5. Example of a custom enclosure for a thicker zine.

To alleviate the workflow lag, we discussed alternate options, including reproducing the front cover on the front of a standard pamphlet binder. Preservation colleagues conducted experiments but determined that it would lead to potential bumping and delamination of the covers over time and use. They instead offered the solution of a "comic book style" presentation, in which the zines would be housed in clear plastic bags with boards in the back to create stability (see figure 6). We agreed to move forward with this solution, since it combined the advantages of browsability, simple treatment, and readily available, inexpensive materials.



Figure 6. Example of current "comic book" preservation style.

Collection Usage Data

Data showed that the SJZC circulated at a much higher rate than other collections. As of August 2024, the SJZC had approximately 142 items that had circulated 189 times, an average of about 1.5 times per zine. Another approach to understanding is the percentage of items that have circulated within fiscal year 2024, the most recent year with complete information. In this case, approximately 20 percent of the SJZC had circulated, compared to 12 percent of Ricker's total circulating collection, which is approximately 1.75 times higher than its most comparable group. This compares favorably across all libraries' circulating collections in the U. of I.'s system, which is approximately 1.7 percent. So, comparing the SJZC against other areas of the U. of I.'s collections, their circulation is 1.75 to 10 times higher, indicating that the decision to circulate these collections was met with appetite by our users.

When we originally discussed whether the SJZC should circulate, we knew one of the risks was lost or damaged materials, especially small and fragile materials like zines. While we considered these concerns, as of the time of writing (approximately two years after the pilot launched), zero zines have been declared lost or missing, and we are not aware of any damage. This is especially promising since the SJZC circulates at a higher rate than the rest of Ricker's collections, which suggests that the preservation process we use protects the zines well and that students treat the zines with the same respect that they have for other library materials. Additionally, the higher circulation rate than the other collections in Ricker demonstrates that users connect with the collection.

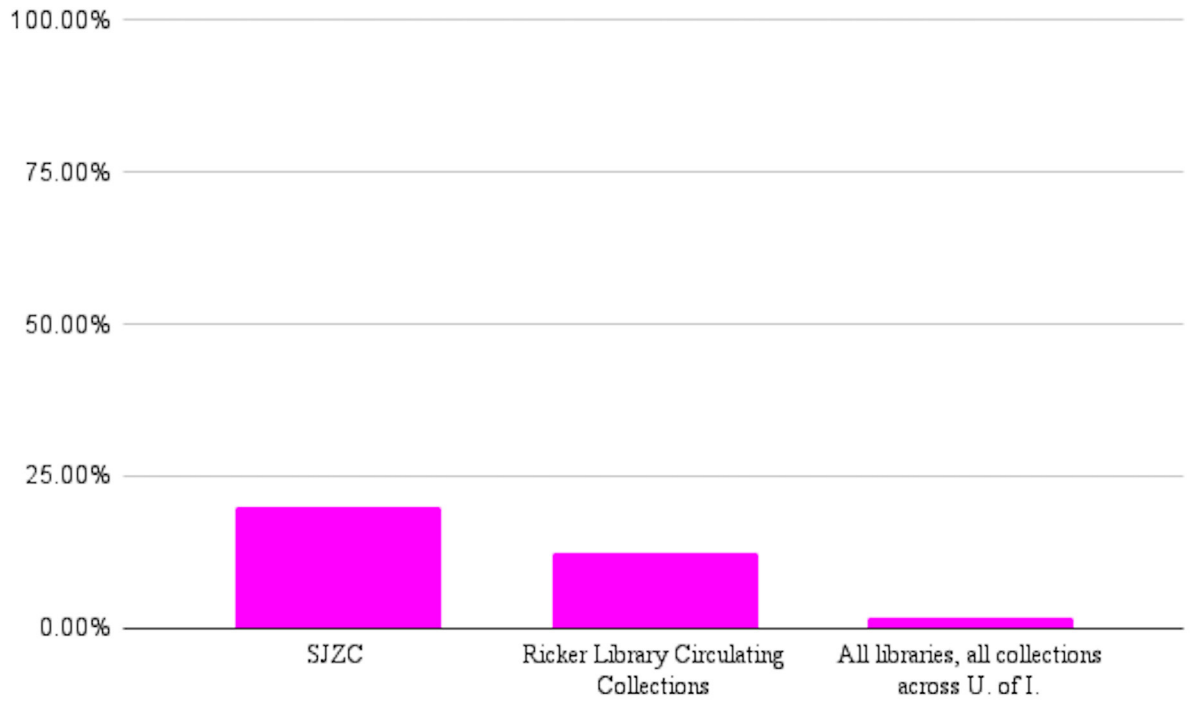


Figure 7. Average number of circulations per item during FY24, comparing the SJZC to other circulating collections in the Ricker, where the collection is housed, and all circulating collections across the Library at U. of I.

The SJZC benefits both the campus and the library. The collection quickly experienced uptake among students, staff, and faculty, and its zines are frequently used in workshop requests, classroom settings, campus events, and in discussions with faculty while discussing new ways to engage students. Since the implementation of the zine collection, María created a graduate student hourly zine position and hired two students to assist with responsibilities like zine workshops, collection development, and marketing and promotion. Introductory composition classes have begun to incorporate zine assignments, with guidance and assistance from the library. These classes highlight the SJZC, as they provide zine examples and demonstrate different ways to communicate and disseminate knowledge. Next steps include exploring more ways our circulating collection engages students through personal and academic ways, as well as through community building at the university.

Survey Methodology

Nearly thirty years separate Dodge's and Herrada's articles from DeVoe and Duff's edited volume, yet the topics that they covered and the challenges in library zine collections remain. Has there been progress made in zine acquisition and provision of these collections, or is it just as challenging and difficult? To answer these questions, we also present a survey and its findings à la Stoddart and Kiser, asking colleagues to detail their practices and challenges. In the initial stages of the SJZC development and implementation, we used our experience in zine librarianship, gained through previous work

developing zine collections and areas of expertise such as art and student engagement, to guide our work. However, in the process, we realized that our awareness of how others had instituted zine collections was primarily based on literature and anecdotes. We wanted to check our assumptions while adding valuable insight to this study, and so elected to create a benchmarking survey of fellow zine collections.

We created a survey to send to our peers and gather this information about zine circulation policies, cataloging practices, and ways the zines are used. In June 2024, we submitted our research methodology to the campus Office for Protection of Research Subjects, and they verified that we did not need institutional review board approval for our study. We still asked participants for consent to use anonymized responses in this publication. We used Qualtrics software to develop a seven-question survey of five multiple-choice questions and two free-text questions. In July 2024, we distributed the survey on the zinelibraries.info listserv and encouraged all types of libraries to participate, expanding it beyond academic colleagues since public and school libraries have been at the forefront of zine librarianship. The survey was anonymous, with twenty-seven responses in total. We excluded incomplete submissions, resulting in a final number of twenty-four. The zinelibraries.info listserv is composed of librarians who are passionate about and work with zines, so it is important to remember that the results should not be generalized across all libraries. However, we nonetheless found the survey results to be helpful for us to better understand other libraries' zine-collecting efforts in comparison to our own experience.

Analysis and Discussion

Q1: *What type of library do you work at?*

Academic libraries comprised the majority of the participants (sixteen) at two-thirds of the total participants (see figure 8). Public libraries (seven) had the next largest proportion at 29 percent, and one special library also participated. While analyzing Q4, we learned that most of the academic library zine collections are housed within their Special Collections. This type of location within the academic library influences policy decisions and ways the collection is accessed and used. Recognizing this, we considered the role of collection location when interpreting the survey responses. Unfortunately, no school librarians responded to the survey, which we did not expect, given the existence of the literature focused on introducing K-12 students to zines and structuring assignments around them.[72] However, there may be fewer school librarians on the zinelibraries.info listserv compared to other types of librarians, resulting in the lack of participation.

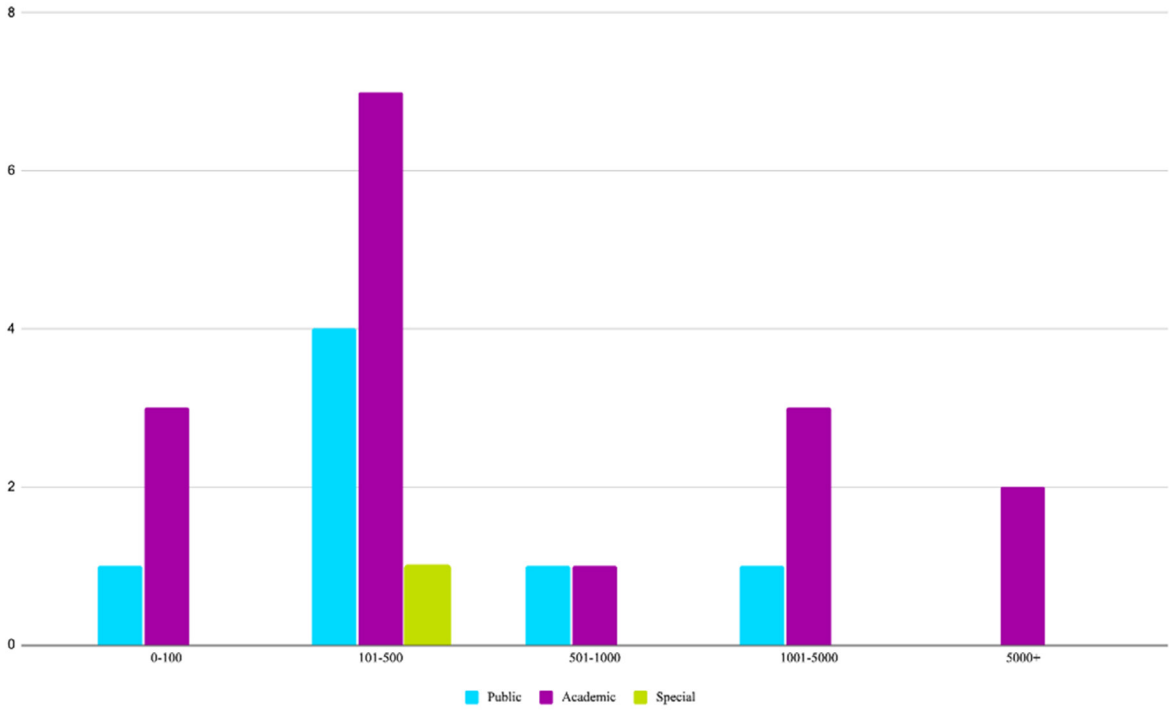


Figure 8. Survey responses to 'How big is your zine collection?', broken down by type of library (public, academic, and special).

Q2: *How big is your zine collection?*

Fifty percent of respondents possess a zine collection size of 101–500 zines (see figure 8). Interestingly, academic libraries primarily made up the respondents for both the smallest-sized collections (75 percent of the 0–100 size collection responses) as well as the largest-sized ones (100 percent of libraries with 5,000+ zines in their collection). Fifty-seven percent of public libraries possess collections in the 101–500 range but are also represented in every category except for the 5,000+-sized collection. The one special library that participated in the survey also had a midsize collection, between 101–500 zines.

