Exploring User-Informed Approaches to Enhancing Library Metadata for the LGBTQ+ Community

1. Project Justification

Researchers from the University of Tennessee, the University of Missouri, and Dominican University request $393,425 for a three-year Applied Research Grant that responds to IMLS' National Leadership Grants for Libraries Goal 2 to build capacity of libraries and archives to improve community well-being and strengthen civic engagement, and specifically Objective 2.1, efforts that increase equity and access. As members of a marginalized group, LGBTQ+ individuals face particular barriers when accessing public services, including access to information through the library. Though this issue has seen increasing attention, most studies and proposed interventions are top-down and expert-driven. This project seeks to employ an inductive, user-based approach to better understand and meet the needs of this group of library users, focusing specifically on the role of metadata in the library catalog. This project addresses two main research questions: 1) How do adult LGBTQ+ library users understand and make use of current library catalogs and metadata? 2) Could library metadata be enhanced to better reflect the language, needs, and uses of LGBTQ+ library users? If so, how, and what would the impacts be of these changes? The work is designed to serve the needs and incorporate the perspectives of two target communities: adult LGBTQ+ library users, and library staff seeking to support these users. A multiphase, iterative research design incorporating user studies and focus groups will be employed to elicit user-based empirical data and interpret this data into actionable advice for libraries. The methods and findings of this project will support future, user-driven research into both LGBTQ+ library users and other marginalized communities as well.

Though U.S. libraries strive to provide information to their diverse constituencies, a robust understanding of the barriers to use for a number of marginalized communities, including LGBTQ+ individuals, is lacking at present. Technical services librarianship has largely engaged in theoretical work to discover potential barriers and theorize solutions. In this vein, problems with knowledge organization systems (KOSs) used in libraries have been well documented in the literature (e.g., Berman, 1993; Cronquist et al., 2021; Olson, 2002; Watson, 2020). The literature demonstrates how library data standards have long been designed to meet the needs of users from the assumed dominant social groups (primarily white, male, heterosexual, and cisgender). As a result, these systems have faced significant criticisms; for example, the Library of Congress Subject Headings (LCSH) has been described as a "poor system" that despite concerns has not defended itself, as well as a system that is not founded in research (Hjørland & Gnoli, 2023). Germane to this research is that LCSH has faced accusations of describing individuals from non-dominant groups inaccurately or offensively, or ignoring them altogether (Berman, 1993; Olson, 2002). While first noted decades ago, these issues remain a matter of concern today (Cronquist et al., 2021; Watson, 2020).

The unique difficulties that library catalog metadata creates for members of the LGBTQ+ community have received increased interest in recent years. For example, Watson (2020) found that library subject metadata has been slow to reflect LGBTQ+ identities, even though these topics have long been discussed in published literature. Accordingly, calls to rectify the exclusion of LGBTQ+ perspectives and revise the language used in the library catalog have also intensified in recent years (Adler, 2017; Cataloging Ethics Steering Committee, 2021; Clarke & Schoonmaker, 2018). Common approaches include efforts to update the widely used subject vocabulary LCSH (Watson, 2020; Cronquist et al., 2021), or supplement current library data with terms from community-based vocabularies such as the Homosaurus (Cifor & Rawson, 2022). While these approaches hold promise, there will never be complete consensus on controlled vocabulary, particularly for the terminologically diverse LGBTQ+ community (Snow et al., 2023). At the same time, many of these proposed interventions stem from top-down, expert-driven processes.

To more fully test the ideas advanced in the literature, user studies are needed, and must be carried out by researchers like the ones putting forth this proposal, who deeply understand library cataloging standards and approaches and who are integrated in the library community. Although the literature is clear on the potential for harm through subject headings (e.g., Adler, 2012; Fox, 2016) and that topics that are fundamentally LGBTQ+ may present sites for mismatches between

library catalog users and the controlled vocabularies of libraries (Moulaison-Sandy, Pham, et al., 2023), topics that are not fundamentally LGBTQ+ may also reveal uses of differing viewpoints and perspectives. Using the LC Genre Form Term (LCGFT) *Romance fiction* as an example, because of the default assumption that relationships, unless qualified, are heterosexual, for LGBTQ+ catalog users this concept might better be represented using the terminology *Hetrosexual romance fiction*. This shows that linguistic differences may manifest for marginalized groups for a wide array of materials, not just those associated with their identities. Few user studies have been carried out to understand how members of the dominant culture search modern library catalogs; even less is understood about how LGBTQ+ users search. Instead, the literature has long analyzed the way standard library knowledge organization systems are ill-adapted to anyone but members of the dominant culture (e.g., Berman, 1993; Olson, 2002). Yet the extent to which this is true has also yet to be determined.

