

Public Libraries in an Aging Society: Preparing Students and Professionals

Introduction

In this three-year **Early Career Research Development** proposal, Dr. Joseph Winberry of the University of North Carolina at Chapel Hill's School of Information and Library Science (SILS) requests **\$398,177** to study how to best prepare LIS students and professionals for public library careers at a time of profound societal aging. This study corresponds to the **Laura Bush 21st Century Librarian Program goal/objective 2.3** as it supports the research of an untenured tenure-track library and information science faculty. The intended project results will be a framework for a training series for librarians which will be created beyond the end date of this proposed project, scholarly publications which provide theoretical and empirical insights to the academic literature, and a white paper which outlines practical implications of the research. Building on Dr. Winberry's earlier research, this study seeks to answer the following:

1. How can LIS education be improved for librarians serving an aging society?
 - a. What skills do older adults appreciate in librarians?
 - b. What services do older adults want from libraries?
 - c. What values do older adults expect from librarians?

Project Justification

The [United Nations \(2023\)](#) projects that by 2050, 1 in 6 people will be 65 years or older—up from an already historically high of 1 in 10 in 2021. In the United States, this shift is due in great part to the Baby Boom generation who since 2010 have seen 10,000 of its members turn 65 every day—a trend which will continue through 2030 ([US Census Bureau, 2019](#)). On their face, the numbers suggest the need for library workers to scrutinize whether they are matching resources to the needs of contemporary society. But the effects that the COVID-19 pandemic has on the health and social wellbeing of older adults puts flesh on the statistical bones and betrays an even larger imperative: a social justice one.

Older adults face a myriad of challenges because of their age such as ageism, elder abuse, and [intersectional injustice](#) for being both older and a member of another marginalized group. Social justice—the goal of seeing marginalized groups treated equitably in comparison to more privileged groups—has risen in LIS research in recent decades, but is still understudied in regard to older adults ([Winberry and Bishop, 2021](#)). Given that the [American Library Association \(2024\)](#) [has](#) recently reaffirmed its commitment to equity as a core value and social justice as a central concern of its code of ethics, it is timely to examine how these principles can be enacted in regard to the country's fastest growing age group.

The reality of this demographic transformation and the implications it has for ensuring a socially just society begs the question: are public librarians prepared to serve an aging society? The answer—"it depends"—leaves much to be desired. For instance, [Lenstra et al. \(2020\)](#) found that public library services to older adults in the US is a patchwork system in which many communities—particularly those that are poorer—go without. There has been recent research which shows how libraries across the country are serving older adults as reported by librarians ([Lenstra et al., 2021](#)). But representation of older adults' perspectives on library services to their population are rarer in research and indicate that how these services are offered and discussed by librarians do not always align with older adults' interests and values ([Dalmer et al., 2024](#)). Considering these findings, the purpose of this proposal is to address inequities in public library services to older adults in partnership with this population.

There could be various paths to addressing these inequities. One path could be to increase federal funding to libraries that do not currently provide services specifically to older adults. Another could be lobbying local governments to increase related funding. But neither of these options represent a cost or time efficient opportunity to address the problem. This proposal suggests a third option—this research project which will increase equity between communities around library services to older adults. How would this be accomplished? By focusing on a topic too often ignored in relation to older adults: librarian education.

The Master of Science of Library and Information Science (MSLIS) is seen by many as the cornerstone of a successful librarian career with most libraries requiring their librarians to have the degree, and from an [American Library](#)

[Association \(ALA\) accredited program](#). As such, the content of these programs is essential to the shaping of the field and its workers. Yet [Winberry \(2021\)](#) found that among MSLIS student participants at ALA accredited master programs:

- 96% shared that it was important that their programs offer classes on serving older adults
- 86% reported that their programs had classes on meeting needs of children or teenagers, but not older adults
- 80% felt that they could become more interested in serving older adults if their training exposed them more to the needs of this population

These findings match studies across various disciplines which indicate that increasing representation of older adults in education can make students of that discipline more interested in serving older adults ([Ross et al., 2018](#)). But these findings also indicate that this gap in older adult representation within MSLIS curricula is not an oversight of just a few programs and that filling it might not be able to be accomplished wholly within formal curricula. Indeed, MSLIS programs and their students often find themselves boxed in by accreditation requirements working to ensure that graduates have the core skills necessary to be entry-level information professionals ([Oguz et al., 2023](#)). Improving education around the need of older adults for library workers through MSLIS programs face more challenges than just accreditation requirements. Many of the communities that cannot afford services to older adults also cannot afford to pay salaries pursuant to MSLIS graduates ([Mehra et al., 2011](#)). As such, including this training in MSLIS education might not get the training to those who need it most.