Q3: *Is your zine collection circulating?*

We found the answers to Q3 particularly enlightening on zine collection policies since the zine librarianship literature does not typically focus on circulation policies and practices, with a few exceptions (see figure 9).[73] The survey demonstrated that 31 percent of academic libraries have fully circulating zine collections; of that number, none of the collections are located in their Special Collections, which increases the accessibility to their patrons. Public libraries have a higher percentage of circulating zine collections (43 percent), which makes sense considering public libraries are less likely to have specialized collections with circulation restrictions. The one special library did not have a circulating collection, yet that is expected since materials in special libraries rarely circulate due to their value, uniqueness, connection to the local community, or fragile nature.

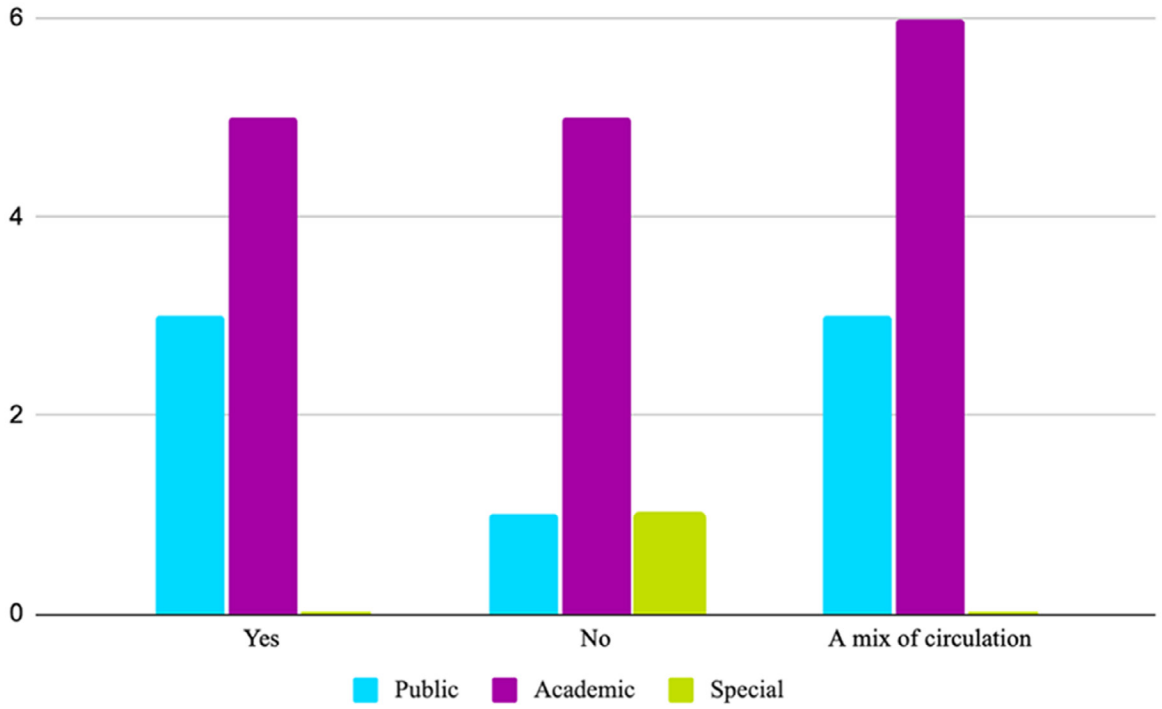


Figure 9. Survey responses to 'Is your zine collection circulating?' broken down by type of library (public, academic, and special).

Thirty-six percent of academic libraries and 43 percent of public libraries selected “a mix of circulation” for question three. Participants who selected this answer had an opportunity to provide additional comments.

Responses from those who work in public libraries included:

- Duplicate copies of zines purchased, with one copy that circulates while the other is in-building use only;
- Zine collections whose scope is on general topics circulate, while collections with specialized zines are placed in special collections or archives;
- Zines may have “unprocessed” barcodes, which means that while the zines appear in the library catalog and can be placed on hold, they do not circulate out of the library.

Academic librarians whose zine collections had mixed circulation policies had responses similar to public librarians, as well as some additional approaches. One library photocopied the original zines and circulated the photocopies while keeping the originals in the library. Other responses included circulation restrictions dependent on patron status, such as limiting students to in-building use only or restricting circulation exclusively to students enrolled in a specific course. One academic library said they were in the process of circulating their zine collection, “but only for zines where creators have given permission for circulation.” Like Peach and Botimer indicated, libraries self-impose restrictions on access.[74]

Q4: *What were the determining factors behind deciding if your zine collection is circulating or not circulating?*

Q4 was a free-text answer. Eighty-five percent of the public library responses shared that their zine collection is either circulating or a mix of circulation statuses, compared to 69 percent of academic libraries. We analyzed the factors that participants indicated contributed to their collection's circulation status and identified four themes: location and staff size, accessibility, and inclusive representation.

Location and Staff Size

Academic libraries that do not circulate their zine collection (31 percent), as well as one of the public libraries, explained that their zine collections are housed in their Special Collection units, whose policies mandate in-house use only. Location was sometimes determined by availability and interest: one academic library shared that their Special Collections was the only department that expressed interest in developing the zine collection, which determined the circulation status to be consistent with department policy. The one special library shared that its entire library collection is noncirculating. Another academic library raised a common concern with zines that most general collections do not typically encounter: "A major criterion for our noncirculating policy is how quickly zines become sold out or otherwise unavailable to replace." Additionally, some of the public and academic library survey participants echoed Bartel's assertion that circulation and cataloging with zines are closely interlinked and shared that circulation status depended on the staff size and workload of their colleagues from acquisitions and cataloging departments.[75]

Access

Public libraries with circulating collections provided reasons such as increased ease of access to their patrons but also shared that some zines are noncirculating because of the age of the zine or if the zine is highly decorative. Interestingly, one public librarian said that "many libraries have zine collections behind an archive or in-library use only." While this observation goes against the data in our survey, it does align with the literature review, which infrequently discusses zines and circulation. Similar to public libraries, some academic libraries said they made their collection circulating to increase accessibility and allow students the option to read zines in more private places. These responses aligned with our perspective as well, since we know students read, engage with, and take inspiration from zines in a multitude of ways. Sometimes, the type of academic institution played a role as opposed to the location within the academic library. For example, one academic librarian said they work at an art school that has a large zine-making culture, so circulating their zine collection makes sense considering the artistic nature and interest of their students.

Inclusive Representation

Although the topic was unaddressed by special and public libraries, several academic librarians noted how zine collections help address the lack of diversity in their collections, as Abel notes in

their chapter.[76] One librarian said, "We wanted our collection to be used by students at the same level as books in our stacks. For us, this is about balancing the voices we make available. Zinesters (zine authors) skew younger, and in our [zine] collection, there are more women/non-binary/femme voices, and voices of people of color, disabled folks, than in our book collection." Another respondent said they created their zine collection in response to a Black Indigenous People of Color (BIPOC) student survey and focus group, where students said they wanted more content by and about BIPOC authors and experiences. The same participant echoed a concern seen in the literature, how having circulating zine collections can enhance libraries' ability to reflect the true nature of zines: as Kassir states, ". . . zines were not originally created with the intent to be cataloged at all, and rather to change many hands. A library collection will always be at odds with this, but by letting them circulate, we are able to stay somewhat more aligned with one of the purposes of zines (sharing information and experiences widely)."[77] These librarians' reasoning to circulate their zine collections is similar to some of the motivations behind circulating the SJZC. While zines in the SJZC do not have to be created by individuals from underrepresented communities, many social justice topics explore and challenge dominant narratives. By structuring the SJZC as a circulating collection, students can use and engage with the materials, which validates the voices and experiences of the collection.

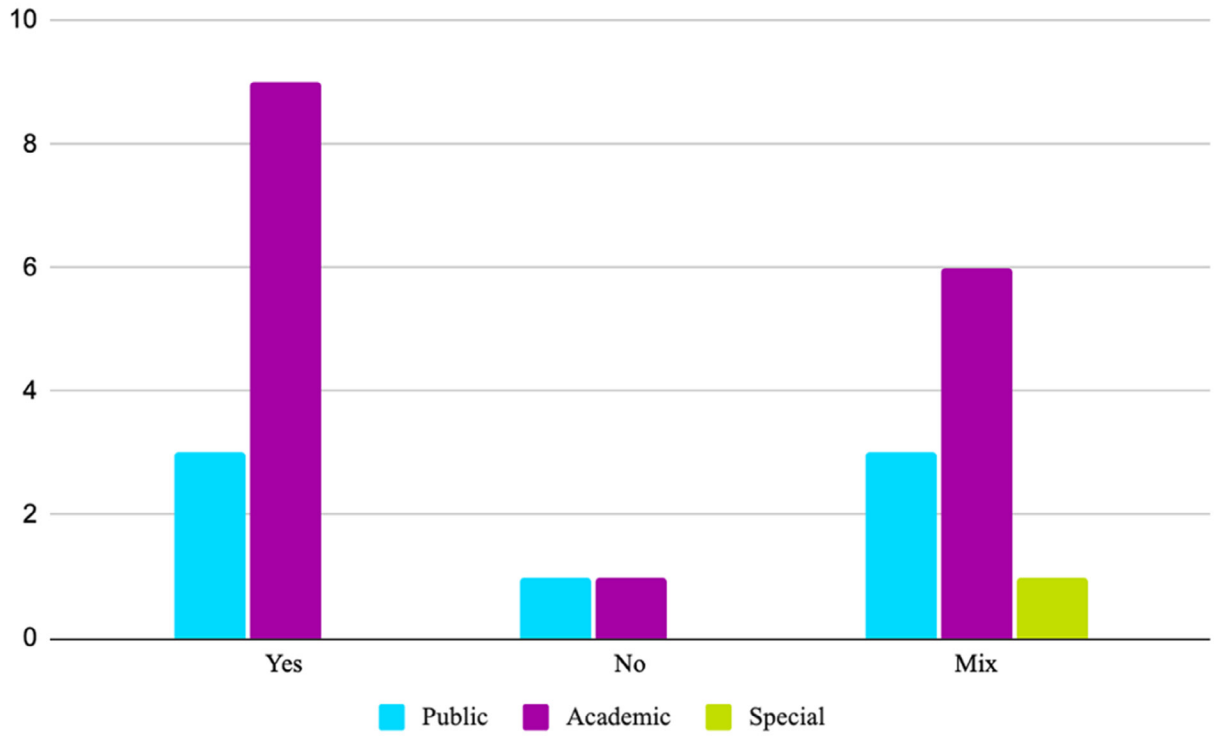


Figure 10. Survey responses to the question 'Is your zine collection cataloged?' broken down by type of library (public, academic, and special).

Q5: *Is your zine collection cataloged?*

Answers from Q5 demonstrated that overall, survey participant libraries have zine collections that are either fully cataloged or have a mix of cataloged and uncatalogued zines (see figure 10). From the survey responses, 93.8 percent of academic library zine collections, and 86 percent of public library zine collections, are either fully cataloged or have a mix of cataloged and uncatalogued status. Only two libraries (8 percent), one public and one academic, did not have their zines cataloged.

Akin to Q3, we prompted participants who selected a mixed status answer to provide further explanation. Lack of time to fully catalog or cataloging of collections currently in progress was reported by 37.5 percent of academic libraries and 43 percent of public libraries. Similar answers explained that libraries prioritized other tasks over original cataloging for zines, often using more efficient alternative workflows like copy cataloging, finding aids, or cataloging at the collection level. The special library shared that although they do catalog their zines, due to lag time in cataloging, they also maintain a spreadsheet of uncatalogued zines that they make available in their reading room so that patrons can discover and access zines as quickly as possible.

