

Abstract

The purpose of this mixed-methods study is to explore the relationship between community college librarians (CCLs) and the Association of College and Research Libraries' (ACRL) *Framework for Information Literacy for Higher Education (Framework)*. The *Framework* was adopted by ACRL in January 2016 for use by all types of higher education institutions. Community colleges however face unique academic challenges relative to four-year colleges and universities; these challenges may impact CCLs' ability to integrate the new document into information literacy (IL) instruction. Despite an extensive literature review, no published studies were found on the self-reported knowledge, attitude and behavior of CCLs toward the *Framework*. This project seeks to close that gap and to address three research questions: RQ1: How do CCLs describe their understanding of the ACRL *Framework*?; RQ2: How do CCLs describe their current use of the ACRL *Framework* in IL instruction?; RQ3: How do CCLs describe their confidence level in incorporating the ACRL *Framework* into IL instruction? The project will follow an Explanatory Sequential Design, with quantitative then qualitative data gathered from two self-selected samples drawn from national populations of CCLs. Quantitative data will be collected via a survey instrument, which will be distributed to listservs of ACRL and ACRL's Community and Junior College Libraries' Section (CJCLS) members. Survey questions will focus on subject's: a) teaching experience and training; b) understanding of the ACRL *Framework*; and c) use of and confidence levels in incorporating the *Framework* into their IL lesson planning, student learning outcomes, and assessment. Survey results from the quantitative data collection phase will be used to develop interview questions for the qualitative data collection phase. Qualitative data will be collected through face-to-face semi-structured interviews of 15-20 CCLs conducted at two American Library Association (ALA) national conferences. The aim of this planning project is to identify the potential continuing education needs of CCLs as related to their teaching practices and the ACRL *Framework*. Findings from this needs assessment may result in future Project Grant applications supporting the development and implementation of CCL cohort training programs and/or online learning modules. The project is in alignment with ACRL's articulated research agenda and will contribute to its *Framework*-related inquiry with a focus on underrepresented community college student and understudied CCLs.

Laura Bush 21st Century Librarian Program: Community College Librarians and the ACRL Framework

Statement of Broad Need

Queensborough Community College (QCC) of The City University of New York (CUNY) seeks funding from the Laura Bush 21st Century Librarian Program for an exploration of the continuing education needs of community college librarians (CCLs) as related to their teaching skills and the recently adopted Association of College and Research Libraries (ACRL) *Framework for Information Literacy for Higher Education (Framework)*. This application, titled *Community College Librarians and the ACRL Framework*, requests \$26,621 in support and designates itself as a Community Anchor (Project Category), Continuing Education (Project Type) and Planning Grant (Funding Category) project.

Over ten million students attend community colleges in the United States; a disproportionate percentage come from underrepresented populations and over two-thirds are underprepared for higher education (Bailey, Smith Jaggars, & Jenkins, 2015). Information literacy (IL) instruction is delivered to these students by CCLs; and CCLs look to ACRL, as the association of higher education librarians in the United States, for direction and guidance to inform their teaching practices.

In January 2016, ACRL replaced its *Information Literacy Competency Standards for Higher Education* (2000) with the *Framework* (2016). The *Framework* is intended for use by all types of higher education institutions; however, the remedial reading, writing and IL skills of the vulnerable community college student population may challenge CCLs when integrating the more advanced and theoretical *Framework* into their instructional work. According to Reed (2015), “For librarians who work with students on advanced research and high-level projects, the *Framework* will feel like a natural fit, whereas those who focus the great amount of their time on introductory concepts may struggle to see much relevance” (p. 237). This project seeks to increase the *Framework's* fit and relevance on community college campuses, by exploring CCL’s relationship with the new document.

CCLs are themselves an understudied population. In the recently released report “Academic Library Impact” (2017), ACRL concluded that “based on evidence from the literature review and feedback from advisory group members and the ACRL board, there exists a lack of research in community colleges” (p. 111). An extensive literature review conducted as part of this planning grant application found no published studies on the self-reported knowledge, attitude and behavior of CCLs toward the *Framework*. This project seeks to close that gap and to address three research questions:

RQ1: How do CCLs describe their understanding of the ACRL *Framework*?

RQ2: How do CCLs describe their current use of the ACRL *Framework* in IL instruction?

RQ3: How do CCLs describe their confidence level in incorporating the ACRL *Framework* into IL instruction?

