

University of Nevada, Las Vegas

LibParlor Online Learning: An Open and Interactive Curriculum for LIS researchers

The University of Nevada, Las Vegas, in collaboration with the Pennsylvania State University, the University of Tennessee Knoxville, and Smith College, seeks \$167,532 in funding from the Institute of Museum and Library Services through a three-year Laura Bush 21st Century Librarian Program Lifelong Learning Project Grant. This grant will fund the creation of LibParlor Online Learning (LPOL), a free open-source curriculum that will teach the foundational knowledge and specialized skills necessary for Library and Information Science (LIS) professionals to conduct research within the field. LPOL expands upon the work of [The Librarian Parlor](#) (LibParlor), an online platform launched in August 2017 that curates content from LIS workers and students on how to conduct and publish research, connects LIS researchers to one another, and shares research opportunities. The open format of these modules coupled with our commitment to centering BIPOC and underrepresented communities throughout the project will democratize knowledge of research methods that is often only available to privileged groups with access to the funding necessary for training. LPOL would complement the informal, spontaneous, community-generated learning happening on the LibParlor platform by offering a didactic, thoughtfully designed, scaffolded curriculum that responds directly to community needs.

Statement of broad need

New LIS professionals face challenges equally accessing knowledge, community, and finances when attempting to conduct the research necessary to inform their work or earn tenure.¹ Formal research methods courses are not required in all MLIS programs^{2 3}, leading to an uneven knowledge base among professionals interested in conducting research as they enter the field. Those who do complete a graduate-level research methods course may still struggle to translate theoretically-based coursework into authentic research projects in their places of employment, as LIS research methods classes often focus on the types of research conducted by LIS faculty rather than by practitioners. Any free content that already exists on the subject of conducting research is generic and can be challenging to translate to an LIS context. Additionally, researchers struggle to connect with others on projects, particularly if there is not a robust culture of research at their institution, leading to a lack of community. Finally, many resources available to researchers are cost prohibitive, and researchers working in under-resourced libraries are unlikely to be able to utilize them. These barriers can lead to unpursued research questions, poorly designed research projects, or unpublished results.⁴ We've noticed through our work with the LibParlor platform that this impacts early-career librarians in particular, ultimately leading to missing voices, perspectives, and solutions in the field.

¹ <http://www.ala.org/acrl/sites/ala.org.acrl/files/content/conferences/confsandpreconfs/2019/TheLibrarianParlor.pdf>

² <https://doi.org/10.1016/j.lisr.2010.12.001>

³ <https://doi.org/10.3138/jelis.61.3.2020-0001>

⁴ <https://doi.org/10.5860/crl-276>

Librarianship currently offers some post-MLIS options to gain the education and experience required to pursue LIS research, however, most of those methods rely on individual institutions. For example, some universities are able to provide formal support to protect research time through sabbaticals or research leave. Other institutions may create opportunities for mentor matching or supply professional development funds.⁵ These options are less likely to be available at smaller, less-resourced institutions, including many minority-serving colleges and universities. LIS workers sometimes organize informal opportunities for support through regular writing groups and journal clubs. However, these informal solutions are often unsustainable, as they often rely on individual library workers who might not have the time built into their positions to do this work⁶.

In addition to institutional structures, there are also professional development programs such as the Institute for Research Design in Librarianship (IRDLD) and Research Institute for Public Libraries (RIPL). These short term, intensive workshops enable LIS professionals to gain skills related to a proposed research project. However, both of these programs are only able to accept a small number of participants each year and are marketed toward novice researchers, leaving fewer opportunities for people who may have conducted research and published and even obtained tenure who would be interested in developing their skills further. Those who wish to apply to these formal programs must have some baseline of prior research knowledge and significant personal means or institutional financial support; IRDLD ranges from \$2,100 - 3,200, and RIPL costs \$1,300 to attend.⁷ Additionally, not everyone is able to travel due to family obligations and lack of institutionally supported professional development leave. While these programs provide crucial resources and community for LIS workers, the field should offer various types of opportunities for research training in order to meet the diverse needs of our profession.