To address these gaps, our research group, the ICU (Inclusive Catalog Use) Lab, has been carrying out funded, user-based research related to these topics since 2021. The ICU Lab was founded by the research team due to their expertise in library metadata and their previous work supporting representation surrounding marginalized peoples based on LGBTQ+ status, disability, and ethnicity. Since 2021, using funding from the iSchools, the ICU Lab has focused exclusively on LGBTQ+ representation to generate empirical, user-driven insight into how the language of library users intersects with the language of the catalog, and have regularly presented work to librarian and researcher communities. For example, in a recent study, we found personal identity terminology among a sample of 200+ LGBTQ+ library catalog users as complex and highly varied, leading us to conclude that any attempt to codify such terminology for use in library catalogs will be fraught (Snow et al., 2023). Likewise, we learned through interviews with 15 LGBTQ+ catalog users that participants were confounded by libraries' use of the common subject term *Sexual minorities*; many participants noted not only its inaccuracy in describing the LGBTQ+ community, but also noted it is a term they would never think of using to find library resources (Moulaison-Sandy, Pham, et al., 2023). In addition, ongoing work by our lab is poised to reveal more about the unique ways this group of users thinks about genre metadata. Current analysis of data from our funded iSchools study is revealing that there might be differences in how information can best be presented (e.g., using cross references) and the need to instead identify different concepts entirely. We have identified a preference for the term "queer" in spoken language, but also an acknowledgement that 1) the term is loaded and may not be acceptable to all LGBTQ+ community members, and 2) there are other terms that indicate the same idea. The ability to work with a range of members of the target group as a way to begin to understand diverse viewpoints among community members is needed, as is an attempt to improve access for at least some target group members, if not all.

More comprehensive user studies are the next step in garnering further insight into improved catalog access for this study's *first target group*: adult LGBTQ+ library users. It must be stressed that the LGBTQ+ community is not a monolithic group. As part of a marginalized community, however, members may share commonalities, including shared identity and language. For example, our research group has identified that as members of a marginalized group, LGBTQ+ individuals may employ a different vocabulary than members of the dominant culture when describing materials relating to their own identity (Moulaison-Sandy, et al., 2023). The literature is replete with studies considering problems of controlled vocabularies, yet user studies eliciting data directly from this target group remain lacking. This project will address this gap, and its findings stand to benefit LGBTQ+ library users seeking any kind of library material, including those related to LGBTQ+ topics. Additionally, a *secondary target group* will benefit from this research: library staff who support the creation of and access to library metadata, particularly those who are looking to better support LGBTQ+ and other marginalized users. This community of information professionals adheres to standards and protocols to support the widespread sharing of library metadata, while at the same time exploring minor improvements, including, for example, the use of AI-based techniques to enhance records (e.g., Asula et al., 2021; Moulaison-Sandy et al., 2021) or other automated approaches to better meet user needs (Golub, 2021). As libraries look for new ways to provide improved access to all users, regardless of their relationship to the dominant culture, user studies such as ours will provide a methodology that can be repeated with members of other marginalized groups.

For the current project, we have chosen to work with LGBTQ+ individuals throughout the state of Illinois. Illinois is a midwestern state with a large and diverse urban population located in Chicago which comprises 74% of Illinois' total population, as of 2013 (Illinois Institute of Rural Affairs, n.d.). Illinois likewise contains a large rural contingent that make up the majority of Illinois counties. Illinois' rural population of 1,657,000 people (as of 2013) is larger than the entire population of 12 states (Illinois Institute of Rural Affairs, n.d.). Demographically, a recent study ranked Illinois as the state most similar to the United States as a whole (McCann, 2024). Illinois residents have a range of lived experiences, and those diverse perspectives will be captured through work with LGBTQ+ individuals throughout the state. The Illinois public libraries that will serve as the primary sites of the study are members of two large consortia located in northern and western-central Illinois, encompassing much of the state. Combined, the partnering consortia members total over 400 public libraries serving areas throughout the state and bordering 4 additional states (Wisconsin, Iowa, Missouri, and Indiana). Importantly, this wide variety of users is united under the same library catalog interface. All of these factors support LGBTQ+ users of Illinois libraries as a representative and conducive sample population for this study.

To systematically address the gaps noted in the literature, user studies with LGBTQ+ individuals throughout the state must be carried out to first identify concerns with access and then to troubleshoot possible solutions. There is a _need_, therefore, for a project that can analyze user behavior and then implement changes to library catalogs with minimal intrusiveness, but potentially on a large scale that is repeatable for other marginalized groups nationally.

As shown already by our lab's findings, an important opportunity exists for greater user involvement in dismantling barriers to access posed by library data. The research project we propose here is our next step in establishing a more comprehensive understanding of LGBTQ+ library users and their needs. By testing decades of work on theory and critique of KOSs and, based on the findings, working with library staff to implement practice that will meet the observed needs, this project addresses a longstanding gap in the literature. In doing so, it provides a roadmap for improvements to library metadata that can be adapted in the future to support members of other marginalized groups.

2. Project Work Plan

The goal of this three-year project is to expand knowledge of the perspectives, preferences, and needs of adult LGBTQ+ catalog users, as well as the potential means of supporting them. This will be accomplished through a series of inductive, qualitative user-based methods featuring the participation of both LGBTQ+ users as well as library staff, and will yield data-driven, actionable advice for how libraries can better serve this community. The project will be guided by two major research questions:

RQ1: How do adult LGBTQ+ library users understand and make use of current library catalogs and metadata?

RQ2: Could library metadata be enhanced to better reflect the language, needs, and uses of LGBTQ+ library users? If so, how, and what would the impacts be of these changes?

