



LAURA BUSH 21st CENTURY LIBRARIAN PROGRAM

Sample Application RE-259502-OLS-26
Project Category: Planning

University of Florida Libraries, George A. Smathers Libraries

Amount awarded by IMLS:	\$199,450
Amount of cost share:	\$0

The George A. Smathers Libraries at the University of Florida will address challenges related to the growing demand for data competencies to support research needs across academic libraries. The planning grant will identify data and research competencies important to librarianship, develop a competency framework for a spectrum of librarian roles, provide instruction in these competencies to library professionals, and evaluate the effectiveness and impact of training in these competencies. Beneficiaries will include academic librarians, library faculty and staff at academic institutions (including smaller colleges and under-resourced campuses), who will be equipped with skills to provide data services. It will empower library professionals to both support and actively engage in the entire research lifecycle, thereby enhancing research quality and outcomes.

Attached are the following components excerpted from the original application.

- Narrative
- Schedule of Completion

When preparing an application for the next deadline, be sure to follow the instructions in the most recent Notice of Funding Opportunity for the grant program to which you are applying.

DATA AND RESEARCH COMPETENCY: CAPACITY BUILDING FOR ACADEMIC LIBRARIANS

PROJECT NARRATIVE

INTRODUCTION

The **Data and Research Competency: Capacity Building for Academic Librarians** project is led by the George A. Smathers Libraries at the University of Florida (UF). The proposal requests \$199,450 for this two-year project, which will address the challenges of the growing demand for data competencies to support research needs across academic libraries. The goal of this planning grant is to pilot a project that 1) identifies data and research competencies and their elements important to librarianship; 2) develops a competency framework that defines competencies across a spectrum of librarian roles; 3) develops and provides instruction in these competencies to library professionals; and 4) evaluates the effectiveness and impact of training in these competencies. This proposal addresses the Laura Bush 21st Century (LB21) Librarian Program Goal 2: Train and retain current library and archives professionals, faculty, and staff; Objective 2.1 Develop or enhance professional development and training programs to enable the library and archival workforce to meet the needs of their communities. The results of this project will benefit academic librarians, library faculty and staff at academic institutions (including smaller colleges and under-resourced campuses) by equipping them with skills to provide data services. This initiative will empower library professionals to support and actively engage in the entire research lifecycle, thereby enhancing research quality and outcomes.

PROJECT JUSTIFICATION

The evolving role of academic libraries in supporting research is evident in the breadth of scholarly support services – ranging from expertise in research impact, copyright, and predatory publishing, to evidence synthesis – that underpin critical stages of the research lifecycle (Brodsky, M., & Chapman Tripp, H. 2025). Historically, libraries have excelled in these areas through both dedicated subject experts and collaborative, team-oriented service environments designed around user needs. As research becomes increasingly data intensive, however, libraries are expanding beyond the traditional research service areas to embrace a broader role in research data services (RDS) that supports all aspects of the research lifecycle (Tenopir 2014). The project team defines RDS as the comprehensive suite of services that encompass not only the scholarly areas libraries have long supported, but also emerging fields such as artificial intelligence (AI), computational and data literacy, data visualization, GIS, informatics, and bioinformatics. The expansion of RDS services requires seamless integration of both traditional competencies and newer data services (Joo, S., & Schmidt, G. M. 2021; Luo, J., & Tang, R.

2024). By broadening the scope of support, libraries are poised to transform their roles from information providers into active partners in the research process.

Building on previous work (Brodsky, M., & Chapman Tripp, H. 2025; Tenopir, C., Sandusky, R. J., Allard, S., & Birch, B. 2013; McCracken, C., & MacDougall, R. 2025) that has demonstrated the tangible benefits of integrating data management with subject specialist expertise, this project seeks to address the current gap in professional development for librarians across roles. While some large libraries have been able to invest in dedicated data support teams, many institutions must rely on their existing subject specialist librarians (SSLs) to meet rising demands. Our recent survey of UF librarians has identified key data service competencies valued by both SSLs and dedicated data services librarians (DSLs), underscoring the need for a unified approach to training. Rather than placing the onus solely on dedicated teams, we propose that all librarians acquire fundamental skills in research and data services. This initiative will empower librarians to not only support, but also actively engage in the entire research lifecycle, thereby enhancing research quality and outcomes institution-wide.