To circumvent these challenges, this proposal recommends the creation of a supplementary training program available free courtesy of IMLS funding to any current or future library worker hoping to improve their service to older adults in their community. While not a perfect comparison in scope or structure, the “[Help! I’m an Accidental Government Information Librarian](#)” series offers one example of such programs. The training’s value would lie not just in its content but in how it would be developed. Given the increased ethical awareness around the need for research conducted with rather than on populations ([Mehra, 2021](#)), participatory design research has become more prevalent in LIS research in recent years as a [Google Scholar](#) search indicates. This study would engage its participants as co-creators and subject matter experts whose perspectives would be essential to shaping the resulting products. It makes sense also from a practical standpoint to ask the people who would benefit from this project what they think would be important for trainees of it to know. As such, the target group are older adults whose perspectives would be centered by this research. The beneficiaries would be older adults who would be served by librarians with training about their needs, librarians who would have the training to do their jobs better, and the library school faculty and library leadership who could point interested individuals to the supplementary training beyond what could be offered in the classroom and workplace.

In order for this supplementary, free-to-the-public training program to be filmed beyond the grant period, this proposed project would create an infrastructure for its development. This would be accomplished through a rigorous examination of the existing academic, educational, and practitioner literature on public library services to older adults, synthesis of relevant federal aging services information, and the centering of older adults across the United States in what they believe it is important for librarians to know. The products which would emerge from this multiyear project include:

- a) A training framework which could be implemented ahead of the filming and release of the supplementary training program
- b) Multiple studies in conference proceedings and peer-reviewed journals on older adult perspectives around LIS education and practice which would yield theoretical as well as empirical insights
- c) A white paper on best practices that library schools and public libraries could take toward better service to older adults

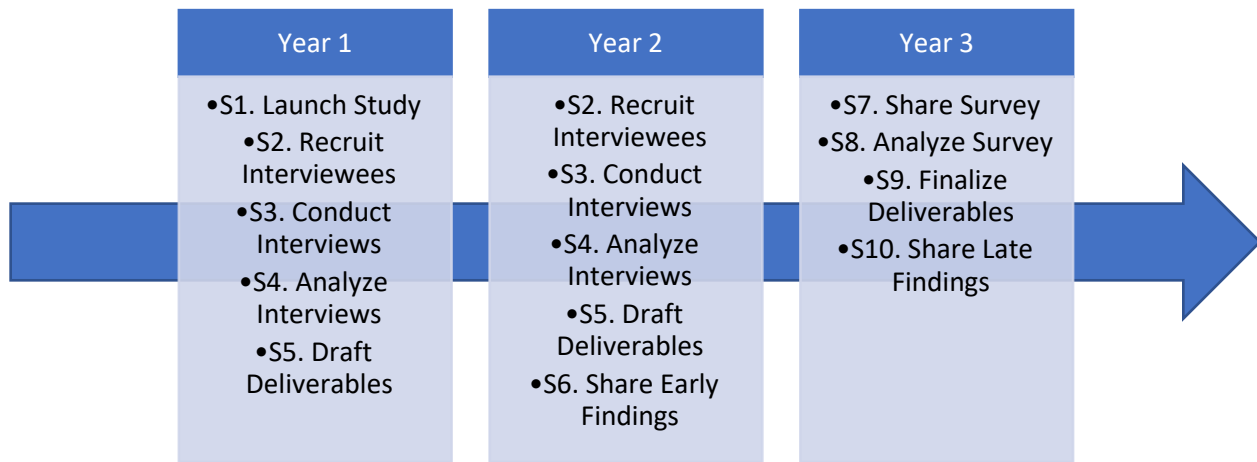
This project meets Laura Bush 21st Century Librarian Program goal/objective 2.3 as it supports the research of an untenured tenure-track library and information science faculty. As project director, [Dr. Joseph Winberry](#)—an untenured tenure-track library and information science faculty member at SILS— will plan, manage, and implement the project. In addition to having been an [aging services practitioner](#), Dr. Winberry led the development of [a program to serve LGBT+ older adults](#) at the Knox County, Tennessee Office on Aging based on his community-based participatory dissertation research around the information and service needs of this population. Dr. Winberry has published extensively on public

libraries and the needs of older adults in relevant venues such as *Public Library Quarterly*, *Library Quarterly*, and *The International Journal of Information, Diversity, and Inclusion*. Obtaining this grant would improve his chances of receiving tenure while also helping to establish him as one of the forefront experts in what he calls iGerontology—research at the intersection of gerontology and library and information science. The intersection of Dr. Winberry’s experiences around community-engaged research, public library services to older adults, aging services, and social justice makes him the best person to lead this project.

