

Public Library Support of College Literacy in Appalachia

Africa S. Hands, PhD, Principal Investigator (PI), seeks funding through the Laura Bush 21st Century Librarian Program to investigate **Public Library Support of College Literacy in Appalachia (Project CLiA)**. **Project CLiA** is a three-year Early Career Development exploratory project to uncover the ways in which public libraries in Central Appalachia support the college literacy of nontraditional prospective students. *College literacy* is defined as the possession of knowledge that assists one in making informed decisions to navigate higher education systems. *Nontraditional students* are those who do not enroll in postsecondary education directly after earning a high school diploma. The proposed project extends the PI's past research, conference presentations (Green, et al., 2020; Hands, 2020a), and practitioner-oriented book (Hands, 2015). The project will examine a regional sample of public libraries using content analytic and interview methods.

The research question guiding this project is: ***What affordances relevant to college literacy are available at public libraries for nontraditional prospective students in Central Appalachia?*** *Affordances* (Gibson, 2015) refers to what the public library offers or provides users that support college literacy, for example, resources, programs, services, and/or partnerships. This study will focus on public libraries across 4 states (KY, TN, VA, WV) comprising the [central region](#) of Appalachia. This region was chosen because it reports lower rates of educational attainment and income and higher unemployment when compared to other regions of Appalachia. Because data consistently show that college degree holders earn more than those with only a high school diploma or associate degree (Broady & Hershbein, 2020), it is assumed that an increase in degree attainment will lead to improved outcomes in the target locale of this study. It is further assumed that communities in economically distressed areas such as Central Appalachia are negatively impacted by the knowledge gap theory or the inequitable exposure to information as a result of lower socioeconomic status or education levels (Lievrouw & Farb, 2005), thus the need for intentional college literacy programming in this region.

This project aligns with IMLS's goal to ***promote lifelong learning*** and its objective of ***investing in library programs that focus on continuous learning for individuals of diverse cultural and socio-economic backgrounds and needs***. The first goal is to examine the nature of public library support for nontraditional prospective students. The second goal is to identify libraries that may serve as exemplars to library practitioners who want to serve nontraditional college-bound patrons. Public libraries – institutions with a track record for public trust, community building, and providing just-in-time services and programming – can be an important resource for adults seeking to enhance their skillset or earn a certificate or degree.

Statement of Broad Need

Project CLiA builds on the PI's previous work (Hands, 2015; Hands, 2020a, b) bringing to the forefront a topic that is not widely examined in LIS literature. Extant LIS literature frames education for adults through the lens of lifelong learning. Sabo (2016) discusses academic-public library partnerships that offer information search courses rather than services or programs that support the academic pursuits of adults in the community. Schull (2013)

describes several library-university partnerships and lifelong learning library programs; however, none are specific to earning an academic degree or certificate. Though Schull (2013) considers college-public library collaborations valuable for bringing visibility to colleges and offering a more accessible location for classes, the focus still seems to be on lifelong learning not certificate- or degree-granting opportunities, which is the focus of the proposed project.

The driving impetus behind this project is concern for information equity as related to college planning and educational attainment. The PI's previous experience as an admission and advising professional exposed a lack of knowledge of the pathways and processes of higher education particularly for nontraditional students. Pathways in that, there is a typical linear progression from one academic level to the next that people were not aware of, and processes, referring to admissions applications, transcripts, financial aid and scholarships, and the importance of attending regionally accredited institutions. *Project CLiA* will address important information gaps by identifying and highlighting public libraries that may serve as exemplars for other libraries wishing to serve this population.

Research on adult learners point to the significance of this project's focus on nontraditional prospective students. McArthur and Mulvey (2019) note challenges to information seeking faced by nontraditional students including, time constraints, discomfort asking for help, and discomfort with technology. Because public libraries are already seen as providing educational opportunities and adults are frequent visitors of public libraries, they are likely to feel comfortable exploring postsecondary opportunities via the public library – at the very least, the public library website. To meet the needs of nontraditional prospective students who face time constraints or are uncomfortable asking for help, a well-resourced section of public library websites specific to adult learners is a valuable service.

