

Abstract

Community College Academic Support Ecosystems is a research project proposed by Ithaka S+R to help community college library leaders, chief academic officers, and other college leaders institutionalize data-driven research findings on the needs of community college students and the barriers students face when attempting to access library and other academic support services.

Our research questions are:

1. How can the library best organize itself to develop and sustain programs or services that contribute to the community college's mission and student success?
2. What types of library services, in conjunction with other academic support services, do community colleges need? How do these needs differ across institution types?
3. How are services to address these needs currently organized, funded, and staffed? What are the key success factors, tradeoffs, opportunities, and challenges associated with the organization and provision of library and academic support services?

The time frame for this project is 36 months and the total budget, if awarded, will be \$449,867. An external advisory committee and a group of student ambassadors will advise the project team at key points in the project.

The goal of this project, helping community colleges incorporate findings on the needs of community college students into their institutional practices, aligns with the IMLS agency-level goal of helping libraries connect with learners. Developing a deeper understanding of the services currently available at community college libraries, how existing services can be reconfigured to better serve the needs of students, and areas where lack of resources impedes libraries and other academic support services from enacting best practices will meet often overlooked needs in this sector.

Five methodological phases comprise this project:

1. A national survey of CAOs to assess the value of the academic support services provided by their college, the services they offer that are successful, and the challenges they face;
2. A set of institutional personas that represent key variations in community colleges and the challenges community colleges face;
3. A series of site visits in which we will engage with a variety of stakeholders, including students, to develop a holistic perspective on how services are currently structured and the extent to which this structuring meets stakeholders' expectations and needs;
4. A national survey of library directors focusing on the role that community college libraries play within the larger field of academic support services;
5. An interactive workshop that will bring together key leaders and participants to discuss action agendas for community college libraries and related academic support entities.

This project will produce several outputs, including four major publications, interim public reports, blogging, presentations, social media engagement, and an interactive workshop. The core audience for this research is community college leaders, including chief academic officers, deans of learning services, and library directors. Capturing the attention of this audience is vital to ensuring that research on student needs can be translated into actionable insights focused on organizational structure, resource allocation, staffing, and other issues that are managed, at least in part, beyond the library's immediate jurisdiction.

While the audience for this project is community college leaders, the beneficiaries of the project are, ultimately, students. This project will translate research on students' needs into actionable recommendations that will enable community college leaders to respond to those needs. The outcome of this project will be actionable recommendations on ways that community college CAOs, library leaders, and other administrative leaders can strengthen and reconfigure the library alongside other academic support services to best prepare students to be full participants in their local communities and our global society.



Proposal Community College Academic Support Ecosystems

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Roger C. Schonfeld | Roger.Schonfeld@Ithaka.org

Introduction

Community colleges serve a wide range of students, including underrepresented minorities (URMs), veterans, low-income, adult, and first-generation students, as well as underprepared and post-traditional learners. Ensuring that community college students have access to academic support services requires more than simply understanding students' needs -- it also requires translating these needs into actionable and scalable recommendations for library leaders, chief academic officers, and other college leaders. The challenge herein is appreciating the barriers that community colleges face when attempting to adapt to the diverse needs of the students they serve.

Ithaka S+R proposes a 36-month project to help community colleges take action to ensure that their libraries and other academic support services best support student success. This project will help community college library leaders, chief academic officers, and other college leaders institutionalize data-driven research findings on the needs of community college students and the barriers students face when attempting to access academic support services. Focusing on how colleges can translate research findings on student needs into actionable and scalable best practices, this project will help community college academic and library leaders reorganize, rebudget, reskill and restaff, or redeploy services. This project will not only conduct research but also engage deeply and thoughtfully with it to help community colleges provide the highest level of support to their students.

Statement of National Need

Historical Context and Conceptual Framing

Ithaka S+R is in the midst of an extensive, multipart, and multiyear examination of how community colleges can more effectively support student success through their libraries and other academic support services.¹ On August 30, 2017, IMLS awarded a grant to Northern Virginia Community College (NVCC) in partnership with Ithaka S+R and six additional community colleges. The Community College Library Support for Student Success (CCLASS) project unites a coalition of community colleges interested in examining how students themselves define success and identifying the library's services portfolio that would help maximize student success.

Ithaka S+R's role in the CCLASS project is to lead qualitative and survey research of community college students focused on better understanding students' learning needs and the challenges they face. We are currently in the process of conducting in-depth student interviews and observations, facilitating the development of service concepts, and will soon begin fielding a survey to examine these issues across the population broadly as well as within specific sub-groups.