The research raised in this proposal is part of a larger set of studies related to Dr. Winberry’s work on critical library practice and impact. Critical library and information science refers to identifying and addressing inequities that exist in society around information ([Drabinski, 2019](#)). Given the aging of society, Dr. Winberry views creating and maintaining [social infrastructure](#) for the growing number of older adults and their support circles as one of the critical LIS imperatives of the century.

Project Work Plan

As the project director, Dr. Winberry will lead all project components and be accountable for project completion. His team—consisting primary of himself and a graduate research assistant funded by this project—would take the following steps to complete the proposed project. The completion of this project will require two months’ summer salary and two course releases for Dr. Winberry as well as the hiring of a masters or Ph.D. student who will assist with data collection and analysis. Other expenses will include conference participation, stipends for study participants, and interview transcription fees. The budget and budget justification documents describe the budget details. The following figure provides an abridged visualization of the 10 steps (S#) and timeline of the project work plan. It is explained further in the schedule of completion document. A narrative description of each of the 10 steps of the project work plan is described below.



Step 1: Launch Study

Work necessary to ensure that the project can launch as soon as it approved is already in motion. Given literature gaps around older adult perspectives on librarian education and social justice for older adults in LIS research, the design of this study is driven by the Integrative Critical Gerontology Information (ICGI) Framework. [Winberry and Mehra \(2022\)](#) created the ICGI framework to take a holistic, anti-ageist view of the needs of this population rather than reducing older adults to one dimension such as their health. The four propositions of the framework state a need for:

- 1) A broad recognition of health (i.e., physical, mental, intellectual, spiritual, emotional, and psychological dimensions, among others) across disciplinary boundaries of older adult populations beyond a narrow information-focused understanding of this population’s needs is important to realistically respond to their human conditions of experience for developing meaningful information solutions with/for them.

- 2) An integration of the older users' larger cultural context and their embeddedness in varied and intersecting social, cultural, political, and economic realities inform their aging conditions and circumstances.
- 3) LIS scholars (including health information support service professionals) who are part of the older users' existing social networks (both informal and formal) need to value those networks beyond the information scholars' egocentric view of their self-importance. Information professionals also must acknowledge the inherent strengths, weaknesses, opportunities, and threats of these existing social structures and networks in the lives of their research subjects.
- 4) LIS scholars should view older adults from a constructive point of view rather than from a deficit perspective as "problem people" in order to potentially develop and utilize information that can eliminate systemic structural and/or institutional barriers for them, not create more challenges and hurdles.

Together these propositions provide a lens through which this study is constructed, and the project work plan grounded. This first step would also include recruiting the grant-funded graduate research which would be done immediately once the project is approved. To answer the research question described in the introduction, Winberry's team will conduct an already begun literature analysis, and engage with older adults. Engagement with older adults will take the form of interviews and a survey. Engaging with older adults requires institutional review board (IRB) approval before the study can begin. Dr. Winberry intends to obtain IRB approval prior to or soon as possible after the grant start period in August.