The intended result of this planning project is to determine the potential continuing education needs of CCLs as related to their teaching practices and the ACRL *Framework*. Findings from this needs assessment may result in future Program Grant applications supporting the development and implementation of CCL cohort training programs and/or online learning modules.

The project is in alignment with ACRL's research agenda as outlined in "Academic Library Impact" (2017), a report informed by an IMLS Collaborative Planning Grant ("Connect, Collaborate and Communicate: A Report from the Value of Academic Libraries Summit") and an IMLS National Leadership Demonstration Grant ("Assessment in Action: Academic Libraries and Student Success"). The agenda suggests a series of research questions requiring further study, including: "How have library administrators and staff updated instruction based on the ACRL Framework for Information Literacy?" (Association of College and Research Libraries, 2017, p. 6). Findings from this project will seek to address this research question, with a particular focus on underrepresented community college students and understudied community college librarians.

Project Design

This mixed-methods study will be accomplished within 12-months time (July 1, 2018 - June 30, 2019). The project will follow an Explanatory Sequential Design (Creswell, 2013), with quantitative then qualitative data gathered from two self-selected samples drawn from national populations of CCLs.

The quantitative data will be collected via a survey instrument distributed to ACRL and ACRL/CJCLS membership listservs using SurveyMonkey. Survey questions will focus on subjects': a) teaching experience and training; b) understanding of the ACRL *Framework*; and c) use of and confidence levels in incorporating the *Framework* into their IL lesson planning, student learning outcomes, and assessment. See Appendix A for the preliminary survey questions. Prior to distribution, survey questions will be reviewed and discussed the project's four-member Advisory Board.

All quantitative data will be categorical in nature, with the exception of two open-ended questions. Descriptive statistical results will be provided by SurveyMonkey, which computes means for Likert-style questions and percentages for closed questions. Open-ended questions will be analyzed through the use of the constant comparison method (Charmaz, 2014). Findings from the survey data will be used to develop the interview questions (Creswell, 2013). Survey findings and interview questions will be reviewed and discussed with the project's four-member Advisory Board.

The qualitative data will be collected through face-to-face semi-structured interviews of 15-20 CCLs. These will be conducted by the Project Director (PD) at two national American Library Association (ALA) events: the ALA Midwinter Meeting 2019 to be held in Seattle, WA on January 25-29, 2019 and the ACRL Conference 2019 to be held in Cleveland, OH on April 10-13, 2019. Interview subjects will be recruited from registered conference attendees, via an email solicitation sent to ACRL and ACRL/Community and Junior College Libraries Section (CJCLS) membership listservs. Snowball sampling will also be deployed, whereby committed

CCL interview subjects will be asked to refer potential CCL interview subjects; this strategy may reach professionals who are unable to attend conferences, but who may be among those with the greatest implementation needs concerning the *Framework*. Referred interview subjects who cannot attend either ALA Midwinter Meeting 2019 or ACRL Conference 2019 will be interviewed via FaceTime or Skype.

Each 60-minute interview will be audio recorded, and all audio recordings will be professionally transcribed verbatim. The PD and a trained Graduate Student Research Assistant (GSRA) will code all interview transcripts using a grounded theory approach, and then systematically analyze the results for emergence of themes (Charmaz, 2014). Themes will be reviewed and discussed with the project's four-member Advisory Board. Based on quantitative and qualitative findings, the PD will develop a list of recommendations regarding CCL's continuing education needs related to the *Framework*; she will also draft a response to ACRL's *Framework*-specific research agenda question (Association of College and Research Libraries, 2017, p. 6). Both the recommendation list and the draft response will be reviewed and discussed with the four-member Advisory Board.

Participation in the quantitative and qualitative data collection phases of the study will be encouraged through incentives. Each survey participant can enter to win one of three \$100 Amazon gift cards in a random drawing. Each interview participant will receive a \$100 Amazon gift card. Participation in both phases of data collection will also be supported and encouraged by the four-member Advisory Board, through their professional contacts and connections.

Susan Wengler, Assistant Professor and Coordinator of Information Literacy at QCC of CUNY will serve as the PD. She will manage all aspects of the research project planning, execution, completion and reporting. A GSRA will be recruited from the Master of Library Science program at the Graduate School of Library and Information Studies at Queens College of CUNY. The GRSA will participate in the processing and evaluation of both quantitative and qualitative data and will gain authentic experience in the practice and scholarship of academic librarianship. The administrative obligations of the grant will be administered by the appropriate staff at QCC and CUNY.

