

The Future of Youth Public Librarian Education Project

Introduction

The School of Information and Library Science at the University of North Carolina at Chapel Hill (UNC SILS) and the State Library of North Carolina propose a one-year National Forum Grant (\$149,781). Over twelve months, we will facilitate a national conversation — to include roundtables with LIS faculty and practitioners at the national conferences, a website, surveys, and social media chats - to broaden and deepen our understanding of the future of LIS youth services education. The capstone activity will bring together 40 innovators, scholars, and practitioners from LIS and related fields to Chapel Hill, NC for a two-day, intensive exploration of today's youth and the developing trends in youth services in public libraries to imagine how higher education LIS curricula could change to meet the needs of future youth library professionals. This project will address the IMLS Strategic Plan for 2018-2022 goals of **building capacity** through “community dialogue,” “identifying trends,” and “sharing best practices and innovations” and **achieving excellence** through “incorporating new ideas” for “attracting an effective and dedicated workforce.”

The Future of Youth Public Librarian Education project will achieve these goals through collaborative brainstorming, experience sharing, and collective data analysis, as we explore the future skills, content knowledge, and social awareness needs of youth librarians. This project will be led by PI Brian W. Sturm and Co-PIs Sayamindu Dasgupta, Sandra Hughes-Hassell, and Casey H. Rawson. (Project team bios are available at <http://ysfuture.web.unc.edu>.)

Statement of National Need

As public libraries shift their focus from collections and buildings to communities and knowledge; as their purview expands from information to experiential, connected¹, and informal learning²; as [definitions of literacy](#) expand to include digital, media, computational, and critical literacies, among others; and as the nation becomes a more pluralistic and diverse society³, youth librarians need new skills and an expanded knowledge base to fill current and future positions. Recognizing this, [ALSC](#) and [YALSA](#) revised their professional competencies to include concepts such as cultural competency, formal and informal learning environments, youth and family engagement, and equity of access. To support practicing youth librarians, both have developed continuing education programs that focus on topics such as career and college readiness, media literacy, connected learning, design thinking, and coding. Members of this project team recently completed and released the IMLS-funded [Project READY](#) online racial

¹ Hoffman, K. M., Subramaniam, M., Kawas, S., Scaff, L., & Davis, K. (2016). Connected libraries: Surveying the current landscape and charting a path to the future. College Park, MD; Seattle, WA: The ConnectedLib Project. Available at SSRN: <https://ssrn.com/abstract=2982532>.

² Harrop, D. & Turpin, B. (2013). A study exploring learners' informal learning space behaviors, attitudes, and preferences, *New Review of Academic Librarianship*, 19(1), 58-77, DOI: 10.1080/13614533.2013.740961

³ Wright, R., Ellis, M., Holloway, S. R., & Wong, S. (2014). Patterns of Racial Diversity and Segregation in the United States: 1990–2010, *The Professional Geographer*, 66(2), 173-182, DOI: 10.1080/00330124.2012.735924

equity curriculum to address gaps in cultural competency and equity of access among youth services librarians. The project helps address the gap in current Library and Information Science (LIS) education concerning racial equity and social justice and is an example of one set of skills and knowledge needed by future youth librarians that is not being fully addressed in today's higher education in Library and Information Science curricula. We expect that many new skills and knowledge gaps will arise from the national conversation and capstone symposium of the Future of Youth Public Librarian Education project.

While these efforts are important steps toward ensuring that librarians can meet the needs of today's youth, they are primarily opt-in offerings. As lifelong LIS educator Virginia Walter remarked, "the United States does not have a unified approach to educating children's librarians or to training them when they are on the job.... It is all a big patchwork quilt with no coordination."⁴

