

## Listening in Libraries: Academic Libraries and Accessible Services for d/Deaf and Hard of Hearing Patrons

### Project Justification

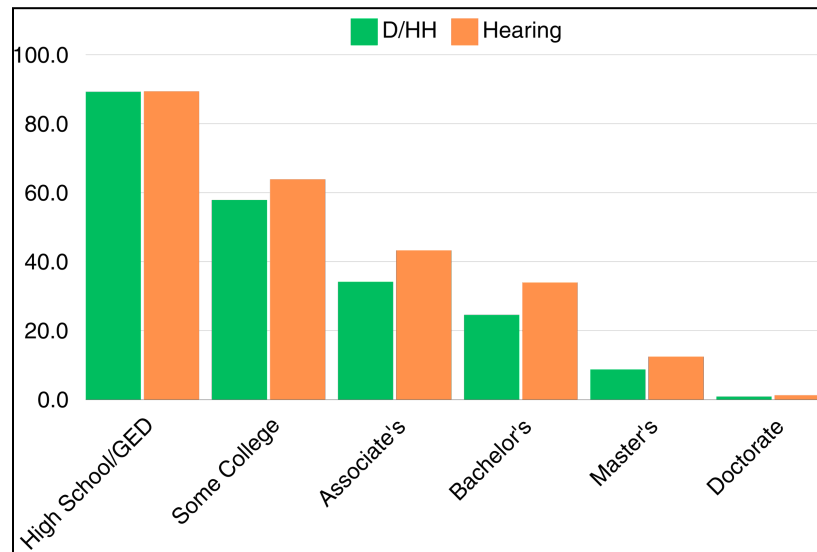
Old Dominion University's (ODU) Library & Information Studies Program requests \$366,325 in funding for a three-year **Early Career Research Development Grant** directed by Dr. Kevin J. Mallary, an assistant professor entering his third year on the tenure track. Dr. Mallary's research, conducted between August 2024 and July 2027, shall address the accessibility needs of an underserved population in academic libraries: d/Deaf and hard-of-hearing (D/HH) patrons. Mallary will conduct an embedded multiple-case study within five institutions ([Stake, 2017](#)) employing interviews with academic librarians, disability services coordinators, and D/HH students to elicit (a) academic librarians' and disability services coordinators' knowledge and experiences surrounding accessible library services to D/HH patrons and (b) D/HH patrons' knowledge and experiences concerning accessible library services. This project will satisfy **Goal 2** of the Institute for Museum and Library Services (IMLS) Laura Bush 21<sup>st</sup> Century Librarian Program: "Develop faculty, library, and archives leaders by increasing the institutional capacity of libraries, archives, and graduate programs related to library and information science" ("[Notice of Funding Opportunity for FY 2024](#)," p. 3). Specifically, Mallary will address **Objective 2.1** since findings shall be broadly communicated and disseminated to facilitate the development of librarians' cross-cultural knowledge and skills. Beyond journal manuscripts and Conference Proceedings, virtual *listening sessions* for librarians, disability services coordinators, and faculty members will be hosted, advancing conversations around D/HH patrons' accessibility needs and recommended practices for serving these patrons. This project will inform the development of an innovative website for information professionals to contribute accessibility resources, share recommended practices, and build a community of practice for serving D/HH patrons. Completing this grant will fulfill **Objective 2.3**, furthering Mallary's long-term professional development (e.g., obtain tenure, enhance teaching) and planned research on accessible library services for D/HH patrons.

Before delving into the project's details, it is important to understand how Dr. Mallary's unique experiences as a D/HH student and faculty member in higher education inspired his research agenda. Mallary's transition from student to faculty member was only possible with the mentorship of accessibility advocates. A memorable library educator encouraged Mallary to advocate for his accessibility needs, leading him to prioritize the inclusion of students with disabilities in libraries and higher education. Mallary reflects on his commitment to accessibility and inclusion:

*I completed an information literacy course as a first-year student at Wake Forest University. Amazingly, my instructor was also profoundly deaf and wore hearing aids like mine. Before my undergraduate years, I never realized that library educators could experience similar difficulties processing sounds and communicating. I recall exchanging stories about being D/HH with my instructor, and she encouraged me to advocate for accommodations to access and learn from information equitably. These conversations inspired me to become an accessibility advocate for students with disabilities. A decade later, when teaching at Western Carolina University, I had a first-year student who was also profoundly deaf and wore hearing aids like mine. I will always remember conversing with this student and encouraging her to advocate for accommodations, moments that resembled the exchanges I had with my instructor. Reflecting on these interactions has often reminded me of the significance of developing accessible and inclusive information spaces for all students. These reminders have guided my work on the information needs of students with disabilities, and this project on library services for D/HH students will certainly advance my long-term research agenda.*

### Accessibility Policies for Including d/Deaf and Hard of Hearing Patrons

The World Health Organization ([2024](#)) has defined the terms d/Deaf and hard of hearing: "[d/Deaf] people mostly have profound hearing loss, which implies very little or no hearing. They often use sign language for communication . . . People who are hard of hearing usually communicate through spoken language and can benefit from hearing aids, cochlear implants, and other assistive devices as well as captioning" ("Hearing Loss and Deafness," paras. 2–3). According to the United States Census Bureau ([2022](#)), 3.7% of Americans are d/Deaf or hard of hearing. The frequency of D/HH Americans attending colleges and universities has increased to 5% ([Garberoglio et al., 2019a](#)). As depicted in Figure 1, D/HH students are less likely to attain higher education than their hearing peers ([2019a](#)).

**Figure 1***Educational Attainment Among D/HH and Hearing Americans*

Source: [“Deaf People and Educational Attainment in the United States: 2019”](#)

Policies governing the accessibility of library services to D/HH patrons include federal regulations such as the Americans with Disabilities Act of 1990 (amended in 2008) and the Rehabilitation Act of 1973 ([United States Department of Justice, “Guide to Disability Rights Laws,” 2020](#)). Libraries are legally required to acquire materials in alternative formats (e.g., captions, sign language, transcripts), make physical spaces inclusive of patrons with hearing loss, and provide accessibility training to information professionals ([American Library Association, “Accessibility,” 2020](#)).