We created LibParlor because, as new professionals, we sought a research community beyond our institutions. Our work on LibParlor uniquely positions us to create an online resource that improves research training for library workers by responding to the needs identified by our established community. We represent various institution types and have spent the past four years discussing the barriers to research and developing a network of experienced researchers who have contributed to the platform. LibParlor showcases honest reflection and lessons learned on research projects, while also providing space to share procedural⁸ and privileged⁹ knowledge around the processes and unwritten rules of publishing in our field. LPOL would expand this project to offer LIS workers with a thoughtfully developed, scaffolded curriculum that would offer more equitable access to this knowledge. Those who complete modules will be able to use

⁵ <https://doi.org/10.1080/01930826.2014.924309>

⁶ Ibid.

⁷ See: Tuition and Fees, <https://library.lmu.edu/irdld/about/tuitionfees/> and Overview, RIPL, <https://ripl.lrs.org/2020/>

⁸ <https://libparlor.com/2017/09/27/research-101-qualitative-research-approaches/>

⁹ <https://libparlor.com/2018/08/01/so-you-want-to-get-a-grant-some-guidance-from-a-librarian-turned-program-officer/>

that knowledge to pursue their own research projects or apply for opportunities like IRDL or RIPL. As a result of completing LPOL modules, participants will also be connected to a uniquely diverse, wide-ranging community of fellow professionals. One of the strengths of LibParlor is that the multi-institutional platform distributes the responsibility of LIS researcher education amongst many. With the creation of LPOL, we will continue to work across institutions in order to strengthen collaborations and provide space for the LibParlor community to connect and formalize their knowledge and ideas.

The goals of the LPOL project directly align with the IMLS charge for the Laura Bush 21st Century Librarian Program to educate and enhance training and professional development for the next generation of library professionals at any stage of their career. This will be particularly useful to early-career academic librarians, but will also be open to and helpful for MLIS students as a co-curricular learning option and mid-career librarians as a way to deepen their knowledge. By developing a free online educational program that responds to community needs, this project will elevate the quality of research in the field, build upon existing MLIS curricula, and enable LIS professionals to continuously improve their research skills throughout their careers.

Project design

The goal of LPOL is to design an openly available online curriculum that will provide LIS professionals with the foundational knowledge and specialized skills necessary to conduct research. This curriculum will include readings and activities organized into themed modules in order to build capacity for our colleagues to conduct and publish rigorous original research. Depending on their interests and goals, participants of LPOL will have the opportunity to complete individual modules or the entire curriculum depending on their needs. LPOL will provide participants with online certificates of completion and continuing education (CE) units for each module, similar to Library Juice Academy¹⁰. Participants can use these resources for promotion and tenure purposes.

The project goals and objectives include:

- Complete a needs assessment of academic librarians through surveys and online discussions to identify their key areas of difficulty in conducting research.
- Collaborate with LIS researcher-practitioners and MLIS instructors with specialized research experience to build a curriculum of open resources.
- Create modules that include open access readings, reflective activities, and planning exercises that build to a fully developed research project proposal.
- Seek feedback on completeness and efficacy of curriculum from stakeholders at conferences and through online platforms while intentionally soliciting perspectives from underrepresented communities.

¹⁰ <https://libraryjuiceacademy.com/>

- Educate and empower interested LIS workers by democratizing privileged knowledge about LIS research in order to improve and diversify LIS literature.

Curricular Outcomes and Indicators of Success

- Testimonials from participants voicing how LPOL has reduced barriers to research for them, how their thinking of research has changed, and how their confidence as researchers has been affected.
- Artifacts collected from the curriculum that demonstrate learning related to LIS research topics.
- Increased community and discussion between participants through the LibParlor Classifieds.
- Information collected from former participants recording any papers or presentations they have disseminated resulting from their learning through LPOL.

This project grant will support three formal phases: (1) needs assessment and planning, (2) curriculum creation and assessment, and (3) implementation, piloting, and outreach. We plan to host workshops, panels, and presentations at various conferences throughout the project to inform potential participants and gather feedback in order to iteratively improve the project. Listening to and leveraging community voices is a foundational value of LibParlor, therefore feedback from the community is a crucial part of this project. In order for LPOL to be successful, our community will have multiple opportunities to inform our curriculum. At the conclusion of this grant, LPOL will move into a maintenance phase (4), where the Project Team will continue to host the curriculum on the LibParlor platform for at least five years. During this phase, the Project Team will maintain the modules and continually assess their effectiveness in order to ensure the curriculum continues to support the needs of LIS researchers.