Four national leaders from the field of academic librarianship have agreed to serve on the project's Advisory Board: Bradlee, Ph.D.; Craig Gibson; Debra Gilchrist, Ph.D.; and Marie L. Radford, Ph.D. Each member will provide expertise in one or more of the following areas: IMLS-funded research projects, IL and the ACRL *Framework*, community college librarianship, and/or library and information science research methods. The board will guide the PD at each step of the project, including a review and discussion of the survey and interview questions, the survey and interview results, the continuing education list of recommendations and a draft response to the ACRL research agenda question.

Braddlee, Ph.D. is Dean of Learning and Technology Resources and Professor at Northern Virginia Community College in Annandale VA; Dr. Braddlee is Project Director of "Community College Library Support for Student Success," an 2018-2019 IMLS-funded research project designed to increase understanding of academic libraries and student success.

His areas of expertise as an Advisory Board member are IMLS-funded research projects and community college librarianship.

Craig Gibson is a Professor at The Ohio State University Libraries in Columbus, OH, where he is Head of the Food, Agricultural and Environmental Sciences Library; Prof. Gibson co-authored the ACRL *Framework for Information Literacy*, served as Co-Chair of the ACRL *Task Force on Revision of the Information Literacy Competency Standards*, serves as a faculty member of the ACRL Information Literacy Immersion Program and is a past winner of ACRL's Miriam Dudley Instruction Librarian Award. His area of expertise as an Advisory Board member is IL and the ACRL *Framework*.

Debra Gilchrist, Ph.D. is the Vice President for Learning and Student Success at Pierce College District: Pierce College Fort Steilacoom, a Lakewood, WA public community college; Dr. Gilchrist is the former Dean of Libraries at Pierce, a former faculty member of the ACRL Information Literacy Immersion Program and a past winner of ACRL's Miriam Dudley Instruction Librarian Award. Her areas of expertise as an Advisory Board member are community college librarianship, as well as IL and the ACRL *Framework*.

Marie L. Radford, Ph.D. is a Professor of Library and Information Science (LIS) at Rutgers, The State University of New Jersey in New Brunswick, NJ; Dr. Radford is formerly the Director of the Rutgers Ph.D. Program in Communication, Library and Information Science. She has published extensively in the LIS literature and is an expert in research methods. Dr. Radford is Co-Principal Investigator for two IMLS grants, "Cyber Synergy: Seeking Sustainability through Collaboration between Virtual Reference and Social Q&A Sites" and "Seeking Synchronicity: Evaluating Virtual Reference Services from User, Non-User and Librarian Perspectives." Her areas of expertise as an Advisory Board member are IMLS-funded research projects, as well as library and information science research methods.

Diversity Plan

Community colleges are among the most diverse institutions in U.S. higher education. This project engages the experiences and ways of learning on community college campuses, with a focus on the activities of librarians delivering IL instruction to students. Enrollment and completion statistics published by the Community College Research Center at the Teachers College of Columbia University speak to the diversity and needs of the community college student population (Community College Research Center, n.d.), including:

- Enrollment by income: 44% of low-income students attend community colleges as their first college after high school (2002-06)
- Enrollment by race and ethnicity: 56% of Hispanic undergraduates and 44% of Black undergraduates were enrolled at community colleges, as compared to 39% of White undergraduates (Fall 2014)
- Completion by income: 14% of low-income students who started at a public community college completed an associate degree in six-years; 15% earned a bachelor's degree and 6% earned a certificate (2003-04)

- Completion by race and ethnicity: For students who started at a community college, 45.1% of White students, 43.8% of Asian students, 33% of Hispanic students and 25.8% of Black students completed a college credential in six-years (2010-2016)

CCL survey participants will be recruited from the 11,000-member ACRL division (“About ACRL,” n.d.) and the 1,188-member ACRL/CJCLS section (M. Miller, personal communication, January 30, 2017).

CCL interview subjects will be recruited from ALA Midwinter Meeting 2019 and ACRL Conference 2019 registered conference attendees; these national events have estimated paid registrations of 9,000 and 3,499 respectively (“ALA conferences: Q&A,” n.d.; “ACRL 2017 continues record,” 2017). Recruiting through a division and a section of the 56,976-member ALA (“ALA annual membership statistics,” n.d.) organization will create an opportunity for diverse representation of community college campuses by setting (rural, suburban, urban); by size (student enrollment, library faculty); and by state. CCL interview subjects will also be recruited through snowball sampling; referred subjects who cannot attend two conferences will be interviewed via FaceTime or Skype.