In addition to the information gap identified, the high rate of unemployment in Central Appalachia points to a broad need for research and action. Data consistently show that individuals with bachelor's degrees earn more than those with only a high school diploma or associate degree both a career entry and mid-career (Broady & Hershbein, 2020). Improvement of outcomes in the target locale of this study, depend in part on attainment of a college degree. Agencies such as the Regional Educational Laboratory Appalachia (REL AP) of the Institutes of Education Sciences (IES) work in partnership with school districts and state departments of education to “create and support use of data and evidence to improve academic outcomes for students” (Regional Educational Laboratory Appalachia, n.d.). However, the focus is on K-12 students not nontraditional students as is the case with this project. The research proposed here may expand the work of REL AP and organizations such as the Appalachian Education and Workforce Network (AEW Network) to place an emphasis on nontraditional students and consider public libraries as a viable partner in their work.

Central Appalachia is a distressed region of Appalachia with higher unemployment rates and lower median household, attainment of undergraduate degrees, and broadband subscriptions than other Appalachian subregions. Compared to 20% of the nation, 42% of the Appalachian region is rural. Twenty percent of those utilizing public libraries for education or career

development resided in rural locales. Prospective students in Appalachia face barriers to advancing their education: academic under-preparedness, lack of information about college and financial aid, lack of internet access, and few families members who attended college and can serve as advisors (Hale et al., 2017). The PI's past research on services and programs to college bound patrons in rural North Carolina found that college literacy efforts were mostly aimed at teens, rather than the wider prospective student community (Hands, 2020b). According to Shapiro et al. (2019), 36 million Americans fit the category of "Some College, No Degree". In Appalachia adults age 25-64 attain bachelor's degrees at a rate 7% below the U.S. average, though the rate of those with high school diplomas was just 0.1% less than the U.S. average between 2014 and 2018 (Pollard and Jacobsen, 2020). However, as the United States further develops into an information-based economy, high school diplomas alone no longer proved the necessary skills and orientations for successful career development and advancement. As the need for more advanced understanding of the skills and orientations in all fields develops, colleges and universities are one of the means to bridge skills and knowledge gaps.

College enrollment and demand for workforce training among adults increases during times of economic turbulence, e.g., the Great Recession (Barshay, 2020). However, a boom in college enrollment has not been seen during the coronavirus pandemic as even enrollment in community colleges has declined (Piser, 2021); this is likely due to the serious nature of the virus and the need to stay at home and limit non-family contact as much as possible. Nevertheless, the Bureau of Labor Statistics projects a decline in future employment growth to be concentrated in jobs that do not require a college degree (Kolko, 2021). Individuals wishing to remain part of the workforce may be compelled to earn a certificate or college degree, and the ability to understand and identify the quality of information related to college should be a focus of our public facing institutions such as libraries. Libraries hold a unique position in society and should provide readily available and reliable information related to colleges and universities.

Investigations like the project proposed have focused on Kentucky and North Carolina (Hands, 2015; Hands, 2020b). Findings indicate that few public libraries have affordances for nontraditional college bound patrons. Broadening educational opportunities for adult learners (i.e., nontraditional students) was among several recommendations made in the IMLS-supported U.S. IMPACT study on public libraries (Becker et al., 2010): "Strategic partnerships between schools, nongovernmental organizations, and libraries can help build stronger educational interventions by marshalling the resources and capabilities of a variety of community learning institutions toward a common set of educational goals" (p. 187). According to the 2018 Public Needs for Library and Museum Services Survey, of those responding "yes", "no", or "don't know," 44% of adults responded in the affirmative to going to the library to support formal education or career development (Frehill et al., 2018). Vargas (2004) suggests public libraries act as community-based college access centers, a "promising alternative for providing college information and guidance to students" (p. 16). Libraries can support nontraditional prospective students in a number of ways: 1) by providing space for students to study or meet with college representatives; 2) preparing staff to answer frequently asked

questions about higher education; 3) promoting (both in-person and online) college preparation materials in the collection; 4) providing information literacy trainings to would-be students; and 5) partnering with local and regional organizations or agencies that prepare adults for the new careers. Such services or programs will be an added value in communities where the library is already a community hub (Scott, 2011).