### **Library Services to d/Deaf or Hard of Hearing Patrons**

Library services to D/HH patrons often emphasize a technical services perspective, focusing on acquiring, developing, and managing digital collections ([American Library Association, “Technical Services Librarian,” 2024](#); [Saar & Arthur-Okor, 2013](#)). Technical services librarians must provide accessible digital resources — namely streaming media, library guides, and websites — to D/HH patrons ([Gallaudet University, 2023](#)). Given the proliferation of digital resources, the demand for accessible library collections has become increasingly necessary ([Tanasse, 2021](#)). When acquiring digital resources, for example, librarians can mandate that vendors provide captioned audiovisual recordings and streaming media ([Peacock & Vecchione, 2020](#)). Librarians can also partner with disability services coordinators to retroactively create captions or transcripts ([Potnis & Mallary, 2022](#)). To make captioning more effective and efficient, Syracuse University and Indiana University scholars ([2018](#)) completed an IMLS National Leadership Grant to develop an open-source software platform to caption digital resources automatically. Although library and information science research has highlighted the accessibility issues with digital collections, scholars have seldom explored the communication and learning barriers encountered by D/HH patrons. Saar and Arthur-Okor ([2013](#)) conducted rare interviews with D/HH students about their academic library experiences, finding that sign language interpreting may be inconveniently available, and these patrons may feel uncertain when conducting research independently of librarians. This project will contribute to understanding the nuances of academic library services for D/HH patrons by interviewing these patrons directly.

Library and information science scholars have increasingly adopted a reference and user services perspective to the accessibility of services to D/HH patrons ([Bushman & Fagan, 2019](#); [Potnis & Mallary, 2021](#)). Reference and user services librarians “assist, advise, and instruct users in accessing all forms of recorded knowledge” ([American Library Association, “Definitions,” 2017](#)). Librarians from Gallaudet University ([2023](#)) have recommended making reference and user services — reference interviews, information literacy instruction, and other interpersonal exchanges — accessible to D/HH patrons. To elicit the information needs of D/HH patrons during reference interviews, academic librarians must consider these patrons’ distinct communication preferences (e.g., interpreting, lip-reading, writing, etc.) ([Saar & Arthur-Okor, 2013](#)). For instance, D/HH patrons may communicate with librarians through assistive listening systems

(e.g., hearing aids, FM transmitters, inductive loops, infrared systems), sign language interpreters, text messages, video relay services, and other equipment ([Ezell et al., 2022](#)). To deliver accessible information literacy instruction (in-person or virtually), librarians might ensure that instructional materials are compatible with preferred modalities for learning (e.g., captioning, note-taking, or reading fluency applications) ([Havelka & Arzola, 2021](#)). Librarians could also increase awareness of accessible services to D/HH patrons, especially through library websites, to demonstrate their value and promote their use ([Potnis & Mallary, 2022](#); [Vaughan & Warlick, 2020](#)). Although recommendations for serving D/HH patrons such as these exist, D/HH patrons are scarcely represented in library and information science research, and this gap may leave academic and other librarians ill-equipped to deliver accessible services to this important population ([Brunskill, 2020](#); [Brunskill et al., 2021](#); [Potnis & Mallary, 2021](#)). Inadequate professional development opportunities have amplified librarians' under-preparedness ([Bushman & Fagan, 2019](#); [Potnis & Mallary, 2022](#)). Without the necessary knowledge and experiences to serve D/HH patrons effectively, academic librarians may fail to provide these patrons with the services needed to communicate, build information literacy skills, and learn fully ([Potnis & Mallary, 2023](#); [Saar & Arthur-Okor, 2013](#)).

### **Knowledge and Experiences for Serving d/Deaf or Hard of Hearing Patrons**

Drawing from his D/HH experiences and scholarship, Dr. Mallary will be uniquely positioned to recruit and develop a rapport with D/HH patrons, enabling him to address a research void in library services to D/HH patrons. Scholars have seldom assessed academic librarians' knowledge and experiences for "[assessing] and [responding] to diversity in user needs, user communities, and user preferences" ([American Library Association, "Section 5F", 2017](#)). Potnis and Mallary's previous scholarship ([2021](#)) contributes to understanding how academic librarians' accessibility knowledge and skills can foster inclusive library spaces for patrons with disabilities. They found that librarians must fully understand the accessibility needs of patrons, identify and resolve accessibility and usability barriers, and participate in professional development opportunities, among other practices ([2021](#)). Whereas this prior research did not exclusively focus on services to D/HH patrons, the project proposed here will elicit librarians' knowledge and experiences to address D/HH patrons' varied accessibility needs. This project shall also assess the knowledge and experiences of disability services coordinators since they likely interface between academic librarians and D/HH patrons by providing assistive technologies and other accommodations ([Potnis & Mallary, 2022](#)). In conjunction with academic librarians' and disability services coordinators' knowledge and experiences, this research will also evaluate D/HH patrons' knowledge and experiences surrounding library services. Potnis and Mallary ([2023](#)) found that D/HH patrons will only perceive a service as valuable if it satisfies their information needs. Otherwise, a divide exists between a service's intended benefits and patrons' reported outcomes from using the service ([Potnis & Mallary, 2022](#)).

### **Target Groups and Beneficiaries**

Academic librarians and disability services coordinators are the target groups in this project since they will be the "most immediately and positively affected" by the findings ("[Notice of Funding Opportunity for FY 2024](#)", p. 16). Findings from this project will inform evidence-based practices for academic librarians and disability services coordinators to immediately enhance their daily interactions with D/HH patrons. As academic librarians and disability services coordinators enrich their accessibility knowledge and experiences, D/HH patrons shall become beneficiaries of the project. Ultimately, D/HH patrons' ability to independently communicate, build information literacy skills, and learn can be strengthened through inclusive library services ([Potnis & Mallary, 2023](#)). While school and public librarians are not targets of this research, they may benefit from the findings as they serve similar populations.

## **Project Work Plan**

### **Conceptual Framework**

This study of library services for D/HH patrons adopts a structural perspective in which organizations constrain or enable patrons' actions ([Nicolini, 2013](#)). Within this perspective, the social model of disability holds that patrons are disabled not by physical or cognitive impairments but by the organizations that serve them ([Barnes, 2020](#)). Patrons who are d/Deaf or hard of hearing can benefit from library services so long as the social structure (i.e., accessibility policies, D/HH-specific supports, and library practices) enhances providers' accessibility knowledge and experiences ([Havelka & Arzola, 2021](#)). By interviewing academic librarians, disability services coordinators, and D/HH patrons about their knowledge and experiences surrounding library services, this project will highlight the challenges and opportunities for delivering accessible library services.