¹ In addition to the IMLS funded CCLASS project described in this proposal, other Ithaka S+R projects focused on community colleges are funded by the Jack Kent Cooke Foundation and the Aspen Institute on [the first-year experience of community college students](#) and [the role of presidential leadership at community colleges](#).

IMLS funded the CCLASSSS project in recognition of the national importance of helping community college libraries secure their footing in a rapidly changing higher education environment. In addition to producing valuable localized intelligence for each of the seven community colleges directly involved in the CCLASSSS project, Ithaka S+R's research will result in a toolkit that will instruct other community college libraries across the nation in how to assess the portfolio of academic support services offered at their own institutions.²

The CCLASSSS project engages deeply with students. It has been instrumental in shedding light on many of the difficulties that students face in navigating available service offerings. While the research conducted in the CCLASSSS project will help community colleges understand where there are gaps in their service offerings, it has revealed a parallel need for more research on how community colleges can implement or adapt recommendations for new or reconfigured academic support services to fill these gaps given limited resources.

We see the two-fold needs that the CCLASSSS and the CASE projects address as *fundamentally entwined*. The new project (CASE) proposed here builds on and will engage with the CCLASSSS project's student-centricity, bringing in perspectives of chief academic officers (CAOs) and library directors to address questions of organizational strategy and design. The research on students' learning needs, which are currently being uncovered in the CCLASSSS project, is incomplete without further research on how academic support services are best deployed that the CASE project will provide. The current proposal, if funded, will support an effort to help colleges institutionalize findings and organize themselves to better support student needs. It will enable community college leaders to strengthen and reconfigure library and other academic support services to increase positive student outcomes.

Library and Academic Support Services at Community Colleges

Approximately 38% of students enrolled in higher education are at community colleges across the country and this number is likely to continue to grow ([IPEDS 2017](#)). Community colleges serve a wide range of students, including URMs, low-income, and first-generation students. They are also unique in serving nontraditional populations such as underprepared and post-traditional learners, adults students, and veterans returning to higher education. The needs of community college students and faculty are currently changing for a variety of reasons, including the introduction of more online learning and limitations in resource availability. These changes must be considered if academic support services are to truly reflect the actual pedagogical and learning practices of faculty and students.

The provision of academic support services is in flux at community colleges. These services, which include the academic library, are organized in a variety of different ways in efforts to utilize limited resources most efficiently and support outcomes most effectively. We hypothesize that the types of services available and the ways these services are organized differ on a number of spectra, including institutional mission, teaching emphases, student body profile, and instructional delivery models. For example, U.S. campus Chief Information Officers across diverse range of institutions generally report some responsibility for services within their institutions' libraries but very low knowledge about the skills these services cultivate ([Pomerantz 2017, 10-20](#)). Furthermore, the continued and growing use of adjunct labor at community colleges presents a barrier for instructors to build long term relationships and engage deeply with academic support services. This challenge represents one example of the ways that the administrative configuration of academic support services has implications for the extent to which these services can be effectively developed for and offered to students.

² Additional information on the [CCLASSSS project](#).

In this project, we propose to take stock both of the needs that exist for library and academic support services as well as the ways in which they are utilized and organized across the community college sector nationally. Focusing on actionable insights, this project will help guide community colleges academic and library leaders in ways they can translate research into change at their institution, whether in the form of reorganized services or new services. This project will help institutional and library leaders provision the best possible array of library and academic support services for community college students.

Project Design

Project Goals and Outcomes

The goal of this project is to help community colleges incorporate findings on the needs of community college students into their institutional practices. This effort to engage deeply and thoughtfully with research to institutionalize data-driven knowledge has the potential to help community colleges organize themselves administratively in order to provide the highest level of support to their students. To this end, this project will produce several outputs, including four major publications, interim public reports, blogging, presentations, social media engagement, and an interactive workshop (see “Outputs” under “National Impact”).

The intended outcome of this project will be actionable recommendations on ways that community college CAOs, library leaders, and other administrative leaders can strengthen and reconfigure the library alongside other academic support services to best prepare students to become active and thoughtful members of society. Academic support services are at the frontline of listening to students and placing learners at the center of their practice and service offerings. The outcomes of this project will support the mission of libraries, along with other academic services, by translating research on student needs and service offerings into attainable organizational initiatives.