To address these questions, this project features a multiphase, exploratory, iterative approach designed to leverage previous and emergent findings. Qualitative approaches are generally recommended for research scenarios in which the primary goals are exploratory rather than confirmatory in nature (Creswell, 2009), which informs our approach. Project work will proceed along three main phases: (1) user studies with LGBTQ+ library users; (2) analysis of findings and cooperation with partnering libraries to enhance catalog data; (3) focus groups with library staff and LGBTQ+ users to assess this enhanced data.

Project Activities
Phase 1: User Studies with LGBTQ+ Library Users (Year 1: August 2024-July 2025) In the first phase of this project, we will build on our previous work examining LGBTQ+ users and library catalog use by performing a series of in-depth user studies. As it entails human subject research, this phase requires IRB approval, and we have begun the process of applying for this approval. We have successfully navigated the multi-site IRB approval process for our research group

(Tennessee, Missouri, Dominican) with the first associated grant (iSchools, 2022) so our institutions have experience with the process and our research. For this phase we have also partnered with two public library consortia in Illinois: Cooperative Computer Services (CCS), a group already exploring the use of Homosaurus in their catalog (Fischer, 2023), and Reaching Across Illinois Library System (RAILS). With the assistance of these consortia and their members we will recruit 50 current and potential adult users of the public library who identify as LGBTQ+. The overall coverage area of these consortia is especially conducive to our study as it encompasses a range of settings, communities, and demographics combined under a single catalog interface. We will prioritize the recruitment of a diverse sample of participants, varying across gender and sexual identity, age, race, ethnicity, education, and setting. One-on-one user studies will be conducted with participants online via Zoom for increased privacy and accessibility. User studies have been chosen for this phase due to their common and effective employment in understanding user experiences of the catalog and other online interfaces (Connaway & Radford, 2021), while offering deeper, more targeted, and more personalized feedback than surveys, diary studies, or focus groups. During the user studies, participants will be led through a talk-aloud procedure in which they perform a series of tasks using the CCS shared online library catalog. These tasks will include searching and browsing for known titles, browsing for new titles, explaining the contents of catalog records, and freely exploring the catalog for titles of interest. While some examples used will be LGBTQ+ related titles specifically, materials of interest to a variety of groups will be incorporated as a means of capturing other potential linguistic considerations (e.g., *romance fiction* vs. *heterosexual romance fiction*). Researchers will observe further details about catalog use beyond initial searching, including how users sort and filter results, as well as which elements of metadata are made use of. All participants will receive compensation for their time and effort. Audio recordings of each user study will be transcribed by PIs or student assistants. De-identified text transcripts will be stored securely and the original recordings then deleted. The main result of this phase is a set of user-driven, qualitative data for analysis in the subsequent phase. During this first phase, the advisory board members will convene twice to assist in the development of the protocol, keep PIs abreast of concurrent activities in the field to avoid redundant work, and offer insight into emerging results. PIs also expect to host at least one public status update and listening session, and prepare and submit work-in-progress and/or preliminary findings for presentation and/or publication.

Phase 2: Analysis and Metadata Enhancement (Year 2: August 2025-July 2026) In the second phase we will draw on the results of the previous phase, as well as the findings from our lab's previous works and other literature on LGBTQ+ library users, to develop a detailed picture of how users understand and engage with library data in the context of the catalog. This phase will begin with a qualitative, inductive content analysis of the user study transcripts, with particular attention focused on how these users identify and understand LGBTQ+ related library resources. As a method, qualitative content analysis is frequently employed when qualitative content serves as the data of interest, and researcher insight and interpretation is needed to explore and develop thematic concepts (Elo et al., 2014). Content analysis will be conducted using MAXQDA software, as the research team has experience with this software following their iSchools-funded work. During analysis, researchers will rely on their subject expertise, as well as insights and expertise of advisory board members, in understanding and interpreting the results. The goal of the content analysis will be to develop a clear set of user behaviors and needs. From here, researchers will identify potential metadata enhancements capable of addressing these behaviors and needs. The enhancements may involve the relabeling or reprioritizing of existing data, as well as the inclusion of new data, giving preference to existing public sources of information beyond library catalogs. Researchers will then meet with staff from the partnering consortia CCS to discuss these possible enhancements. In collaboration with CCS staff, researchers will identify a sample of records in the CCS shared catalog for enhancement. Using native software and tools such as MARCEdit and OpenRefine, PIs and student research assistants will implement an agreed upon set of metadata enhancements. Results of this phase include the coding structure expressing LGBTQ+ user needs and behaviors, indications for metadata enhancement, and a dataset of enhanced test records made publicly available through GitHub or a similar source. During the second phase, PIs will continue regular meetings with advisory board members, host at least one public status update and listening session, and prepare and submit intermediary findings for presentation and/or publication. PIs will attend conferences during this phase to present on previous and emerging results; target venues

include Public Library Association (PLA), American Library Association (ALA), Illinois Library Association (ILA), and the Association for Library and Information Science Education (ALISE).