Step 2: Recruit Interviewees

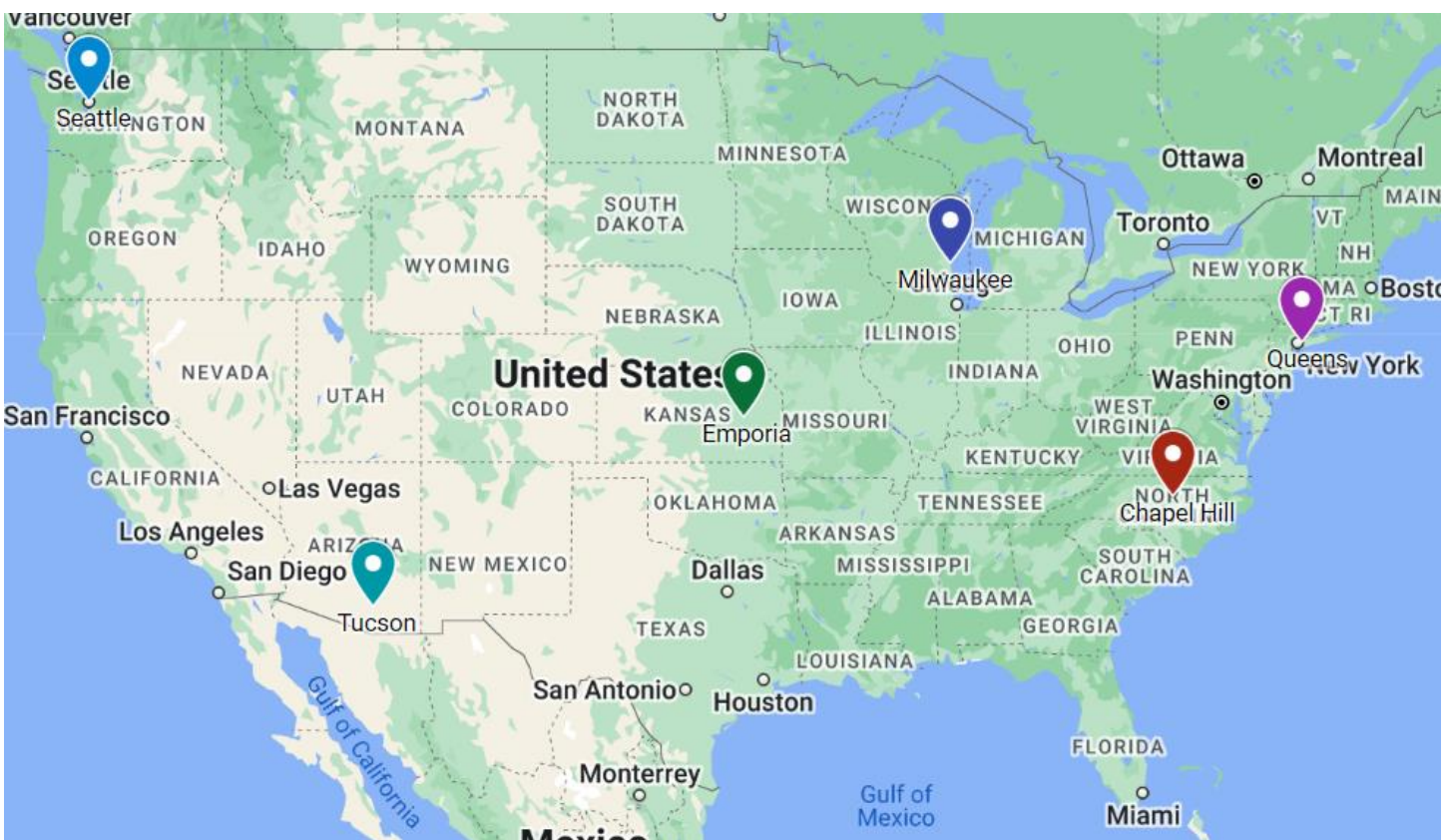
Older adult interview participants will be identified in select communities which have an ALA accredited MSLIS program. The decision was made to speak to older adults in these particular communities because of the presence of ALA accredited MSLIS programs and the nearby public libraries which often serve as a learning ground for library students. These institutions provide an infrastructure that can be more easily utilized for implementing study recommendations than communities that lack it. A project like this requires interviews because these questions require deeper probing. Jones (1992) stresses the importance of talking at length with older adults if wanting to understand their perspectives and needs. Since it would be impossible to speak at length with older adults in all of the communities with ALA accredited MSLIS programs in the US, interviews will be conducted within a sample of 10% (N=6) of the 56 communities. Ten percent is a reasonable sample as it will allow for broad representation of communities across the US which have ALA accredited programs while also offering a reasonable price tag and timeline for the granting institution.

The 6 selected communities are part of a purposeful sample which seeks to ensure broad representation of: 1) geography (i.e., north, south, west), 2) community size (i.e., larger, midsized, smaller), and 3) diversity (i.e., racial inclusion among participants, institution type based on [Carnegie classifications](#)). Since finding participants at the local public library or library school in these communities would likely bias participants towards certain views of libraries, interview participants in each of these communities will be identified primarily by engaging with gatekeepers at the primary aging services provider (ASP) in each community as these providers have access to the most potential participants. ASPs were selected because 1) the funding they receive through [the Older Americans Act](#) makes them a service provider to many older adults in their community and 2) working through these well established organizations minimizes the chances of participation fraud by people who do not meet the study criteria. If for some reason the primary ASP in a community would not or could no longer partner on this project, Dr. Winberry will identify another ASP in the community to partner with.