Research Questions

Our research questions are:

1. How can the library best organize itself to develop and sustain programs or services that contribute to the community college’s mission and student success?
2. What types of library services, in conjunction with other academic support services, do community colleges need? How do these needs differ across institution types?
3. How are services to address these needs currently organized, funded, and staffed? What are the key success factors, tradeoffs, opportunities, and challenges associated with the organization and provision of library and academic support services?

Audience and Engagement with Community

The core audience for this research is community college leaders, including chief academic officers, deans of learning services, and library directors. Capturing the attention of this audience is vital to ensuring that research on student needs can be translated into actionable insights focused on organizational structure, resource allocation, staffing, and other issues that are managed, at least in part, beyond the library’s immediate jurisdiction. In order to communicate with our target audience, we will assemble a national email contact list of community college CAO’s and library directors, which we will use to conduct survey research of these populations (see “Research Approach” below) and to communicate key project findings at crucial points.

To represent the views and interests of the target project audience, we have assembled an advisory committee of national leaders who will help ensure our research, analysis, recommendations, and communications are developed appropriately. This committee will offer guidance throughout the duration of work and oversee progress towards projected goals and intended outcomes. We will convene advisory committee members as a group in person twice during the project, in addition to inviting them to participate in our culminating workshop. Additionally, we will convene the committee in a bi-annual phone conference to present research findings, engage in discussion, and appraise next steps. The advisory committee will play a role in ensuring our team's accountability to a timeline and set of outputs as well as assisting us in the strategic dissemination of project outputs to key stakeholders.

The advisory committee will be comprised of community college CAOs, deans for academic support, library directors, and other relevant experts. Committee members who are confirmed (see Letters of Support in application appendices):

- Mark McBride, SUNY Senior Library Strategist (former library director at Monroe County Community College), who will provide special help in ensuring that our approaches address the special needs of state systems of community colleges;
- Dr. Braddlee, Dean of Learning and Technology Resources and Professor, Northern Virginia Community College, who will provide the perspective of a librarian currently serving as a library director with responsibilities that also go beyond the traditional scope of the college library;
- Dr. Karen Reilly, Dean of Learning Support, Valencia Community College, who will provide the perspective of overseeing a library and other learning support services in a complex organizational structure;
- Dr. Rosemary A. Costigan, Vice President for Academic Affairs (CAO), Community College of Rhode Island, who will provide the perspective of a CAO.

In addition to the advisory committee, we will also engage with a group of student ambassadors. These ambassadors, one each per institution, will represent each of the community colleges that participate in site visits during Phase 3 of this project (see "Research Approach" under "Project Design"). During the on-site visits, we will meet with each student ambassador, who will serve as a liaison for their institutions. Student ambassadors will read and provide feedback on project outputs to ensure that their "end-user" perspectives have been fully incorporated into the project outcomes.

Both advisory committee members and student ambassadors will be among the individuals invited to attend the project's culminating workshop.

Research Approach

Our project will be comprised of five research phases.

1) Survey of CAOs

This survey will capture the perspectives of community college CAOs on the value of the academic support services provided by their college, the services they offer that are successful, and the challenges they face. The data gathered in this survey will enable us to examine institutional objectives, the way library and other academic support services are organized at diverse institutions, and how these services are funded. The survey questionnaire will be developed on the topics outlined above and reviewed by the advisory team. We will conduct cognitive interviews with approximately 5-7 CAOs to test and refine the questionnaire before finalizing.

Developing a contact list of community college CAO's presents a challenge, given that the individual occupying this role can be housed in different offices or carry different titles depending on institution, so we will assemble the list by hand. Although time consuming, this approach ensures the highest quality list, an essential feature of delivering a strong participation rate (and for communications purposes later in the project).

To ensure a high response rate to our survey, we will leverage our advisory committee and Ithaca S+R's network to endorse this research. We will also work to develop partnerships with professional society leaders who will aid us in this process by serving as "signatories" under whose name(s) we will send invitations and reminders. Due to Ithaca S+R's extensive experience and national reputation for fielding these types of national surveys, as exemplified through our triennial Faculty Survey³ and our annual Higher Ed Insights report⁴, we are confident in our ability to generate strong CAO participation.

Analysis of survey findings will take place in Phase 2.

2) Analyzing CAO Survey Findings and Developing Institutional Personas

We will analyze the data we collect in our national survey of CAOs in conjunction with IPEDS data about funding, staffing, student body, and outcomes. We will stratify the results of this analysis to represent key variations in community colleges by how they currently structure academic support services and the challenges they face when doing so. This analysis will be important to interpreting the findings of this research and making it actionable. We acknowledge the importance of recognizing that regional and other institutional differences drive the unique challenges a community college must face. From this analysis, we will develop institutional personas that reflect a deep understanding of the communities that each type of community college serves.