Phase 3: Focus Groups with Users and Librarians (Year 3: August 2026-July 2027) In the third phase, we will close the loop by returning to LGBTQ+ library users to gain feedback on the metadata enhancements in the record set generated during the previous phase. In cooperation with CCS and RAILS, researchers will recruit current and potential adult users of the public library system who identify as LGBTQ+ for a set of focus groups. As a method, focus groups are a frequently employed assessment strategy in library settings, capable of gathering and synthesizing feedback from a large number of stakeholders (Connaway & Radford, 2021). Focus groups will be conducted in person in locations within the consortia coverage areas (i.e., Illinois), and moderated by one or more of the study's PIs. At least 8 focus groups will be held. Each focus group will contain 5-10 participants, recruited with the assistance of the partnering consortia to prioritize diversity across participant gender and sexual identity, age, race, ethnicity, education, and setting. Participants may have previously taken part in Phase 1 user studies, though this is not required. During the focus groups, participants will be shown catalog searches and records using both the current CCS metadata as well as with the enhanced record set. Participants will be invited to share their reactions and suggestions on further improving the metadata and library catalog to better serve their needs. Additionally, two focus groups will be held with library staff from CCS and RAILS member libraries to incorporate their reactions and suggestions as well. All focus group members will receive compensation for their participation. Audio recordings of each focus group will be transcribed by PIs or student assistants. De-identified text transcripts will be stored securely and the original recordings then deleted. PIs will perform qualitative content analysis on the transcripts using MAXQDA, again focusing on user needs as well as user perceptions and suggestions. In cooperation with advisory board members and partnering consortia representatives, PIs will revise the previous indications for metadata enhancement and produce a second, revised dataset of enhanced records. Additional outputs from this phase will include publicly available sets of guidelines designed to assist LGBTQ+ library catalog users, as well as libraries seeking to better support this community. As in previous phases, PIs will maintain regular meetings with the advisory board, host at least one public status update and listening session, prepare and submit findings for publication, and attend conferences to present on the project.

Evaluation

The overall research design of the project is iterative in nature, such that each phase analyzes and builds on the findings of the previous. This loop begins in the first phase with elicitation of feedback from members of the LGBTQ+ community, and closes in the third phase when the enhanced metadata is presented to this community as well as library staff. Throughout the duration of the project, additional formative and summative assessments will be employed to gauge project progress and ensure adherence to the underlying research questions. Sources of formative assessment will include feedback from user study and focus group participants on the research itself, feedback from the public during listening sessions, and guidance from the advisory board during regular meetings. Public listening sessions, aimed at practitioners and to be held in conjunction with relevant professional groups, will be especially important in maintaining a focus on yielding practical solutions for the library community. Summative assessments will be conducted by PIs in cooperation with members of the advisory board in the last two months of each phase, aimed at determining if and how well phase objectives were met. The researchers' ability to provide meaningful answers to the study's underlying research questions represents perhaps the broadest assessment of the project's success; evidence in the form of publications and presentations will be provided, though the library community must decide this in the years following the project through their ability to leverage or incorporate the project's findings.

Personnel

This project is led by PI **Brian Dobreski** and co-PIs **Heather Moulaison-Sandy** and **Karen Snow**, founding members of the Inclusive Catalog Use Lab.
Dr. Dobreski is an Assistant Professor in the School of Information Sciences at University of Tennessee-Knoxville. His research focuses on the practices and implications of knowledge and information organization, as well as the concepts of

personhood and personal identity in information. His work examining the cataloging standard *Resource Description and Access* (RDA) has received numerous recognitions from organizations including ALISE, the iSchools, and ProQuest. He has authored works in publications including *Journal of Documentation*, *Knowledge Organization*, *Cataloging & Classification Quarterly*, *Social Media + Society*, *Journal of Information Ethics*, and *Journal of Education for Library and Information Science*. He previously worked as a librarian in systems and cataloging positions, including at Onondaga County Public Library, Syracuse University, and Eastman School of Music.

Dr. Moulaison-Sandy is Associate Professor and Director of Graduate Studies at the iSchool, the School of Information Science and Learning Technologies at the University of Missouri. As remote faculty, Dr. Moulaison-Sandy lives in Chicago, IL. Dr. Moulaison-Sandy is an award-winning scholar who studies the interrelated topics of library metadata, digital data, and authorship; she has published extensively on these topics over the course of her career. Dr. Moulaison-Sandy likewise has experience as a professional cataloging librarian which gives her first-hand knowledge of library systems and standards. Dr. Moulaison-Sandy has been elected to leadership positions in ALA, ALISE, the ASIST Special Interest Group-Classification and Metadata Research (SIG-CMR), and the International Society of Knowledge Organization (ISKO) Canada/US chapter.

Dr. Snow is a Professor and the Ph.D. Program Director in the School of Information Studies at Dominican University in River Forest, IL. She teaches face-to-face and online in the areas of cataloging, classification, and metadata. Dr. Snow's main areas of research interest are cataloging quality, ethics, and education. In addition to serving in multiple leadership roles in professional associations such as ALA and ALISE, Dr. Snow co-authored the *Core Competencies for Cataloging and Metadata Professional Librarians* (2017 and 2023 revision) and the *Cataloguing Code of Ethics* (2021). She was elected in 2017 and re-elected in 2021 to serve as a Trustee on the board of the La Grange Park Public Library in La Grange Park, Illinois.