Phase 1: Needs Assessment and Planning, September 2021 - July 2022

Pre-Curriculum Planning Forum

Maintaining the LibParlor platform has given the Project Team unique insight into the type of support LIS professionals need to conduct research. We will augment this insight by conducting a formal needs assessment that solicits feedback from the academic LIS researcher-practitioner community in order to identify critical needs. Members of the Project Team have experience implementing surveys in multiple research projects and will leverage their professional networks to ensure the survey is rigorous, intentional, and reliable. This survey will be shared broadly through a variety of online platforms such as professional email listservs and forums and social media. This will help to identify the most challenging barriers to beginning LIS research.

Curriculum Planning Forum

With this data compiled and analyzed, we will host a curriculum planning forum. Following participatory design principles,¹¹ attendees will participate in facilitated discussions and brainstorming and prioritization activities in order to facilitate mutual learning. Forum participants will clarify assessed needs, define success for different user groups, differentiate our work from existing offerings, and begin identifying expert partners with whom we will co-create the curriculum. Using this information, the Project Team will then develop a draft curriculum framework and an assessment tool for future curriculum modules. For an idea of what the curriculum framework might look like, refer to the *Outline of Modules* section.

We anticipate the forum will consist of 30 total participants including the Project Team, the Advisory Board, MLIS students, LIS instructors, early-career librarians, mid-career librarians, and established librarians. These participants will come from a range of experience levels and types of academic librarianship to ensure that we have adequate representation of future users. For example, we will include participants who work at predominantly minority-serving institutions and community colleges to ensure our modules successfully serve librarians from those research backgrounds. We will select participants by reaching out directly to individual members of our network and by soliciting statements of interest through listservs and LibParlor's existing communication channels, such as our website and Twitter. Throughout Phase 1, we will share our findings via the online networks that received the needs assessment in order to ensure that our community remains involved.

Phase 2: Curriculum Creation and Assessment, August 2022-August 2023

We will draw upon community feedback, our pedagogical expertise and history of developing curricula as teaching librarians, and the advice of Advisory Board members' with experience in online education (Joelle Pitts, Carnegie Mellon University) and curriculum design (Jason Clark, Montana State University), to build the final curriculum framework and identify possible instructors whose experience aligns with the finalized curriculum topics. We anticipate that the curriculum will contain a mix of introductory and specialized material. We will then work with the Advisory Board to recruit a diverse group of instructors with complementary perspectives by reaching out to individuals in our networks, contacting experts identified during the forum, and sharing calls for interest in the aforementioned online communities. Once instructors are selected, they will be paired with a member of the Project Team who will serve as a pedagogical partner while developing modules. Module creation will take place in two stages. Stage one will focus on foundational modules and stage two will focus on specialized modules.

Upon completion, members of the team of expert instructors will peer review each other's work for accuracy, and then a sensitivity reader will ensure the content is free of representation issues, biases, and problematic language. Attention to Universal Design Principles will be incorporated

¹¹ <https://scholarworks.montana.edu/xmlui/handle/1/15833>

at each stage. Expert Instructors and Project Team members will meet virtually throughout the design process, and the Project Team will attend conferences to share updates, challenges, and next steps. We have purposefully identified a variety of conferences in our grant timeline that will allow us to reach our intended audience of academic librarians from a wide array of institutions, locations, and experiences. Many are academic library conferences where we will be able to target our primary audience of early-career librarians. Several chosen conferences are organized by and for library workers of color, which will allow us to ensure the feedback we receive will be representative and inclusive. By attending conferences like ALA, IFLA, and ALISE, we hope to also achieve unique insight into the ways other library communities can benefit from these modules.

Phase 3: Implementation, Piloting, and Outreach, July 2023 - July 2024

With the full curriculum designed, the Project Team will identify a cohort of approximately 20 participants who will receive a stipend to pilot the first iteration of LPOL. This will allow our community to ensure the curriculum is responding to their needs and meets the goals of LPOL. This cohort might contain members from the original planning forum, as well as new representatives who have connected with the project and provided feedback. Participants will apply via a short form and we will assemble a diverse and representative group. In order to understand the effectiveness of the curriculum, we will prioritize early-career librarians without significant previous experience or support at their library. To ensure our curriculum is useful to other groups, we will also solicit participants who are MLIS students, mid-career librarians with research experience, and LIS instructors with experience teaching research methods courses. Members of the cohort will be placed into various groups based on the nature of their projects and individual needs for research support and will complete the curriculum asynchronously over a given time frame. This will give the Project Team insight into ways future users will interact with the modules. Pilot participants will provide feedback on the strengths and limitations of this curriculum. This feedback will be incorporated into the second iteration of LPOL before it is officially launched. The Project Team will also share updates on the LibParlor platform and through other methods such as webinars in order to continue to build community and identify potential users.