A recent survey conducted by UF librarians identified 1) the data support services competencies most valued by UF SSLs and DSLs and, 2) which librarian roles should possess them. In the survey, participants grouped and ranked individual competencies for AI, data management, data literacy, data visualization, digital humanities, GIS, high-performance computing, informatics, scholarly communications, open access, systematic reviews, assessment, and grant writing. The findings revealed that, although SSLs value all these broad competency areas (none of the competencies were assigned to “neither role”), they do not consider every individual competency within each area equally critical for their roles; also, the views of DSLs indicated that some of these competencies should be shared by all librarians and some are specifically the domain of the DSL. This study provided UF Libraries the opportunity to prioritize data service trainings for all SSLs across the organization and develop a data services framework that can be adapted to a variety of academic library contexts. In 2025, members of the project team presented these findings at the CORE Forum (Minson, V., Spears, L., 2025) which ignited considerable interest across academic institutions, whether modest or expansive in data support services, affirming the importance of the research beyond UF.

Building on these findings, this pilot project aims, in year one, to refine and extend the survey to assess data and research competencies that are important to library professionals at a state audience and develop a framework that defines competencies across a spectrum of librarian roles; and, in year two, to design and deliver a two-day Data and Research Competency Symposium for Florida librarians, that provides training on select prioritized competencies thereby advancing the critical data support services essential for the future of library service offerings. This project will collaborate with local stakeholders such as the Florida Virtual Campus (FLVC), the centralized, automated library system used by Florida’s 40 public colleges and universities, to ensure broad impact across the state.

An LB21 planning grant is the correct mechanism at this stage because it supports exploratory activities—analyzing needs and feasibility, developing work plans, and assessing outcomes—that can lead to future implementation with far-reaching impact. By aligning the planning deliverables to LB21 expectations for influencing practice, outreach, and measurable results, our proposal sets a strong foundation for a sustainable development model that enhances capacity and bridges the gap between traditional scholarly subjects for subject librarians to become more actively engaged in the delivery of data support services and improve workforce capacity across Florida’s diverse academic libraries. By focusing on building robust data support services that align with the evolving research landscape, our proposal lays the groundwork for a sustainable model that enhances capacity and bridges the gap between traditional scholarly support and the advanced demands of data-intensive research.

Who will benefit:

Academic librarians, library faculty and staff at academic institutions (including smaller colleges and under-resourced campuses), and indirectly the researchers, instructors, and students they serve. Planning products (framework, prototype curricula, evaluation tools) will be adaptable for other states, thus addressing the LB21 expectation that results be broadly usable and generalizable.

Previous work:

1. A data competency survey was implemented at the Smathers Libraries to explore data services competencies that all librarians may need to support academic research needs presented by all types of campus researchers. Preliminary findings indicate that there are clearly some competencies that belong to the DSLs but many that are shared by both DSLs and SSLs. However, these shared competencies might exist on a spectrum, in which some elements require the DSL expertise while other elements of the competency can be held by all librarians. (e.g., how to use a process vs. the ethics of using a process) The results from the survey and subsequent focus group suggest that a broader conversation about each competency category should be held to identify all elements of a competency and then the level of expertise (i.e., the spectrum) that should be attained by the respective librarian roles.
2. The Academic Research Consulting and Services (ARCS) Department comprises the DSL within the Smathers Libraries. These specialists provide services in research data methodologies (e.g., collection, analysis, management) and scholarly communications (e.g., copyright and fair use, research metrics and impact) to support academic research. Informed by the research support services most requested from ARCS librarians, the team

is currently developing a training series on topics related to the research lifecycle for Smathers Library professionals that will be hosted in the summer of 2026.

PROJECT WORK PLAN

The University of Florida is the flagship university in the state of Florida, and the Smathers Libraries is the largest academic resource in the state. Data services and assessment librarians at Smathers Libraries will implement this planning project to pilot a state-wide initiative to train library professionals in data and research competencies. The goals of this planning grant are to 1) confirm or identify data and research competencies and their elements important to librarianship (Phases 1 and 2); 2) develop a competency framework that defines competencies across a spectrum of librarian roles (Phase 3); 3) develop and provide instruction in these competencies to library professionals (Phase 4); and 4) evaluate the effectiveness and impact of training in these competencies (Phase 5).