Together, these three researchers bring a range of experience and expertise in catalog data and users as well as the methods incorporated in this study. As a team they have been working with and studying the perspectives and needs of LGBTQ+ users for the past 2.5 years, and have been disseminating their findings through publications, presentations, and workshops. As in their previous collaborations, all researchers expect to take part equally in all tasks, including data collection, analysis, writing, dissemination and presentation. The three will meet in biweekly, online research meetings throughout the entirety of the project. In their work, they will be supported by two **graduate research assistants**. Once onboarded and trained for human subjects research, the graduate research assistants will assist with scheduling and other project logistics, literature collection, data collection, audio transcription, data analysis, and other tasks as needed.

Throughout the entirety of the project, the PIs will also be supported by a five-member advisory board which will be convened twice per year and will lend expertise throughout the grant period. Advisory board members represent specific areas of subject and research expertise as well as the interests of potential stakeholders. **Dr. Denice Adkins** is Professor and Associate Director at the iSchool, the School of Information Science and Learning Technologies at the University of Missouri. Dr. Adkins studies information seeking and use by marginalized users in public library environments and is PI and Co-PI on a number of IMLS-funded initiatives. **Billey Albina** is the Systems & Metadata Librarian at Bard College and on the editorial board for the Homosaurus, an international linked data vocabulary of LGBTQ+ terms. Her research focuses on ethics and social justice in library metadata and information organization. **Dr. Lynn Connaway** is Executive Director, Research, at OCLC. Dr. Connaway has expertise in catalog data, library users, and research methods in LIS. Dr. Connaway has received a number of IMLS grants to support her research. **Dr. Vanessa Kitzie** is Associate Professor at the iSchool, the School of Information Science at the University of South Carolina. Dr. Kitzie studies the information practices of marginalized groups with a focus on the LGBTQ+ community, and is the recipient of multiple IMLS awards to study health information practices of this community. **Rachel Fischer** will serve as the cooperative site representative for Cooperative Computer Services (CCS), where she is the Member Services Librarian for Technical Services. Her recent research and projects with CCS have focused on improving access to LGBTQ+ collections for those in the LGBTQ+ community. Together, these advisory board members bring vital expertise in library research, catalog data,

working with LGBTQ+ populations, public libraries, and readers' advisory. Researchers and advisory board members include individuals identifying as LGBTQ+ as well as allies of this community.

Preliminary Timeline

Year 1 (August 2024-July 2025)	Phase 1: User Studies with LGBTQ+ Library Users
August-October 2024	Initial meetings with advisory board and cooperating consortia; Submission and approval of IRB; hiring and onboarding student workers
November 2024	Recruitment of user study participants in collaboration with consortia
December 2024-May 2025	Online user studies conducted; transcript preparation
June-July 2025	Public listening session; presentation and dissemination of Phase 1 findings in progress
Year 2 (August 2025-July 2026)	Phase 2: Analysis and Metadata Enhancement (Year 2: August 2025-July 2026)
August-October 2025	Inductive content analysis of user study transcripts; hiring and onboarding student workers
November 2025	Meeting with CCS staff to review results and discuss metadata enhancements
December 2025-March 2026	Record enhancement and quality control
April-July 2026	Public listening session; presentation and dissemination of Phase 2 findings
June-September 2026	Continue review of the literature; Submission and approval of IRB for Phase 3
Year 3 (August 2026-July 2027)	Phase 3: Focus Groups with Users and Librarians (Year 3: August 2026-July 2027)
August-September 2026	Recruitment of focus group participants in collaboration with consortia; hiring and onboarding student workers
October 2026-January 2027	Focus group sessions held in consortia member locations; transcript preparation
February-April 2027	Content analysis of focus group transcripts
May 2027	Review of findings with CCS staff; adjustment of record enhancements
June-July 2027	Public listening session; presentation and dissemination of Phase 3 findings including best practices guidelines

Dissemination and Communication

Throughout the project, PIs will document and disseminate the study's methodology and findings in order to support understanding, discussion, and adaptation of our work by the library community. Our dissemination and communication plan includes a mixture of listening sessions, workshops, presentations, and academic publications.

We will report on and disseminate our findings using multiple channels and venues. In collaboration with organizations serving and informing the library community, including the American Library Association (ALA) and the Public Library Association (PLA), PIs will host periodic project status updates and listening sessions (at least once each phase). These sessions will keep practitioners informed, solicit their feedback, and spark continuing conversations about serving LGBTQ+ users. We anticipate that the sessions will be largely panel presentations, either in-person or online, with the research team presenting updates and findings, and including time for questions and feedback from the audience. However, we are also considering developing more interactive workshops that encourage more engagement between the research team and the audience. At the start of the project, web pages on the research group's existing site (https://icu-lab.org) will be created, devoted specifically to information about the grant-funded work. These pages will be updated regularly throughout the project to provide status updates as well as links to publicly available documents and presentations.