As a preliminary environmental scan, we examined the top 2017 *US News and World Report* youth services programs' course offerings and conducted a national survey of recent graduates with LIS degrees. Our preliminary analysis of course titles and descriptions (please see Supportingdoc3) suggests that most schools continue to emphasize traditional library skills such as reference, cataloging, and collection management and offer traditional youth services courses such as children's and young adult literature and library programs and services for youth. Few offer youth courses addressing more recently identified competencies such as cultural competency, social justice, community engagement, or digital literacy. Preliminary, unpublished findings from our survey echo these findings that graduates feel prepared for traditional roles but not for the emerging demands of today's libraries. These findings are also supported by conversations we have had with library administrators and hiring personnel who are having difficulty finding qualified applicants for youth services positions. For example, one such administrator of a midsize city's public library system shared with us via email, "Too many MLIS candidates come to us not having done any research on our communities, not displaying an understanding of youth developmental theory let alone how that is essential for youth librarianship, not displaying an understanding of what librarianship for youth is all about, and not displaying any understanding of the challenges that youth are facing and what our libraries are trying to do to help them now and in preparing for their futures."

While not specific to public libraries or youth services, other studies have also identified emerging competencies and skills that are not currently being addressed in graduate LIS curricula. For example, attendees at the 2016 IFLA World Library and Information Congress were asked what knowledge, skills, and abilities (KSAs) would be required of information professionals in the next five years.⁵ Their answers included some conventional library skills, such as managing and organizing information, but the most frequently cited KSAs focused on less traditional areas including design thinking, diversity and inclusion, advocacy and political

⁴ Walter, V. (2014). Who will serve the children? Recruiting and educating future children's librarians. *IFLA Journal*, 40(1), 24-29, p. 28.

⁵ Abels, E. G., Howarth, L. C., & Smith, L. G. (2018). Transforming library and information science education by design. In Percell, J., Sarin, L. C., Jaeger, P. T., & Bertot, J. C. (Eds.), *Re-Envisioning the MLS: Perspectives on the future of library and information science education* (pp. 71-89). Bingley, UK: Emerald.

engagement, and entrepreneurial skills. This evidence, paired with rapidly changing contexts for public library work, points to a need to reimagine LIS curricula on a national scale.

In recent years, there has been a great deal of scholarship published related to LIS education in general and potential changes to LIS curricula and programs that might improve the profession. However, very little of this research has specifically addressed public librarianship, and even less has explored youth services work within these settings. For example, a two-volume edition of *Advances in Librarianship* published in 2018 focused on “Re-envisioning the MLS” and included 24 articles related to this theme, including some that focused on specific LIS subdomains such as academic libraries, archives, and cataloging. None of these articles focused on public libraries or on youth services. Similarly, other national forums⁶ have addressed the future of LIS education in general, but this will be the first focused on youth services curricula. Our goal for this year-long project is to create a deeper understanding of the youth of today, their lived experiences, their challenges and aspirations and what that means for the education of public librarians serving youth. Our intent is to provide a platform for youth experts and advocates from LIS and related fields to engage in zero-based thinking, so that future curricular decisions are guided by, but not limited by, past directions. We wish to be future-oriented and innovative in our approach to education while still being guided by the profession’s core values.

Project Design

The proposed year-long project will take place in phases. While evaluation will be an ongoing process, woven throughout the project, it is described in the narrative below as a separate phase for clarity.

Phase 1: Planning Phase - The first phase of the project, planning, began in March 2020 with the formation of a project advisory board. The members of the advisory board include representatives from various stakeholder groups. They bring knowledge of youth and communities, expertise developing and implementing library and afterschool programs for children and teens, and a commitment to creating inclusive and equitable programs for diverse populations. Biographies of the advisory board members and letters indicating their willingness to serve can be found in the Supporting Documents. It is anticipated that the work of the advisory board will be conducted primarily through conference calls, emails, and virtual meetings using tools such as Zoom and Google Docs. Advisory board members include:

1. Nicole Cooke - Augusta Baker Endowed Chair Associate Professor. University of South Carolina
2. Dan Gilbert - Senior Program Manager, Afterschool Alliance
3. Kirby McCurtis - Branch Manager, Multnomah County Library, Portland, Oregon
4. Jamie Naidoo - Associate Professor, University of Alabama
5. Ricarose Roque - Assistant Professor, University of Boulder, Colorado
6. Tessa Schmidt - Public Library Youth & Inclusive Consultant for Wisconsin State Library
7. David Singleton - Executive Director, Live Oak Public Library, Georgia
8. Mega Subramaniam - Associate Professor, University of Maryland