Personas are character profiles developed from the concrete experiences of individuals or groups, which help ground research-and-design processes in the lived experiences of end-users. While personas represent a type or category of users, they are concretely represented through fictitious names, character-traits, visual representations, and even personal narratives. Academic libraries are increasingly using personas as a resource, alongside other best practices in user-centered research-and-design, to improve and create tools to meet the needs of students (see, for example, [Maness, J., Miaskiewicz, T., & Summer, T. 2008](#); [Lewis, C., & Contrino, J. 2016](#); and [Sundt, A., & Davis, E. 2017](#)).

To create institutional personas, we will use survey and IPEDS data to group community colleges by the types of academic support services currently offered and the services that are needed. While each institutional persona will represent a group of community colleges with similar services and needs, we will adhere closely to the best practices of our methodological approach, by giving each fictitious persona specific details (i.e. name, imagery, backstory, etc.). The logic of this approach is to ensure that each institutional persona incorporates a deep empathy for the end-users' perspectives. The personas will translate abstract data points into more accessible examples of typical use cases to inform our research-and-design process (Pruitt and Adlin 2006).

Furthermore, since there is no pre-existing model for typologizing community college academic support service models, the process of identifying and developing personas will be essential to developing a sampling method for selecting colleges for site visits in Phase 3 of this project.

At the end of this phase, we will publish a report analyzing the aggregate CAO survey findings, providing the institutional personas, and stratifying the CAO findings by institutional personas.

³ Additional information on the [National Faculty Survey](#).

⁴ Additional information on [Higher Ed Insights](#).

3) Conducting the Site Visits

Based on the data gathered in Phase 1 and the institutional personas developed in Phase 2, we will select 5 community colleges for in-depth examination through site visits. The purpose of these site visits is to build a detailed picture of how services are developed, organized, and sustained. By analyzing what is learned across these in-depth examinations, we will identify “key success factors” as well as the tradeoffs, opportunities, and challenges associated with the organization and provision of library and academic support services.

During the site visits, we expect to engage with a variety of stakeholders including leaders (e.g. CAOs, library directors, and deans of learning support); librarians and other academic support providers; faculty members; and students. As discussed in greater detail in the “Audience and Engagement with Community” section, we will work closely with student ambassadors during this phase of research.

Our focus during these site visits will be attuned to developing a holistic perspective on how services are currently structured, and, the extent to which this structuring meets various stakeholders’ expectations and needs. In order to do so, engagements will incorporate exercises that facilitate service design thinking, such as journey mapping ([Deitering and Filar-Williams 2018](#)). This approach will encourage the stakeholders to articulate the concrete touchpoints, processes and barriers associated with their current academic support services while also providing opportunities for them to identify possible improvements to and/or possibilities for new services.

At the end of this phase, we will publish a report analyzing findings from the site visits.

4) Survey of Library Directors

In order to provide a truly national treatment of the challenges community college library directors face in strengthening and reconfiguring services, we will balance the localized perspectives uncovered during the site visit against national perspectives gathered in a second national survey. We will field a national survey, focused this time on community college library directors, inquiring about the role that community college libraries play within the larger field of academic support services.

The survey questionnaire will be designed bearing in mind the findings from the CAO survey and the site visits. It will explore perceptions about the library’s role, priorities, resource allocations, and especially constraints. One of many benefits of this second national survey is that it will allow us to compare the perceptions of CAOs with those of library directors and identify areas to build consensus around shared goals.

We will hand gather a list of community college library directors based on information available from library websites and other sources. We believe that a hand gathered list affords us the best opportunity to reach the broadest possible group of potential participants. We will employ the same methodological approach to this national survey that we applied to the survey of CAOs (see “Survey of CAOS” under “Research Approach”).

In addition to aggregated analysis, our analysis will stratify by institutional personas and various other variables. We will offer comparisons with the CAO survey findings, as well as other relevant national surveys.

At the end of this phase, we will publish a report of the survey findings.

5) Workshop on Academic Support Services

In the final phase of this project, we will convene an invitational workshop to discuss actionable recommendations for community college academic support services. This workshop will bring together key

leaders and participants from the CCLASS and CASE projects to discuss action agendas for community college libraries and related academic support entities that have emerged from both projects.