Additional free and easily accessible channels used for dissemination will include online discussion forums and email lists geared toward practitioners, such as ALA's message board ALA Connect, the AUTOCAT listserv for cataloging practitioners, and the PUBLIB listserv for public librarians. The Core division of ALA also encourages the development of webinar presentations for Core members and the Core Interest Group Week every year yields many calls for proposals to present a brief online session for a particular interest group. These webinar opportunities often reach hundreds, if not thousands of practitioners who attend the sessions live or watch the recordings. For example, the research team previously presented at the Core Cataloging Norms Interest Group session during the 2023 Core Interest Group week on *LGBTQ+ identities, language, and the library catalog* to over 400 live participants of mainly library practitioners and received positive feedback and encouragement. We will propose sessions in some or all of these venues to disseminate and solicit feedback on our study progress and findings.

We also plan to submit proposals to present at several practitioner conferences such as the ALA, PLA, and the Illinois Library Association (ILA) annual conferences. Not only does the ALA attract the attention of many cataloging practitioners, it has the Rainbow Round Table, a group "committed to serving the information needs of the LGBTQIA+ professional library community, and the LGBTQIA+ information and access needs of individuals at large." Our findings will be communicated to this group through conference attendance and/or online channels. We will submit presentation proposals at other major LIS conferences that focus more on research, such as ALISE and the Association for Information Science & Technology (ASIS&T), to gain further feedback and perspectives on our study.

One member of the research team (Dr. Snow) is on the ALA Core Subject Analysis Committee (SAC), a committee consisting mainly of practitioners who explore and make recommendations about subject vocabularies used in cataloging practice, and liaisons from these vocabularies (e.g., Dewey Decimal Classification, Library of Congress Subject Headings, Homosaurus) are members as well. The findings of our study can be communicated directly to this body for consideration.

Scholarly papers will be submitted to peer-reviewed journals aimed at LIS practitioners and researchers. Target venues for practitioners include *Cataloging & Classification Quarterly*, *Reference & User Services Quarterly,* and *Public Library Quarterly.* Disseminating in these outlets will allow libraries and library staff to learn more about the project and the potentials for implementing project findings. More academic, research-focused venues will include *Information Technology and Libraries, Library and Information Science Research, Knowledge Organization, Journal of Documentation*, and *Journal for the Association for Information Science and Technology*. Articles in these journals will present theoretical and methodological implications of our work to the information research community. Finally, best practices guides aimed at both LGBTQ+ library users and libraries seeking to better support these communities will be made available on the project website and disseminated publicly.

3. Diversity Plan

The research team is committed to diversity and inclusion in all aspects of this project, from design to implementation to dissemination. We recognize the richness and diversity within the LGBTQ+ community and view this as a strength to leverage in the development of a more nuanced understanding of the community's information needs, and arriving at more innovative solutions. At the same time, we also recognize the diversity present in libraries, their needs, and their staff. We are dedicated to ensuring that our research reflects the diverse realities of both these groups while at the same time addressing inclusion in library and information practice at large. Our research personnel, processes, and outcomes all demonstrate our commitments in this area.

Our project personnel have been assembled to reflect both the diversity of the LGBTQ+ community and the library profession. Researchers and advisory board members include individuals who identify as LGBTQ+ as well as allies of this community. Among us we have significant experience in performing research with the LGBTQ+ community. Advisory board members also represent a variety of work and research settings and a range of expertise in areas relevant to the study and its subjects. The participating consortia for this study cover libraries serving diverse areas and constituents, from large urban institutions to small rural ones. Finally, recruitment of student research assistants for the project will

uphold our group's commitment to the LGBTQ+ community while seeking to further diversify project personnel in terms of race, ethnicity, gender identity, and age.

Recruitment strategies for user studies and focus groups will actively focus on the engagement of diverse segments of the LGBTQ+ community. We acknowledge the inherent complexities of defining this community as a singular unit, and though they are united to some extent under a shared identity and set of societal experiences, we understand that the range of lived experiences for such a group is vast. As such, our sampling methods will actively address the heterogeneity within this community, ensuring our findings are relevant to the broad spectrum of adult LGBTQ+ library users. This will involve not only consideration of participants' sexual orientation and gender identity, but of their race, ethnicity, education, and urban/rural setting as well.

Dissemination of information on the study and its findings will take place throughout the project, and will further support our commitment to diversity and inclusion. We recognize the important role librarians play in serving LGBTQ+ users. As such, we will actively engage with library professionals through listening sessions, workshops, and presentations to ensure their feedback is heard and incorporated and the project findings are translated into clear and actionable guidance for supporting LGBTQ+ library users. We will share our findings through various channels, including outlets specifically focused on diversity and inclusion within libraries such as the ALA's Rainbow Round Table. Finally, in the dissemination of our work we will address the generalizability of our findings to other user groups, and how our methods and findings may inform other efforts to improve access for marginalized communities.

4. Project Results

The overarching goal of this project is to continue the work of the ICU Lab to understand how marginalized users, in this case LGBTQ+ community members, interact with library catalogs. We seek user-driven, effective ways to supplement current access to library resources as a way of supporting improved catalog use. When this research is completed, we will better know 1) how LGBTQ+ users search, 2) how catalog metadata could be enhanced to help these users, and 3) actionable advice for libraries interested in implementing these enhancements. The results will benefit libraries and LBGTQ+ community members, but will also potentially provide a blueprint for similar, future studies involving other marginalized communities.