⁶ Syracuse University ([2017](#)); Simmons College ([2014](#));

9. Jason Yip - Assistant Professor, University of Washington

While these advisory board members are focused in library education and practice, their areas of expertise include: design thinking, underrepresented youth and computing, diverse youth and libraries, social justice, and STEM and disadvantaged youth, and inclusive library practices and programs. We feel they will bring broad perspectives to the board and their social networks will enable us to recruit diverse perspectives among the symposium participants. The advisory board members will: (1) provide feedback on the content and structure of Phase 2 roundtable discussions, webinars, and social media chats; (2) help identify and select potential Phase 3 symposium participants; (3) provide feedback on the symposium agenda; (4) participate in the symposium; (5) give feedback on the preliminary project report, and (6) help disseminate the project findings and recommendations.

Also in the Supporting Documents are letters of support for the proposed project from the Association of Library Services to Children (ALSC), the Young Adult Library Services Association (YALSA), the Association of Library and Information Science Educators (ALISE), and the State Library of North Carolina. A representative from the YALSA and ALSC Board's will serve on the project's advisory board and will attend the symposium. A representative of the State Library of North Carolina will also attend the symposium. All organizations will help disseminate the project findings to their members through various communication channels.

Phase 2: National Conversation: Phase 2 of the project involves conducting a national conversation focused on identifying the issues facing today's youth; discerning what today's youth need to thrive; exploring the knowledge, skills, and attitudes wanted in youth services librarians by library administrators and hiring personnel; discovering what youth services LIS faculty are currently doing; understanding the perceptions and experiences of other youth-focused organizations that work with youth, families, and communities; and establishing what innovative public libraries are already doing. We plan to use our advisory board to identify and reach out to these groups. In preparation for the national conversation, the project team will gather demographic data on today's youth, conduct an environmental scan to identify the issues facing youth and their communities, and analyze documents such as competencies for serving youth, research agendas, and white papers from ALSC, YALSA, the [National AfterSchool Association](#), the [Afterschool Alliance](#), and other professional youth-focused associations to identify trends and issues in serving today's youth. This information, plus ongoing consultation with the project advisory board members, will help us create organizing questions for the conversations we will have with various stakeholders during this phase. These conversations will take several forms:

- Surveys of public librarians, public library administrators and hiring personnel (via LLAMA Library Administration Discussion List and LIBSUP-L), LIS faculty (via ALISE listserv), youth (via Twitter, Facebook, and other social media)⁷, and other youth-focused organizations;
- Online town halls open to public library staff (including librarians, hiring personnel, and administrators) and stakeholders in other youth-focused organizations,

⁷ Sutter E, Klein JD. (2007). Internet surveys with adolescents: Promising methods and methodologic challenges. *Adolescent Medicine: State of the Art Reviews*, 18(2), 293–304.

- Social media chats aimed at youth services library staff and administrators; and
- Round table discussions with practitioners, researchers, and LIS educators at the national conferences of ALSC, ALISE, the Black Caucus of the American Library Association (BCALA), REFORMA, and YALSA.

Our goal is to be inclusive of multiple perspectives and to create substantial opportunities for stakeholders representing various communities to take part in the discussion. Data collected from the environmental scan and from these conversations will inform the development of the subsequent capstone symposium.

Phase 3: Capstone Symposium: The primary event for which we are seeking funding is a two-day symposium which will be held in May or June 2021 in Chapel Hill, North Carolina. In order for the symposium to be most effective, it is imperative that as many stakeholder groups be represented as possible. As noted above, attendees will include public library staff, library directors, state level library leaders, representatives from professional associations, educators and researchers from the LIS, afterschool, and learning sciences, media literacy communities, representatives from national organizations such as the Connected Learning Alliance, Afterschool Alliance, AfterSchool Association, Urban Libraries Council, the Boys and Girls Clubs, and so forth. Most of the grant funds will be used for the costs of the symposium, including meeting rooms, keynote speakers and facilitator fees, meals, and overnight accommodations for attendees who are traveling outside the Chapel Hill, Raleigh, or Durham area.

