Equitable Access for the Blind, Visually Impaired, and Print-Disabled (BVIPD) Students in Online Learning: A Study of BVIPD Services Among Southeastern Conference (SEC) Institutions

Introduction

This project addresses Laura Bush 21st Century Librarian Grant program **Goal 3, Objectives 3.1, 3.2, 3.3 and 3.4**. The University of South Carolina, School of Information Science (USC/iSchool) requests $249,394 for a **three-year** research and implementation grant. The project is aimed at developing a **Disabilities Services Offices (DSOs)-Academic Libraries Partnership Model** between DSOs and university libraries in the Southeastern Conference (SEC) institutions built around the existing legal infrastructure for providing accessible content to **Blind, Visually Impaired, and Print-Disabled (BVIPD)** students enrolled in online courses (Laura Bush Program Goal 3, Objectives 3.1, 3.2, 3.3 and 3.4). The choice of the SEC region is largely due to the geographical location of the research team. This will make it more feasible for team members to visit campuses for data collection activities with participants. Although most SEC institutions are Research One (R1) institutions, the processes and procedures for serving BVIPD students should be similar at most Institutions of Higher Education (IHEs) around the United States. The results can be applicable to and replicated by other institutions throughout the U.S. This project is centered around DSOs as the legally designated entities for determining student eligibility for accessibility services with university libraries as the main service entities most qualified to support DSOs in curating, storing and providing access to accessible content.

The main problem addressed by the project is the lack of timely and equitable access to accessible content, content that is otherwise more readily available to non-BVIPD students (Scott & Aquino, 2020). The proposed **DSO-Academic Libraries Partnership Model** will specifically address the **RRDRS Service Framework** which was identified by Butler, Adler, and Cox (2019) to include the following: **Request** (student requests content); **Remediation** (accessible content is prepared or created); **Delivery** (accessible content is delivered); **Retention** and **Sharing** (accessible content used regularly is retained for future use and shared as needed). This framework will maximize services to BVIPD students and improve equity of access. By their nature and expertise, academic libraries can support the work of DSOs at each point of the **RRDRS service framework**, especially the **Retention** and **Sharing** stage. The **RRDRS service framework** is part of the **DSO-Academic Libraries Partnership Model**. The researchers have received an internal grant to pilot the proposed study at the University of South Carolina (USC) between May 2023 and May 2024. The pilot project will enable the research team to start working on activities in Phase 1 of the proposed project. Since USC will be ahead of other study sites, the data collected at this site through the pilot project will help the researchers to develop a draft **DSO-Academic Libraries Partnership Model** in Phase 6, which, with preliminary data from other SEC institutions, will be developed, piloted, and evaluated at USC between Fall 2025 and Summer 2026.

The proposed project complements the work of Professor John Unsworth, Dean of Libraries & University Librarian for the University of Virginia and PI for "Educational Materials Made Accessible" (EMMA).EMMA is an outgrowth of an IMLIS funded pilot project from 2015. Professor Unsworth has offered to consult with the proposed project and is willing to share with the team anything the EMMA project has done in order to leverage the work planned within the proposed project.

Additionally, the **Library Accessibility Alliance (LAA)**, which is focused on making library resources, such as electronic databases, universally accessible, has endorsed the proposed project through a letter of support. The LAA represents some of the major research and academic libraries in the nation through member consortia with the Big Ten Academic Alliance (BTAA), the Association of Southeastern Research Libraries (ASERL), the Greater Western Library Alliance, the

Washington Research Library Consortium (WRLC), and the Ivy Plus Libraries Confederation (IPLC). It is noteworthy that there is much overlap between the ASERL and SEC members. Therefore, the proposed project involves a significant number of the LAA's member institutions in the Southeast region. Finally, given the representation of major IHEs within the LAA member consortia, this partnership helps assure the project's national impact. The LAA has pledged to advise the research team as needed throughout the life cycle of the project.