Upon reflection while analyzing the answers to Q5, we realized the phrasing should have been more detailed to avoid different ways of interpretation. While some zine cataloging records are very detailed, other records can be quite sparse. The variation in record completeness can be attributed to different challenges, such as a lack of staff time or a lack of details on the zines themselves. While some answers did remark upon fully cataloging or cataloging at the title level, other answers did not. Due to the inconsistency in answers and the unclear phrasing of the question, we are not able to fully understand how respondents define cataloging in this context.

Despite the lack of clarity around how cataloging is defined for the purposes of the survey, it is interesting to note that only two responses said their libraries did not catalog their zine collections. Much of the literature indicates that many institutions cannot or do not wish to catalog their zine collections. Respondents cited reasons such as difficulty placing zines into preexisting categories, the need for specialized treatment with classification, and the challenge of finding appropriate subject headings. More libraries may be relying on others to help with some of the workload and expertise required for cataloging zines. The cataloger at U. of I. found 60 percent of the zines added to the SJZC already had an OCLC record in WorldCat, which indicates that there are an increasing number of records in WorldCat that libraries that catalog zines have contributed for others to use. Additionally, we plan to incorporate local metadata and keyword summaries into the SJZC records to make the zines in the collections easier for students to find and understand each zine's individual subject matter. As more libraries incorporate zines into their collections and share their experiences and best practices, we hope it will lower the barrier for entry and provide encouragement to other libraries that are interested in collecting these important yet often overlooked resources.

In addition to discussing cataloging strategies, respondents shared other ways their patrons can browse their zine collections. One public library explained that their patrons browse their zines on

LibraryThing (a free open-source application where users can share online catalogs of materials) and also links the collection to their website. An academic library shared that their zines are only cataloged in a Google spreadsheet, which is accessible to those who have the link. One of the free-text responses in Q4 from an academic librarian is also worth sharing as it relates to cataloging practices. They shared that their library is currently processing zines in "kits," meaning that between ten and thirty zines with the same theme are cataloged as a collection rather than individually. The continued use of finding aids and collection-level records is an example of cataloging that both Herrada and Stoddart and Kiser discuss; however, Berthoud, Freedman and Kauffman, and Bartel actively discourage this approach as less helpful to researchers.[78]

We created the SJZC through a shared passion for inclusion and a willingness to collaborate. The survey results helped us learn more about how other libraries work with zines behind the scenes, as well as operationalize them as a tool to engage their communities. In line with the essence of zines, there is no standard way that the participants work with their zine collections. This is also reinforced by the zine literature, which consistently recommends that libraries develop an approach customized to each library's setting and overarching goals. The survey showed that libraries are heavily influenced by factors like availability of staff time, budget, space, administrative support, and collection scope, which impact their decisions with circulation and cataloging; however, the passion and value from librarians working with these materials is prevalent throughout the varying zine collection approaches and scenarios.

Our case study and analysis of the survey results informed us that while there are still many challenges libraries experience with zine collections, some practices and procedures seen in the literature are evolving with the intent to increase the accessibility of zine collections to patrons. Although the literature review rarely discussed circulating zines, the survey responses and our own collection showed that this is becoming a more commonly seen practice. Many times, the most challenging barrier to implementing and circulating zine collections is a lack of staff time, particularly with tasks such as cataloging and processing. However, information resource sharing from the strong and helpful zine librarian community aids in zine collection development, providing help with workload through resources like WorldCat and the Zine Union Catalog.

Conclusion

Throughout the literature review, case study, and survey, we explored evolving contemporary zine librarianship practices. The literature review documents even more libraries ready to take on the challenge of collecting zines and, overall, libraries that do so experience a positive impact. In our own case study, the SJZC has positively impacted our work, while also being full of challenges that keep us experimenting, discussing, and collaborating. We conceived of the SJZC as a circulating collection to increase accessibility and foster student engagement, as well as to assert its equal value to other library materials that students frequently use for personal and academic purposes. Many survey respondents reported similar reasoning, eager to provide space for their zines and highlight the creative and

ingenious ways different communities communicate their experiences, thoughts, and information. Our survey analysis shows how zine collection practices have evolved, and highlights librarians' innovative strategies to increase access to these valuable materials. With more information sharing about ways to make the zine implementation process easier for all different library types and budgets—as well as more discussions about ways zines are intended to be used—more students and patrons will have opportunities to engage with these exceptional materials.

Acknowledgments

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CRediT authorship contribution statement

Emilee Mathews: Writing - Original Draft, Writing - Review & Editing, Conceptualization, Methodology, Validation, Investigation, Visualization, Data Analysis.

María Evelia Emerson: Writing - Original Draft, Writing - Review & Editing, Conceptualization, Methodology, Validation, Investigation, Data Analysis.

The authors were in constant communication with each other throughout the research and writing process, brainstorming, adjusting language, conceptualizing the process, and working on the methodology. They did the writing and editing of the article in a Google Doc so they could edit it together easily. The only thing the authors did separately in this article was the survey analysis, which Emerson took the lead on, and the creation of the figures, which Mathews created.

AI Statement

ChatGPT was used to brainstorm options for the article's title. The prompt was "Create ten titles for a scholarly article about zines and libraries."

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NOTES ON OPERATIONS

Anti-Racist Collections Workbook

A Tool for Building Inclusive Library Collections

Frederick C. Carey, Arthur Aguilera, Amanda Rybin Koob, Juleah Swanson, Natalia Tingle Dolan, and Alexander Watkins

The Anti-Racist Collections Workbook was developed by a team of librarians at the University of Colorado Boulder as an alternative to traditional diversity audits, which often fail to address systemic issues. Recognizing the deep-rooted ideologies of Whiteness in academic libraries, the workbook uses scholar Diane Gusa's White Institutional Presence framework to critically examine collection practices. It focuses on six areas: cataloging and classification, selecting materials, purchasing materials, approval profiles, weeding, and community engagement. Each section provides questions to challenge existing practices and promote anti-racist collection policies. By interrogating and adjusting traditional practices, the workbook aims to inspire library practitioners to create inclusive, representative collections that better serve all communities, moving beyond superficial representation to address structural inequities in library systems.

Introduction

Many libraries and their collections remain deeply ingrained in systems that perpetuate Whiteness.[1] To challenge this status quo, a team of librarians at The University of Colorado Boulder created the Anti-Racist Collections Workbook to help academic library employees at predominantly White institutions adopt more reflective approaches to current and future collection management efforts. One of the most common approaches to diversity assessment is to attempt to quantify diversity within collections through a diversity audit.[2] These investigations are often hindered by how difficult and problematic it can be to define what identity markers are being counted and how they are determined.[3] Often, these methodologies can end up more focused on numerical representation than on ingrained systems and dynamics of racial domination and power. For an in-depth exploration of our decision to bypass a diversity audit in order to focus on systemic issues, see our previously published book chapter: "Beyond the Diversity Audit: Uncovering Whiteness in Our Collections."[4]

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This article will focus on the development process and theoretical underpinnings of a reflective resource entitled the Anti-Racist Collections Workbook (see appendix).[5] The workbook was developed as a tool to shift focus from purely numerical representation to the critical examination of the decision-making processes that govern collections systemically. The workbook examines how Whiteness is embedded in key facets of collection development and management and offers a reflective framework for understanding how Whiteness has distorted and dominated collections practices. It is designed to walk readers through biases and unexamined norms that exist within library systems. The workbook does not have all the answers; instead, it is intended to raise questions about long-standing collections practices that have largely gone unnoticed, unexamined, and unchallenged. The workbook questions are meant as a first step to enacting systemic change in collection development by illuminating component parts of routine workflows. While we discuss the next steps we have identified for our institution, the necessary changes are going to be contextual for each institution.

This article outlines the use of Diane Gusa's White Institutional Presence (WIP) framework as the theoretical foundation of the workbook. WIP applies Whiteness theory to the realm of higher education and provides academic libraries with a strong contextual understanding of the manifestations of Whiteness in the academy. This article uses WIP to examine how WIP's key tenets of White ascendency, monoculturalism, White evasiveness, and White estrangement have influenced collections practices in libraries. This article examines more deeply how the workbook situates six key areas of collection management within the WIP framework, including: 1) cataloging and classifying materials, 2) selecting materials, 3) purchasing materials, 4) creating approval plans, 5) weeding collections, and 6) engaging with library communities. Our project's aim is to explicitly name the practices and systems we use across academic libraries in the United States to develop academic library collections, and to examine how they are created within and by Whiteness at predominantly White institutions. By problematizing Whiteness through the framework of White Institutional Presence, we propose that library workers can disrupt racism in collection-building habits and systems.

The authors would like to note that the workbook was developed between 2020 and 2023. The political and cultural environment at the time of expected publication is very different than when we began, and we recognize the work will necessarily be done in different ways in different contexts. We believe the workbook can be a powerful guide for personal action and reflection, and thus is still a valuable resource even when institutional support is limited or in flux.

Whiteness in Academic Libraries and Collections

Important work has been done to explore the complexities of critical race theory (CRT) and Whiteness in academic librarianship.[6] While an exhaustive review of the intersections of CRT, Whiteness, and librarianship is beyond the scope of this paper, it is instructive to understand how Whiteness has been variously understood in the field so that we can apply a critical frame to collections work in particular. As Gina Schlesselman-Tarango describes it, "Whiteness, in its ubiquity and with its claims to normalcy, resists definition"; among other definitions it can be "an identity or self-understanding, an ideology or set of group beliefs, a concept, a form of property, an experience, several social practices, a system

of power, that which terrorizes."[7] As Ian Beilin states, "Whiteness is a status that sets the standard for normality and reality itself (at least in much of North America and Europe) . . . often discursively hidden within concepts like neutrality or universality."[8] Examinations of Whiteness and librarianship should also be grounded explicitly in resistance to White supremacy, which is "a political, economic, and cultural system in which ideas of White superiority and entitlement are widespread, and relations of White dominance and non-White subordination are daily reenacted across a broad array of institutions and social settings."[9]

Some recent scholarship in library and information science connects concepts of Whiteness to library collections. In her 2019 blog post "Whiteness as Collections," Sofia Leung explores the impact that physical collections have on library spaces and, more specifically, scrutinizes how collection development practices continue to promote library spaces and materials as "sites of Whiteness."[10] Leung asserts, "Library collections continue to promote and proliferate Whiteness with their very existence and the fact that they are physically taking up space in our libraries."[11] Erica England examines the concept of " whiteness as property" and, in researching a sample of recently acquired print books, finds that of those books that are about nondominant narratives, 68 percent of authors are White. England concludes that White authors benefit monetarily and through tenure and promotion advantages in publishing the stories and voices of people of color.[12] Thus, "when the majority of academic collections are filled with White authoritative knowledge designed and created by the dominant Eurocentric culture and published in White-dominated publishing houses, a clear message is sent: there is little value in what people of color have to say."[13] In exploring a small, rural, children's collection, Wickham and Sweeney find that race-neutral selection, lack of weeding, and constraints on resources contribute to the perpetuation of Whiteness in collections.[14]

White Institutional Presence

Scholar Diane Gusa developed a framework for discussing the interrelated dimensions of Whiteness in higher education in 2010, calling it White Institutional Presence (WIP). This framework is grounded in higher education retention literature and the "marginalization and discrimination experiences of African American undergraduates."[15] We have found that this framework reflects how academic libraries contribute to a White institutional presence on campus. Indeed, WIP's four attributes—White ascendency, monoculturalism, White blindness (called here White evasiveness), and White estrangement—resonate with many of the concepts evident in literature examining Whiteness in academic libraries.[16]