Phase 4: Maintenance and Sustainability

The Project Team is also looking towards sustainability and reuse of the curriculum in professional settings, and will actively pursue placement of the modules in co-curricular MLIS and professional fellowship settings alongside research methods course offerings and Graduate Assistant positions. We will achieve this with the guidance of Advisory Board members who have expertise in MLIS programs (Rachel Fleming-May, University of Tennessee Knoxville) and common barriers to research for early-career librarians (Erin Ackerman, The College of New Jersey and Zara Wilkinson, Rutgers University), as well as through the partnerships we develop with LIS instructors throughout the project. The entire curriculum will remain freely available on

the LibParlor platform for a minimum of five years. We will also upload archival versions of all curriculum materials to the OER commons.¹²

Note on COVID-19: If the COVID-19 pandemic has not been adequately addressed by May 2022, we will host our forum virtually and draw upon our extensive experience hosting online engagement and learning events to ensure a productive and meaningful event. Conferences are subject to change due to COVID-19 and other factors. If necessary, we will reroute travel funds for the forum and other conferences to increase stipends for expert partners and reviewers as well as additional technology to support our modules over time.

Outline of modules

There will be eight to ten modules created through this grant. The exact number and focus of each module will be determined during the Needs Assessment phase. However, as we have been working with the community through the LibParlor platform for four years, we can anticipate topics that might surface. Content for all modules will be grounded in the LIS context. Below is an example set of module topics:

- *Foundational*
 - Finding Direction - reflecting on one's interests, finding a research agenda, identifying collaborators, deciding on a research project, developing research questions/starting inquiry-based research
 - Research Methods - identifying appropriate research methods to answer your question, Qualitative and Quantitative Research Methods
 - Planning a Research Project - making research goals and timelines
 - Research Dissemination - preparing for publication/presentation, navigating the peer review process
 - Research Ethics - IRB and beyond
- *Specialized*
 - Scholarship of Teaching and Learning
 - Research through a critical lens
 - Conducting focus groups and interviews
 - Utilizing grounded theory
 - Utilizing Ethnography
 - Anti-racist work in publishing and scholarship

Participants who use LPOL will have the option to focus on individual modules or complete the entire curriculum. Attention will be paid to what topics are covered in existing training programs and effort will be made not to duplicate content. However, there may be some foundational content that must be duplicated in this online environment for those who are not able to access graduate courses or in-person training.

¹² <https://www.oercommons.org/>

Diversity Plan

Diversity, equity, inclusion, and accessibility (DEIA) will be integrated into the project at every phase including the solicitation and implementation of feedback voiced by populations traditionally underrepresented in LIS, designing thoughtful learning materials accessible to all users, and hiring BIPOC library workers as curriculum creators and instructors. We aim to democratize the often privileged information around research and publishing in an effort towards diversifying LIS literature. Professional development opportunities for improving research skills that are typically available to library workers are cost prohibitive, while LPOL's modules will be made freely available to everyone who wishes to use them. Additionally, the Project Team is prioritizing conferences (The Joint Conference of Librarians of Color (JCLC)¹³ and the POC in LIS Summit at Loyola Marymount¹⁴) and platforms (WOC+LIB¹⁵, up//root¹⁶, and we here¹⁷) for marginalized communities during outreach, public comment periods, and calls for interest to participate and teach modules.

LPOL modules will also address DEIA in its offerings. Some of these modules will include topics on: racism in publishing and scholarship, finding and creating communities of practice for BIPOC library researchers, and positionality of white researchers publishing on communities of color. The Project Team will also leverage relationships with platforms like WOC+LIB, up//root, and we here to hire and pay BIPOC library researchers to develop and teach modules on the LPOL platform. The Project Team will extend existing work to ensure our online offerings are accessible to all. In 2018 we consulted with Penn State's Teaching and Learning With Technology Office¹⁸ and have implemented their recommendations for readability, accessibility with screen readers, and alternative text on the LibParlor website. We will assess all modules to ensure they are aligned with this existing plan for ADA compliance on the LibParlor platform. This plan will include video transcription and image descriptions, as well as checking for fonts, colors, and readability.