## Research Questions

Drawing from the literature on accessible library services and the conceptual framework, this project shall address the following research questions:

- RQ1. What are academic librarians' knowledge and experiences surrounding library services to d/Deaf or hard of hearing patrons?*
- RQ2. What are disability services coordinators' knowledge and experiences surrounding library services to d/Deaf or hard of hearing patrons?*
- RQ3. What are d/Deaf or hard of hearing patrons' knowledge and experiences surrounding library services?*

## Research Design

The research design guiding Mallary's project shall be an embedded, multiple-case study design (Stake, 2017). Data will be collected within five institutions, which shall serve as the study's cases:

- [Old Dominion University \(ODU\)](#) (Norfolk, Virginia) is a regional public research university with 23,494 students (as of 2023).
- [North Carolina School for the Deaf \(NCSd\)](#) (Morganton, North Carolina) is a public secondary school for the D/HH with 69 students (as of 2021). Minor students' parents or legal guardians will provide assent via a Qualtrics form approved by ODU's Institutional Review Board (IRB). Students aged 18 or older will provide consent using the form.
- [Tidewater Community College \(TCC\)](#) (Norfolk, Virginia) is ODU's community partner, with approximately 25,000 students (as of 2023).
- [The University of Tennessee at Knoxville \(UTK\)](#) (Knoxville, Tennessee) is a flagship public research university with 33,805 students (as of 2023).
- [Wake Forest University \(WFU\)](#) (Winston-Salem, North Carolina) is a private liberal arts university with 8,963 students (as of 2023).

Data will be collected within these sites for various reasons. NCSd is dedicated to D/HH students and is geographically located near UTK and WFU (within 1.5–3 hours of driving). NCSd was selected to provide insights from a D/HH serving institution and to establish relationships with D/HH students as they transition to higher education. D/HH students transitioning from secondary education may attend community colleges such as TCC (45.2% of D/HH students) or public universities like UTK (19.8% of D/HH students) (Garberoglio et al., 2019b). D/HH students also attend private universities like WFU (26.0% of D/HH students) more frequently than hearing students (23.1% of hearing students) (2019b). Furthermore, Mallary has fostered long-lasting relationships (2–16 years) with the directors of disability support services at ODU, UTK, and WFU, coordinating research projects with each director.

## Recruiting Participants

Within each of the five cases, several groups (i.e., units of analysis) (Stake, 2017) will be invited to participate in interviews: academic librarians, disability services coordinators, and D/HH patrons. To recruit academic librarians, Mallary will email each library's head librarian or dean, requesting that they forward an IRB-approved email invitation to librarians who directly serve D/HH patrons (e.g., instructional, reference services, or other user services librarians). Each institution's director of disability support services shall forward the email invitation to participate to disability services coordinators working with D/HH students. The librarians and disability services coordinators interested in participating will complete a Qualtrics consent form. To recruit D/HH students, directors of disability support services will be asked to forward the recruitment email to students with documented hearing loss. By sending this recruitment email, directors shall lend credibility to the research and conceal D/HH students' protected health information from Mallary and the GRA.

## Conducting and Analyzing Interviews

Each interview will occur in person (in a location convenient to the participant) or virtually. Interviews will last 30–45 minutes, with breaks allotted to the participants as needed. Sample questions in Table 1 (below) will be asked and

refined as necessary. An expert live transcriptionist from [Verbit](#) – a company that contracts with ODU – will caption every interview. A professional sign language interpreter (American Sign Language or otherwise) from [Jeenie](#) will be available upon a participant’s request for any physical or virtual interview. Interviews will be audio recorded separately by Mallary and a grant-funded Graduate Research Assistant (GRA) to prevent data loss. Every student participant will receive a \$25.00 Amazon gift card. The GRA will listen to every interview recording, correct any of Verbit’s captions, and then share the transcripts with participants for verification.

Interview transcripts will be analyzed during open, axial, and selective coding cycles ([Saldaña, 2021](#)). Open codes (i.e., basic descriptions of participants’ words) are identified first, followed by axial codes (i.e., open codes that have been categorized) ([Morse et al., 2021](#)). Selective coding is the final analysis cycle, which involves identifying themes from the categories ([Saldaña, 2021](#)). Coding comparisons will be made among the participant groups of each institution – academic librarians, disability services coordinators, and D/HH patrons – to identify similarities and differences in their knowledge and experiences surrounding accessible library services ([Stake, 2017](#)). Following the interviews, Mallary and the GRA will perform member-checking, asking librarians, disability services coordinators, and D/HH students through email to evaluate the trustworthiness of the codes and findings ([Denzin & Lincoln, 2024](#)).

### **Activities Timeline**

This project’s activities shall occur between August 1, 2024, and July 31, 2027. The specific activities for Years 1, 2, and 3 are detailed below.

#### ***Year 1 (August 1, 2024 – July 31, 2025)***

During Year 1 (August 1, 2024 – July 31, 2025), Mallary and the GRA will convene an advisory committee of D/HH and library accessibility experts, develop interview protocols, submit an IRB application, conduct interviews at ODU and NCSD, communicate and disseminate the year’s findings, and deliver the first of three annual reports to the advisory committee.

##### *Convening Advisory Committee*

In August 2024, Mallary will convene an advisory committee of experts on D/HH and library accessibility. [Dr. Molly Howlett](#) (Audiologist at Hearing Services of Virginia), [Dr. Bobbie Long](#) (Assistant Professor at Emporia State University), [Mr. David Ndiaye](#) (Director of Student Disability Services at UTK), [Dr. Devendra Potnis](#) (Professor at UTK), and [Dr. Kim Thompson](#) (Professor at The University of South Carolina) will comprise the advisory committee. These experts have agreed to participate, assuming the project is funded. In exchange for the advisory committee’s multi-year contributions, Mallary will compensate each member \$500.00 annually for three years, totaling \$7,500.00. Committee members will also be invited to co-author any of the six resulting manuscripts with himself as lead author and the GRA as second author.

##### *Developing Interview Protocols*

Guided by Mallary’s prior work on academic library services for disabled patrons ([Mallary, 2022](#); [Potnis & Mallary, 2022](#); [Potnis & Mallary, 2023](#)), Mallary and the GRA will spend August 2024 developing a draft interview protocol for each participant group: librarians, disability services coordinators, and D/HH students (Table 1). The advisory committee will offer electronic feedback on the proposed interview protocols, including suggestions for additional questions, rewording items, or removing questions. Moreover, NCSD librarians and students will be invited to offer electronic feedback on the three protocols. These librarians and students will be excluded from interviews to prevent biased sampling.