To begin, WIP's attribute of White ascendency reflects the "thinking and behavior that arise from White mainstream authority and advantage, which in turn are generated from Whiteness's historical position of power and domination."[17] This leads to a sense of entitlement, the sense that it is right and natural for White people to maintain control over spaces, discourses, and outcomes. This idea is reflected in Beilin's question: "Is the library, by definition, a White place?"[18] Several writers have explored this idea of Whiteness as it manifests in library architecture and spaces.[19] This is also reflected in the continued

employment disparities for Black librarians and librarians of color, widely discussed over the past three decades but without significant improvement.[20]

Gusa's next attribute of WIP, monoculturalism, is "the expectation that all individuals conform to one 'scholarly' worldview, which stems from the aforementioned beliefs in the superiority and normalcy of White culture."[21] Monocultural values are so embedded in academic libraries in the United States that they may not be readily noticeable. For example, the practices of collection building are part of a scholarly life cycle that includes scholarly publishing, and these practices often disguise "the fact that BIPOC knowledge has never been considered valid knowledge."[22] Further, Chiu, Ettarh, and Ferretti note that collecting practices as codified in the Library Bill of Rights uphold a false neutrality ("Libraries should provide materials and information presenting all points of view . . ."),[23] operating on "an assumption that all points of view on all issues are equally fixed in formats that libraries collect and that publishers equally publish."[24] David James Hudson applies a related critique to the scholarly production of librarians themselves, unpacking the supposedly neutral, White values underpinning a widespread focus on practicality as a research priority in the LIS profession.[25]

Gusa further describes the next WIP attribute of White blindness or color blindness, or what we call White evasiveness or color evasiveness. This ideology "obscures and protects White identity and White privilege" while espousing the "neutral" concept that "everyone is the same," ignoring and undermining legacies of racism and White supremacy.[26] In this way, color evasiveness means that Whiteness is never the cause of racial inequality by negating discourse around racism. This concept likewise shows up in academic library literature as a "general consensus that Whiteness seeks invisibility"[27] and is related to the idea of "new racism" defined by Robin DiAngelo as "modern norms, policies, and practices [that] result in similar racial outcomes as in the past, while not appearing to be explicitly racist."[28]

Finally, the attribute of White estrangement sustains WIP by "distancing Whites physically and socially from people of color."[29] This relates to the significant racial employment disparities in libraries, mentioned above, as well as to the perpetuation of micro- or macroaggressions in the workplace against colleagues and students of color. White estrangement can also lead to problematic contributions to literature about racism in LIS, for example, by establishing "a line of inquiry that centers White scholarship."[30] This is an important limitation to the field of critical Whiteness studies and LIS. We are concerned with this eventuality in our work and strive for a research practice of self-reflexivity that positions our identities in relation to our thinking and lived experiences while citing the Black and people of color scholars who have written the foundational texts related to CRT and libraries. We also wish to avoid designating racial categories for those authors whose racial identities are not self-defined.

Gusa's attributes of White Institutional Presence resonate with much scholarship on Whiteness in LIS and with the critique of dominant ideologies evident in Critical Race Theory more broadly, such as "color blindness, objectivity, neutrality, and meritocracy."[31] Further, we see explicit connections between Gusa's framework and collections work in academic libraries. WIP clarifies how Whiteness manifests in academic environments and provides succinct language to apply directly to the structures underlying collection development work.

Development of the Workbook

Why a Workbook?

We considered conducting a large-scale diversity audit of our print circulating collections at the University of Colorado Boulder but quickly recognized the challenges of scaling existing practices for large academic collections and drawbacks of the approaches we considered (such as incorrectly identifying or assigning author identities or relying on problematic metadata).[32] The process of investigating diversity audits again prompted the question: diverse compared to what? This led us to examine the heterogeneous nature of predominantly White institutions and their academic library collections in the United States, and specifically the ideologies of Whiteness that have informed their creation over decades.[33] As Todd Honma notes in the forward of *Topographies of Whiteness: Mapping Whiteness in Library and Information Science*, it is important to "tackle both the structural and the representational aspects of Whiteness in LIS."[34] Diversity audits, in general, address representation without interrogating the structures and systems that we use to build collections. We suggest that in order to begin developing anti-racist collection practices, or to "dewhiten" our collections,[35] it is necessary to first comprehend the systems, informed by Whiteness, that have shaped our collecting practices as they exist today.

As an alternative to a diversity audit, we sought to develop a tool that could interrogate collection-building practices and establish strategies for anti-racist collections at predominantly White institutions through structured reflection. While the workbook focuses on separate functions and processes related to collection building, it also offers a holistic view, allowing practitioners to see the big picture while engaging in critical thinking about their individual work. This format also allows for group discussion and initiatives, and prompts can be customized for group engagement at a variety of institutions.

Workbook Structure: Sections and Questions

Whiteness is built into every aspect of collection-building systems, and these systems maintain existing knowledge production dominated by White voices and perspectives. In considering these systems, we identified six primary areas of focus: 1) cataloging and classifying, 2) selecting materials, 3) purchasing materials, 4) approval profiles, 5) weeding, and 6) community engagement. These six areas comprise the six sections of the workbook. Each section overtly articulates how current standards and practices in each area reflect WIP and continue to promote and maintain White ideologies. Each section includes a series of questions that library collection practitioners can leverage to challenge the current ecosystem at both individual and systemic levels. These questions are designed to challenge systemic barriers and spark new ideas for moving forward, and are not intended to shame any individuals or identities. They are also not exhaustive, and the workbook will be continually updated, expanded, and revised. The workbook underwent several reviews by colleagues at the University of Colorado Boulder during each stage of the design process before it was published and went live online. Reviewers were solicited from each area of focus of the workbook, and their feedback is represented in the published workbook.

Using the Workbook

We designed the workbook to inspire reflective practice. It is our hope that library workers will engage with the questions posed in the collection areas described in the workbook relevant to their work. Through this process of questioning and reflecting, we hope that librarians will consider their practices and design changes that best fit their institutions.

Libraries hold a myriad of formats within their collections that all possess a series of unique characteristics that differentiate them from each other and require specific considerations during evaluation. Leung's post "Whiteness as Collections" and the assertion that collections perpetuate Whiteness through the physical space they occupy inspired us to begin our process by focusing on print monographs in an attempt to begin dismantling our libraries' spaces as sites of Whiteness. Future plans include further developing the workbook to include a greater variety of material formats. We encourage adapting the workbook for your own context, formats, and use.

The Workbook is the starting point for libraries that want to make systematic changes and can complement other justice work, assessment, and inclusive practices. It is ideally undertaken by a library team that is dedicated to making proactive change, but also has relevance to individual practice and the impact that can be made by individual library workers, depending on their personal and professional context and assessment of risk. We understand that in the current political environment, this work may not be able to be undertaken institutionally; however, this work is still vitally important.

Anti-Racist Collections Workbook Summary

In this section, we will provide an overview of each core collection-building area found in the Workbook and examine how traditional practices may be reinforcing Whiteness, and pose questions from the Workbook to spark change. For a complete copy of the workbook, see appendix A. Following the overview of each Workbook section, we highlight ongoing projects where we have begun to enact changes to our practices and policies in the "Next Steps" section of this article.

Cataloging and Classifying

The use of controlled vocabularies in cataloging and classification practices reflects monoculturalism—that there is only one correct way to think. Jennifer Martin explains that controlled vocabularies "reflect and reinforce cultural norms which are harmful to nondominant peoples and cultures, with LGBTQ+ [Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, and the spectrum of sexual orientations, gender identities, and expressions beyond these categories, such as intersex, asexual, nonbinary, and more] people, racial and ethnic minorities, religious minorities, and non-Western countries most frequently discussed."[36] While controlled vocabularies do offer a standardized classification method, they are ingrained within White cultural biases and subject non-White cultures to inaccurate or

offensive descriptions and discoverability challenges. This standardization creates a cyclical process that maintains White dominance and the underrepresentation of diverse voices and topics.

White evasiveness manifests through attempts to be objective and/or neutral. Library catalogs do not present—nor have they ever—materials objectively or neutrally. Attempts at neutrality ignore or significantly understate the weightiness of race and ethnicity. This perpetuates the dominance of a White scholarly worldview[37] and directly contributes to the erasure of non-White experiences. We can also see White evasiveness in the way classification hides and ignores Whiteness, as it is always the unmentioned, invisible norm. Meanwhile, other ethnic groups are marked explicitly, the assumed exception to the White norm. For example, Library of Congress Subject Headings (LCSH) explicitly mark African American involvement in the Civil War with the heading United States—History—Civil War, 1861–1865—African Americans, while Whiteness has been normalized through the singular use of the heading United States—History—Civil War, 1861–1865.[38] White evasiveness is reflected in Whiteness' privilege to go unmarked as the default option in our cataloging systems.[39]

The Anti-Racist Collection Building Workbook prompts library employees who work on the cataloging and classification of materials to reflect on their own individual processes, as well as their institutional practices, to begin to dismantle White dominance in how materials are identified, recorded, and discovered. Questions such as "How are cataloging and classification systems distancing and segregating diverse knowledge?," "How will the cataloging and classification of BIPOC knowledge affect its placement in the library?," and "How are cataloging and classification systems using offensive and outdated terms?" encourage library workers to consider what it means for users to discover and engage with collections. Questions such as "How are cataloging and classification systems lumping diverse forms of knowledge together inappropriately?" and "How are cataloging and classification systems leaving White knowledge as unmarked and neutral but marking and othering BIPOC knowledge?" directly address the ways Whiteness acts as the system for determining where knowledge belongs and who knowledge is intended to serve within collections. While changes to controlled vocabularies like the LCSH can be lengthy and difficult processes, local changes, such as changing Indians of North America to the specific nations represented in materials, can be made to benefit local communities and library users.

Selecting Materials

The building of collections is an ongoing process shaped by choices made by library workers: "We buy one book to the exclusion of probably thousands of others. And in the process, we build our libraries as one kind of world, one that can never encompass all the possibilities of how we might organize ourselves in social, cultural, political, and, critically, material space."[40] This work is both historically and currently dominated by White perspectives, as the library profession in the United States is overwhelmingly White and many of our institutions' faculty and users are predominantly White. Gusa's concept of White ascendancy can be seen in library selection, as the ongoing choices made by library workers reflect White domination of academia and a concomitant monocultural conception

of knowledge production. WIP also explains the commonly held notion that this is both right and natural—that collections dominated by Whiteness are neutral, rather than the result of deliberate choices.