The symposium will be a working meeting. Before the symposium, we will send a summary report of Phase 2 findings to all attendees; this will serve as a common foundation for facilitated discussions and small group work. Linda Braun, Learning Consultant with LEO, will serve as the symposium facilitator. She will be assisted by the project staff and UNC SILS students who will serve as recorders for working group discussions.

Details of the symposium agenda will change in response to findings from earlier phases of this project and discussions with the project advisory board and facilitator. Tentative plans include:

- Two keynote speakers who will lay the groundwork for the symposium work. On the first evening of the symposium, we hope to have a keynote speaker who will provide attendees with a “lay of the land” in terms of the characteristics, needs, and strengths of today’s youth. We are tentatively targeting the Annie E. Casey Foundation’s Kids Count Center as a potential contact for this speaker. The second keynote speaker may be an expert in informal learning, or another critical area identified as an area of need in Phase 2 of the project.
- A panel of library directors and practitioners who will speak to the knowledge, skills, and attitudes needed by MSLS graduates, and panel of LIS Youth Services faculty who will explore examples of innovative assignments, courses, and curricula already offered in some LIS programs, such as the [public library collaboration work](#) of Leanne Bowler at Pratt Institute or the [digital literacy work](#) of Mega Subramaniam at the University of Maryland.
- Facilitated discussions and participatory activities to bring ideas and topics to the fore.

Table 1: Tentative Symposium Agenda		
Day 1 (evening only)	5:00-9:00pm	<ul style="list-style-type: none"> • Dinner • Welcome and introduction to the goals of the symposium • Keynote #1 (TBD) • World Cafe or similar group activity designed to capture initial thoughts around the symposium issues
Day 2 (full day)	Morning	<ul style="list-style-type: none"> • Breakfast • Panel discussion (Library directors) • Working Groups (Facilitated Discussions) • Keynote #2 (TBD)
	Midday	<ul style="list-style-type: none"> • Working Lunch
	Afternoon	<ul style="list-style-type: none"> • Panel Discussion (Innovative Practice) • Working Groups (Facilitated Discussions) • Large Group Discussion—Working Groups Report Out • Participants released for dinner on their own
Day 3 (morning only)	8:00-11:00am	<ul style="list-style-type: none"> • Breakfast • Closing working group activity

The symposium will be fully documented. UNC students and members of the project team will take copious notes during the working groups and the large group discussions. If the speakers agree, the keynote speaker presentations and panel discussions will be videotaped. The project team will meet each day to review the ideas, questions, etc. that have been generated and to identify gaps that need to be addressed.

Phase 4: Project Report: After the symposium, the project team will use the information gathered throughout the project (national conversation and symposium) to generate a preliminary report that includes recommendations for curriculum changes, as well as next steps. The preliminary report will be shared with the advisory board and symposium participants for review and posted for public comment.

Phase 5: Dissemination: Effective dissemination and communication of the project outcomes is critical to the success of this project, as our goal is to inspire LIS programs to effect changes in their youth services curricula. To that end, the project team will make the project report accessible online in PDF format. It will be sent to a variety of key stakeholders including deans,

directors, and youth services faculty of the ALA and NCATE accredited LIS programs, state librarians, member libraries in the Urban Libraries Council, and the Boards of ALA, PLA, ALSC, YALSA, BCALA, ALISE, REFORMA, and the Association for Rural and Small Libraries (ARSL). The report will also be shared with the Office for Accreditation. We also plan to create a website which will host information about the project including data collected from the environmental scan, summary data resulting from the national conversation events and surveys, and artifacts from the symposium. If the keynote speakers and panel members agree, their presentations will be videotaped and included on the website. The project team will present the results of the project at appropriate national conferences such as ALA, ALISE, YALSA, ALSC, BCALA, REFORMA, PLA, and ARSL and will publish the results in appropriate journals such as *Library Quarterly*, *Journal of Education for Library and Information Science*, *Children and Libraries*, and *Young Adult Library Services*. Finally, SILS Director of Communications will prepare numerous PR documents and communications for the project. Acknowledgement will be made to IMLS for project funding in all materials produced during this project.