To ensure that all project deliverables including, but not limited to papers, websites, and audiovisual materials are accessible, the project team is retaining the services of Able South Carolina (Able SC), a South Carolina based federally-recognized disability-led advocacy organization that provides accessibility audit services. A majority of Able SC staff members are people with disabilities, and several who will be assisting with the proposed project are blind. This makes Able SC uniquely positioned to support the project because of the lived experiences of key contact staff that will conduct the accessibility audits for the project. Some are recent college graduates and, therefore, will have firsthand knowledge of the challenges BVIPD students experience navigating the accessibility infrastructure in higher education. Able SC will audit for accessibility of all project outputs at all stages of the project cycle.

DSOs can provide continuous training to academic libraries on the legal and policy frameworks that regulate the provision of services to BVIPD students, especially the highly technical area of copyright and related legal frameworks. This grant proposal is focused primarily on copyright issues because copyright law is the primary legal framework implicated in the provision of accessible content to BVIPD students, but in no way devalues the importance of other areas of law and policy like privacy and the Americans with Disabilities Act (ADA) of 1990. For instance, the project team is aware that section 504 of the Rehabilitation Act of 1973 and Title II of the ADA prohibit discrimination against students with disabilities. However, the current project is narrowly focused on the legal infrastructure that permits the creation, distribution, and storage or retention of accessible content for BVIPD students on college campuses. Copyright law is the primary legal domain regulating such activities.

This proposed grant, which employs Jaeger and Burnett's (2010) multi-level information worlds theory, will address these issues through a **mixed methods research design** involving data collection from BVIPD students, DSOs, and academic libraries. BVIPD student will only participate in the study after accepting an invitation from the DSOs sent on behalf of the researchers.

Need: The BVIPD population is historically underserved by libraries (Epp, 2006; Copeland, 2011; Copeland, 2012; Copeland, 2023; Bonnici et al., 2015). Most published literature is not available to BVIPD students, with only 5% of published works available in BVIPD accessible formats (National Federation for the Blind, 2019). According to the Centers for Disease Control and Prevention (CDC), vision disabilities are among the top ten disabilities for populations 18 years and older (CDC, n.d.). A recent study found BVIPD students were frustrated by this lack of accessible formats (Beyen, 2018). Also, an Association on Higher Education and Disability (AHEAD) survey found that amidst course format changes, students with disabilities were having greater overall difficulty adjusting to online learning environments due to inaccessibility of content (Scott & Aquino, 2020). The transition to online learning is permanent and has widespread, long-term implications in the learning of BVIPD students (Diep, 2021). Although a substantial set of legal tools and decisions have created opportunities to provide accessible learning materials to BVIPD students in online classes, little is known about the extent to which these laws are fully utilized to further the academic performance and experiences of BVIPD students through ready access to learning materials. A 2019 study by Butler, Adler and Cox, published prior to the pandemic, showed that IHEs enjoyed wide legal latitude to make and distribute accessible learning materials. However, it is unclear whether and how most DSOs at IHEs are utilizing the existing legal infrastructure to leverage the expertise, resources, and infrastructures in academic libraries in the furtherance of BVIPD students' learning experiences in online classes.

Impact: The proposed project focuses on increasing access and information use for and among BVIPD students and bringing equity to historically marginalized groups in higher education. Ultimately, this project will develop a **DSO-**

Academic Libraries Partnership Model designed to address inefficiencies in the **Request, Remediation, Delivery, Retention** and **Sharing (RRDRS) service framework** for accessible content. If implemented in SEC institutions and beyond, this model has the potential to improve equity of access for BVIPD students and directly impact their degree completion rates and overall quality of educational experiences. For instance, BVIPD students in online classes will have accessible content for those courses at the same time that non-BVIPD students enrolled in the classes receive content. Currently, BVIPD students are often left waiting weeks or longer to receive the same content made available to other students on the first day of school or, in some cases, weeks prior to the start of the semester. The **RRDRS service framework**, once developed and adopted by IHEs and DSOs, will significantly reduce the time lag between the beginning of the semester and when BVIPD students receive accessible content.

The model and research findings will be widely shared at professional and academic conferences, such as the Association on Higher Education and Disability (AHEAD) and the Association of College and Research Libraries (ACRL), scholarly and popular publications. Findings will also be shared with participating institutions and will be broadly available via an openly accessible project website. The project is partnering with the LAA, a national organization representing five of the major library consortia in the United States, working to ensure that library electronic resources are universally accessible. The LAA has agreed to assist with this project throughout its lifespan on ways in which academic libraries can work with DSOs to advance **the RRDRS service framework**.