Library selectors choose materials suggested through ordering platforms, faculty, staff, and student requests, reviews published in professional journals, book awards, or vendor promotions. Some subjects have core collection lists that can be compared to our holdings to identify gaps in our coverage. In each of these cases, library workers use existing knowledge of the subject and of our users to determine whether each potential purchase is an appropriate acquisition. WIP can play a role in determining which publishers and titles are included in ordering systems, which titles gain exposure through reviews or awards, and which titles are accepted as making up the "core collection." As professionals typically educated within a monocultural system that demands adherence to a White scholarly worldview, many library selectors place a heavy emphasis and value on materials that reflect White, Western ways of knowing and knowledge production.[41] Due to this monoculturalism, many library selectors have gaps in awareness or even skepticism of materials from traditionally marginalized voices, which employ non-Western methodologies or which reflect diverse worldviews. In the workbook, we ask library professionals to consider how they can go beyond their typical sources for book discovery and purchasing to consider materials that reflect diverse ways of knowing and thinking. These knowledge practices have been cultivated, developed, and used by many cultures worldwide for generations, especially within BIPOC communities, but are frequently dismissed in a White scholarly framework.[42]

A White scholarly environment also determines what books are available to be purchased. For many subjects, library workers select items written by professional scholars, for an audience of upper undergraduate to graduate students and faculty. The ability to publish a scholarly monograph depends on the time, support, and resources afforded to privileged and majority White professions, such as tenure-track professors. Knowing that this is the environment that produces books we collect, the workbook poses the question: "How can we go beyond traditional scholarly publishing venues to include voices either overlooked or marginalized by White structures of knowledge production?"

White ascendency and entitlement are seen in collections that are overwhelmingly built to answer White questions and serve White needs. White users are the assumed and anticipated users of collections at predominantly White institutions. Library collections historically reflect an "imperialist desire to know and gather the cultural artifacts of marginalized cultures."[43] To this day, these library collections have been built to inform the assumed White users about the cultural "other." Thus, even materials on diverse topics are often not for diverse communities, but instead for White consumption. Indeed, such collections often tell people of color things they already know, as they are meant to inform White audiences about them.[44] To correct such a long-standing imbalance, it will take dedicated and consistent effort to change our practices and shift the makeup of our collections. Our workbook suggests that selectors consider the following questions when evaluating materials: "What does this material communicate about its intended audience?," "Who are the anticipated users of this material?," and "Is this material only about diverse communities, or is it truly for those communities?"

Due to White estrangement, White library workers may be less likely to know about the needs of their non-White users, less familiar with diverse publishers, and less likely to be approached for requests by non-White users. Overall, they are less likely to be connected to communities of color. The workbook asks library professionals to reflect on how current collection development practices distance libraries from diverse users. Then, to ask themselves: "How can we engage diverse users in the collection development process?" Similarly, disciplinary faculty may be unaware of alternatives to White-dominated course materials and textbooks, which often drive library selections. The workbook urges library workers to identify opportunities for partnering with disciplinary faculty to identify diverse materials to be included in course readings and syllabi.

Purchasing Materials

The practice of purchasing materials can be viewed through two lenses through which WIP may manifest: the policies and processes that guide acquiring materials and the vendors libraries engage with. White evasiveness is notable to unpack when considering procurement policies. Procurement offices are often required to consider the most efficient means of purchasing, which often emphasizes cost-effectiveness and lead-time as significant factors.[45] The standard processes of evaluation, such as competitive bids, may be viewed as neutral and applied equally, yet could obscure the advantage granted to Whiteness. For example, access to capital could impact the price or delivery time a vendor is able to offer. Yet, a Black-owned business may lack that same access to capital or loans through historic and systemic discrimination within the banking system.[46]

When purchasing materials, libraries are guided by a number of policies and processes, whether it is campus procurement policies, state laws, or internal processes and documentation on how to conduct acquisitions work. The American Library Association Cultural Proficiencies for Racial Equity specifically calls out that "many of the policies, procedures, and norms employed and enforced in libraries are rooted in White supremacy, and are often exclusionary to BIPOC individuals."[47] White evasiveness may be structurally embedded into processes and policies for acquiring materials, ensuring White economic power is upheld while disadvantaging communities of color.

When interrogating which vendors libraries engage with, White estrangement is present, especially when considering not only financial resources, but time and attention. "Who has a seat at the table?" is one of the questions posed in the workbook section on purchasing materials. This question is meant to interrogate which vendors libraries engage with through not only financial resources, but also time and attention. Both a library's long-standing relationships with specific vendors and the predominantly White demographics of the publishing profession result in White estrangement and the physical distancing of libraries from businesses owned and managed by people of color. Through these economic relationships, libraries have an opportunity to dismantle an environment of White estrangement that primarily serves large, White-owned and managed businesses and cultivate new, enriching relationships with businesses that support and grow communities of color and are owned and managed by people of color.

While history may favor White economic power, there can be mechanisms and the development of policies to dismantle WIP, even for those operating within a public procurement system.[48] For example, the National Aeronautics and Space Administration (NASA) created a pilot program to partner and mentor large and small contractors with members of underserved communities, and increase outreach to small businesses representing LGBTQ+, disabled, and veteran communities about navigating NASA's procurement process.[49] Libraries can engage in similar exercises to examine barriers to purchasing materials and engaging with a diverse vendor base. Questions found in the workbook on purchasing materials can guide library workers to examine the ways procurement policies, procedures, and engaging with vendors currently uphold WIP, while considering alternate avenues.

Approval Profiles

Approval plans are widely adopted collection-building tools designed to identify and streamline the acquisition of newly published works that fall within the scope of a library's collection. This acquisition method reflects the current landscape of knowledge production and dissemination and plays a key role in perpetuating Whiteness in academic collections. Varying by vendor, approval plans identify materials using a set of subject and nonsubject parameters that are set by the library. These criteria may be reliant on subject classification, language, publisher, award lists, geographic origin, format, readership level, price, and more. Depending on the goal of the library, vendors will notify librarians if a title is in scope or will immediately purchase and deliver the title as part of an automated service.

The main value of the approval plan is derived from a vendor's ability to identify relevant materials from thousands of new publications each year. In recent years, approval plans have been found to prioritize the auto-shipment of material from large academic publishers as compared to individual titles selected by librarians or requested by users.[50] Do approval profiles and other methods of acquisition proactively include historically under-collected publishers or voices? We pose this question in the workbook to encourage library workers to critically evaluate the profiling and book matching processes of any vendor, including how the vendor applies subject thesauri and nonsubject parameters to materials and how those practices vary across publishers. Given that approval vendors are situated within a dominantly White publishing industry, the issues discussed in the Selecting Materials and Cataloging & Classification sections of this article materialize in practice through approval profiles. Vendors have taken note of the pitfalls behind mainstream classification systems like the Library of Congress Classification (LCC) and Dewey Decimal System and have developed interdisciplinary tags in an attempt to identify non-White materials.[51] However, these interdisciplinary categories are subjective and manually applied based on data received from the publisher and are designed to assist with numerical representation, rather than a critical redesign of the service. As noted in a recent study, tags may not be as effective identifying diverse authors, nor are they systematically applied to many small and independent publishers.[52]

Much of the literature around the evaluation of approval plans is primarily economic in nature. Most libraries evaluate their profiles based on the speed of fulfillment or cost efficiencies. Workbook

questions such as "Are selection filters potentially eliminating materials that do not conform to a White scholarly worldview?" and "Are we resistant to try alternative modes of collection building?" encourage library workers to expand how approval plans are evaluated and if adopting these tools will advance or hinder the goal of creating anti-racist collections. Predominantly White institutions should consider whether we are overly reliant on tools that are designed to acquire mainstream materials, and whether librarians are demonstrating White evasiveness by passing the work of identifying diverse materials to vendors that are less effective at that goal than a selector making title-by-title selections.[53] The workbook prompts library professionals to critically consider the filters and algorithms used, advocate for needed changes, and if necessary deemphasize approval services that reinforce knowledge structures informed by White voices and perspectives.

Weeding

Weeding is crucial to keeping collections healthy and relevant, but weeding processes and decisions can perpetuate White knowledge's domination of collections. Oftentimes, weeding decisions are made primarily by sets of criteria that include age and circulation or usage statistics. These are factors that are impacted by White supremacy, for example, because exclusion of materials by BIPOC authors from curricula can lead to lower usage, or BIPOC issues may be less popular areas of study for a predominantly White student body. White evasiveness and the desire to ignore race as a factor presents through the reliance on such superficially "objective" criteria. However, even these factors are impacted by White ascendancy in the academy. We recommend library workers who are planning a weeding project start reconsidering traditional methods used in the weeding process and ask themselves: Are we relying on usage data too extensively when making weeding decisions, and how might we enhance criteria that rely solely on circulation? Additionally, library professionals should consider if they are taking race and Whiteness into account explicitly in their weeding criteria.

Overall, data-driven weeding practices can result in diverse but less popular materials being removed. Materials that would be relevant to BIPOC students or that could represent BIPOC points of view in our physical spaces may be weeded uncritically. The result is monocultural library spaces that estrange our users from diverse voices. This is one way the library perpetuates White estrangement: White users of the library are unlikely to be confronted by alternate points of view or non-White knowledge. Weeding does not have to decrease the diversity of a collection; indeed, it has the potential to increase representation of diverse voices. We should ask ourselves: how can we use weeding as a tool to increase the diversity of the collection and correct historical imbalances?

When we work to change the White domination of our collections, we frequently see White entitlement in the pushback to the diversification and weeding of collections. See for example the vitriolic backlash against librarians who have called for weeding that increases diversity and inclusion.[54] This backlash reflects the entitled belief that White domination of collections is both right and natural due to the "objective" superiority of White knowledge, rather than being a result of ingrained and systematic White supremacy. It extends false ideas that White domination of collections is earned as the result of

meritocracy, rather than the extension of unearned White privilege. The workbook asks library workers to be prepared to defend weeding decisions that increase the diversity of the collection.

Engaging with Community

The Anti-Racist Collection Building workbook underscores the critical need for library collections to be more representative of the communities they serve. For all the reasons discussed thus far, White estrangement embodies library culture. The lack of BIPOC representation in collections, spaces, and library employees continues to marginalize and exclude community members. It is understandable, then, that BIPOC communities may maintain skepticism toward library spaces and collections at predominantly White institutions. While White estrangement creates separation between libraries and BIPOC communities, it is White evasiveness that perpetuates the divide. Therefore, it is crucial that libraries increase reciprocal engagement with marginalized communities.

Questions such as "How are we inviting and gathering our institution's BIPOC perspectives on the state of our collections?" guide libraries to consider methods of engagement specific to their individual institutions and their communities. Furthermore, questions such as "Are we committed to engaging with anti-racist work in other areas of the academy that impact our collections, such as hiring, promotion, and culture?" guide librarians to approach systemic issues within libraries, higher education, and the knowledge ecosystem more broadly. This workbook encourages libraries to not only acknowledge their problematic systems and structures but also emphasizes that it is only through collaborating with the larger academic context and communities marginalized by those very systems and structures that change can happen.

Next Steps

At the University of Colorado Boulder, we are using the workbook to revise our collection development policies and approval plans as a way to decenter Whiteness. It is our aim to change traditional collection-building practices by evaluating our policies and establishing practices for including smaller presses and publishers from the Global South to our approval plans and critically examining how selection filters remove materials from non-White voices and perspectives.

One conclusion is that libraries may need to rethink the overreliance on automated purchasing, along the lines of Meredith Farkas's humanistic and thoughtful process of slow librarianship.[55] Our work reveals that in the move to streamline collection development, libraries have increasingly relied on large vendors and algorithms to make selection choices, but these systems not only embed bias, but they also tend to make such bias invisible. Countering these systems will take an "antiracist, responsive, and values-driven practice,"[56] which takes time and care that is not always allowed for in the neoliberal university. Next steps at our institution include undertaking further case studies and projects to ensure that we're on the right track and to help us ask new questions.