Phase 6: Evaluation: As Table 2 shows, we will use a multi-pronged approach to evaluate the success of the project.

Table 2: Overview of Measurable Outcomes, Data Sources, and Targets for Each Phase of the Project

Measurable Outcome 1	<p>Develop a thorough catalog of:</p> <ol style="list-style-type: none"> 1. the issues facing today’s youth and what they need to thrive 2. the knowledge, skills, and attitudes wanted in youth services librarians by library administrators and hiring personnel 3. the perceptions and experiences of other youth-focused organizations that work with youth, families and communities 4. what innovative public libraries are already doing.
Data Sources	<ul style="list-style-type: none"> ● Systematic review of relevant research, white papers, and website content ● Surveys, online town halls, social media chats, and round table discussions at national conferences, capstone symposium
Data Intervals	September 2020 - June 2021
Target	<ul style="list-style-type: none"> ● Content analysis of relevant research, reports, etc. completed by October 2020 ● Surveys, webinars, social media chats, and round table discussions at national conferences completed and findings analyzed by April 2021 ● Symposium data captured in June 2021 and analyzed by July 2021
Measurable Outcome 2	<p>Develop an innovative curriculum structure, including suggested courses that would address the knowledge, issues, competencies, and skills raised during this yearlong project.</p>

Data Sources	<ul style="list-style-type: none"> ● Phase 2 Environmental scan ● Phase 2 National conversation (online and in-person) ● Phase 3 Symposium
Data Intervals	September 2020-June 2021
Target	<ul style="list-style-type: none"> ● August 2021
Measurable Outcome 3	Produce and disseminate the project report and website to a variety of stakeholders
Data Sources	Dissemination emails; website statistics; presentations by project staff
Data Intervals	Post grant: August 2021 - December 2021
Target	<ul style="list-style-type: none"> ● Project report disseminated to deans / directors and youth services faculty at ALA and NCATE accredited programs, 56 state and territory library directors and youth consultants, and approximately 150 Urban Library Council member libraries, the Boards of ALA, PLA, ALSC, YALSA, BCALA, ALISE, REFORMA, and ARSL, and the executive directors of non-library professional organizations serving youth and their communities, plus other stakeholders identified throughout the process ● Present on the project results at 2 or more national conferences (e.g. ALA Annual or ALISE)

Diversity Plan

The proposed project will be interdisciplinary in nature, involving participants from a variety of domains and perspectives including LIS, education, learning sciences, media literacy, and information science. We also plan to engage a variety of stakeholder voices, such as: youth services librarians and library administrators, academics, educators and parents, youth-focused nonprofits, and afterschool coalitions and providers.

One of the primary drivers of this project is the increasing diversity of U.S. children and teens (including diversity in terms of race and ethnicity, gender, sexual orientation, religion, SES, and ability). The project staff are keenly aware of the need for improved professional training related to equity and inclusion and have extensive experience in this area as a result of our work with Project READY. We view this need as central to the curriculum reimagining work that will be done in this project. To that end, we have ensured that our project advisory board is diverse in terms of demographics and perspectives. In all phases of the project, we will actively recruit

participants of color and participants from other marginalized groups, as well as participants who work in communities that are geographically and demographically diverse. Outreach to affiliates of ALA such as BCALA, REFORMA, and ARSL is central to our efforts to engage diverse, and often underserved communities. Equity and inclusion will ground all the work we do within this project.

National Impact

This project should engender a refreshed vision for the future of youth services librarian education, informed by interdisciplinary conversation and collaboration. We expect this project to shed light on both strengths and deficiencies in current LIS higher education, though we will give special attention to the educational gaps this project identifies. We anticipate the outcomes to include a nationally disseminated report and publicly available [website](#) of the ideas generated throughout the year-long project, along with recommendations for the curriculum changes necessary to address them. These materials should have value for stakeholders beyond those who participate in the project itself, including LIS program deans and directors, LIS faculty, state and territory library youth consultants, LIS professional organizations including ALSC, YALSA BCALA, REFORMA, ARSL, PLA, and ALA's Committee on Accreditation, among others.