All virtual and in-person work on this grant will also adhere to LibParlor's existing Code of Conduct & Comment Policy¹⁹, which specifies the types of harassment LibParlor does not tolerate, including:

- Offensive comments related to gender, gender identity and expression, sexual orientation, disability, mental illness, neuro(a)typicality, physical appearance, body size, age, race, or religion.

¹³ <https://www.jclcinc.org>

¹⁴ <https://digitalcommons.lmu.edu/pocinlis/>

¹⁵ <https://www.wocandlib.org>

¹⁶ <https://medium.com/uproot>

¹⁷ <https://www.wehere.space/>

¹⁸ <https://ilt.psu.edu>

¹⁹ <https://libparlor.com/about/code-of-conduct/>

- Unwelcome comments regarding a person's lifestyle choices and practices, including those related to food, health, parenting, drugs, and employment.
- Deliberate misgendering or use of 'dead' or rejected names.

Broad Impact

Dissemination and Sustainability

During the grant period, the LPOL curriculum will be hosted on the LibParlor platform under the management of the grant's Project Team. The program modules will be reviewed regularly to ensure curricula, software, and readings are relevant and useful, both during and after the grant funding period. In consultation with the community, additional modules could be added to ensure relevant learning for participants after the end of the grant period.

Since its creation in 2017, the LibParlor platform has built a strong online community as demonstrated by 368 subscribers through Wordpress, 13 contributing editors, 89 guest writers, and over 2,500 followers on Twitter. We were recently honored to receive the ACRL ULS Outstanding Professional Development Award for our work. Our maintenance of the LibParlor platform has resulted in growing a community that will help to disseminate, test, and sustain the curriculum. In 2020, responding to reader demand for opportunities to develop relationships with other researchers, we created our Classifieds section to connect members of our community through ideas, projects, and opportunities on the LibParlor platform. We plan on using our Classifieds section, along with other forms of asynchronous communication, to build community among participants and also help to share this work with others. The curriculum will be an Open Educational Resource, released under a Creative Commons license and hosted through a learning management system (LMS), available on our Wordpress platform. Interested parties will be able to copy and adapt our modules in their own communities, such as their own LMS or website. This will contribute to the sustainability of the project after the grant work is complete, as interested parties will be able to retain, revise, remix, reuse and redistribute the curricula. Any new iterations or additions of modules will be assessed by the Project Team utilizing the original module assessment tool to determine if they should formally become a part of the curriculum. Therefore the curriculum will continue to organically grow over time, with input from the community, and the LibParlor team will maintain the host website and LMS for a minimum of five years after the grant work is complete. In the future, the project team will explore ways to extend the distribution of the curriculum beyond the 5 year period.

Areas of Impact

By developing a free online educational program for LIS professionals at any stage of their career, this project will elevate the quality of research in the field, build upon existing MLIS curricula, and enable LIS professionals to continuously improve their research skills.

LPOL will address the key needs and high priority gaps that currently exist in LIS research training by collaborating with expert partners from geographically diverse areas and seeking feedback from interested parties and potential users via conferences and other forums. This curriculum will be especially useful for early career librarians but will also be valuable for MLIS students, library workers without faculty status, mid-career librarians, and more. MLIS students have already found LibParlor's platform content helpful when embarking on their research path²⁰ and this project would expand our educational toolset for this population by providing a co-curricular way for them to explore LIS research.

The free, open format of these modules democratizes the knowledge of research methods that is often only available to privileged groups with access to the funding necessary for training. LPOL allows for far-reaching impact and the professional development of LIS students and professionals all over the country and the world. Finding ways to formally and informally embed LPOL into MLIS programs, professional fellowships, and within institutions will reduce barriers for the community and influence theory and practice, ultimately building capacity for LIS professionals to conduct and publish rigorous original research. Finally, LPOL's accessible curriculum will allow for a wider breadth of participation in the field, opening scholarship up to diverse voices that otherwise might not be heard.

²⁰ <https://hacklibraryschool.com/2019/01/03/research-as-a-library-school-student/>



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?