As the Project Director, Dr. Aida Miró-Herrans will plan and manage the project. The project team will consist of library experts in research design, data analysis, and assessment. Dr. Miró-Herrans and Dr. Natya Hans, the bioinformatics librarian and informatics and reproducibility librarian, respectively, provide consultations and instruction in research design, statistics, and data collection, analysis, and management. Dr. Laura Spears, the Libraries' Director of Assessment, is an expert in assessment and survey design. As the Senior Associate Dean for Research, Valrie Minson leads research initiatives between the Libraries and other academic units at the university. Two staff members will be hired: a project coordinator to support the development of the deliverables, plan and coordinate a two-day Data and Research Competency Symposium, and handle communications with participants; and a data analyst to assist with survey refinement and focus group development, data processing and analysis, organize and summarize findings, and prepare the dataset for sharing (see role descriptions in Resumes Documents). An external Stakeholder Advisory Committee of leaders in data and library services and instruction will guide the efforts of this Planning project. The SAC will be constituted by leaders whose expertise can complement the project team in addressing the diverse needs of Florida's academic librarians. The SAC will include leaders from MSI/MLS granting institutions (Dr. Marcia Mardis, director of the Florida State University Information Institute; leaders in inclusive data skills instruction (Dr. Hao Ye, Curriculum Lead at Community for Rigor); a representative from the FLVC (Melissa Sykes-Silvers, Library Services Analyst); experts in library instructional design and assessment (yet to be invited); and leaders from public college libraries (yet to be invited); see letters of support in Supplementary Documents.

The whole team will implement the project, such that the skills within the team will ensure the successful implementation and evaluation of this project. Ms. Minson and Dr. Spears will lead the development of the data and research competency survey and focus group protocol, informed by their previously created data competency survey and focus group (Phase 2). All team

members will analyze the data and generate a Competencies Assessment Report (Phase 2). With the input of the SAC, the team will develop a Data and Research Competency Framework (Phase 3). In collaboration with the UF's Center for Teaching Excellence, the team will create an instructional design template to guide the structure of the workshops, including learning objectives from the Competency Framework and a rubric to assess learning gains (Phase 3). The team will organize a two-day Data and Research Competency (DRC) Symposium to provide workshops on prioritized competencies (Phase 4), and create, implement, and analyze a survey to assess the effectiveness of the trainings (Phase 5). As the reproducibility librarian, Dr. Hans will implement the Digital Products Plan and ensure all products follow appropriate standards (Phase 5).

Data Collection

This project aims to identify and address the data competency and research needs of library professionals across Florida. To achieve this, various surveys and focus groups will be conducted and directed towards library professionals in universities and colleges across the state. Building on a data competency survey implemented at the Smathers Libraries to explore data services competencies that librarians may need to support academic research, this project will assess the data and research competencies needed for librarians to not only support research, but also actively engage in the entire research lifecycle. An initial survey and focus group session will be implemented to assess data and research competency gaps and priorities (Phases 1 and 2). A second assessment will be administered to participants of the DRC Symposium to evaluate the learning gains and changes in attitudes towards acquiring data and research competencies (Phase 5).

All survey and focus group data will be kept private and secure on University of Florida's authorized network drives and servers, following IRB protocols and in compliance with UF's data storage policies. Surveys will be deployed using Qualtrics and include both quantitative and qualitative data. The data analyst will work with Ms. Minson and Dr. Spears to refine the original survey and develop the focus group protocol. The analyst will be responsible for collecting, cleaning, coding, and analyzing the survey and focus group data under the guidance of Drs. Miró-Herrans and Hans. Quantitative data will be cleaned and analyzed using SPSS. Analyses for the initial survey will include statistical tests to assess competency priorities across librarian roles. Qualitative data will be coded and analyzed using NVivo software. Focus group responses will be used to contextualize the results of the statewide survey, identifying needs and gaps. The project coordinator will be responsible for deploying the surveys, responding to participant questions, and recruiting focus group participants. They will work with the data analyst to ensure smooth data collection. The results of the initial survey and focus group will be compiled in a Florida Data and Research Competencies Assessment Report that will present final proposed

competencies, prioritizing training for the competencies and documenting knowledge gaps that will inform future implementation.

A second survey will assess the impact of the competencies workshops of the DRC Symposium. Pre- and post- surveys will be implemented to assess learning gains from the workshops and assess changes in knowledge and attitudes of library professionals towards acquiring these competencies. The surveys will be implemented through Qualtrics and made available through a URL and QR code during the DRC Symposium and immediately after. The project coordinator and data analyst will work together to collect survey responses. Data analyses will include statistical tests to compare pre- and post- responses. The results will be compiled in a report on the effectiveness and impact of the symposium. Positive learning gains and attitudes will indicate effectiveness of the project.