The communities included in the study are:

1. Chapel Hill, North Carolina. This community represents the south, smaller community size, and the MSLIS granting institution, [UNC Chapel Hill](#), is a research focused institution. The preferred aging services partner is the Orange County Department on Aging who has signed a letter of support.

2. Queens, New York. This community represents the north, larger community size, and the MSLIS granting institution, [Queens College](#), is a teaching focused institution. The preferred aging services partner is a NYC Department for the Aging's Queens community partner.
3. Milwaukee, Wisconsin. This community represents the Midwest, midsized community size, and the MSLIS granting institution, [UW Milwaukee](#), is a research focused institution. The preferred aging services partner is the Milwaukee County Area Agency on Aging whose director has expressed interest in participating with the project.
4. Emporia, Kansas. This community represents the Plains, smaller community size, and the MSLIS granting institution, [Emporia State University](#), is a teaching focused institution. The preferred aging services partner is the North Central-Flint Hills Area Agency on Aging.
5. Tucson, Arizona. This community represents the Southwest, midsized community size, and the MSLIS granting institution, [UA Tucson](#), is a research focused institution. The preferred aging services partner is the Pima Council on Aging.
6. Seattle, Washington. This community represents the Pacific Northwest, larger community size, and the MSLIS granting institution, [UW Seattle](#), is a research focused institution. The preferred aging services partner is the Seattle/King County Area Agency on Aging.



In accordance with the spirit of the ICGI, Dr. Winberry will also monitor demographic information of participants and engage other community-based groups to increase diversity of participants as needed regarding race, gender, sexual orientation, level of ability, etc. For instance, in the case of Chapel Hill, NC, there is an opportunity to engage with the Carolina Aging Alliance which serves LGBT+ older adults in the area. Diverse representations among interview participants will ensure that the co-creation of training content considers how someone from various background might

be served by their public library. This in turn provides a richer understanding of diversity and how it shapes library needs for those who take the training before returning to serve older adults.

The expectation is to interview about 75-100 total participants over Zoom, about 15 in each of the 6 communities, which is a large enough sample to obtain saturation of responses in each community ([Hennink et al., 2017](#)). The ages of participants will be determined by local requirements of the aging services partner. For instance, to engage with aging services, you must be an older adult. But “older adult” could refer to someone as young as 50 though often is anywhere between 55 and 65. Sample parameters for interview participants will require that the racial diversity of participants is representative of local demographics as established by US Census Bureau data. Interviews are expected to be conducted in English. However, select interviews may be done in other languages if deemed necessary by ASPs and will be determined on a community-by-community decision. ASPs will also be asked to provide a random sample of participants for interviews. However, they will be able to provide a purposeful sample of participants should random recruitment be unfeasible or otherwise unsuccessful. Partnering with these organizations also gives them a chance to provide feedback throughout the data collection process. Continually engaging with older adults throughout the study keeps the perspective of the target group and organizations that serve them at the center of the project.

Step 3: Conduct Interviews

Once participants are identified, they will be interviewed over Zoom or by phone. Winberry has previously conducted interviews with older adults completely virtually either by Zoom or phone. This experience has helped him understand how to interview older adults virtually which is useful given that resource limitations prevent his team from visiting each of the sample communities. These strategies include recording the discussions with participant permission (and IRB approval) through the Zoom software whether participants are taking part through a video call or an audio call only. Any accessibility needs that the participants will have to participate over Zoom or by phone will be accommodated as part of the recruitment process prior to beginning the interview.

In addition to a questionnaire which asks about their demographics and historic as well as current library usage, the interviewees will be asked the following questions in relation to the study’s research question and the ICGI Framework. A pilot study of interview questions will be updated as needed after conducting a pilot study in March 2024 with a focus group of older adults at an independent living facility in Greensboro, NC. The questions, shown below, are meant to be a starting point. The answers received will inspire follow-up questions which allows for a more personalized discussion of the library from the interviewee perspective as part of a semi-structured interview process. The decision to ask more general probing and semi-structured questions is based on Dr. Winberry’s prior experience interviewing older adults. He finds that asking them to think broader at first before narrowing in on certain ideas the study is focused on or that the older adult mentions is often more successful in obtaining answers that starting out too specifically on a topic interviewees may have more or less knowledge of depending on their backgrounds.

Research Question	ICGI Proposition	Interview Questions
What skills do older adults appreciate in librarians?	1	1) If someone has the opportunity to serve older adults, what is something they need to be good at?
		2) If you have a question about something, who are you most likely to contact and why?
		3) Have you ever asked a librarian for help and if so, what was helpful or unhelpful about their response?
What services do older adults want from libraries?	2	4) What do you think of when I say the word “library”?