Of course, public libraries already offer educational programming. In fact, 58% say public libraries contribute “a lot” toward creating educational opportunities for all ages (Horrigan, 2016). However, upon closer examination we notice that this programming is often geared toward children and youth. For instance, summer reading programs, which were offered by almost 92% of library respondents to the 2014 Digital Inclusion Survey (Bertot et al., 2015). The PI’s study of rural public libraries’ online content affirms the trend of centering the youth audience when it comes to educational services and programming (Hands, 2020b). Of the few college planning events found on rural public library websites, all were promoted or listed in the youth or teen section of the website with descriptions that indicated a middle or high school audience. While library users of all ages will benefit from more intentional engagement with this topic, *Project CLiA*’s emphasis on nontraditional, adult prospective students fills a void in library and information science research literature and library services.

The literature also points to a difference in the format of education-related programs or services for our population of interest. The Digital Inclusion Survey (Bertot et al., 2015) noted that GED preparation and access to and use of formal online education content were offered on a point-of-use basis rather than the formalized structures (e.g., regularly scheduled events) that are afforded within children and youth programming. Thus, assistance for education-related topics for the focal population of this project, relied on patrons to initiate contact. This presents a problem because adults report feeling apprehensive and anxious about returning to school at a nontypical age (Genco, 2007); they may be less likely to initiate college planning conversations with library staff. Further, because low-income and underrepresented youth face numerous information barriers related to college preparation (Ehlert, 2017; Vargas, 2004), it stands to reason that these students will not possess foundational knowledge about college planning to draw on should they decide to enroll in later years. Nontraditional students are an ideal audience for public libraries to market college planning resources and programs as 78% percent of those surveyed thought the public library helped them find information that is trustworthy, and over half considered the library helpful in finding information for decision-making.

Project Design

Overview

This project will address the following question:

RQ1: What affordances related to college literacy are available at public libraries for nontraditional students in Central Appalachia?

Here, *affordances* (Gibson, 2015) refers to what the public library offers or provides that supports college literacy, for example, resources, programs, services, and/or partnerships. The

PI defines *college literacy* as the possession of knowledge that assists one in making informed decisions about how to navigate higher education systems. This includes but is not limited to knowledge about admissions requirements and processes, financial aid, and certificate and degree programs. *Nontraditional students* is broadly defined as: 1) “students who delayed enrollment in postsecondary education by a year or more after high school,” 2) “GED recipients and those who received a high school certificate of completion,” or 3) those who have dependents or are “financially independent from parents” (Horn & Carroll, 1996, p. 3). *Central Appalachia* comprises counties across Kentucky, Tennessee, Virginia, and West Virginia as defined by the Appalachian Regional Commission (ARC; n.d).

Summary of Methods

The research question will be addressed in two phases using data collected from a content analysis of public library websites and social media accounts such as Facebook and Twitter (as applicable) and semi-structured interviews with staff at public libraries in Central Appalachia.