The long-term intent of this project is to serve as a call to action for future work with other LIS educators to develop and implement a new curriculum for youth services librarianship via a Laura Bush 21st Century Librarian proposal; however, individual LIS programs can use the materials and recommendations produced in this project to begin making changes to their own curricula, whether or not a follow-up project is funded. The project may also serve as the foundation for a national research agenda in youth librarianship and youth library education.

Schedule of Completion

Project Activity	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Ma	Ju	Jly	Au	Sept
Phase 1: Convene advisory board	—————												
Phase 2: Implement national conversation		—————											
Phase 3: Make symposium arrangements	—————												
Phase 3: Hold symposium										———			
Phase 4: Develop project report										—————			
Phase 5: Develop and maintain project website	—————												
Phase 5: Disseminate results											—————		
Phase 6: Evaluation				—————									



DIGITAL PRODUCT FORM

INTRODUCTION

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to digital products that are created using federal funds. This includes (1) digitized and born-digital content, resources, or assets; (2) software; and (3) research data (see below for more specific examples). Excluded are preliminary analyses, drafts of papers, plans for future research, peer-review assessments, and communications with colleagues.

The digital products you create with IMLS funding require effective stewardship to protect and enhance their value, and they should be freely and readily available for use and reuse by libraries, archives, museums, and the public. Because technology is dynamic and because we do not want to inhibit innovation, we do not want to prescribe set standards and practices that could become quickly outdated. Instead, we ask that you answer questions that address specific aspects of creating and managing digital products. Like all components of your IMLS application, your answers will be used by IMLS staff and by expert peer reviewers to evaluate your application, and they will be important in determining whether your project will be funded.

INSTRUCTIONS

If you propose to create digital products in the course of your IMLS-funded project, you must first provide answers to the questions in **SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS**. Then consider which of the following types of digital products you will create in your project, and complete each section of the form that is applicable.

SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS

Complete this section if your project will create digital content, resources, or assets. These include both digitized and born-digital products created by individuals, project teams, or through community gatherings during your project. Examples include, but are not limited to, still images, audio files, moving images, microfilm, object inventories, object catalogs, artworks, books, posters, curricula, field books, maps, notebooks, scientific labels, metadata schema, charts, tables, drawings, workflows, and teacher toolkits. Your project may involve making these materials available through public or access-controlled websites, kiosks, or live or recorded programs.

SECTION III: SOFTWARE

Complete this section if your project will create software, including any source code, algorithms, applications, and digital tools plus the accompanying documentation created by you during your project.

SECTION IV: RESEARCH DATA

Complete this section if your project will create research data, including recorded factual information and supporting documentation, commonly accepted as relevant to validating research findings and to supporting scholarly publications.

SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS

A.1 We expect applicants seeking federal funds for developing or creating digital products to release these files under open-source licenses to maximize access and promote reuse. What will be the intellectual property status of the digital products (i.e., digital content, resources, or assets; software; research data) you intend to create? What ownership rights will your organization assert over the files you intend to create, and what conditions will you impose on their access and use? Who will hold the copyright(s)? Explain and justify your licensing selections. Identify and explain the license under which you will release the files (e.g., a non-restrictive license such as BSD, GNU, MIT, Creative Commons licenses; RightsStatements.org statements). Explain and justify any prohibitive terms or conditions of use or access, and detail how you will notify potential users about relevant terms and conditions.

A.2 What ownership rights will your organization assert over the new digital products and what conditions will you impose on access and use? Explain and justify any terms of access and conditions of use and detail how you will notify potential users about relevant terms or conditions.

A.3 If you will create any products that may involve privacy concerns, require obtaining permissions or rights, or raise any cultural sensitivities, describe the issues and how you plan to address them.

SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS

A.1 Describe the digital content, resources, or assets you will create or collect, the quantities of each type, and the format(s) you will use.

A.2 List the equipment, software, and supplies that you will use to create the digital content, resources, or assets, or the name of the service provider that will perform the work.