Throughout the project, various deliverables will be used to communicate findings and recommendations to stakeholders and interested audiences. These include research articles in relevant journals (Phase 1-3), public presentations to practitioners during the American Library Association Annual Conference or similar events (Phases 1-3), open data sets of enhanced records along with documentation (Phases 2 & 3), freely available metadata recommendations for library catalogs (Phase 3), and accessible best practices materials on successful search strategies aimed at LGBTQ+ library users and those assisting them (Phase 3). For LGBTQ+ library users, this work and its findings stand to reduce barriers associated with library use and increase equitable access to information. For libraries, this project will offer insight and practical suggestions concerning how to better leverage their vast amounts of data in providing access for the LGBTQ+ community. For researchers, our work will offer a methodological template that can be drawn from in understanding and assisting other marginalized groups.

The project will be considered successful if, in Phase 3, the feedback we receive from focus group participants confirm the benefits of the enhanced records. We will also view this project as a success if other libraries replicate the enhanced metadata or records in their catalogs. Additionally, we hope that other researchers will use our study as a model for conducting more user-driven research in the future.

The results and effects of this project will be sustained in several ways. First, best practices guidelines will be made freely available by the end of the project, covering both guidance for LGBTQ+ users on effectively searching and understanding library data, and for libraries wishing to implement strategies to better serve the catalog needs of these users. We will encourage the sharing of this documentation, and it will remain available after the formal conclusion of the project. Second, dissemination of the methods and findings of our study through publications and presentations will yield a body

of work from which researchers and practitioners may draw in conducting their own future work. Third, through practitioner forums, presentations, workshops, and collaborations, we anticipate our work will spark ongoing conversations within the library community about how to understand and address the needs of all catalog users, especially those from marginalized communities. Finally, the ICU Lab website, which already exists and lists our completed projects and publications, will continue to be updated beyond the duration of the project.

Exploring User-Informed Approaches to Enhancing Library Metadata for the LGBTQ+ Community

YEAR 1 (2024-2025)

Activities	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
Hiring and onboarding student workers	▓	▓										
Team meetings with advisory board	▓									▓		
Development of project website	▓	▓										
Secure IRB approval	▓	▓	▓									
Develop and test data collection instruments		▓	▓									
Recruit LGBTQ+ library user participants				▓								
Conduct user studies via Zoom with LGBTQ+ library user participants; transcript preparation					▓	▓	▓	▓	▓	▓		
Public listening session; presentation and dissemination of Phase 1 findings											▓	▓
First year evaluation activities											▓	▓

YEAR 2 (2025-2026)

Activities	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
Team meetings with advisory board	▓									▓		
Hiring and onboarding of student workers	▓	▓										
Inductive content analysis of user study transcripts	▓	▓	▓									
Develop set of user behavior and needs and metadata recommendations		▓	▓	▓								
Identify sample of records in the CCS shared catalog for enhancement				▓								
Meeting with CCS staff to review results and discuss metadata enhancements				▓								
Perform enhancements on identified sample of records; quality control					▓	▓	▓	▓				
Public listening session; presentation and dissemination of Phase 2 findings									▓			
Continue review of the literature; submission and approval of IRB for Phase 3										▓	▓	▓
Second year evaluation activities											▓	▓

YEAR 3 (2026-2027)

Activities	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
Team meetings with advisory board	▓									▓		
Hiring and onboarding of student workers	▓	▓										
Continue review of the literature; submission and approval of IRB for Phase 3	▓	▓										
Recruit LGBTQ+ library users for focus groups			▓	▓								
Conduct focus groups in consortia member locations; transcript preparation				▓	▓	▓	▓					
Content analysis of focus group transcripts							▓	▓	▓			
Review of findings with CCS staff; adjustment of record enhancements										▓		
Third year and final evaluation activities										▓	▓	▓
Public listening session; presentation and dissemination of Phase 3 findings including best practice guidelines											▓	▓

Digital Products Plan

1. Type:
What digital products will you create?

The table below summarizes the major digital products to be produced by this project:

Product	Type	Format	Metadata	Standards
Project website	webpages	HTML	HTML head elements (embedded)	HTML
Phase 1 user studies	de-identified text transcripts of 50 user studies	PDF/A	DDI (Harvard Dataverse)	DDI
Data analysis codebooks	master codebooks for qualitative analysis of phase 1 and 3 data	PDF/A	DDI (Harvard Dataverse)	DDI
Research publications	journal and conference articles generated by the project	PDF/A	Digital Commons repository descriptive metadata (DC)	DC
Catalog record set	set of modified library catalog records	MARC, CSV	DDI (Harvard Dataverse), GitHub properties	DDI, MARC, LC vocabularies
Phase 3 focus groups	de-identified text transcripts of 10 focus groups	PDF/A	DDI (Harvard Dataverse)	DDI
Best practices guidelines	written documentation for library staff and LGBTQ+ library users	HTML, PDF/A	HTML head element (embedded), Digital Commons repository descriptive metadata (DC)	HTML, DC

2. Availability
How will you make your digital products openly available (as appropriate)?

Digital products from this project will be openly available online through freely accessible websites and interfaces; no limitations are indicated. The main project website will accessible via

standard web browsers. The website will also include publicly accessible versions of the best practices guidelines developed during the project's final phase. Three major datasets will be generated during the project, and these will be uploaded and described using Harvard Dataverse, an open repository for research data. Two sets of deidentified transcripts and the MARC records will be stored here, alongside the codebooks used in qualitative analysis of the transcripts. The MARC record set will also be made available on GitHub. The best practices documentation, and, where possible, conference and journal papers and preprints, will be stored in University of Tennessee's openly accessible institutional repository TRACE. Standard web infrastructure underlies all of these resources; additionally, Harvard Dataverse is built on Dataverse Project infrastructure, and TRACE is part of the Digital Commons Network infrastructure.