Broad Impact

Over 1,200 community colleges currently operate in the U.S. (Bailey, Smith Jaggars, & Jenkins, 2015). Academic librarians who teach at these two-year schools face unique instructional challenges relative to their colleagues at four-year colleges and universities. The primary goal of this planning project is to explore CCL implementation of the *Framework* on these diverse, underserved populations and to identify the continuing education needs of CCLs as related to their teaching practices and the *Framework*.

This study does not aspire to challenge or revise the *Framework* on behalf of CCLs; rather it hopes to examine current CCL practices and to engage CCLs in the *Framework* discussion. As noted above, findings from this needs assessment may result in future Program Grant applications related to the development and implementation of CCL cohort training programs and/or online learning modules; findings will also advance ACRL’s research agenda in relation to their Framework-related question (Association of College and Research Libraries, 2017, p. 6), with a particular focus on underrepresented community college students and understudied community college librarians.

This project expects to contribute to the fields of community college pedagogy, information literacy, and information and library science; results including recommendations for continuing education as well as contributions to ACRL’s research agenda will be disseminated to national audiences through conference presentation and peer-reviewed publication. The PD will submit a presentation proposal regarding the study’s preliminary findings to the 2019 ALA Conference in Washington DC on June 20-25, 2019. The PD will also prepare an article based on the project’s findings and submit to peer-reviewed journals in the following order: *College & Research Libraries*, *Journal of Academic Librarianship*, *Communications in Information Literacy* and *Community & Junior College Libraries*.

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Appendix A

Preliminary Survey Questions¹

1. Are you currently employed as a community college librarian?
 - a. Yes
 - b. No
 - i. *Logic question: If response is no, survey completed
2. How long have you been employed as a community college librarian?
 - a. 0-2 years
 - b. 3-5 years
 - c. 5-10 years
 - d. 10+ years
3. Please describe your advanced degree(s); check all that apply:
 - a. Master degree in library and information studies (LIS)
 - b. Doctorate degree in LIS
 - c. Master degree in non-LIS subject
 - d. Doctorate degree in non-LIS subject
4. Which of the following best describes the status of your current position?
 - a. Staff
 - b. Faculty – tenured
 - c. Faculty – tenure track
 - d. Other – please list
5. Please describe any coursework or training you have in the areas of teaching, educational theory and/or instructional design; check all that apply:
 - a. Coursework as part of LIS degree
 - b. Coursework as part of non-LIS degree
 - c. ACRL Immersion program
 - d. Other professional development programs
 - e. Other – please list
 - f. None
6. Did you have any experience in classroom teaching, prior to your current position?
 - a. Yes
 - i. If yes, please list
 - b. No
7. What types of information literacy (IL) instruction does your community college library offer; check all that apply:
 - a. One-shots
 - b. For-credit - face-to-face
 - c. For-credit – online or hybrid
 - d. Embedded librarians
 - e. Online tutorials
 - f. Other – please list
8. How many IL instruction sessions do you teach each semester?
 - a. 0

- b. Less than 5
 - c. 5 - 10
 - d. 11 - 20
 - e. 21 – 30
 - f. 31 or more
9. Please describe your participation in the development and revision of the ACRL *Framework*; please select all that apply:
- a. Served as member of ACRL Task Force
 - b. Serve(d) as member of Information Literacy Frameworks and Standards Committee
 - c. Provided *Framework* draft feedback through formal channels
 - d. Provided *Framework* draft feedback through informal channels
 - e. Other – please list
 - f. None
10. Have you read the ACRL *Framework*?
- a. Yes
 - b. No
 - c. Parts of it
 - d. Not sure
11. Please describe any continuing education opportunities you have engaged with regarding the ACRL *Framework*:
- a. Reading
 - b. Programming offered by your community college library
 - c. Programming offered by professional associations
 - d. Other – please list
 - e. None

Please indicate your level of agreement with each of the following statements:

12. Teaching represents a significant part of my current job responsibilities.
- a. Strongly agree
 - b. Agree
 - c. Don't agree or disagree
 - d. Disagree
 - e. Strongly disagree
13. I understand the ACRL *Framework*.
- a. Strongly agree
 - b. Agree
 - c. Don't agree or disagree
 - d. Disagree
 - e. Strongly disagree
14. I reference the ACRL *Framework* in conversations with classroom faculty.
- a. Always
 - b. Often
 - c. Sometimes
 - d. Rarely