		5) Is there anything library staff could do to make you use it more and to encourage your family and friends to do the same?
		6) What is something you would like to learn more about?
What values do older adults expect from librarians?	3, 4	7) Is it important to “respect one’s elders” and if so, what does that look like?
		8) How do you feel service providers treat you now in comparison to when you were in your thirties?
		9) What is something you would want younger people to know about getting older?

Once completed, the interview will be transcribed and shared back with the participants for a chance for them to confirm that their intentional answers are reflected in the transcript. This process is also known as [member checking](#). After receiving confirmation of approval of the transcript, the recordings of their interview will be destroyed to protect participant privacy. The Data Management Plan (DMP) required for and attached to the application for this proposal goes into greater detail about how participant data will be maintained and made available to other researchers. However, to protect the privacy of participants, the research team will read each interview transcript closely for any answer that provides even a slight chance for identifying the participant. These statements would be further anonymized such as by using pseudonyms and stating so.

Step 4: Analyze Interviews

The analysis of interview data will begin immediately after the first participant has approved the transcript and will continue until all interviews are completed and analyzed. In cases where there are no answer back from a participant after the transcript has been shared with them, transcripts will still be analyzed with careful attention to any details needing further anonymization. The only case in which transcripts will not be analyzed is when participants state their decision to withdraw from the study. These details will be outlined for potential participants in the IRB-approved consent form.

The interviews will be analyzed using constructivist grounded theory ([Charmaz, 2014](#)). This analysis choice is important for two reasons. First, qualitative and open-ended approaches to this understudied topic is necessary because it allows for more exploration and follow ups than quantitative, close-ended research would. Second, constructivist grounded theory provides a good balance of allowing some theoretical structure (such as the ICGI Framework) without being prescriptive to the point of missing unexpected and important insights during data analysis. A deeper but practical discussion of constructivist grounded theory can be found [here](#).

The constructivist grounded theory approach works well in cases of participatory design like this study because as the researchers conduct the interviews and begin reviewing the data, connections between different topics mentioned by the interviewee. Therefore, the meaning in what is shared is co-created by the perspective of the interviewee and that of the interviewer. Dr. Winberry’s background in aging services and his public library and LIS education focused research prepares him to bring an informed background to the knowledge construction process. The data collection and analysis processes will occur simultaneously to the degree possible so findings will evolve throughout the research process.

Step 5: Draft Deliverables

Early data collection and analysis will begin the outlining of the white paper and training framework. These products will morph across the grant period as more data is obtained and analyzed. This provides an iterative and evaluative process

of knowledge generation across the years of this project. The analysis of the data will provide insights into the values, skills, and services which can be used to improve an understanding of how to improve library education around the needs of older adults per the direct insights of the population the training is designed to serve.

Step 6: Share Early Findings

In Year 2, the major focus will be completing the interviews and their analysis. Early findings from the study will be shared. Target venues for publication include conferences such as the American Library Association, the Association for Library and Information Science Education, and the Gerontological Society of America, and perhaps in peer-reviewed journals such as *The Library Quarterly*, *Journal of Education for Library and Information Science*, and *Gerontology & Geriatrics Education*. The research findings will continue to shape the white paper and training framework.

Step 7: Share Survey

By the start of Year 3, the interviews should be complete; surveys would start in year 2 if interviews are completed early. To give other adults across the United States a chance to provide input for the deliverables, a survey will be shared. The survey would include elements of the training framework as they stood at the time and provide survey participants a chance to agree or disagree with the importance of those components. It would also offer an open-ended space for them to share additional ideas they believe are missing from the framework. The survey would be shared with the state agency on aging in each state asking for their help in its distribution. It would also be shared with the ASP in the 56 communities in the US with ALA accredited MSLS programs. The grant-funded research assistant would follow through on other strategies the ASPs might have for maximizing exposure to potential participants.

Step 8: Analyze Survey

The results of those surveys will also be analyzed using constructivist grounded theory and inform final changes to the framework and white paper before those are shared. There would not be any financial incentive for survey completion which should remove incentive for scammers to participate. However, Dr. Winberry and the grant-funded research assistant would discuss any answers which seem suspicious as part of the analysis process and make a determination about whether or not an individual response or a participant's entire response set should be included in the final data of the study. An ability to consider survey results in relation to certain variables such as participant community, gender, etc. would deliver useful insights about factors that make the material more appealing to one older group over another. These would help practitioners who are wanting to adopt lessons from the findings which have the greatest possibility of success in their communities.