We are also committed to sharing this work and incorporating feedback from librarians working in institutions that vary in size and community demographics. While the workbook questions arose within the context of a large research-intensive, predominately White institution strongly influenced by White Institutional Presence, we are also interested in how libraries within more diverse communities and institutions such as Historically Black College and University libraries develop their collections systematically with their user audiences in mind.

In response to these considerations, we have begun to implement projects guided by our workbook. Colleagues at our institution are creating an Indigenous Knowledge collection development policy that focuses on items from Indigenous perspectives or under Indigenous creative control. We are also partnering with local, BIPOC-owned bookstores to acquire diverse ranges of experiences and stories while financially supporting community institutions. We have begun evaluating and adjusting profiles to ensure inclusion of materials from BIPOC-owned publishers as well as resisting fully automating the weeding process to ensure weeding initiatives contribute to a more diverse collection instead of perpetuating a monocultural collection. We have also hosted discussions of the workbook, including varied possible implementation ideas, with colleagues at our campus libraries and across our state university library system. As these initiatives are ongoing, we have yet to reflect on our methodologies, experiences, and potential success. We plan to share more about these projects in future publications.

Limitations

The workbook was initially conceived by a group of tenure-track librarians at a well-resourced, Carnegie R1 university library. We have the time and motivation to conduct research that impacts changes in our practice of librarianship, and this work is currently protected by institutional support of academic freedom. We also rely on the expertise and experiences of colleagues in various roles at our institution, including teaching track librarians, library staff, and student employees, and we have made an effort to include their expertise by soliciting their feedback. We also know that power differentials in library contexts impact collections decision-making at all institutions and we aim to acknowledge the work done by all library workers and encourage discussion and initiatives among library workers in every role. We encourage readers to consider what is within their spheres of influence and to continue this work with colleagues who share a commitment to inclusive, anti-racist collections.

We also recognize that this kind of reflective, systems-focused work is time-intensive and difficult. This is even more true for library professionals working in politically hostile and oppressive states and regions throughout the United States and worldwide, or at institutions that may be at risk for funding cuts and targeted harassment. While at the anticipated date of publication, attacks on all types of libraries and educators are prolific in the United States, we hope for a future where more library professionals and vendor partners engage these questions so that the work of dismantling Whiteness in our collections will become a truly collective effort.

Conclusion

Current collection management practices remain firmly grounded in the White structures that govern higher education and library systems. The Anti-Racist Collections Workbook leverages Diane Gusa's White Institutional Presence framework and applies her attributes of White ascendency, monoculturalism, White evasiveness, and White estrangement to prominent collection development processes. Each section of the workbook provides librarians with opportunities to disrupt practices that perpetuate White dominance in collections by encouraging reflection on current policies at both the individual and institutional levels. Systemic changes are needed to fix systemic problems, and impactful change should begin with a critical examination of the methods, policies, and practices of collection building outlined in the workbook.

Appendix A

Anti-racist Collection Building Workbook

White Institutional Knowledge

The library literature documents a long history of marginalizing non-White voices and institutionalizing White knowledge as the norm. To identify ways in which Whiteness manifests in our collections, we position collection building within the White Institutional Presence (WIP) conceptual framework developed by Diane Gusa. This framework identifies four ways that Whiteness functions in academic institutions. We find that academic libraries and our systems are necessarily shaped by WIP as well as contribute to it. For each component of the WIP framework, Monoculturalism, White Ascendancy & Entitlement, White Evasiveness, and White Estrangement, we discuss how academic libraries are enmeshed in that aspect of WIP and provide reflection questions to spark ideas about how collections work is part of WIP as well as how it might resist WIP.

Monoculturalism

Monoculturalism in academic spaces is "the expectation that all individuals conform to one 'scholarly' worldview, which stems from the belief in the superiority and normalcy of White culture" (Gusa pp. 474–475). This concept is reflected in library collections that center on materials that conform to a White scholarly worldview and exclude materials that do not conform.

Monoculturalism manifests itself in all aspects of culture. It "creates a strong belief in the superiority of one group's cultural heritage, history, values, language, beliefs, religion, traditions, and arts and crafts" (Sue, 2004, p. 764). This concept is reflected in library collections that center materials that conform to a White scholarly worldview, and exclude materials that do not conform, whether consciously or unconsciously.

Monocultural values are also embedded in the environment and setting, including through the natural environment, architecture (including honorific building names), art and decoration (including statues),

as well as the racial and ethnic makeup of the student, faculty, and staff population. Overwhelmingly White library collections help create such a monocultural environment.

White Ascendancy and Entitlement

White ascendency is the system of "thinking and behavior that arise from White mainstream authority and advantage, which in turn are generated from Whiteness's historical position of power and domination" (Gusa pp. 472). This leads to a sense of White entitlement, the notion that it is right and natural for Whites to maintain control over spaces, discourses, and outcomes.

White ascendancy can be seen in the domination of White voices in our collections, as well as the sense that this is both right and natural. This reflects a history of White domination in the academy, including White privilege in hiring and promotion of faculty and librarians, privilege in the selection of books published by academic presses, and privilege in which voices are included in syllabi, curricula, and assigned as textbooks.

White ascendency and entitlement are also reflected in the anticipated users of our collections. Library collections historically reflect an "imperialist desire to know and gather the cultural artifacts of marginalized cultures" (Brook, Ellenwood, & Lazzaro, 2015). Thus, even our materials on diverse topics are often not for diverse communities, but instead for White consumption.

When we work to change the White domination of our collections, we frequently see White entitlement in the pushback to the diversification and weeding of collections.

White Evasiveness

Diane Gusa uses the term "White blindness" to describe an ideology that "obscures and protects White identity and White privilege" while simultaneously espousing the "neutral" concept of color blindness (p. 477). Here, we will use the terms "White evasiveness" and "color evasiveness," which we think more accurately capture the impact while also avoiding ableist language (Annamma, Jackson, & Morrison, 2015).

Color evasiveness "contends that everyone is the same," ignoring and undermining legacies of racism and White supremacy (477). By negating discourse around racism, color evasiveness effectively renders Whiteness the hidden, invisible norm, and never the cause of racial inequality.

White evasiveness means librarians might think of their collections as "neutral" rather than as expressions of White privilege, and therefore not in need of diversification. It can lead to ignoring the overwhelming White domination in our collections, and instead simply adding a few token diverse titles to a collection. White evasiveness can also be seen in cataloging systems that set Whiteness as the default (such as creating subheadings for non-White racial or ethnic groups, classifying books from diverse authors in separate areas of the library).

A critical view of individual texts as well as institutional decisions and policies can help mitigate the effects of White evasiveness, as can the acknowledgment and naming of Whiteness as a condition in which collections were and are built, cataloged, and maintained. Working against White evasiveness also requires commitment to "White responsibilities on a multicultural campus," discussed further in the section on White Estrangement below (478).

White Estrangement

White Estrangement sustains White Institutional Presence (WIP) by "distancing Whites physically and socially from people of color" (Gusa, p. 478). White people spend much of their lives segregated from people of color, and when they arrive in the potentially more diverse spaces of higher education, they are unable to conceive of how to create a truly multicultural environment or even to initiate genuine contact and dialogue with their peers of color.

Overwhelmingly White collections contribute to White estrangement from people of color by prioritizing White structures of knowledge production, communication, and format that perpetuate monoculturalism and White ascendancy and entitlement. White-dominated collections contribute to White estrangement by both alienating people of color from library resources and failing to connect users to the scholarship and ideas of people of color.

White estrangement also stymies efforts to establish multicultural library communities, events, and spaces. The task of creating a truly diverse collection is made more difficult by the overwhelming Whiteness of the library profession, as White librarians' estrangement from communities of color will mean they have a harder time creating a multicultural environment and a collection that reflects the needs and interests of a diverse community.

Getting Started

"We demand that LIS directly acknowledge and address the root of the issue: White Supremacy was built into our structures and systems from the very beginning and continues to be an active, destructive force" (Leung & Lopez McKnight, 2021).

We know that institutional racism is built into every aspect of our collection-building systems, and that these systems work in concert to uphold White supremacy in knowledge production. In this section, we have reorganized and edited our reflection questions into sections that focus on different processes in library collection building and maintenance. In each section, we invite you to reflect on how Whiteness and institutional racism is built into your collection-building practices: how our collection practices favor White knowledge at the expense BIPOC knowledge, how our collections serve as a physical manifestation of White supremacy in knowledge production, how our categorization processes normalize Whiteness, and how our weeding process can decrease diversity.

These questions are not meant to shame individuals or any identity. This is an exercise for identifying systemic barriers and challenging norms. The questions are also designed to spark new ideas for moving forward, creating alternative systems, and dismantling harmful processes.

Questions to Consider When Cataloging and Classifying

- Cataloging and classifying materials are exercises of power: power over naming and organizing knowledge; making knowledge accessible and discoverable; and appropriating authority. Standardized systems and vocabularies act as catalysts that normalize White supremist ideologies. Jennifer Martin explains that controlled vocabularies "reflect and reinforce cultural norms which are harmful to nondominant peoples and cultures, with LGBTQ + people, racial and ethnic minorities, religious minorities, and non-Western countries most frequently discussed" (Martin, 2020). What actions can we take to dismantle these harmful practices that actively hide and ostracize BIPOC authors and points of view? How will historically under-collected material be cataloged and classified in the collection? How might this affect discoverability?
- How will the cataloging and classification of BIPOC knowledge affect its placement in the library?
- How are cataloging and classification systems distancing and segregating diverse knowledge?
- How are cataloging and classification systems lumping diverse forms of knowledge together inappropriately?
- How are cataloging and classification systems leaving White knowledge as unmarked and neutral but marking and othering BIPOC knowledge?
- How are cataloging and classification systems using offensive and outdated terms? How do these terms reflect a White point of view?

Questions to Consider When Selecting Materials

Librarians make decisions on individual titles to select based on their knowledge of their users' needs. This work is both historically and currently dominated by White perspectives: the library profession is overwhelmingly White, and many of our institutions' users are predominantly White (PWI), while our users of color may not feel comfortable approaching a White librarian to express their collection needs. This work has influenced decades of collection-building decisions that have resulted in our current collections that are overwhelmingly built to answer White questions and serve White needs. To correct such a long-standing imbalance, it will take dedicated and consistent effort to change our practices and change the makeup of our collections.

- Ask ourselves the following questions about materials we select for purchase:
  - What does this material communicate about its intended audience?
  - Who are the anticipated users of this material?
  - Is this material only about diverse communities, or is it truly for those communities?
- How can we go beyond traditional scholarly publishing venues to consider materials that reflect diverse ways of knowing and thinking?

- How can we avoid imposing a single White scholarly worldview on materials from different traditions with different ways of knowing? (heavy reliance on peer review as a measure of validity, focus on empiricism vs. alternative ways of knowing, alternative methodologies)
- How can we avoid emphasizing materials in English over other languages?
- How can we include materials either overlooked or marginalized by White structures of knowledge production, communication, and/or format?
- How do current collection development practices distance librarians from diverse users and collections? How can we engage diverse users in the collection development process?
- Are our selectors mostly White? How can we empower BIPOC librarians to make selection decisions while making sure to compensate them for this expertise?

Questions to Consider When Purchasing Materials

The process and policies of acquiring materials are often overlooked when considering developing an inclusive and anti-racist collection. These policies are often derived from institutional, campus, state, and federal procurement policies and laws. From Gusa's WIP framework, the authority and advantage generated from Whiteness's historical position of power and dominance are embedded into the structures and economics of purchasing materials.