- e. Never
15. I use the ACRL *Framework* to develop lesson plans.
- a. Always
 - b. Often
 - c. Sometimes
 - d. Rarely
 - e. Never
16. I use the ACRL *Framework* to create student learning outcomes.
- a. Always
 - b. Often
 - c. Sometimes
 - d. Rarely
 - e. Never
17. I use the ACRL *Framework* to design assessment tools.
- a. Always
 - b. Often
 - c. Sometimes
 - d. Rarely
 - e. Never
18. I have altered my instructional practices as a result of the ACRL *Framework*.
- a. Strongly agree
 - b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly disagree
19. There are continuing education opportunities regarding the ACRL *Framework* available, which address my needs as a community college librarian.
- a. Strongly agree
 - b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly disagree
20. The ACRL *Framework* is having a positive impact on impacting student leaning on my community college campus.
- a. Strongly agree
 - b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly disagree
21. My understanding and use of the ACRL *Framework* is important to my advancement/promotion at my current community college position.
- a. Strongly agree
 - b. Agree
 - c. Neutral

- d. Disagree
 - e. Strongly disagree
22. I feel confident incorporating the ACRL *Framework* into my IL instruction.
- a. Strongly agree
 - b. Agree
 - c. Don't agree or disagree
 - d. Disagree
 - e. Strongly disagree
23. What three words best describe your feelings toward the *Framework*?
24. Is there anything else you think we should know, in order to understand your experience with the *Framework* better?

¹ The above survey questions are preliminary; if the project receives funding, the Project Director will finalize survey questions based feedback provided by the Advisory Board.

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

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.

The digital content to be produced as a result of the proposed project will consist of the following:

- Dataset related to CCL survey results
- Dataset related to CCL interview audio recordings and audio recording transcripts

According to the CUNY General Rule, the Creator (PI) shall own all rights in Copyrightable Works. The University shall own all rights in all other Intellectual Property. Ownership of any Intellectual Property resulting from Sponsored Research shall be determined pursuant to the terms of the agreement between the University or The Research Foundation, and the Sponsor, or as otherwise required by applicable law. If ownership is not defined in the agreement, Intellectual Property shall be owned pursuant to the General Rule.

It is the PIs assumption that the digital works produced as a result of the sponsored project will fall under Copyrightable Works and thus will remain the rights of the PI. However, the PI will submit required documentation to the university's Technology Commercialization Office to determine that no university Intellectual Property has resulted from the project. The CUNY ownership rights that may be asserted are described under A.2.below.

It is the PIs intent to make all products to which the PI retains ownership available to the public to the extent possible. The PI will work with her university Technology Commercialization Office to negotiate optimal access for the public to all products resulting from the sponsored program.

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.

Authority and responsibility for administration of the CUNY Intellectual Property Policy resides with the CUNY Chancellor through the Vice Chancellor for Research. The Vice Chancellor for Research shall establish and maintain a Technology Commercialization Office (TCO) to take such actions as may be necessary to carry out the purposes of this policy across the University. Creators shall disclose to the Vice Chancellor for Research, through the Director of the TCO, any Intellectual Property that is or may be owned by the University under this policy, including improvements and reductions to practice, whether done alone or in collaboration, with or without Sponsored Research support. Disclosure shall be made prior to submission of the Intellectual Property for publication or other release to the public domain, or attempt to license, distribute or manufacture applications of the Intellectual Property commercially. The Vice Chancellor for Research, through the Director of the TCO, shall determine whether the University has reason to exercise ownership rights over Intellectual Property disclosed to it and if the University has such rights whether it desires to obtain protection for or pursue licensing

following circumstances: a . if the University notifies Creator that it elects not to protect or commercialize University – owned Intellectual Property, or that it has decided to abandon protection or commercialization; or b. if, within 90 calendar days of disclosure of University – owned Intellectual Property to the TCO , the Creator has not received notice that the University: (i) disclaims ownership of the Intellectual Property or (ii) has taken steps to protect or commercialize University – owned Intellectual Property. Such request shall disclose the date of any publication of the Intellectual Property.

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.

The PI does not anticipate that any products will be created that involve any privacy concerns or raise cultural sensitivities. In the event obtaining permissions or rights arise as a result of products created, the PI will adhere to CUNY and sponsor policies and applicable laws. The CUNY policies related to intellectual property rights are detailed in A.1 and A.2 above.

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.

Please see Part IV.

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.

N/A

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).

N/A

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).

N/A

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).

N/A

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).

N/A

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.

N/A

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.

Please see Part IV.

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: N/A

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.