Step 9: Finalize Deliverables

Once the data from the interviews is compared to survey data, the final training framework and white paper will be completed. This will be the major focus of the second half of the third year. The final training framework would benefit from LIS literature, aging services resources, and the direct insights of older adults. The expected specifics of the finalized deliverables are discussed further below in the project results section.

Step 10: Share Late Findings

As the grant period wanes, late findings from the research would be shared at conferences and in peer-reviewed journal articles. This process is discussed more in the project results. The findings would also be "shared" as part of a future grant application such as an IMLS applied research grant to record the training and test the effect it has for the participants who complete it. This is an exciting, long-term possibility for the trajectory of this project's results.

Diversity Plan

IMLS descriptions indicate that older adults are a diverse group in the sense that they are not usually the subject of research in comparison to other groups. Dr. Winberry has found this lack of research to be true in MSLIS education and in LIS research more broadly. As such, the inclusion of older adults of any background would be considered inclusion of a diverse group. Having said that, [Winberry \(2018\)](#) described how older adults are a diverse group, so it is fundamental that efforts to meet their information needs take these specific characteristics (race, level of ability, sexual orientation, gender identity, immigration status, geographic location, etc.) into consideration. Therefore, the research will address broader diversity, equity, and inclusion topics where applicable. For instance, the purposeful sample of communities were chosen with consideration of socio-cultural diversity such as race, geographic diversity in including more and less urban communities, and Carnegie classification of LIS schools to ensure research and teaching centered foci. Identifying participants through the local ASPs will help with ensuring a diverse set of older people given the broad social and economic groups they traditionally serve.

Project Results

The products which would emerge from this multiyear project include:

- a) A training framework which could be implemented ahead of the filming and release of the supplementary training program beyond the grant period
- b) Multiple studies in conference proceedings and peer-reviewed journals on older adult perspectives around LIS education and practice which would yield theoretical as well as empirical insights
- c) A White paper on best practices that library schools and public libraries could take to improve services to older adults

The first product of this project is the training framework. It is not possible to know exactly what the framework would provide without conducting the study, but it would likely provide readers with insights into the Older American's Act including contact information for their state area agency on aging given that library partnerships with social workers or providing information on social services is increasingly important ([Wahler et al., 2020](#)). It would also include information on diversity among older adults and discuss the skills, services, and values that older adults say they want to see from public libraries—supplemented by other key findings from the literature. The training framework would be the base of a future grant to film the training and to test its long-term usefulness for trainees working with older adults in public libraries. In the meantime, the training framework would provide valuable insights to all readers and could be the basis for a class on serving older adults offered by Dr. Winberry at SILS, or other faculty in LIS schools in the United States and even around the world who want to make a more focused contribution towards increasing older adult representation in LIS education.

The second product would be a series of research studies published in LIS and Gerontology conference proceedings and peer-reviewed journals. The findings of these research products would tell the overall story of this project. But it would also provide insights valuable to other theoretical and empirical research. For instance, information on what older adults value from libraries and librarians could inform research useful in understanding how to successfully engage older people—insights with value for private industry and public institutions alike in an aging society. From the perspective of LIS literature, these studies would be citable in any future study at intersections of LIS education, public libraries, and older adults—an area that is likely to grow as the imperative of serving older people becomes more broadly understandable in the not-so-distant future.

The third product would be a white paper. This white paper would provide practical insights from the study which practitioners and policymakers could easily apply to their work in librarians and perhaps beyond. Part of the information included would be directions on how public libraries and MSLIS granting institutions can build more partnerships with ASPs which might unlock funding, educational, and service opportunities for the constituents of these institutions ([Lenstra et al., 2022](#)).

These resulting products represent contributions to theory and practice around meeting the needs of older adults which can inform future research and positively impact the work of people in MSLIS programs, public libraries, and aging services organizations. The desire is to ensure that these products can have maximum impact.

One way of maximizing impact is making the products publicly available. The budget includes money to support making access to resulting research papers open access so interested readers would not be blocked by pay walls. Alternatively, Dr. Winberry would make versions of these papers as well as the white paper, the training framework, and any shareable raw data or project documents permanently available through the University of North Carolina-Chapel Hill research repository, [Carolina Digital Repository](#). The DMP discusses the details of ensuring future access to these materials.