##### *Submitting IRB Application*

Based on the suggested revisions to the interview protocols, Mallary and the GRA will apply to ODU’s IRB. The IRB takes 2—3 weeks to approve studies (including revisions). Once IRB approval is granted, Mallary and the GRA will conduct interviews at ODU and NCSD.

**Table 1**

*Sample Interview Protocols for Academic Librarians, Disability Services Coordinators, and D/HH Students*

Research Questions	Sample Interview Questions
<b>Academic Librarians</b>	
<i>RQ1: What are academic librarians’ knowledge and experiences surrounding library services to d/Deaf or hard of hearing patrons?</i>	<ul style="list-style-type: none"> <li>● From your experience, are there common practices in academic libraries that are inaccessible to [D/HH] patrons?</li> <li>● What equipment or services does your academic library offer [D/HH] patrons to enhance their use of resources?</li> <li>● What input has your library received from [D/HH] patrons, and how has their feedback influenced your services?</li> </ul>
<b>Disability Services Coordinators</b>	
<i>RQ2: What are disability services coordinators’ knowledge and experiences surrounding library services to d/Deaf or hard of hearing patrons?</i>	<ul style="list-style-type: none"> <li>● What equipment or accommodations does your office provide [D/HH] students?</li> <li>● Can you describe the extent of your office’s involvement in serving [D/HH] patrons in the institution’s library?</li> <li>● What input has your office received from [D/HH] students, and how has their feedback influenced your services?</li> </ul>
<b>d/Deaf or Hard of Hearing Patrons</b>	
<i>RQ3: What are d/Deaf or hard of hearing patrons’ knowledge and experiences surrounding library services?</i>	<ul style="list-style-type: none"> <li>● Can you describe your experiences using the campus library as a [D/HH] patron?</li> <li>● What equipment or accommodations have you used in your campus library, and how have they helped?</li> <li>● How do you communicate your needs or preferences to library staff when seeking assistance?</li> </ul>

*Conducting Interviews at ODU and NCSD*

Between October 2024 and March 2025, Mallary and the GRA will interview three ODU and three NCSD academic librarians, two ODU and two NCSD disability services coordinators, five D/HH students at ODU, and ten D/HH students at NCSD, totaling 25 interviews. Mallary and the GRA will physically travel to Morgantown twice for in-person interviews with NCSD participants. NCSD students scheduled to graduate in Years 1 or 2 will decide to participate in follow-up interviews during Year 2 (rationale explained later). Each NCSD participant interested in a follow-up interview will provide an email address on the Qualtrics form (e.g., personal, parent’s, or guardian’s address). Since ODU and NCSD operate on different calendars (postsecondary versus secondary institution) and obtaining assent for minor participants might take longer, data analysis and evaluation may occur between November 2024 and May 2025. Study participants and the advisory committee members will evaluate the codes and findings in April or May 2025. Mallary will host a virtual meeting with the advisory committee to discuss the codes and findings. Based on the feedback, Mallary and the GRA will make any amendments to the protocols with ODU’s IRB in May or June 2025.

*Year 1 Communication and Dissemination Plans*

From February to July 2025, Mallary and the GRA shall communicate and disseminate the findings from Year 1. In March 2025, they will submit a works-in-progress poster proposal for the Association for Library and Information Science Education’s (ALISE) 2025 annual conference (occurring in October 2025). Between February and July 2025,

Mallary and the GRA will submit two manuscripts to the [International Journal of Information, Diversity, & Inclusion](#) and the [Technical Services Quarterly](#). Based on the journals' flexible review timelines, editorial decisions (e.g., requests for revision, publication acceptance, etc.) should be returned between Years 2 and 3.

### *Delivering the First Annual Report*

Between June and July 2025, Mallary will deliver the first of three annual reports to the advisory committee. This first report will describe Mallary's and the GRA's experiences interviewing Year 1 participants, analyzing the data, and participant feedback on the codes and findings. The advisory committee's feedback on the first annual report will inform Year 2 activities.

### ***Year 2 (August 1, 2025 – July 31, 2026)***

During Year 2 (August 1, 2025 – July 31, 2026), Mallary and the GRA will conduct interviews at TCC, UTK, and WFU, follow up with NCSD graduating students and recent graduates, communicate and disseminate Year 2 findings, and deliver the second annual report to advisory committee members.

### *Conducting Interviews at TCC, UTK, and WFU*

From August 2025 through January 2026, three librarians, two disability services coordinators, and five D/HH students at each of the remaining three institutions – TCC, UTK, and WFU – shall participate in physical or virtual interviews. Although travel is not required to visit TCC, Mallary and the GRA will travel to Knoxville and Winston-Salem (twice each) for in-person interviews. Transcripts will be analyzed between September 2025 and February 2026. Like in Year 1, participants will receive an electronic request to evaluate the coding and findings. A virtual meeting with the advisory board will be held in February or March 2026 to review the codes and findings.

### *Conducting Follow-Up Interviews with NCSD Graduating Students and Recent Graduates*

Mallary and the GRA will conduct follow-up interviews with 10 NCSD graduating students and recent graduates from February through May 2026. These participants will receive an email reminding them of their initial interview and prior interest in a follow-up interview. Assuming a participant is still interested in a follow-up interview, they will complete the Qualtrics consent form. Mallary and the GRA will travel twice to conduct in-person interviews. The transcripts will be analyzed between March and June 2026. In June or July 2027, advisory committee members will be asked for feedback on the coding and findings during a virtual meeting. Study participants will be invited to write feedback regarding Year 2 codes and findings.