In this workshop, we will review the findings from both the CCLASS and CASE projects, along with other recent research and innovation in community college library and academic support services. Invitees will include:

- Advisory committee members
- Library directors, deans of learning resources, and other academic support leaders from the site visits
- Student ambassadors who participated in the site visits
- Program officers from IMLS and other relevant funding agencies
- Representatives from the League for Innovation and ACRL

To promote discussion on ways community colleges can act on the research produced by this project, the workshop will be structured as an intimate gathering focused on active participation, rather than as a traditional conference with panelists giving lectures. Shortly after the workshop takes place, Ithaka S+R staff will write and publish an output, tentatively titled “An Action Plan for Community College Libraries.” This Action Plan will share insights from the workshop, summarize the discussion, and address topics including necessary levels of investment in community college libraries and other academic support providers, options for organizing these services to greatest impact, and similar topics germane to their success.

Workplan

YEAR 1 (November 2018 - October 2019)

November 2018-March 2019. Assemble CAO survey recipient lists. Convene advisory committee in person. Draft survey instrument, test via cognitive interviews, iterate with advisory committee, and finalize questionnaire.

April-May 2019. Field CAO survey, monitor response rates, generate reminders, close survey.

June-October 2019. Analyze survey findings. Create institutional personas. Stratify survey findings accordingly. Share analysis with advisors. Publish CAO survey findings and disseminate widely through direct email, listservs, and media outreach. Begin to present findings broadly. Identify colleges for site visits.

YEAR 2 (November 2019 - October 2020)

November-December 2019. Secure site visit participation and begin site visits.

January-May 2020. Complete all site visits, including interviews, document gathering, and analysis.

June-October 2020. Analyze site visit findings, review with advisory committee in person, write and publish report. Disseminate report widely through direct email, listservs, and media outreach. Begin to present findings broadly. Draft library director survey instrument.

YEAR 3 (November 2020 - October 2021)

November-December 2020. Draft library director survey instrument, test via cognitive interviews, iterate with advisory committee, and finalize questionnaire. Assemble library director survey recipient list.

January 2021-March 2021. Field library director survey, monitor response rates, send reminders, close survey.

April 2021-August 2021. Analyze library director survey findings. Publish findings and disseminate widely through direct email, listservs, and media outreach. Present findings broadly. Organize invitational workshop.

September 2021. Conduct invitational workshop.

October 2021. Publish a final output, including recommendations resulting from the workshop, and disseminate widely through direct email, listservs, and media outreach. Present findings broadly.

Project Team

Ithaca S+R's team will be led by Project Director Roger C. Schonfeld, Director of Libraries and Scholarly Communication for Ithaca S+R, who is co-leading our current IMLS-funded initiative. Schonfeld has also spearheaded funded research on academia and its libraries with support from the Getty, Hewlett, Kress, Mellon, and Mertz Gilmore foundations, as well as JISC, NEH, and the Rockefeller Brothers Fund. Schonfeld will take responsibility for reporting requirements to IMLS, ensuring that project outputs are delivered on time, and managing the project budget.

Co-project leads, Researcher Christine Wolff-Eisenberg and Senior Researcher Danielle Cooper, will lead day-to-day project activities. Wolff-Eisenberg has led Ithaca S+R's widely regarded national surveys of faculty members and academic librarians, and will lead all survey work. Cooper has designed and coordinated qualitative research collaborations involving over 200 librarians at more than 100 universities and will lead the site visits. Wolff-Eisenberg and Cooper will work throughout all phases of the project to provide intellectual leadership and to ensure that all elements of the project connect seamlessly. Additional Ithaca S+R staff will contribute to this project as needed under the direction of Wolff-Eisenberg and Cooper.

Diversity Plan

Community colleges are unique in that they serve a wide and diverse range of students, many of whom come from under-resourced backgrounds, while at the same time are themselves often underserved institutions within the higher education sector. In other words, community colleges serve the greatest range of students with the fewest resources available to them.

This project is designed to support both students and the community colleges that serve them. Community colleges give students options for different ways to pursue higher education, meeting a growing societal need for postsecondary education that four-year, private, elite public, and liberal arts colleges alone are not equipped to accommodate. Students who attend community colleges include URMs, veterans, low-income, adults, and first-generation students, as well as underprepared and post-traditional learners. This project meets an urgent need to invest in the future of the community college library, alongside other academic support services, as essential for supporting the success of this diverse body of students.