Another way of maximizing impact would be to put the products in front of the people who would benefit most from them. Dr. Winberry would distribute the training framework to MSLIS program directors and student groups at ALA-accredited programs. He would share the white paper with public libraries and primary ASP organizations in the communities with ALA-accredited programs and seek to distribute it further through state ASP and library organizations. As part of the sharing, the other resources created by the study (such as the research products) would be linked in the materials described above. Lastly, Dr. Winberry would share and utilize these products within efforts to create an older adult [task force](#) within the American Library Association's Social Responsibilities Round Table—a group Winberry is hoping to launch after presenting at the ALA conference in San Diego in July 2024. Ultimately, these efforts to disseminate the study findings could result in countless “aha” moments and conversations which could birth an entire new series of studies and practical efforts which will further grow the project's impact.

These products and their dissemination are important for meeting Laura Bush 21st Century Librarian Program goal/objective 2.3 of supporting the research of an untenured library and information science professor. They are valuable because they are the first step in a series of research projects. Getting this funding would help Dr. Winberry publish, strengthen his tenure case, and make him competitive for future funding which would oversee the creation, testing, and launching of the LIS supplementary training for public library students and librarians serving older adults.



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.

The research products will be research protocols, training framework, white paper and data collected through interviews and surveys. The University of North Carolina at Chapel Hill will hold the copywrite for the data which will be available under a Creative Commons License.

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.

The University of North Carolina at Chapel Hill will have ownership of research protocols, training framework, white paper and data collected through interviews and surveys. Access will be determined by policies of the university IRB in order to protect participant confidentiality. All pre-prints of papers, posters, and proceedings will be made available by link and with permission of the publisher as required by the publication venue guidelines.

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.

Interview data will be reviewed to anonymize any identifying information and used and stored in accordance with IRB approved protocols.

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.

Item	Description	Quantity	Format
Interviews	Interview transcripts	100	PDF
Survey	Survey responses	1	XML
Study Protocols	Consent forms, questions,	1	PDF
Training Framework	Basis for future training	1	PDF
White Paper	Best practices for public libraries and library schools	1	PDF

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.

Microsoft Office - Word, Excel

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.

PDF, XML

Workflow and Asset Maintenance/Preservation

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

The PI will oversee workflows using university-provided Office 365 in coordination with research assistant. Routinely the PI and research assistant will discuss processes and identify any areas for needed change and make those changes.

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).

The University of North Carolina at Chapel Hill will permanently host the research products through their digital repository.

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).

The University of North Carolina at Chapel Hill digital repository will manage metadata according to their standards.

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

All metadata from the study required from the PI will be shared with staff at the university repository prior to the end of the award period and with afterwards be maintained by the university repository.

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).

The PI will work with the research data management core at the university to ensure the research products remain accessible to searchers.

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).

Access will be available via the Carolina Digital Repository.

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.

Carolina Digital Repository

<https://cdr.lib.unc.edu>

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.

N/A

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.

N/A

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.

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

N/A

Access and Use

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

N/A

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

N/A

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.

Year	Data Collection	Data Analysis
1	Interviews	Constructivist Grounded Theory
2	Interviews	Constructivist Grounded Theory
3	Survey	Constructivist Grounded Theory

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?

The expectation is to have the study IRB approved prior to the start of the grant period in August. If not by then, as soon afterwards as is feasible.

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.

It is possible that while answering interview or survey questions about what library services they would like to see offered to their population, older adult participants might share personally identifying

information. To protect the identity of participants, the interview recordings will be destroyed once the member check process is complete. The research team will closely review the interview transcripts and survey responses and remove or further anonymize any information that might help identify a person prior to that data being made available. All processes for managing data will also be approved by the university IRB prior to enactment of this plan, in line with IMLS guidance.

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

N/A

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?

Consent forms, research protocols, and codebook will be captured or created along with the data. The data will be made available in the university digital repository in PDF form. This information will be made permanently available in the repository under university policies which will make future access possible.

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

The data will be made permanently available through the university digital repository.

A.7 Identify where you will deposit the data:

Carolina Digital Repository

<https://cdr.lib.unc.edu>

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

The data management plan will be evaluated quarterly by the PI and graduate research assistant who will make any changes as they determine necessary.

Public Libraries in an Aging Society: Preparing Students and Professionals

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

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

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

N/A

Access and Use

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

N/A

C.2

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

Include Name and URL of publicly accessible source code repository:

N/A

SECTION IV: RESEARCH DATA

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.

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Identify where you will deposit the data:

Name and URL of repository:

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