Statement of National Need
The proposed project will investigate whether and how DSOs and academic libraries in the SEC institutions make use of existing legal infrastructure to provide accessible content to BVIPD students in online courses. In this section the researchers demonstrate the gap in accessible services addressed by the proposed work.

Disability and visual impairment in the U.S.: There is an urgent need to provide information services to BVIPD individuals, which, in the context of this study, are BVIPD students. The full range of accessible content and services can significantly reduce or even remove barriers that BVIPD individuals face in finding and using information (Tripathi & Shukla, 2014, p. 105). Tripathi and Shukla (2014) note that using assistive technology like braille embossers, talking and large print processors, screen readers, speech recognition programs, text-to-speech synthesizers, and screen magnifiers can considerably enhance access to information since assistive technologies allow those who are blind or visually impaired to complete "tasks such as reading an assignment, listening to a textbook, enlarging a syllabus, or printing a braille copy of a page or computer file" (p. 105). Among people with disabilities, educational attainment is lower, with 12.3% fewer individuals with disabilities graduating high school and 14.3% fewer completing a Bachelor's degree (Ryan & Bauman, 2016; Kawooya, 2023). As of 2020, the unemployment rate for people with disabilities was nearly double the unemployment rate of people without disabilities, which increases the likelihood of these individuals living below the poverty line. These statistics clearly illustrate inequities in educational attainment, employment, and poverty status between populations with and without disabilities (U.S. Department of Labor, n.d.). Unlike other disabilities, blindness and visual impairment render the affected person almost entirely dependent on others to function in society, including in education and research contexts. Accessible content is a critical part of the necessary support services required by BVIPD students (Wood, et. al, 2017).

Legal barriers to accessibility: In addition to technological and service barriers noted above, there are legal barriers that prohibit the production, reproduction, and distribution of accessible content. Copyright laws present the biggest barriers to creating and sharing accessible works for BVIPD individuals. To that end, under the World Intellectual Property Organization (WIPO), a United Nations (UN) agency, the Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Blind, Visually Impaired or Otherwise Print Disabled (The Marrakesh Treaty) was successfully negotiated in 2013. The Marrakesh Treaty is aimed at promoting access for BVIPD individuals by setting global minimum legal standards for creating and distributing accessible content (WIPO, 2013). Generally, copyright laws grant the exclusive rights to authors to reproduce, distribute, and make publicly available copyrighted content (Hirtle, Hudson & Kenyon, 2009; Butler, Adler & Cox, 2019). Copyright laws often provide exceptions and limitations to carry out certain activities without seeking permission from the copyright owners. However, the exceptions and limitations are generally narrow in

scope, territorial in nature, and specific in subject matter (Hirtle, Hudson & Kenyon, 2009). Making and distributing a copy of a work in an accessible format without the authority of the rights holder infringes the rights holder's copyright, unless an exception permits this activity. Prior to Marrakesh, the copyright laws of many developed countries had such exceptions, but the copyright laws of most developing countries did not (Butler, Adler and Cox, 2019). International copyright law did not address converting content into accessible formats (Butler, Adler & Cox, 2019; Kawooya, Keninger, Owen, & Tabb, 2016; Kawooya, 2023). Likewise, the mechanism for the cross-border transfer of accessible content was missing from the international copyright treaties, making the production and sharing of such content expensive across the world (Butler, Adler & Cox, 2019). Prior to the Marrakesh Treaty, accessible format copies of books produced for BVIPD persons in one country usually could not be shared with BVIPD persons in another country, even if the domestic copyright law of each country allowed the making of the accessible format copy. No international copyright framework existed to facilitate the exchange of accessible materials. Consequently, wasteful duplication persisted when the same kind of accessible material was created or reproduced in one or more countries. The total cost of this duplication then becomes a deterrent to DSOs and other entities located within IHE's, to produce and make available, within a reasonable timeframe, different forms and varieties of accessible materials to BVIPD students.