While the audience for the outputs that will result from this project is community college leaders, the beneficiaries of the project are, ultimately, students. This project will translate research on students' needs into actionable recommendations that will enable community college leaders to respond to those needs. Empathy and a strong desire to generate a holistic view of the challenges facing community college libraries are woven deeply into the structure and methodologies of this project (see "Research Methods" under "Project Design," especially Phases 2 and 3). Furthermore, we will engage closely with key constituents from both the target audience and target beneficiaries of this project. We will solicit feedback and guidance from representatives of the community college sector through our advisory committee. We will engage with student perspectives through the student ambassadors, who will play a key role in this project, especially in Phases 3 and 5 (see "Audience and Community Engagement" under "Project Design").

National Impact

We anticipate the knowledge produced by this research will have broad impact on a wide range of stakeholders including community college leaders, library leaders, policymakers, and grantmakers. The intended beneficiaries of the project are the students who attend community colleges. Developing a deeper understanding

of the services currently available at community colleges, how existing services can be reconfigured to better serve the needs of students, and areas where lack of resources impedes community college libraries and other academic support services from enacting best practices will meet often overlooked needs in this sector.

By shifting between national and local lenses, this project will overcome a major hurdle to produce research that will lead to systemic change. This research will bridge a gap between national and local results as well as bring together student views with an impetus for structural change. While the site visits will have a profound impact on a group of key local actors, other project activities (such as public reporting, social media engagement, and the “Action Plan for Community College Leaders”) will help to ensure that the research resulting from this project will find a national audience. In particular, the workshop will help to socialize our research findings at a group of community colleges and forge pathways for others to follow.

In order to ensure that community colleges are equipped to shape thoughtful citizens, members of society who will contribute to increasing positive public outcomes for their communities, colleges must be prepared to adapt. Adaptation involves understanding a changing environment and reconfiguring services to fit into this new landscape. Community colleges serve a broad general public and equip their students with the research skills needed to contribute to civic conversations, the critical thinking skills to benefit from cultural opportunities, and the technological skills to promote economic vitality. Thus, community colleges bridge a gap between the ways that student experience their local communities and global society.

Outputs

Deliverables will include several major public reports, interim public reports, blogging, presentations, and social media engagement:

- *Research report on CAO findings (Phase 2)*, including a summary of the national CAO survey and institutional personas.
- *Research report on site visits (Phase 3)*, including an cross-institutional analysis of findings.
- *Research report on library director findings (Phase 4)*, including comparisons with CAO survey findings.
- *Dataset deposit (Phases 1 and 4)*. The survey datasets both of CAOs and of library directors will be deposited with ICPSR, ensuring long-term preservation and broad access and reuse.
- *Public interim reporting (throughout)*, including project updates through regular blogging and social media engagement.
- *Culminating workshop (Phase 5)*, in which we will engage with community college academic leaders, community college library leaders, grantmakers, and community college students to present research finding, discuss how they might use the findings in their work, identify action-steps that can be taken to implement recommendations, and build consensus about directions forward.
- *An Action Plan for Community College Library Leaders (Phase 5)*, including insights from the workshop, a summary of the workshop discussion, options for ways community college libraries can organize their services to ensure greatest impact, etc.

Dissemination of Findings

Publications that result from this research will be published on the Ithaka S+R website under a CC-BY license and promoted widely through our email list, blog, listservs, and social media. Researchers will seek out opportunities to write blog posts, opinion pieces, and promote research findings on social media.

In addition to presenting the research findings at a workshop convened by Ithaka S+R to the group of institutions that engaged deeply with this project, Ithaka S+R researchers will present outputs from this project

at conferences such as ACRL, ALA, and the League for Innovation in Community Colleges. Members of our advisory committee will play a role in ensuring the national dissemination of research outputs from this work. The student ambassadors who contribute to this project will serve as liaisons in their communities, spreading the word about ways to engage with academic support services.

Performance Goals and Performance Measurement Statement

This project will support the IMLS agency-level goal of promoting communities. We will measure the performance goals of this project by surveying attendees of our workshop. In this survey, we will ask IMLS agency questions as well as project-related questions.

IMLS agency questions to be included in Performance Measurement Survey:

- My organization is better prepared to provide a program or service that addresses community needs.
- My organization is better able to engage my community.
- My organization is better prepared to develop and maintain ongoing relationships with community partners.
- My organization is better prepared to share knowledge and other resources as an active contributor to problem solving in the community
- My community college library offers programs, services, or resources that address community needs.
- My community college library is an active contributor to problem solving in the community.