- Where do elements of Gusa's framework of White Institutional Presence appear in purchasing materials?
- What processes and policies are within our power to change?
- Have we examined the existing procurement rules, policies, and practices with an anti-racist lens to decentralize Whiteness and colonialism?
- Who is getting "a seat at the table"?
- Which vendors do we visit at conferences?
  - What vendors do we engage with in meetings?
- What does an anti-racist sourcing strategy look like for our library?

Questions to Consider When Creating Approval Profiles

Approval plans are one of the key ways that White supremacy becomes embedded in the process of collection building. These plans often identify subjects, publishers, and formats to automatically purchase or reject. The criteria of our approval plans typically reflect White ways of knowing and privilege White methods of knowledge production, such as the scholarly monograph, peer review, university presses, academic affiliations, etc. How can we disrupt, expand, reduce our reliance on, or change our approval plans so that we automatically collect diverse forms of knowledge?

- How can we avoid imposing a single White scholarly worldview on materials from different traditions with different ways of knowing? (heavy reliance on peer review as a measure of validity, focus on empiricism vs. alternative ways of knowing, alternative methodologies)

- How can we include materials either overlooked or marginalized by White structures of knowledge production, communication, and/or format?
- Are selection filters potentially eliminating materials that do not conform to a White scholarly worldview?
- How can we add publishers from the Global South or smaller presses to our selection profiles?
- How do collections policies evade the issue of Whiteness in the collection?
- Do approval profiles and other methods of acquisition proactively include historically under-collected publishers or voices? If so, how, and if not, how can we do this individually and collectively?
- In what ways do our collection-building systems reproduce and reinforce White domination in the academy? Are we resistant to trying alternative modes of collection building, which may indicate White entitlement?

Questions to Consider When Weeding

Weeding is a key way that librarians keep collections healthy and relevant, but weeding processes and decisions can perpetuate White knowledge's domination of collections. Oftentimes, weeding decisions are made primarily by sets of criteria that often include age and popularity of material. These are factors that are impacted by White supremacy, for example exclusion of materials by BIPOC authors from curricula leads to lower usage, or BIPOC issues are less popular areas of study for a predominantly White student body. This results in materials that would be relevant to BIPOC students or that could represent BIPOC points of view in our physical spaces being weeded.

- How can we use weeding as a tool to increase the diversity of the collection and correct historical imbalances?
- Are we prepared to defend the weeding decisions that increase the diversity of the collection?
- Since low usage of diverse materials can reflect White ascendancy in the curriculum, how might we go beyond weeding criteria that rely on circulation?
- How are we taking race and Whiteness into account explicitly in weeding or acquisition criteria?
- Does a book by an underrepresented individual or on a marginalized topic have low usage data because of difficulty in discoverability? Are we relying on usage data too extensively when making weeding decisions?
- How can we ensure BIPOC users and librarians are involved in weeding processes, and how can we compensate them for this expertise?

Questions to Consider When Using Collections to Engage with Our Community

Empowering BIPOC communities to play a role in collection building is essential to building a more just collection, and this requires building reciprocal relationships with these communities, communities

that may rightly be suspicious of the library. Creating fewer White collections will require creating a less White profession, and thus the work also includes doing the work to make librarianship a more diverse profession. Collections and displays must be less White if the library is to be relevant to BIPOC communities, if our collections are to communicate that BIPOC belong in the library's spaces and that the library's resources were built with BIPOC in mind.

- How are we inviting and gathering our institution's BIPOC perspectives on the state of our collections?
- How can we better engage with the BIPOC community to create a truly diverse collection that reflects their needs and interests?
- How can we better engage with BIPOC communities to include materials either overlooked or marginalized by White structures of knowledge production, communication, and/or format?
- How are we ensuring the BIPOC communities are compensated for their knowledge and expertise?
- How can we work together with faculty to diversify curricula?
- Are we committed to engaging with anti-racist work in other areas of the academy that impact our collections, such as hiring, promotion, and culture?
- Are there ways that we can feature this material in displays, exhibitions, etc., while avoiding tokenism?
- How can the items in our collections be used to promote cross-racial dialogue?

CrediT Author Statement

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Notes

1. In this article we have chosen to capitalize White and Whiteness because "to not name 'White' as a race is, in fact, an anti-Black act which frames Whiteness as both neutral and the standard," Nguyễn, Ann Thúy,

and Maya Pendleton. "Recognizing Race in Language: Why We Capitalize 'Black' and 'White.'" *Center for the Study of Social Policy: Ideas into Action* (blog), n.d., https://cssp.org/2020/03/recognizing-race-in-language-why-we-capitalize-black-and-white/. Additionally, we affirm that "Whiteness is not only an absence. It's not a hole in the map of America's racial landscape. Rather, it is a specific social category that confers identifiable and measurable social benefits," Eve L. Ewing, "I'm a Black Scholar Who Studies Race. Here's Why I Capitalize 'White,'" *ZORA* (blog), July 1, 2020, https://zora.medium.com/im-a-black-scholar-who-studies-race-here-s-why-i-capitalize-white-f94883aa2dd3.

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6. Most recently, through the landmark *Knowledge Justice: Disrupting Library and Information Studies through Critical Race Theory*. Sofia Y. Leung and Jorge R. López-McKnight, eds., *Knowledge Justice: Disrupting Library and Information Science through Critical Race Theory* (The MIT Press, 2021).
7. Gina Schlesselman-Tarango, "Introduction," in *Topographies of Whiteness: Mapping Whiteness in Library and Information Science* (Library Juice Press, 2017), 1–30: 2.
8. Ian Beilin, "The Academic Research Library's White Past and Present," in *Topographies of Whiteness: Mapping Whiteness in Library and Information Science* (Library Juice Press, 2017), 79–98: 83–84.
9. Frances Lee Ansley quoted in Sofia Y. Leung and Jorge R. Lopez-McKnight, "Introduction: This Is Only the Beginning," in *Knowledge Justice: Disrupting Library and Information Studies Through Critical Race Theory* (MIT Press, 2021), 9–41.
10. Sofia Y. Leung, "Whiteness as Collections," *Thoughts* (blog), September 30, 2019, https://www.sofiayleung.com/thoughts/whiteness-as-collections.
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16. We chose to use the terms "White evasiveness" and "color evasiveness" in the workbook as they accurately capture the impact while also avoiding ableist language. See Amanda Rybin Koob et al.
17. Gusa, "White Institutional Presence: The Impact of Whiteness on Campus Climate": 472.
18. Beilin, "The Academic Research Library's White Past and Present": 83.
19. Ian Beilin, "The Academic Research Library's White Past and Present"; Sofia Y. Leung and Jorge R. Lopez-McKnight, "Introduction: This Is Only the Beginning"; Freeda Brook, Dave Ellenwood, and Althea Eannace Lazzaro, "In Pursuit of Antiracist Social Justice: Denaturalizing Whiteness in the Academic Library," *Library Trends* 64, no. 2 (September 2015): 246–284, https://doi.org/10.1353/lib.2015.0048.
20. Leung and Lopez-McKnight, "Introduction: This Is Only the Beginning": 2.
21. Gusa, "White Institutional Presence: The Impact of Whiteness on Campus Climate": 474–475.
22. Leung and Lopez-McKnight, "Introduction: This Is Only the Beginning": 7.
23. "Library Bill of Rights," American Library Association, last amended January 29, 2019, https://www.ala.org/advocacy/intfreedom/librarybill.
24. Anastasia Chiu, Fobazi M. Ettarh, and Jennifer A. Ferretti, "Not the Shark, but the Water," in *Knowledge Justice: Disrupting Library and Information Studies Through Critical Race Theory* (MIT Press, 2021), 47–65: 60.
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26. Gusa, "White Institutional Presence: The Impact of Whiteness on Campus Climate": 477.
27. Schlesselman-Tarango, "Introduction": 8.
28. Robin DiAngelo, *What Does It Mean to Be White? Developing White Racial Literacy* (Peter Lang, 2012), 106. Cited by Melissa Kalpin Prescott, Kristyn Caragher, and Dover-Taylor Katie, "Disrupting Whiteness: Three Perspectives on White Anti-Racist Librarianship," in *Topographies of Whiteness: Mapping Whiteness in Library and Information Science* (Library Juice Press, 2017), 293–316: 296.
29. Gusa, "White Institutional Presence: The Impact of Whiteness on Campus Climate": 478.
30. Schlesselman-Tarango, "Introduction": 10.
31. Leung and Lopez-McKnight, "Introduction: This Is Only the Beginning": 14.
32. Koob et al., "Beyond the Diversity Audit: Uncovering Whiteness in Our Collections."
33. Leung, "Whiteness as Collections."
34. Todd Honma, "Foreword," in *Topographies of Whiteness : Mapping Whiteness in Library and Information Science* (Library Juice Press, 2017), ix–xiv: x.

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36. Jennifer M. Martin, "Records, Responsibility, and Power: An Overview of Cataloging Ethics," *Cataloging & Classification Quarterly* 59, no. 2–3 (April 3, 2021): 281–304: 291, https://doi.org/10.1080/01639374.2020.1871458.

37. By *White Scholarly Worldview*, we refer to the epistemological framework that determines what information is valid and who possesses authoritative knowledge. This worldview prizes objectivity, quantitative data, rationality, and linear thinking. It is an exclusive epistemology that generally rejects knowledge from other traditions. Gusa, "White Institutional Presence," 475.

38. This phenomenon extends beyond race and ethnicity to other identifiable characteristics that deviate from the invisible norm, such as gender and sexuality. For more information, see Hope Olson's *The Power to Name,* 1–15.

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41. Diane Gusa, "White Institutional Presence," 475.

42. See, for example, the description of Native American ways of knowing in Vine Deloria, Jr. "Ethnoscience and Indian Realities." In *Spirit and Reason, the Vine Deloria, Jr. Reader* (Fulcrum Publishing, 1999).

43. Freeda Brook, Dave Ellenwood, and Althea Eannace Lazzaro, "In Pursuit of Antiracist Social Justice: Denaturalizing Whiteness in the Academic Library": 258.

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45. Fernando Mendoza Lopez and Joni Hersch, "Socioeconomic Policies in Public Procurement: What Should We Be Asking of Public Procurement Systems?," *University of Memphis Law Review* 52, no. 1 (2021): 155–98.

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51. See EBSCO's "How Using GOBI® Helps Libraries Find Diversity, Inclusion and Social Justice Content" (https://www.ebsco.com/blogs/ebscopost/how-using-gobir-helps-libraries-find-diversity-inclusion-and-social-justice-content) and ProQuest's "Curated Topics" (https://about.proquest.com/en/customer-care/curated-topics/).

52. Sunshine J. Carter et al., "Retrospectively Purchasing Ebooks to Amplify Diverse Voices and Perspectives at the University of Minnesota Libraries," 2022, https://hdl.handle.net/11299/226104.

53. Amalia Monroe-Gulick and Sara E. Morris, "Diversity in Monographs: Selectors, Acquisitions, Publishers, and Vendors," *Collection Management* 48, no. 3 (July 3, 2023): 210–233, https://doi.org/10.1080/01462679.2022.2163019.

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55. Meredith Farkas, "What Is Slow Librarianship?," *Information Wants to Be Free* (blog), October 18, 2021, https://meredith.wolfwater.com/wordpress/2021/10/18/what-is-slow-librarianship/.