Implementation of Competency Training

Informed by the Florida Data and Research Competency Framework and guided by the SAC, the project team will prioritize a subset of high-impact competencies for the DRC Symposium and validate how they map across a spectrum of librarian roles (e.g. DSLs, SSLs, etc.). The Framework will articulate competencies as Bloom-aligned learning objectives that distinguish foundational, intermediate, and advanced levels of expertise, ensuring that training is appropriately scoped for diverse library contexts.

Using this Framework, and working with UF's Center for Teaching Excellence, the project team will create an instructional design template that includes standardized learning objectives, recommended content outlines, active-learning methods, accessibility requirements, and assessment rubrics. Subject-matter experts, including from UF and partner institutions, will be recruited to design and deliver workshops using the templates, ensuring consistency across workshop sessions.

The two-day in-person Symposium at UF will feature hands-on workshops, poster-style showcases of local practices, and structured opportunities for participants. Workshops and instructional material will be recorded for online availability in compliance with the web accessibility needs. Target attendance would be 150 participants based on allowable space and resources. UF Conference Services will provide registration, logistics, and on-site support. UF is centrally located in Gainesville, Florida for car travel, and a medium-sized airport for flights, and has adjacent hotel accommodations. During the Symposium, participants will be invited to form a Data and Research Competencies Working Group that will refine the Framework, advise on future offerings, and help sustain statewide training beyond the grant funding period.

Data Management

Drs. Miró-Herrans and Hans will be responsible for the project's data management plan. All survey and focus group data will be kept private and secure in long-term storage on authorized network drives in compliance with University of Florida's data storage policies. After resolving any data privacy and security issues that we might encounter, data will also be made available on Figshare Projects proactively for all the key personnel and collaborators and then on Figshare Collections to track user metrics and for reuse as indicated by a Data Use Agreement. Survey instruments, focus group protocols, reports, instructional templates, and video-recorded DRC Symposium workshops will be stored on FigShare Collections and made freely available under a Creative Commons Attribution ShareAlike 4.0 (CC-BY-SA) license on project completion (See Digital Products Plan).

Work Plan

Phase 1: Project organization (Month 1)

1. Hire Project Coordinator and Data Analyst. Deliverables: Project team organization and task assignments.
2. Identify and convene members for a Stakeholder Advisory Committee (SAC).
Deliverable: SAC establishment and role assignment
3. Obtain requisite IRB/Human Subjects training. Deliverable: IRB training certificates.

Phase 2: Statewide Competency Needs Assessment (Months 2–8)

1. Submit IRB application for surveys, focus groups, and symposium assessments (expected exempt/expedited). Deliverable: IRB determination letter
2. Adapt the data-competency survey previously implemented at the University of Florida for statewide use. Conduct user testing and revise for clarity and accessibility. Establish follow-up focus group protocol. Deliverables: Survey and focus-group protocols
3. Deploy survey via Qualtrics with a six-week window and two reminders. Analyze survey data to identify data and research competency gaps and priorities for supporting research in academic libraries. Deliverables: Response dataset for survey and focus group prompts.
4. Host two on-line focus groups to contextualize the results of the statewide survey, identifying needs and gaps. Present findings to SAC and identify final proposed competencies. Develop a report with key results and final proposed competencies, prioritizing training for the competencies and documenting knowledge gaps that will inform future implementation. Deliverables: Florida Data and Research Competencies Assessment Report

Phase 3: Curriculum Blueprint Development (Months 9-12)

1. Translate competencies into a Florida Data and Research Competency Framework with competencies mapped to learning objectives (Bloom's levels) and assigned across a spectrum of librarian roles. Deliverable: Competency Framework v1.
2. Experts in fields relevant to the competencies will be recruited to develop instructional workshops for competencies training during the Data and Research Competency Symposium. In collaboration with the University's Center for Teaching Excellence, we will create an instructional design template to guide the development of the workshops, including learning outcomes from the competency framework and a rubric to assess learning gains. Deliverables: Instructional design template for competencies training.