### *Year 2 Communication and Dissemination Plans*

To communicate and disseminate Year 2's findings, Mallary and the GRA will spend September 2025 preparing and submitting a session proposal for the American Library Association's (ALA) 2026 annual conference (occurring in June or July 2026). In the proposed session, librarians, educators, and other practitioners will be invited to discuss updated findings and suggest practical implications for delivering accessible information services to D/HH patrons. Assuming their ALISE 2025 proposal was accepted in Year 1, Mallary and the GRA will present the poster in October 2025. Attending these conferences will be essential to Mallary's professional development since they are ideal venues for networking with external tenure reviewers. These events are also excellent opportunities for networking with librarians serving D/HH patrons. In March 2026, Mallary and the GRA will submit a workshop proposal for the ALISE 2026 annual conference (occurring in October 2026). The workshop will be a forum for academic librarians and information professionals to brainstorm and share practices for enhancing services to D/HH patrons. From December 2025 to May 2026, Mallary and the GRA shall submit two manuscripts to the [College & Research Libraries](#) journal and [The Journal of Academic Librarianship](#). Given these publications' flexible review timelines, editorial decisions (e.g., requests for revision, publication acceptance, etc.) should be returned in Year 3 or after. If their ALA 2026 session is accepted, Mallary and the GRA will host it at the conference (June or July 2026). During the ALA 2026 session, they will begin developing a community of practice on academic library services to D/HH patrons. Mallary and the GRA will invite session attendees to register for a ListServ, consisting of academic librarians and other information professionals. This ListServ (hosted through ODU) will offer periodic updates regarding the project's findings and practical guidelines for serving D/HH patrons effectively. ListServ members will be encouraged to share professional conferences, training materials, and other resources related to D/HH library services.

*Delivering the Second Annual Report*

During June and July 2026, Mallary will deliver a second annual report to the advisory committee. This second report will describe Mallary’s and the GRA’s experiences interviewing Year 2 participants, analyzing the data, and participant feedback on the codes and findings. The advisory committee’s feedback on the second report will inform Year 3 activities.

**Year 3 (August 1, 2026 – July 31, 2027)**

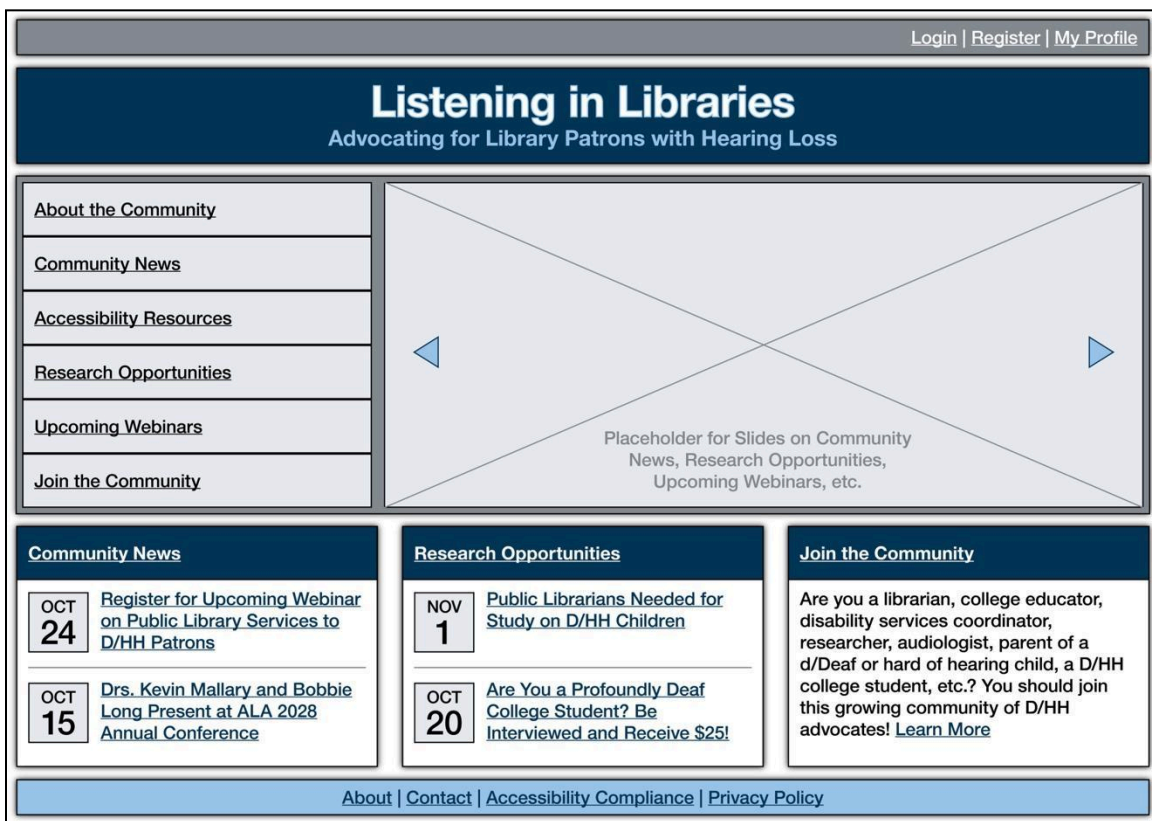
In Year 3 (August 1, 2026 – July 31, 2027), Mallary and the GRA shall communicate and disseminate the project’s findings and deliver the final annual report to advisory committee members.

*Year 3 Communication and Dissemination Plans*

Findings from Years 1 through 3 will be communicated and disseminated through a website, virtual listening sessions, conference workshops, and journal manuscripts. These project developments will be promoted via ListServ. Between August 2026 and January 2027, Mallary and the GRA will construct a website – tentatively named “Listening in Libraries” (inspired by [The Librarian Parlor](#)) – for practitioners to contribute accessibility resources, share experiences, and develop the capacity to serve D/HH patrons more effectively. Mallary will rely upon his nearly 16 years of professional experience developing websites in the higher education, commercial, and non-profit sectors. The website will enable users to receive news regarding library services to D/HH patrons, network with other information professionals, share innovative research, contribute educational blog posts, exchange accessibility resources, and register for upcoming Webinars (Figure 2).

**Figure 2**

*Proposed Home Page Design for “Listening in Libraries” Website*



Mallary and the GRA will host two listening sessions via Zoom in October 2026 and March 2027. These interactive sessions will be designed for librarians, disability services coordinators, and faculty members to acquire knowledge of D/HH patrons’ accessibility needs and share their experiences serving them. ODU’s Research Institute for



Digital Innovation in Learning (RIDIL) has pledged to assist Mallary in developing the website and listening sessions, ensuring their accessibility and usability. Mallary's colleague, Dr. Helen Crompton (Professor at ODU), is the director of RIDIL, and her letter of endorsement is enclosed. With RIDIL's assistance, the website and listening sessions shall be promoted to the [Association on Higher Education and Disability \(AHEAD\)](#), [ALISE](#), the [National Association of the Deaf \(NAD\)](#), and the [National Deaf Center \(NDC\)](#). In Year 3, Mallary and the GRA will propose and host a workshop at the ALA 2027 annual conference (occurring in June or July 2027), deliver a workshop at ALISE 2026 (September or October 2026), and attend the AHEAD annual conference in July 2027. Each workshop session will invite academic librarians and information professionals to brainstorm and share practices for serving D/HH patrons. Workshop attendees will be encouraged to join the growing community of practice by registering for the ListServ. Librarians, educators, and other practitioners can learn about and offer feedback on the website. Mallary will network with external tenure reviewers in each venue. Finally, Mallary and the GRA will submit two manuscripts to the [Library & Information Science Research](#) and [Disability & Rehabilitation](#) journals. Given these publications' flexible review timelines, editorial decisions (e.g., requests for revision, publication acceptance, etc.) will likely be returned after the grant period ends.