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Book Review

Michael Fernandez, editor

Fundamentals of Collection Development and Management, Fifth Edition. By Peggy Johnson and Mary Beth Weber. Chicago: ALA Editions, 2025. 484p. $85.00 softcover (ISBN 979-8-89255-565-4).

In its fifth edition, *Fundamentals of Collection Development and Management* remains one of the field's most comprehensive one-volume works. For this first post-COVID-19 revision, author Peggy Johnson, a long-respected authority in collection development, now teams up with Mary Beth Weber, a leader in academic technical services, to present an ambitious and far-reaching survey of collection practice. The authors clearly state their goal: to provide both a comprehensive guide for new professionals and a useful reference for experienced selectors and managers. For the most part, the book succeeds with few limitations.

What sets this edition apart is its broad coverage paired with practical, up-to-date guidance. The text delves into traditional topics such as budgeting, selection criteria, vendor negotiation, and collection evaluation, while also incorporating current concerns like evolving e-book licensing models, accessibility law compliance, and social media marketing. The structure remains similar to previous editions, with material organized into nine chapters (now supported by updated case studies), revised suggested readings (all from 2017 or later), and online appendices.

The fifth edition addresses shifting library priorities in response to digital transformation, tightening budgets, and increased expectations for data-informed decision-making. In this respect, *Fundamentals* remains a top-tier resource among a robust field. Its treatment of legal and licensing issues surpasses Gregory's *Collection Development and Management for 21st Century Library Collections,* and while Evans and Saponaro's *Collection Management Basics* is possibly stronger pedagogically, it lacks *Fundamentals*' coverage of digital strategy and impact assessment, critical to current practitioners.[1]

Fundamentals begins by introducing the discipline as one shaped by legacy practices challenged by budget constraints, evolving user needs, and format diversification. There is a focus on collection responsibilities within different staffing models, with special attention paid to the growing role of paraprofessionals and important ethical concerns tied to selection, censorship, and labor. The authors provide clear guidance on how to align collection goals with a library's mission and detailed approaches to budgeting and policy writing. Similar to the entire work, the early sections are strongest in an academic library context while offering a solid foundation for understanding how collections are shaped by both long-term strategy and day-to-day decisions for all library types.

Fundamentals supports readers through the full life cycle of a collection, beginning with clear guidance on material selection and extending through licensing, vendor negotiation, and long-term maintenance. The discussion balances professional judgment with tools like demand-driven acquisitions (DDA), evidence-based acquisitions (EBA), and approval plans. Chapters 5 and 6 stand out for their deep dives into licensing language, legal compliance, and vendor communication, including a particularly

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helpful callout box highlighting common license elements (226). The authors' focus on actionable and ethical strategies is an improvement over quickly outdated vendor lists often included in similar works addressing this topic. One of the most striking quotes from the book, "Acting ethically is one of the most essential attributes a librarian can have" (199), summarizes a key ethos that pervades the text. The inclusion of upcoming accessibility laws along with up-to-date compliance timelines is indicative of how the work marries thoughtful practice with practical value. The work fulfills the promise in its title to address both collection development and collection management by outlining deselection, preservation, and storage planning as essential, rather than secondary, activities in sustaining collection health and access equity.

The inclusion of expanded marketing and outreach content in chapter 7 is a welcome development. The introduction of tools like Customer Relationship Management (CRM) systems, market segmentation, and social media planning reflects the increased integration of marketing strategies into everyday library practice. The chapter includes a case study on developing a social media plan, which, like other case studies throughout the work, successfully ties abstract concepts to real-life applications.

Also appreciated is the well-developed distinction between collection assessment and evaluation made by Johnson and Weber, emphasizing not just data collection but meaningful interpretation. The authors make a key observation: "To be meaningful, the librarian and the library need to understand why they are collecting data and what they intend to do with the results. Simply counting things is not enough" (328). They effectively address the increasing demand for libraries to demonstrate value by outlining diverse assessment frameworks such as use-based, cost-based, user-centered, outcome-based, and Social Return on Investment (SROI).

The final chapter, titled "Collaborative Collection Development and Management," completes the text with a timely and thorough look at the topic. The authors emphasize that their change from the term *cooperative* in the fourth edition to *collaborative* in the fifth reflects the intention of current library efforts, even if that intention is still aspirational. They present a wide variety of consortial partnerships, shared print programs, and cooperative licensing agreements as necessary adaptations to financial and spatial limitations. Its detailed overview of past and existing collaborations, along with related infrastructure and even the characteristics of the most successful consortia, provides an excellent example of how *Fundamentals* shines as a comprehensive reference work.

While the book is impressive in its comprehensiveness, its density may challenge some readers. There are several informative visual aids within *Fundamentals*, such as the sample budget plan and report in chapter 3, "Planning, Policies and Budgets," but given the book's instructional purpose, additional charts, matrices, or diagrams throughout might improve usability, particularly for Library and Information Science (LIS) students and early career professionals. The inclusion of structured tools like figure 6.1 ("Guidelines for Weeding and Replacing Materials in a School Library Media Center") is valuable, but its specificity highlights a missed opportunity. Offering comparable visual frameworks for each library type would have reinforced the concept for all readers while helping new practitioners recognize critical differences across settings. Similarly, while the included case studies are helpful, the

book would be further strengthened by offering multiple case studies representing a range of libraries (e.g., school, public, academic, special) for each chapter. This would not only better reflect the book's wide audience but also enrich its pedagogical application for LIS instructors and trainers.

Ultimately, *Fundamentals of Collection Development and Management* is a well-structured and up-to-date resource that delivers both breadth and depth. Its practical orientation—paired with a strong ethical framework and timely coverage of emerging issues—makes it an excellent choice for LIS students, early-career librarians, and seasoned professionals alike. Despite minor limitations in formatting and balance across library types, this fifth edition remains an important and useful guide for navigating the complexities of modern collection work.—*Christina Mune (Christina.Mune@sjsu.edu), San José State University, California*

Note

1. Vicki L. Gregory, *Collection Development and Management for 21st Century Library Collections: An Introduction*, 2nd ed. (Chicago: ALA Neal-Schuman, 2019); G. Edward Evans and Margaret Zarnosky Saponaro, *Collection Management Basics*, 7th ed. (Santa Barbara, CA: Libraries Unlimited, 2019).

Book Review

Michael Fernandez, editor

Records and Information Management, Third Edition. By Patricia C. Franks. Chicago: ALA Editions, 2025. 584 p. $79.99 softcover (ISBN: 979-8-89255-588-3).

The digital revolution has ushered in rapid technological advancements that continue to transform practices and activities across many industries, thereby greatly impacting records and information management (RIM). Organizations are confronted with "formidable challenges" and new opportunities regarding managing records and information (57). Disruptive technologies, such as cloud computing, machine learning, and artificial intelligence (AI), present both challenges and opportunities. In addition, the abundance of data and information that comes with this digital age further proves that RIM is just as relevant as ever. It is essential to equip existing and future professionals with a solid foundation and understanding of the core elements and many complexities of RIM.

Within *Records and Information Management, Third Edition*, Patricia C. Franks provides a comprehensive exploration of RIM that serves as a helpful resource for students and professionals alike. This book addresses "the basics of records management, information governance, and data governance" while covering the many challenges, opportunities, and changes that records and information professionals face today (xxi). With knowledge and expertise as a Certified Archivist, Records Manager, and Professor at San José State University, Patricia C. Franks has positioned herself as a notable voice in the RIM field.

The introduction and first two chapters begin by laying a solid foundation that provides readers with a detailed history and overview of recordkeeping and how it has evolved from ancient civilization to the twenty-first century. From cave drawings and stone tablets to paper and digital records, as humans evolve so do the ways in which records are created, captured, managed, stored, and preserved. According to Franks, "the methods used to create and store the content of these records have changed over time based on the tools available to record the content and the medium in which the content could be recorded and stored" (21). While recordkeeping dates back to ancient times, RIM began to really take shape in the nineteenth and twentieth centuries with the establishment of widely accepted practices, guidelines, and standards.

Following that thorough introduction, the subsequent chapters explore key concepts of RIM, including the various stages of the RIM life cycle, information and data governance, and the core elements of records management programs. The book's structure appropriately flows as each chapter builds on the previous concepts and themes. Chapter 2 emphasizes the importance of an "integrated, strategic" RIM program built on information governance and a solid foundation and framework (33). Franks goes on to state that "RIM programs vary across organizations and industries, but they all possess certain core elements (e.g., retention and disposition, preservation) and activities (e.g., records identification, disaster preparedness, and business continuity planning)" (57).

Chapters 3–6 unpack the various stages of the RIM life cycle, including creation and capture, distribution and use, storage and maintenance, retention and disposition, and preservation. Within chapters 7–9, Franks continues to address key concerns and considerations, including emerging and disruptive technology, innovation and trends, essential records, disaster preparedness, and information value and risks. Chapters 10–11 cover physical records, record centers, and archives, as well as digital preservation and digital repositories. Chapters 12–13 explore data governance, automation, artificial intelligence, records management, and information governance.

The last chapter focuses on the records management professional. Franks concludes by discussing management and leadership and the importance of training, lifelong learning, and professional development. Leadership is not always about a particular title or position, and Franks encourages readers to strive to be both managers and leaders. Also, the author emphasizes an important message for students and early career professionals and a timely reminder for seasoned records managers. According to Franks, "lifelong learning is necessary when working in a dynamic environment" such as records management (492).

I appreciated the author's updates to the third edition, including how she addressed present challenges and opportunities. For example, a notable change was the inclusion of the "Paradigms and Perspectives" section at the end of each chapter. These sections moved beyond theory and principles to offer practical, real-world examples and viewpoints from professionals. According to Franks, "it provides an overview of the evolution of technology and thinking in our field while in every chapter acknowledging the influence of emerging and developing technologies and encouraging new ways of meeting the resulting challenges" (xxi).

Within *Records and Information Management,* Franks successfully addresses current technology trends facing RIM, including that of artificial intelligence. We cannot avoid this disruptive technology that reaches each aspect of our everyday lives, from how we go about our day to how we communicate, work, and accomplish tasks. The majority of chapter 12 explores the crucial subject of AI, a notable addition to the third edition of this book. Franks provides an in-depth exploration of AI, covering its background and evolution, as well as advances in technology over the years. Additionally, Franks discusses common standards and ethical considerations such as transparency and accountability.

Most importantly, the author addresses the connection between artificial intelligence and records and information management. AI is certainly here to stay and will continue to have a tremendous impact on RIM. Therefore, Franks stresses the need to consider AI from different viewpoints. She states that "records and information managers must look at AI from two perspectives: (1) as users, to improve records management functions, and (2) as recordkeepers, to provide evidence of transparent and responsible AI use within an organization" (422).

Records and information professionals must remain diligent, proactive, and adaptive. According to Franks, "in a perpetual state of sociotechnical change, there is one constant: data, records, and

information are still created, managed, used, shared, retained, and disposed of or preserved for future generations" (xxi). It is imperative to keep a firm footing in the foundations of records and information management while being able to anticipate and embrace evolving technology and how it impacts each stage of records and information management. This comprehensive book provides insight into the complexities of records and information management and will position readers to walk away with a better understanding of the field and its current landscape.—*Dawn Stump (dastump@bsu.edu), Ball State University Libraries, Muncie, Indiana*