Dataset related to CCL survey results

Quantitative data will be collected using the survey instrument, which will be distributed using QCC's SurveyMonkey subscription through the ACRL and ACRL Community and Junior College Libraries' Section (CJCLS) membership listservs (August 2018 – September 2018). Survey questions will focus on subject's: a) teaching experience and training; b) understanding of the ACRL Framework; and c) use of and confidence levels in incorporating the Framework into their IL lesson planning, student learning outcomes, and assessment. The Advisory Board will be consulted regarding the survey questions and analysis. Survey participants may enter to win one of three randomly drawn \$100 Amazon gift cards.

Dataset related to CCL interview audio recordings and audio recording transcripts

Qualitative data will be collected through semi-structured interviews of 15-20 community college librarians (CCLs). Findings from the survey data analysis will be used to inform and design the interview questions (November – December 2018). Face-to-face interviews will be conducted at two major American Library Association (ALA) events: the ALA Midwinter Meeting 2019 (January 2019) and the ACRL Conference 2019 (April 2019). Each 60-minute interview will be audio recorded, and all audio recordings will be professionally transcribed. The Project Director and the Graduate Student Research Assistant will code interview transcripts using a grounded theory approach, and then systematically analyze the results for emergence of themes (March – May 2019). The Advisory Board will be consulted regarding the interview questions and analysis. Qualitative data analysis will be used to inform and design a quantitative survey instrument. Interview subjects will each receive \$100 Amazon gift card as incentive to participate.

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?

Approval for the proposed research activity has not been applied for or granted. If the project receives funding, approval will be required by the university's Institutional Review Board for the collection of both quantitative and qualitative data. An application for the quantitative/survey phase of the project will be filed upon receipt of the funding decision; an application for the qualitative/interview phase of the project will be filed after the quantitative/survey phase is complete and the interview questions are developed.

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).

No personally identifiable information will be kept on either the CCL survey data or the CCL interview data.

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.

Data and consent documentation will be kept in a locked file cabinet within the PIs office. No personally identifiable information will be kept so the PI does not anticipate requiring additional security for storing the data and consent documentation.

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).

Dataset related to CCL survey results

Quantitative data will be collected using the survey instrument, which will be distributed using QCC's SurveyMonkey subscription through the ACRL and ACRL Community and Junior College Libraries' Section (CJCLS) membership listservs (August 2018 – September 2018). Survey questions will focus on subject's: a) teaching experience and training; b) understanding of the ACRL Framework; and c) use of and confidence levels in incorporating the Framework into their IL lesson planning, student learning outcomes, and assessment. The Advisory Board will be consulted regarding the survey questions and analysis. Survey participants may enter to win one of three randomly drawn \$100 Amazon gift cards.

Dataset related to CCL interview audio recordings and audio recording transcripts

Qualitative data will be collected through semi-structured interviews of 15-20 community college librarians (CCLs). Findings from the survey data analysis will be used to inform and design the interview questions (November – December 2018). Face-to-face interviews will be conducted at two major American Library Association (ALA) events: the ALA Midwinter Meeting 2019 (January 2019) and the ACRL Conference 2019 (April 2019). Each 60-minute interview will be audio recorded, and all audio recordings will be professionally transcribed. The Project Director and the Graduate Student Research Assistant will code interview transcripts using a grounded theory approach, and then systematically analyze the results for emergence of themes (March – May 2019). The Advisory Board will be consulted regarding the interview questions and analysis. Qualitative data analysis will be used to inform and design a quantitative survey instrument. Interview subjects will each receive \$100 Amazon gift card as incentive to participate.

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?

Documentation of the audio interview transcripts created during analysis of the qualitative data will be stored by the PI in her office for the grant period of performance.

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

The PI will collect, analyze, report on, and disseminate findings of the survey and interviews to the field. All data collected, consent forms, analysis, and related documentation will be stored by the PI in her office for the grant period of performance. At closeout, all grant award documents will be moved and maintained by the university for a minimum of six years within a locked storage facility on the QCC campus. Storage will be overseen by the QCC Office of Grants/Sponsored Programs.

Dissemination of findings will to national academic and community college library audiences will take place through conference presentation and peer-reviewed publication.

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

Name of repository: N/A

URL: N/A

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

As the award is of a one-year duration and all project activities will be completed within that timeframe, the data management plan should be adequate if reviewed at the beginning and end of the period of performance. This will allow the PI to determine if the data management plan is adequate to fulfill all grant requirements prior to commencing the work and that all requirements will be met post close out.