### *Delivering the Final Annual Report*

Mallary will deliver the final annual report to the advisory committee between June and July 2027. The report will describe Mallary's and the GRA's experiences developing the website and hosting the listening sessions and conference workshops. The advisory committee's feedback on the final report will inform future activities beyond the grant period ("Project Results" section).

### **Diversity Plan**

This project shall advance the values of diversity, equity, inclusion, and accessibility, which are fundamental to librarianship ([American Library Association, 2023](#)). Librarians, disability services coordinators, and D/HH students participating in this research will be diverse in abilities, age, ethnicity, and gender. Sampling diverse participants will be essential given the broad cultural and ethnic representation among D/HH patrons (e.g., first-generation, Asian, Black, Latinx, multiracial) ([National Deaf Center, 2024](#)). Since every librarian, disability services coordinator, and D/HH student at each of the five institutions will be eligible for participation and invited to provide feedback throughout the project's progression, the research design will be equitable and inclusive. The advisory committee will intentionally be formed, given that members' diverse abilities, cultural experiences, and ethnicities will enrich the design's equity and inclusivity. Uniquely, as a member of the D/HH community, Mallary anticipates building an authentic rapport with participants whose insights shall inform the development of inclusive, evidence-based practices for delivering accessible services.

### **Project Results**

#### **Implications for Accessible Library Services**

This project's results may strengthen library services to D/HH patrons, advancing **Objective 2.1**. By conducting needs assessments, Dr. Mallary will better understand the knowledge and experiences that academic librarians and disability services coordinators need to deliver accessible services to D/HH patrons. Establishing rapport with these patrons will allow Mallary to elicit the vast accessibility needs, knowledge, and experiences of D/HH patrons, a vulnerable population scarcely represented in library and information science scholarship. Results may also facilitate the development of information professionals' cross-cultural competencies. Through the ListServ, virtual listening sessions, conference workshops, and the "Listening in Libraries" website, Mallary shall develop a community of practice dedicated to making library services more inclusive of D/HH patrons. Librarians (e.g., academic, public, schools, etc.), disability services coordinators, faculty members, and other practitioners who contribute to this community can develop the knowledge and experiences necessary to deliver accessible services to D/HH patrons. With continued assistance from Dr. Crompton and RIDIL, Mallary will host periodic virtual listening sessions and further develop the website (i.e., optimize and market the platform). Soliciting sponsorships from national disability, D/HH, and higher education organizations like [AHEAD](#), [ALISE](#), [NAD](#), and [NDC](#) will be crucial to broadening this project's impact on library services.

#### **Long-Term Agenda**

Dr. Mallary's project will augment his long-term agenda, contributing to his professional development and planned research (**Objective 2.3**). By integrating this project into his teaching, Mallary will enhance his professional development. For example, Mallary will invite students in his [User-Centered Design \(LIBS 653\)](#) course to evaluate and

improve the “Listening in Libraries” website. The course, which Mallery created for ODU’s Master’s in Library & Information Studies Program in Fall 2022, teaches students how to conduct user-experience research through gathering and analyzing user data, prototyping design solutions, and conducting accessibility and usability evaluations. Following the three-year grant period, Mallery has planned research based on this project. For instance, Mallery’s follow-up interviews with NCSD students in Year 2 will guide a planned longitudinal survey of D/HH students transitioning from secondary to higher education and from higher education into the workplace. To contextualize these patrons’ experiences, Mallery will interview D/HH patrons’ family members to explore the influences of personal support systems on their everyday lives. Results from the familial interviews will inform the development of large-scale, quantitative surveys of academic librarians, disability services coordinators, and D/HH patrons from institutions across the United States and internationally. Comprehensive findings from Mallery’s ongoing scholarship will enable him to gradually develop a theoretical model of accessibility knowledge and experiences for including D/HH library patrons.

## Schedule of Completion

### Year 1 (August 1, 2024 – July 31, 2025): Convening Advisory Committee, Developing Interview Protocols, Submitting IRB Application, Conducting Interviews, and Communicating and Disseminating Year 1 Findings

Project Task	Stakeholders	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Convene advisory committee	PI, Advisory Committee	X											
Develop draft interview protocols	PI, GRA	X											
Request feedback on the draft interview protocols from advisory committee and NCSD librarians and students	PI, Advisory Committee	X	X										
Apply to ODU's IRB with the revised interview protocols	PI, GRA		X	X									
Send IRB-approved recruitment email messages to ODU and NCSD disability services directors and library deans	PI, GRA			X									
Obtain informed consent and assent (for minor participants)	PI, GRA			X	X	X	X	X	X				
Conduct 25 initial interviews at ODU and NCSD (in-person and virtual)	PI, GRA			X	X	X	X	X	X				
Deliver \$25 Amazon gift cards to D/HH students	PI			X	X	X	X	X	X				
Transcribe interview recordings	GRA			X	X	X	X	X	X	X			
Analyze interview data	PI, GRA				X	X	X	X	X	X			
Submit two manuscripts to the International Journal of Information, Diversity, & Inclusion and Technical Services Quarterly	PI, GRA							X	X	X	X	X	X
Submit works-in-progress poster proposal to ALISE 2025	PI, GRA							X					
Solicit written feedback on Year 1 codes and findings from participants	PI, GRA									X	X		
Host virtual meeting with advisory committee to review Year 1 codes and findings	PI, Advisory Committee									X	X		
Amend interview protocols with ODU's IRB based on feedback	PI, GRA										X	X	
Prepare annual report and share it with the advisory committee	PI, Advisory Committee											X	X

Note: Dates are tentative since tasks may take less or more time than expected.