3. Access
What rights will you assert over your digital products, and what limitations, if any, will you place on their use? Will your products implicate privacy concerns or cultural sensitivities, and if so, how will you address them?

Digital products described here will be freely available under CC0 1.0 (public domain) licensing. User study and focus group transcripts present potential privacy concerns for participants. These concerns will be mitigated using standard deidentification practices. In addition, all participants will be informed of the public availability of transcripts before taking part in the study, and participants in the user studies may opt out of having their deidentified transcript included in the final dataset.

4. Sustainability:
How will you address the sustainability of your digital products?

Project webpages will be maintained after the conclusion of the project. Datasets will be stored in Harvard Dataverse, an established data repository built on open-source software designed for long-term storage. Articles and documents will be stored in University of Tennessee's TRACE system, which is part of the Digital Commons Network of open access repositories and similarly designed for long-term storage.

Exploring User-Informed Approaches to Enhancing Library Metadata for the LGBTQ+ Community

Data Management Plan

Three major research datasets will be produced during the course of this project:

1. **User Studies:** In the first phase of the study, 50 one-on-one user studies will be conducted online using Zoom between December 2024 and May 2025. Only the audio will be recorded, resulting in temporary .mp4 files that will be deleted upon transcription. Transcripts will be saved as 50 PDF/A files. These transcripts will be used for qualitative analysis during the second phase of the study and made publicly available as a set.

2. **MARC Record Set:** In the second and third phases of the project, a set of approximately 100 enhanced MARC records will be produced, using a sample of records from the CCS shared catalog. The enhanced records will be produced using data quality software including MARCEdit and OpenRefine. The record set will be first created between December 2025 and March 2026, with additional edits taking place in May 2027. The record set will be used during the third phase focus groups, and also made available for public download in both MARC and CSV formats.

3. **Focus Groups:** In the third phase of the study, 10 focus groups will be conducted in person with 5-10 participants each. Focus groups will be held between October 2026 and January 2027. Only the audio of these sessions will be recorded resulting in temporary .mp4 files that will be deleted upon transcription. Transcripts will be saved as 10 PDF/A files. These transcripts will be used for qualitative analysis during this same phase of the study and made publicly available as a set.

As the final data products of this study are to be released publicly, certain precautions must be taken with the user studies and focus groups datasets, both of which entail human subjects research. Participants may divulge personal information during the course of the user studies and focus groups, including name, age, occupation, and education. Before transcription, audio files will be stored securely using University of Tennessee OneDrive and permissioned for only PIs and student research assistants. During transcription, all personally identifiable data will be removed from the final transcript. Original audio files will then be deleted. Participants of the user studies will have the option of withholding their deidentified transcript from the eventual public dataset.

Accompanying documentation will be prepared for each of the datasets. Codebooks will be created during the qualitative analysis of the first and third phase transcripts. These codebooks will be created using MAXQDA software, with the final versions saved as PDF/A files for public distribution. A data dictionary will be prepared for the MARC record set, explaining data fields as well as the procedures used to generate and enhance the records. This data dictionary will be saved as a PDF/A file for public distribution.

Researchers have chosen Harvard Dataverse as the long-term repository for the three public datasets and their accompanying documentation. This is a well-established, publicly accessible, open repository for research data. The datasets and their accompanying documentation will be stored together there and described with metadata using Dataverse's implementation of the DDI metadata standard. All datasets will be made available under CC0 1.0 (public domain) licensing. Data will be stored and made publicly accessible, with no expiration date, by the conclusion of each phase: user study transcripts by August 2025, MARC records by August 2026, and focus group transcripts by August 2027.

Access to these datasets will be available through standard web protocols and browsers. Harvard Dataverse has a robust search and retrieval mechanism that will allow discovery of the datasets. Accompanying documentation will aid users in understanding and working with the data. Display of the transcripts and accompanying documentation will require the user to have software capable of displaying PDF formats; this open standard is supported by a variety of free software. The MARC records will be available in two formats: MARC and CSV. The MARC format will require special software for the user to read and interact with. Though free options such as MARCEdit are available for this purpose, they may still require specialized knowledge of the MARC format. The CSV version of the record set will be provided as an alternative, and can be read and interacted with using a number of open-access programs. In both cases, the accompanying data dictionary will aid users in understanding the data.

This data management plan will be periodically reviewed throughout the course of the project. Review of the plan will coincide with preparations for semiannual advisory board meetings, which are to take place in August and May in Years 1-3. Plan review will be conducted by the project PIs, while implementation of the plan will be monitored by advisory board members as well as University of Tennessee staff members overseeing grant logistics in the College of Communication and Information's Research and Innovation Center (RIC).