The content analysis will uncover the affordances available to prospective students as well as inform the research team which social media platforms, if any, should be reviewed for each library. According to the 2018 Pew Internet & American Life Project, 40% of adults surveyed trust the public library “a lot” as a source of information; 31% trust social media “some” (Rainie, 2018). In this digital information age, with people frequently turning to social media and the internet as a starting point to seek or crowdsource information, it is possible that nontraditional students will look to public library websites and social media accounts for relevant information. Thus, these online sources of information are an ideal starting point for examining affordances related to college literacy. The content analysis also will inform the selection of libraries to include in the interview phase and, subsequently, the cases presented as exemplars. The flow of data collection in graphic form is depicted here:



Phase 1 – Methods and Analysis

The PI will submit a request for IRB approval prior to starting this project. The first phase of *Project CLiA* takes a general descriptive approach to learn what affordances are available to college-bound nontraditional patrons. As such, Phase 1 begins with the collection and analysis of data from websites and social media accounts of all public libraries across 82 counties in Central Appalachia. The unobtrusive approach of content analysis allows the researcher to “sample existing texts created originally by others for purposes other than the current research” (Drisko & Maschi, 2015, p. 2). Collection and analysis of extant data through quantitative content analysis is an approach easily replicable by others seeking to examine support for college literacy in their own communities. Data generated from Phase 1 will address the research question by identifying such affordances as college fairs at the library, assistance completing scholarship applications, or resources via the inclusion of links to reputable websites or staff-generated content explaining college pathways or processes, to name a few.

A spreadsheet identifying subregions in Appalachia by state and county has been downloaded from the Appalachian Regional Commission (ARC) website. Founded in 1965, the ARC (a federal agency) aims to “innovate, partner, and invest to build community capacity and strengthen economic growth in Appalachia to help the Region achieve socioeconomic parity with the nation” (ARC, n.d.). The spreadsheet was last revised in 2010. Using the websites of state library commissions for KY, TN, VA, and WV, the PI has already generated a list of library websites for all counties in Central Appalachia. Library websites have been added to the ARC spreadsheet to create a complete database for use throughout the study, which will facilitate orderly data collection by the research team. The library websites will be used to identify libraries’ respective social media accounts to add to the database.

Prior to collecting data for content analysis, a graduate student will be selected and trained. Training will emphasize: 1) searching library websites and related social media accounts and 2) identifying and tracking relevant examples of affordances pertaining to the research question using a previously developed observation tool or codebook (Hands, 2020b) as a guide. The observation tool guides the research team in noting instances of affordance, for example, the presence and type of resources available and programs offered. The observation tool will be modified iteratively based on feedback during data collection.

Upon the completion of training, the PI and graduate student will use the list of library websites and the observation tool to examine a small sample of library websites and respective social media accounts to check for and establish interrater reliability. This will ensure agreement of what is observed by each team member (Connaway & Radford, 2017; Miles & Huberman, 1994). Miles and Huberman (1994) recommend at least 80% between-coder agreement. Also, as recommended, the research team will meet regularly throughout the data collection to ensure consistency and interrater agreement.

Descriptive statistics will be employed to quantitatively analyze data generated from the examination of library websites and social media accounts. From Phase 1 findings, we will learn if and how public libraries are serving nontraditional prospective students.

Phase 2 – Methods and Analysis

By documenting, in Phase 1, the affordances available at public libraries for nontraditional college-bound individuals, the proposed project will generate new knowledge to inform future library practices, particularly in rural and small libraries. Based on findings from analysis of the website and social media data, the PI will select libraries to examine further through semi-structured interviews. Interviews with library staff will permit the PI to explore findings from the website and social media analysis more fully to generate a complete account of the libraries’ affordances to college-bound nontraditional individuals. Semi-structured interviews are flexible enough that the researcher can “respond to the situation at hand, ... and to new ideas on the topic” (Merriam & Tisdell, 2016, p. 111).