## Schedule of Completion

### Year 2 (August 1, 2025 – July 31, 2026): Conducting Interviews and Communicating and Disseminating Year 2 Findings

Project Task	Stakeholders	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Send IRB-approved recruitment email messages to TCC, UTK, and WFU disability services directors and library deans	PI, GRA	X											
Obtain informed consent and assent (for minor participants)	PI, GRA	X	X	X	X	X	X						
Conduct 30 interviews at TCC, UTK, and WFU (in-person and virtual)	PI, GRA	X	X	X	X	X	X						
Deliver \$25 Amazon gift cards to D/HH students	PI	X	X	X	X	X	X						
Transcribe interview recordings	GRA	X	X	X	X	X	X	X					
Analyze interview data	PI, GRA		X	X	X	X	X	X					
Submit session proposal to ALA 2026	PI, GRA		X										
Present works-in-progress poster at ALISE 2025	PI, GRA			X									
Submit two manuscripts to the College & Research Libraries journal and The Journal of Academic Librarianship	PI, GRA					X	X	X	X	X	X		
Develop draft interview protocol to conduct follow-up interviews with NCSD graduating students and recent graduates	PI, GRA					X							
Request written feedback on the draft follow-up interview protocol from advisory committee and NCSD librarians and D/HH students	PI, Advisory Committee					X	X						
Amend interview protocol with ODU's IRB based on written feedback	PI, GRA						X	X					
Send IRB-approved recruitment email messages to NCSD graduating students and recent graduates	PI, GRA							X					
Obtain informed consent and assent (for minor participants)	PI, GRA							X	X	X	X		
Conduct 10 follow-up interviews with NCSD graduating students and recent graduates (in-person and virtual)	PI, GRA							X	X	X	X		
Deliver \$25 Amazon gift cards to NCSD graduating students and recent graduates	PI							X	X	X	X		
Transcribe follow-up interview recordings	GRA							X	X	X	X	X	
Analyze interview data	PI, GRA								X	X	X	X	
Submit workshop proposal to ALISE 2026	PI, GRA								X				
Create ListServ for building community of practice	PI, GRA										X		
Host session at ALA 2026	PI, GRA											X	X
Solicit written feedback on Year 2 coding and findings from participants	PI, GRA											X	X
Host virtual meeting with advisory committee to review codes and findings from Year 2	PI, Advisory Committee											X	X
Prepare annual report and share it with the advisory committee	PI, Advisory Committee											X	X

Note: Dates are tentative since tasks may take less or more time than expected.

## Schedule of Completion

### Year 3 (August 1, 2026 – July 31, 2027): Communicating and Disseminating Project Findings

Project Task	Stakeholders	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Develop HTML template and stylesheets for "Listening in Libraries" website	PI	X	X										
Evaluate the accessibility and usability of the website design with RIDIL's support	PI, GRA, RIDIL	X	X										
Work with ODU's RIDIL to promote upcoming virtual listening sessions to AHEAD, ALISE, the National Association of the Deaf, and the National Deaf Center	PI, GRA, RIDIL	X	X										
Submit workshop proposal to ALA 2027	PI, GRA		X										
Host workshop at ALISE 2026	PI, GRA		X										
Solicit written feedback on the website design from advisory committee	PI, Advisory Committee			X	X								
Host virtual listening session	PI, GRA, RIDIL			X									
Program the website, including database-driven pages and the user dashboard	PI			X	X	X	X						
Host virtual meeting with advisory committee to review the website	PI, Advisory Committee					X	X						
Work with ODU's RIDIL to promote upcoming virtual listening session and the new website to AHEAD, ALISE, the National Association of the Deaf, and the National Deaf Center	PI, GRA, RIDIL						X	X					
Host virtual listening session	PI, GRA, RIDIL								X				
Submit two manuscripts to the Library & Information Science Research and Disability & Rehabilitation journals	PI, GRA							X	X	X	X	X	X
Host session at ALA 2027	PI, GRA											X	X
Prepare annual report and share it with the advisory committee	PI, Advisory Committee											X	X
Attend AHEAD 2027 conference	PI, GRA												X

Note: Dates are tentative since tasks may take less or more time than expected.

## Digital Products Plan

Product Type	Formats, Availability, Access, and Sustainability	
Community Resources: ListServ, Conference Workshops, Virtual Listening Sessions, and “Listening in Libraries” Website	Formats	The PI shall develop a <a href="#">ListServ</a> , which ODU’s Information Technology Services will host. <a href="#">Conference workshops</a> and <a href="#">virtual listening sessions</a> will consist of PowerPoint slides (stored via ODU’s Microsoft OneDrive account). The PI’s and GRA’s observations from the conference workshops will be shared via ListServ. The virtual listening sessions will occur over ODU’s Zoom platform, with attendees joining through a secure waiting room. The <a href="#">“Listening in Libraries” website</a> will consist of Hypertext Markup Language (HTML) pages, Cascading Stylesheets (CSS), JavaScript documents, PHP scripts, MySQL database tables, and audiovisual materials (e.g., PI-produced graphics, externally hosted videos, user-shared photos). The website will be hosted on a secure, ODU-provisioned Web server.
	Availability	Anyone can join the ListServ by emailing an ODU-provided address. The “Listening in Libraries” website will be available to anyone with Internet access via their browser. Its design will be compliant with the <a href="#">Web Content Accessibility Guidelines (Version 2.2)</a> , ensuring that users with and without hearing loss may receive and benefit from the same information.
	Access	Digital products shared via the ListServ and hosted on the “Listening in Libraries” website shall be licensed under <a href="#">Creative Commons CC BY-NC-SA 4.0</a> .
	Sustainability	The ListServ and “Listening in Libraries” website, which ODU’s Information Technology Services will host, will operate indefinitely, and be routinely backed up to prevent data loss.
Research Data: Consent Forms, Interview Protocols, Audio Recordings, Interview Transcripts, Research Notes, Data Analysis Spreadsheets	Formats	<a href="#">Consent forms</a> , <a href="#">interview protocols</a> , <a href="#">interview transcripts</a> , and <a href="#">research notes</a> will be Word documents; <a href="#">audio recordings</a> will be MP3 files; and <a href="#">data analysis spreadsheets</a> will be Excel documents. Research materials will be anonymized by redacting personal identifiers. All research data will be stored in ODU’s Microsoft OneDrive account. In accordance with the Schedule of Completion, secure links to these materials will be shared with advisory committee members and participants.
	Availability	Interview protocols will be shared in research publications and, following publication, hosted on the “Listening in Libraries” website. Redacted interview transcripts and data analysis spreadsheets will be available through <a href="#">ODU’s Digital Commons</a> , the institution’s research repository. Consent forms, research notes, and audio recordings will be deleted two years after the grant closes.
	Access	Digital products hosted on the “Listening in Libraries” website or ODU’s Digital Commons shall be licensed under <a href="#">Creative Commons CC BY-NC-SA 4.0</a> .