DIGITAL PRODUCT FORM

Introduction

The Institute of Museum and Library Services (IMLS) is committed to expanding public access to federally funded digital products (i.e., digital content, resources, assets, software, and datasets). The products you create with IMLS funding require careful stewardship to protect and enhance their value, and they should be freely and readily available for use and re-use by libraries, archives, museums, and the public. However, applying these principles to the development and management of digital products can be challenging. 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

Please check here if you have reviewed Parts I, II, III, and IV below and you have determined that your proposal does NOT involve the creation of digital products (i.e., digital content, resources, assets, software, or datasets). You must still submit this Digital Product Form with your proposal even if you check this box, because this Digital Product Form is a Required Document.

If you ARE creating digital products, you must provide answers to the questions in Part I. In addition, you must also complete at least one of the subsequent sections. If you intend to create or collect digital content, resources, or assets, complete Part II. If you intend to develop software, complete Part III. If you intend to create a dataset, complete Part IV.

Part I: Intellectual Property Rights and Permissions

A.1 What will be the intellectual property status of the digital products (content, resources, assets, software, or datasets) you intend to create? Who will hold the copyright(s)? How will you explain property rights and permissions to potential users (for example, by assigning a non-restrictive license such as BSD, GNU, MIT, or Creative Commons to the product)? Explain and justify your licensing selections.

Ithaka S+R will hold the intellectual property rights in the digital products that are deliverables for the project. The digital content created (research reports, final output publication) will be released under a Creative Commons Attribution – Noncommercial 4.0 International (CC BY-NC 4.0) license. The survey datasets will be deposited with ICPSR, ensuring long-term preservation and broad access and reuse.

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.

Attribution rights and prohibition of use for commercial purposes per <https://creativecommons.org/licenses/by-nc/4.0/>.

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.

No data that would allow participants to be individually identified will be released in any of the datasets. In case research report on site visits identifies individual interview respondents, proper consent to be identified will be captured prior to the interview. No intellectual property belonging to others will be distributed in the process of fulfilling grant obligations or deliverables.

Part II: Projects Creating or Collecting Digital Content, Resources, or Assets

A. Creating or Collecting New 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 format you will use.

Per proposal narrative, deliverables will include two major public reports, interim public reports, blogging, presentations, and social media engagement:

- *Research report on CAO findings (Phase 2)*, including a summary of the national CAO survey and institutional personas.
- *Research report on site visits (Phase 3)*, including a cross-institutional analysis of findings.
- *Research report on library director findings (Phase 4)*, including comparisons with CAO survey findings.
- *Dataset deposit (Phases 1 and 4)*. The survey datasets both of CAOs and of library directors will be deposited with ICPSR, ensuring long-term preservation and broad access and reuse.
- *Public interim reporting (throughout)*, including project updates through regular blogging and social media engagement.
- *An Action Plan for Community College Library Leaders (Phase 5)*, including insights from the culminating workshop, a summary of the workshop discussion, options for ways community college libraries can organize their services to ensure greatest impact, etc.

Reports will be available as digital downloads in pdf format, with summaries presented in HTML.

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

For the surveys, Ithaka will employ Qualtrics, a highly configurable and flexible survey software application. All other deliverables will be created using widely available applications such as Microsoft Office, Google Docs, Adobe Acrobat. A transcription service Transcript Divas may be used to transcribe interviews recorded during site visits.

A.3 List all the digital file formats (e.g., XML, TIFF, MPEG) you plan to use, along with the relevant information about the appropriate quality standards (e.g., resolution, sampling rate, or pixel dimensions).

Reports will be available as digital downloads in pdf format, with summaries presented in HTML. Datasets will be deposited with ICPSR in .pdf and .xls formats, and will be further available in multiple formats from ICPSR.

B. Workflow and Asset Maintenance/Preservation

B.1 Describe your quality control plan (i.e., how you will monitor and evaluate your workflow and products).

During the award period, survey data will be stored within the survey platform (Qualtrics) and on a private protected drive, both of which will only be accessible to the Ithaka S+R project team and ITHAKA network domain administrators. Data from the survey will later be processed by and deposited with ICPSR for preservation and access, along with the associated questionnaire and codebook. The interview audio files will be stored on a private protected drive, which will only be accessible to the Ithaka S+R project team, and may be transferred for transcription to third-party service Transcript Divas under an appropriate confidentiality agreement.

B.2 Describe your plan for preserving and maintaining digital assets during and after the award period of performance. Your plan may 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).