Building upon Phase 1, Phase 2 of this project employs a case study, emergent design approach (Creswell, 2014). This approach was selected because of its inherent flexibility allowing

processes to “shift after the researcher enters the field and begins to collect data” (Creswell, 2014, p. 186). Within the case study design, Lincoln and Guba (1985) suggests researchers “identify some *types* of sites likely to yield the information that the focus calls for” (italics in original; p. 261). Libraries selected for interviews will be those with websites and/or social media profiles that indicate affordances specific to supporting the college literacy of nontraditional students. This includes but is not limited to libraries with such affordances as events for college-bound students, website links to college planning information such as financial aid or scholarships, or college planning resources such as college prep book lists. Cases, therefore, will be bounded by location (Central Appalachia), library type (public library), and the existence of affordances as determined by the review of websites and social media (Yin, 2012).

In keeping with emergent design, which advocates for evolving data collection “over the course of a research project in response to what is learned in the earlier parts of the study” (Morgan, 2008, 246), data from interviews may be supplemented by relevant materials (e.g., promotional brochures) provided by each library to enhance the richness of each case. Including multiple data sources facilitates triangulation (Yin, 2012); more importantly, here, the use of multiple sources supports information-richness.

Library staff responsible for programs, services, and/or partnerships will be invited for interviews expected to last 45-60 minutes. Staff in these roles are expected to have relevant information and experience to provide substantive information-richness from which the PI “can learn a great deal about issues of central importance to the purpose of the inquiry” (Patton, 2002, p. 230). PI aims to conduct interviews with a staff member from at least three public libraries in each state (n=12). “For case studies, no such formula exists” (Yin, 2012, p. 146) to determine the appropriate number of cases. Further, a small number of cases is typical of cases studies as the intention is not statistical generalization (VanWynsberghe & Khan, 2007; Yin, 2012). As a primarily descriptive study, practitioners will be encouraged to transfer findings from this project to their own settings based on their interpretation of context similarities and fittingness of exemplar libraries (Lincoln & Guba, 1985).

The PI will create a semi-structured interview guide that incorporates questions related to data collected in the content analysis thus integrating the two datasets. The interview guide will be reviewed for clarity by advisory board members and revised as necessary. After securing informed consent from participants, the interviews will be scheduled and conducted by phone or using an online conferencing platform depending on the accessibility of participants. The PI will conduct and digitally record interviews. A graduate assistant will assist with scheduling interviews, obtaining informed consent, and data analysis. Participants will be compensated with \$50 gift card stipend at the conclusion of the interview.

Interview audio recordings will be professionally transcribed verbatim with timestamps. Upon receipt, interview transcripts and other supplemental materials will be subjected to within- and cross-case analysis (Merriam & Tisdell, 2016; Yin 2012).

Key Project Staff and Consultants - Dr. Hands is an assistant professor in the Department of Interdisciplinary Professions in the College of Education at East Carolina University. She employs qualitative methods to study college literacy in public libraries, public library services to underserved communities, and the experiences of first-generation LIS students. Her recent work investigates college literacy services in public libraries in rural North Carolina, which she presented at the Association of Rural and Small Libraries (ARSL) in 2020. In addition to membership in ARSL, she is a member of NASPA, a professional association for higher education professionals. Dr. Hands has over 10 years of experience in higher education admissions and academic advising, primarily with nontraditional students. The proposed project also fits within her long-term interdisciplinary research agenda, which endeavors to improve access to and awareness of information, resources, and services that move people toward their personal and professional educational goals.

A graduate student from the PI's institution will be selected to work on this project and will be mentored by the PI. The student will be selected with an emphasis on diversity, equity, and inclusion. Funding will support this student's work.