Product Type	Formats, Availability, Access, and Sustainability	
	Sustainability	The “Listening in Libraries” website, which ODU’s Information Technology Services will host, will operate indefinitely, and be routinely backed up to prevent data loss. ODU’s librarians maintain the Digital Commons platform, which allows scholars to reach broader audiences through open-access publishing and search engine optimization, demonstrate research impact by gathering and analyzing scholarly metrics, and archive research data.
Research Design Feedback: Advisory Committee Meetings, Electronic Communications, and Annual Reports	Formats	<u>Advisory committee meetings</u> will be held via ODU’s Zoom account, with meetings protected via a waiting room. Meetings will not be recorded. Any <u>electronic communications</u> with the advisory committee will occur through ODU’s Microsoft Exchange account. <u>Annual reports</u> will be PDF documents stored in OneDrive and shared with advisory committee members via secure email links.
	Availability	Notes from advisory committee meetings and electronic communications with members will not be shared. Annual reports, however, will be published via the “Listening in Libraries” website.
	Access	The <a href="#">Creative Commons CC BY-NC (non-derivative) 4.0 license</a> will cover the annual reports since the PI will protect the advisory board’s contributions.
	Sustainability	The “Listening in Libraries” website, which ODU’s Information Technology Services will host, will operate indefinitely, and be routinely backed up to prevent data loss.
Research Publications: Conference Proceedings and Journal Manuscripts	Formats	<u>Conference Proceedings</u> and <u>journal manuscripts</u> will be Word and PDF documents created by the PI or publishers. Documents created by the PI will be stored via ODU’s Microsoft OneDrive account.
	Availability	Conference Proceedings will be available through the publisher’s website, and the PI will make them available via ODU’s Digital Commons. To broadly disseminate the findings, the PI will also submit journal manuscripts to open-access publishers.
	Access	Digital products hosted on the “Listening in Libraries” website or ODU’s Digital Commons shall be licensed under <a href="#">Creative Commons CC BY-NC-SA 4.0</a> .
	Sustainability	The “Listening in Libraries” website, which ODU’s Information Technology Services will host, will operate indefinitely, and be routinely backed up to prevent data loss. ODU’s librarians maintain the Digital Commons platform, which allows scholars to reach broader audiences through open-access publishing and search engine optimization, demonstrate research impact by gathering and analyzing scholarly metrics, and archive research data.

## **Data Management Plan**

This Data Management Plan (DMP) outlines the data types and formats, privacy and intellectual property considerations, technical requirements and documentation, and continuing review plans for the PI's proposed project.

### **Data Types and Formats**

Consent forms, interview protocols, interview transcripts, and research notes will be Microsoft Word documents; audio recordings will be MP3 files; and data analysis spreadsheets will be Microsoft Excel documents. Conference Proceedings and journal manuscripts will be Word and PDF documents created by the PI or publishers. The PI shall develop a ListServ, which ODU's Information Technology Services will host. Conference workshops and virtual listening sessions will consist of PowerPoint slides. The "Listening in Libraries" website will consist of Hypertext Markup Language (HTML) pages, Cascading Stylesheets (CSS), JavaScript (JS) documents, PHP scripts, MySQL database tables, and audiovisual materials (e.g., PI-produced graphics, externally hosted videos, user-shared photos). Annual reports will be PDF documents.

### **Data Privacy and Intellectual Property**

Research data – including interview transcripts, research notes, and data analysis spreadsheets – will be anonymized by redacting personal identifiers. Research data will be indefinitely stored in OneDrive, except for consent forms, research notes, and audio recordings, which will be deleted two years after the grant closes. Redacted interview transcripts (Word documents) and data analysis spreadsheets (Excel documents) will be available through [ODU's Digital Commons](#), the institution's research repository. Consent forms, research notes, and audio recordings will be deleted two years after the grant closes. Any electronic communications with the advisory committee will occur through ODU's Microsoft Exchange account; however, this data will not be shared. Notes from advisory committee meetings and electronic communications with members will not be shared. Annual reports, however, will be published via the "Listening in Libraries" website.

Digital products shared via the ListServ and hosted on the "Listening in Libraries" website shall be licensed under [Creative Commons CC BY-NC-SA 4.0](#). The [Creative Commons CC BY-NC \(non-derivative\) 4.0 license](#) will cover the annual reports since the PI will protect the advisory committee's contributions.



### **Technical Requirements and Documentation**

Microsoft Office software – specifically Word, Excel, and PowerPoint – will be used to manage and create project data. ODU’s Microsoft OneDrive subscription will be required to store data (e.g., interview transcripts, research notes, data analysis spreadsheets, etc.). The “Listening in Libraries” website will be hosted on a secure, ODU-provisioned Web server. An ODU-provided Web server will be used to develop and maintain the website, with a secure file transfer protocol (SFTP) established for managing HTML, CSS, JS, PHP, and other documents. Additionally, secure MySQL database access will be needed to maintain website data. The website’s publicly available pages will comply with the [Web Content Accessibility Guidelines \(Version 2.2\)](#), ensuring that users with disabilities may receive and benefit from the same information.

### **Continuing Review of Data Management Plan**

This data management plan will be in effect after the three-year grant period. Conference Proceedings will be available through the publisher’s website, and the PI will make them available via ODU’s Digital Commons. ODU’s librarians maintain the Digital Commons platform, which allows scholars to reach broader audiences through open-access publishing and search engine optimization, demonstrate research impact by gathering and analyzing scholarly metrics, and archive research data. The PI will also submit journal manuscripts to open-access publishers to broadly disseminate the findings. Interview protocols will be shared in research publications and, following publication, hosted on the “Listening in Libraries” website. [ODU’s Information Technology Services](#) will indefinitely host the website and routinely back it up to prevent data loss.

The PI will periodically review the DMP during and after the grant period. During the three years, the PI will meet with the advisory committee at least twice yearly. The PI and advisory committee will review the DMP to ensure project activities meet its specifications.