Phase 4: Research Symposium (Months 13-18)

1. Create pre/post surveys to assess learning gains from competencies workshops and assess changes in knowledge and attitudes of library professionals towards acquiring these competencies. Deliverables: Survey tool to measure symposium effectiveness
2. Initiate a digital product planning strategy for successful management and storage of all the digital resources developed during the research symposium. Deliverables: A digital product planning strategy document.
3. Consult with SAC to finalize list of Symposium topics. Finalize the list of experts that will provide instructional workshops in fields relevant to the competencies for the symposium.
4. Invite and register participants across state of Florida. Implement pre-symposium survey.
5. Host a two-day in-person statewide symposium at the University of Florida to provide training on topics identified in the Florida competency report. Target attendance would be 150 participants based on allowable space and resources. Workshops and instructional material will be recorded for online availability in compliance with the web accessibility needs. Deliverables: In-person workshops on competency topics, workshop recordings.
6. Recruit and charge a Data & Research Competencies working group (DRCWG) to 1) refine the competencies discussed and trained during the symposium; 2) translate needs, instructions and workshops into sustainable statewide training template; and, 3) summarize the working group activities in a project brief, Competency Framework v2.(below). This deliverable will begin with recruitment in Phase 4 and see completion in Phase 5.
7. Conduct post-symposium survey prior to final concluding remarks.

Phase 5: Evaluation and Wrap-up (Months 19-24)

1. Analyze survey data to detect learning gains and changes in attitudes towards acquiring data and research competencies. Deliverables: Report on the effectiveness and impact of the symposium

2. Building on the work of the DRCWG and SAC, refine Framework and Instructional design templates based on pilot data. Deliverable: Competency Framework v2.
3. Finalize approach for digital products plan. Prepare surveys, templates, workshop recordings and materials, and other digital products as open education resources (OER). Verify that all products meet accessibility standards, are available via open access, with appropriate licensing, metadata, repositories, and sustainability per NOFO guidance. Deliverables: OER of all digital products.

PROJECT RESULTS

The goal of this planning grant is to pilot a project in the state of Florida that 1) identifies data and research competencies important in academic librarianship (Phases 1 and 2); 2) implements a series of training workshops on these competencies (Phase 3 and 4); and, that produces easy, online accessibility to frameworks, instruction, and other resources for reproducibility of local workshops. To identify the competency needs, a state-wide survey will be distributed across libraries in Florida, followed by focus groups. The results will be used to produce a Florida Data and Research Competencies Assessment Report with statewide gaps and priorities. Prioritized competencies will be mapped to Bloom's level learning objectives to create a Data and Research Competency Framework that is generalizable across library communities. Further, an instructional design template will be created to structure all competency training workshops, so present and future training is accessible for all learners. In addition to the in-person symposium, all workshops will be available online, following accessibility standards. All evaluation instruments will also be made openly available, so other institutions can adapt and implement locally.

Deliverables

1. Florida Data and Research Competencies Assessment Report with statewide gaps and priorities in data and research competencies
2. Florida Data and Research Competency Framework (i.e. Competency Framework v.2)
3. Instructional design template for competencies training
4. Symposium of training workshops in data and research competencies (i.e., DRC Symposium)
5. Digital library of workshops in data and research competencies
6. Working group that synthesizes results from symposium assessment to inform effectiveness of training and to develop future training
7. Evaluation instruments (surveys, rubrics) for immediate reuse.

Dissemination

While all the materials developed for this project will be made openly available, the results from the surveys will be more formally disseminated through conference presentations and publications. Both the Florida Data and Research Competencies Assessment Report results and the DRC Symposium assessment results will be presented at local (e.g., Florida Association of College and Research Libraries) and national conferences (e.g., Association of College and Research Libraries, Association of Library and Information Science Education), to reach academic and research librarians, and published in open access journals (e.g., Journal of Academic Librarianship, College and Research Libraries).

Sustainability

This planning grant project will pilot a training initiative for library professionals in the state of Florida. While the Data and Research Competencies Assessment Report will identify many priorities and gaps, a limited number of competencies can be addressed during the DRC Symposium, given the constraints on time and resources. As the flagship institution of the state university system of Florida, the University of Florida Libraries are poised to continue providing training relevant to state academic libraries. Smathers Libraries has experts that can continue to develop data and research competency training. The Data and Research Competencies Assessment Report and Data and Research Competency Framework will inform on additional topics for which to develop training and the results of the DRC Symposium assessment will provide insight on how to improve the trainings for increased effectiveness and impact. Smathers will lead the DSCWG to continue the work of this project past this grant. For example, the working group will identify and develop training for competencies that are additional priorities for smaller or rural academic institutions. The Smathers Libraries has the resources to make future workshops available online for local and national use. Furthermore, the results of this project will serve to develop an LB21 National Implementation Grant to translate these project goals to national scale.

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