Advisory board - The PI is assembling an advisory board with members representing various perspectives relevant to the project (e.g., individuals from public library, higher education, and Appalachian economic development sectors). The advisory board is expected to assist in the data collection by reviewing the interview guide and making introductions of the PI and target interview participants; creation of a distribution list for project reports; dissemination of project findings; and navigation of challenges as needed. The advisory board will also be consulted to ensure cultural sensitivity is employed in the presentation of project materials. Each advisory board member will receive a stipend acknowledging their valuable contributions. Representatives from regional chapters of NACADA - The Global Community on Academic Advising, state chapters of the Appalachian Education and Workforce Network (AEW Network), and state affiliates of the Appalachian Regional Commission have been invited to join the advisory board. Committed advisory board members are:

- Jennifer Resor-Whicker, MLIS – Associate Professor of Research Services and President of Virginia Library Association
- Kandace Rogers, MSLS – Library Director, Sullivan University and Past President of Kentucky Library Association

Abridged Timeline

- Year 1 – Preparation; Phase 1 Data Collection (Website/Social Media Content Analysis)
- Year 2 – Phase 2 Data Collection (Interviews) and Dissemination of Phase 1 Findings
- Year 3 – Resource Development and Dissemination of Phase 2 Findings

Diversity Plan - There is a growing population of African Americans and Latinos in Appalachia who will benefit from practices implemented based on this study. Reports and resources from the proposed project will be promoted to libraries in these communities, those serving low-income households, and the broader community of library professionals. The PI will work with

advisory panel members to ensure the deliverables are presented in culturally relevant and respectful ways as the intent of this project is not to criticize communities but rather offer exemplars to support implementation of college literacy services at interested libraries. Because the public library plays a central role in the lives of people who have been marginalized, this project may help organizations focused equity, diversity, and inclusion the public library as a partner in their work.

Supporting the information needs of nontraditional students is an equity issue exacerbated by the diffuseness of this group which, compared to traditional age students, is more removed from college planning services and information. This is especially true for traditionally marginalized populations who are historically less likely to enroll in college or complete a degree when they do enroll (Person et al., 2019). Data consistently show that those with bachelor's degrees earn more than those with only a high school diploma or associate degree (Broady & Hershbein, 2020) and, because Central Appalachia lags national averages on both educational attainment and the economy (Pollard and Jacobsen, 2019), it is important to support this region. As such, *Project CLiA* aims to strengthen college planning information access and equity especially for those who were underprepared as youth and carry that underpreparedness into adulthood. This research complements programs such as Lumina Foundation's Adult Promise, which develops and tests programs to "engage adult learners in postsecondary education through improved outreach, financial supports, and other supportive services" (Person et al., 2019).

Dissemination Plan & Broad Impact – The broad impact of this project will be realized through a comprehensive dissemination plan, which includes the library organizations in Central Appalachia and similar communities and community and education stakeholders in the regions examined. Data from this project will be shared throughout the grant period as data is analyzed and in consultation with advisory panel members, where appropriate.

At the local level, the primary community for this research is public libraries in Central Appalachia as well as regional and local organizations interested in advancing educational and, by extension, workforce outcomes of the region. Findings and insights will be disseminated via the project website and professionally designed reports distributed to stakeholders such as the Appalachian Regional Commission (ARC). The PI will consult with advisory panel members to create a distribution list. Proposals to present findings will be submitted to state and regional library conferences, the Association of Rural and Small Libraries conference, and the Appalachian Education and Workforce Network (AEW Network) conference, which brings together individuals "focused on increasing post-high school education and training access and success in rural places" (Institute for Educational Leadership, 2020). The 2019 AEW Network conference agenda did not include any representation from the library community. The *Journal of Appalachian Studies* is also a possible venue for manuscripts to share findings with local and regional stakeholders.

The PI will also submit proposals and manuscripts to venues serving college personnel such as NACADA - The Global Community on Academic Advising and *NACADA Journal*, and venues for

workforce development professionals such as National Association of Workforce Development Professionals and *Online Journal for Workforce Education and Development*.

This research will assist public libraries in developing programs and resources to serve educational interests in the target communities. More public libraries serving as an educational resource for nontraditional students is a valuable economic and workforce development asset to any community. Insights from this project will also extend lifelong learning programs currently available at public libraries. *Project CLiA* will lay a path for other initiatives to address any needs expressed by library staff that would help further their work in this area. As such, to build greater knowledge, skills, and abilities of library professionals and impact their practice, the PI will submit proposals and manuscripts to peer-reviewed scholarly and practitioner venues including but not limited to: *Public Library Quarterly*, *Library Quarterly*, and the Public Library Association.