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG, OBJ, DOC, PDF) you plan to use. If digitizing content, describe the quality standards (e.g., resolution, sampling rate, pixel dimensions) you will use for the files you will create.

Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan. How will you monitor and evaluate your workflow and products?

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period. Your plan should address storage systems, shared repositories, technical documentation, migration planning, and commitment of organizational funding for these purposes. Please note: You may charge the federal award before closeout for the costs of publication or sharing of research results if the costs are not incurred during the period of performance of the federal award (see 2 C.F.R. § 200.461).

Metadata

C.1 Describe how you will produce any and all technical, descriptive, administrative, or preservation metadata or linked data. Specify which standards or data models you will use for the metadata structure (e.g., RDF, BIBFRAME, Dublin Core, Encoded Archival Description, PBCore, PREMIS) and metadata content (e.g., thesauri).

C.2 Explain your strategy for preserving and maintaining metadata created or collected during and after the award period of performance.

C.3 Explain what metadata sharing and/or other strategies you will use to facilitate widespread discovery and use of the digital content, resources, or assets created during your project (e.g., an API [Application Programming Interface], contributions to a digital platform, or other ways you might enable batch queries and retrieval of metadata).

Access and Use

D.1 Describe how you will make the digital content, resources, or assets available to the public. Include details such as the delivery strategy (e.g., openly available online, available to specified audiences) and underlying hardware/software platforms and infrastructure (e.g., specific digital repository software or leased services, accessibility via standard web browsers, requirements for special software tools in order to use the content, delivery enabled by IIIF specifications).

D.2. Provide the name(s) and URL(s) (Universal Resource Locator), DOI (Digital Object Identifier), or other persistent identifier for any examples of previous digital content, resources, or assets your organization has created.

SECTION III: SOFTWARE

General Information

A.1 Describe the software you intend to create, including a summary of the major functions it will perform and the intended primary audience(s) it will serve.

A.2 List other existing software that wholly or partially performs the same or similar functions, and explain how the software you intend to create is different, and justify why those differences are significant and necessary.

Technical Information

B.1 List the programming languages, platforms, frameworks, software, or other applications you will use to create your software and explain why you chose them.

B.2 Describe how the software you intend to create will extend or interoperate with relevant existing software.

B.3 Describe any underlying additional software or system dependencies necessary to run the software you intend to create.

B.4 Describe the processes you will use for development, documentation, and for maintaining and updating documentation for users of the software.

B.5 Provide the name(s), URL(s), and/or code repository locations for examples of any previous software your organization has created.

Access and Use

C.1 Describe how you will make the software and source code available to the public and/or its intended users.

C.2 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

SECTION IV: RESEARCH DATA

As part of the federal government's commitment to increase access to federally funded research data, Section IV represents the Data Management Plan (DMP) for research proposals and should reflect data management, dissemination, and preservation best practices in the applicant's area of research appropriate to the data that the project will generate.

A.1 Identify the type(s) of data you plan to collect or generate, and the purpose or intended use(s) to which you expect them to be put. Describe the method(s) you will use, the proposed scope and scale, and the approximate dates or intervals at which you will collect or generate data.

A.2 Does the proposed data collection or research activity require approval by any internal review panel or institutional review board (IRB)? If so, has the proposed research activity been approved? If not, what is your plan for securing approval?

A.3 Will you collect any sensitive information? This may include personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information. If so, detail the specific steps you will take to protect the information while you prepare it for public release (e.g., anonymizing individual identifiers, data aggregation). If the data will not be released publicly, explain why the data cannot be shared due to the protection of privacy, confidentiality, security, intellectual property, and other rights or requirements.

A.4 What technical (hardware and/or software) requirements or dependencies would be necessary for understanding retrieving, displaying, processing, or otherwise reusing the data?

A.5 What documentation (e.g., consent agreements, data documentation, codebooks, metadata, and analytical and procedural information) will you capture or create along with the data? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the data it describes to enable future reuse?

A.6 What is your plan for managing, disseminating, and preserving data after the completion of the award-funded project?

A.7 Identify where you will deposit the data:

Name of repository:

URL:

A.8 When and how frequently will you review this data management plan? How will the implementation be monitored?