Per grant narrative, data from the surveys will be processed by and deposited with ICPSR for preservation and

access, along with the associated questionnaire and codebook. The reports will be published and maintained via the Ithaka S+R website.

C. Metadata

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

N/A

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

N/A

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).

N/A

D. 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).

Per grant narrative, data from the project's survey datasets will be submitted to the ICPSR repository for preservation and access. The reports will be published and maintained via the Ithaka S+R website.

D.2 Provide the name(s) and URL(s) (Uniform Resource Locator) for any examples of previous digital content, resources, or assets your organization has created.

ICPSR: <http://www.icpsr.umich.edu/icpsrweb/ICPSR/series/00226>
Ithaka S+R <http://www.sr.ithaka.org/publications/>

Part III. Projects Developing Software

A. 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.

N/A

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

N/A

B. Technical Information

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

N/A

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

N/A

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

N/A

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

N/A

B.5 Provide the name(s) and URL(s) for examples of any previous software your organization has created.

N/A

C. Access and Use

C.1 We expect applicants seeking federal funds for software to develop and release these products under open-source licenses to maximize access and promote reuse. What ownership rights will your organization assert over the software you intend to create, and what conditions will you impose on its access and use? Identify and explain the license under which you will release source code for the software you develop (e.g., BSD, GNU, or MIT software licenses). 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.

N/A

C.2 Describe how you will make the software and source code available to the public and/or its intended users.

N/A

C.3 Identify where you will deposit the source code for the software you intend to develop:

Name of publicly accessible source code repository:

URL:

N/A

Part IV: Projects Creating Datasets

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

Three sets of data will be created. First, from in-person interviews during the site visits (Phase 3). These will be cited in reports and publications, but there are no plans to release these publicly. Second and third, data produced by the CAOs and library directors surveys during Phase 1 and Phase 4 will be used to produce reports, and will form the basis of the archived datasets.

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?

No.

A.3 Will you collect any personally identifiable information (PII), confidential information (e.g., trade secrets), or proprietary information? If so, detail the specific steps you will take to protect such information while you prepare the data files for public release (e.g., data anonymization, data suppression PII, or synthetic data).

PII may be collected during the in-person interviews, with an option to remain anonymous or provide consent to be identified in released reports. Survey data will be collected with either anonymous responses enabled, to insure separation of individually identifying information, such as email addresses, from collected data, or will be anonymized prior to the release.

A.4 If you will collect additional documentation, such as consent agreements, along with the data, describe plans for preserving the documentation and ensuring that its relationship to the collected data is maintained.

Ithaka will preserve any consent documentation for in-person interviews conducted during site visits. We will include disclosures on how the data will be used in our online survey questionnaire, but we will not gather signed consent forms (i.e. that by proceeding in the survey, respondents will have indicated consent). Survey data, data dictionaries, code books and any other documentation will be preserved either by Ithaka, or where appropriate, released as part of shared datasets.

A.5 What methods will you use to collect or generate the data? Provide details about any technical requirements or dependencies that would be necessary for understanding, retrieving, displaying, or processing the dataset(s).

Data for the datasets will be gathered by means of an online survey, distributed to institutional email addresses via Qualtrics survey software, as described above in Part II, Section A2. Results will be analyzed using a commonly available statistical software package, such as SPSS, SAS or R. Datasets to be archived will be saved in common file formats so they are easily accessible, and not made specific to a particular application.

A.6 What documentation (e.g., data documentation, codebooks) will you capture or create along with the dataset(s)? Where will the documentation be stored and in what format(s)? How will you permanently associate and manage the documentation with the dataset(s) it describes?

During the award period, survey data will be stored within the survey platform (Qualtrics) and on a private protected drive, both of which will only be accessible to the Ithaka S+R project team and ITHAKA network domain administrators. Data from the project's survey will later be deposited with ICPSR for preservation and access, along with the associated questionnaire and codebook.

A.7 What is your plan for archiving, managing, and disseminating data after the completion of the award-funded project?

Per grant narrative, data from the project's survey datasets will be submitted to the ICPSR repository for preservation and access.

A.8 Identify where you will deposit the dataset(s):

Name of repository: ICPSR

URL: <https://www.icpsr.umich.edu/icpsrweb/>

A.9 When and how frequently will you review this data management plan? How will the implementation be monitored?

The data management plan will be periodically reviewed during the course of the project. In the event that any changes are necessitated prior to project completion, IMLS will be informed and consulted prior to implementation.