Of benefit to all constituents will be the project website, which will host resources, reports, and updates on the project. The website, maintained by the PI with assistance from a graduate student, will detail strategies for public libraries to employ in support of college literacy. With assistance from university graphic design and communications staff, an online, printable resource guide highlighting library programs, services, and partnerships identified from the research will be created and made publicly available on the project website. The website will be hosted on the PI's institution's website. The PI will also be available to provide technical assistance in the form of webinars to summarize findings for library practitioners, assistance creating action plans for those who want to develop programs or services based on findings, assistance identifying community partners, and consultation on developing college planning resources for their communities. The observation tool used to review websites and social media accounts will be made freely available and may be used by those interested in undertaking a similar examination of their library's college literacy affordances.

Project deliverables such as the project website and published reports, which will be available beyond the conclusion of the award, will serve as guides for practitioners. Using the methods employed in this project and the observational tool, future projects may be undertaken to examine college literacy affordances in the four other subregions of Appalachia.

Public Library Support of College Literacy in Appalachia (Project CLiA) – Schedule of Completion – Major Activities

Year 1 – 2021-2022 (Phase 1: Preparation and Content Analysis)

1. Secure IRB approval
2. Recruit, select, and train graduate assistant
3. Update list of public library websites for Central Appalachia
4. Create observation tool for data collection using Qualtrics
5. Convene meeting of advisory board
6. Validate and refine observation tool
7. Conduct reviews of public library websites and social media accounts
8. Conduct data management and preliminary analysis
9. Develop project website
10. Convene meeting of advisory board to share and discuss initial findings
11. Prepare manuscripts and proposals to disseminate initial findings

Activity

	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>
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<u>Activity 11</u>												

Year 2 – 2022-2023 (Phase 2: Interviews and Dissemination)

1. Disseminate findings from Year 1 targeting LIS scholarly and practitioner conferences and journals
2. Create interview protocol incorporating insights from Year 1
3. Convene meeting of advisory board to share interview protocol
4. Validate and refine interview protocol
5. Select information-rich cases for interviews
6. Conduct audio-recorded interviews, collect any supplemental materials from libraries
7. Review transcripts transcribed by third-party
8. Analyze interview transcripts and documents
9. Convene meeting of advisory board to share and discuss findings
10. Update project website

Activity

	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>
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Year 3 – 2023-2024 (Resource Development and Dissemination)

1. Prepare manuscripts and proposals to disseminate findings
2. Work with a designer to develop a printable online resource to highlight exemplars
3. Convene meeting of advisory board to share resource and create distribution list of library and non-library state and regional community organizations
4. Disseminate findings from Year 2 targeting conferences and journals related to college personnel and workforce development
5. Update project website
6. Prepare and submit final report to IMLS

Activity

	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug</u>
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DIGITAL PRODUCT FORM

INTRODUCTION

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

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

INSTRUCTIONS

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

SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS

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

SECTION III: SOFTWARE

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

SECTION IV: RESEARCH DATA

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

SECTION I: INTELLECTUAL PROPERTY RIGHTS AND PERMISSIONS

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

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

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

SECTION II: DIGITAL CONTENT, RESOURCES, OR ASSETS

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

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

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

Workflow and Asset Maintenance/Preservation

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

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

Metadata

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

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

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

Access and Use

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

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

SECTION III: SOFTWARE

General Information

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

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

Technical Information

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

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

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

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

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

Access and Use

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

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

Name of publicly accessible source code repository:

URL:

SECTION IV: RESEARCH DATA

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

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

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

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

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

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

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

A.7 Identify where you will deposit the data:

Name of repository:

URL:

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