Accessibility under U.S. Law: The making of an accessible format copy of a copyrighted work by a DSO implicates the copyright owner's exclusive rights of reproduction and preparation of derivative works, 17 USC 106(1) and (2). The sharing of accessible format copies between DSOs at different institutions implicates the copyright owner's exclusive rights of distribution and public performance, 17 USC 106(3) and (4). A DSO could engage in these activities only to the extent permitted by exceptions to exclusive rights provided by the Copyright Act, specifically fair use, 17 USC 107, and the Chafee Amendment, 17 USC 121. (The Chafee Amendment permitted entities that provided services to people with visual disabilities to make and distribute accessible format copies.) Historically, DSOs applied these exceptions narrowly out of concern with copyright infringement liability. This resulted in delays in providing BVIPD students with the materials they needed to succeed in their courses.

Recent legal developments have significantly reduced the threat of legal liability for copyright infringement and violating the DMCA. First, the U.S. Court of Appeals for the Second Circuit in *Authors Guild v. Hathitrust* 755 F.3d 87 (2d Cir. 2014) clarified that the making and retaining of accessible format copies by institutions of higher education (IHEs) for print disabled members of its community was a fair use; and that fair use supplemented, and was not displaced by, the Chafee amendment. (Butler, Adler and Cox 2019) Second, in 2018, the United States ratified the Marrakesh Treaty and Congress 'domesticated' the Treaty as the Marrakesh Treaty Implementation Act (MTIA). The MTIA broadened and clarified the Chafee Amendment, and added a new Section 121A, 17 USC 121A, that applied to the cross-border exchange of accessible format copies. (U.S. Copyright Office, 2019, p. 2). The proposed project will investigate whether and how DSOs and academic libraries in the SEC institutions make use of existing legal infrastructure to provide accessible content to BVIPD students in online courses. Between the Marrakesh Treaty Implementation Act (MTIA), Fair Use Doctrine, and case law, DSOs enjoy wide legal latitude to make and distribute accessible content. This study investigates whether DSOs are familiar with current legal standards, and if they are, are they taking advantage of it to serve BVIPD students?

Project Objectives

The **first objective** of the study is to establish the extent to which DSOs are familiar with the current legal infrastructure to facilitate access for BVIPD students. This study investigates how that familiarity, or lack thereof, translates into services for BVIPD students. Specifically, how do DSOs implement the four steps in the **RRDRS service framework**? That is:

1.   **Request** – a BVIPD student requests an accessible copy;
2.   **Remediation** – the DSO or service unit like the academic library prepares or creates an accessible copy. Under remediation, "IHEs and their affiliates are free to anticipate future requests by preparing accessible texts of works that are likely to be in demand" (Butler, Adler & Cox, 2019, p. 18);
3.   **Delivery** – the DSO or service unit (e.g. academic library) delivers an accessible copy "in file formats appropriate for their use, without technological protection measures" (TPMs) (Butler, Adler & Cox,

2019, p. 19); and

4. **Retention and Sharing** – "Since the delivery of accessible texts to qualified persons is a lawful fair use, the creation of the underlying database(s) that make that delivery possible is also noninfringing" (Butler, Adler & Cox, 2019, p. 19). Wood et al. (2017) recommended that "repository services [are] an effective way to assist IHEs with providing accessible instructional materials to students with disabilities" (p. 3). Wood et al further note that "With notable exceptions, U.S. libraries are doing very little to address disability concerns on campus. The majority of efforts are reactions to specific barriers for specific individuals" (p. 4). The current study investigates what steps DSOs and academic libraries have taken to establish databases and repositories for retention of accessible content for BVIPD students for current and future use.

The **second objective** is to understand how DSOs can work with academic libraries to serve BVIPD students to meet the requirements of the **RRDRS service framework**. Little is currently known about how DSOs work with academic libraries to utilize the above legally permissible four steps. DSOs and academic libraries need to work together to increase accessible content for BVIPD students.

The **third objective** of the study is to examine BVIPD students' lived experiences with the current services and how the lived experiences can improve if the **RRDRS service framework** is implemented by DSOs and academic libraries.

The **fourth objective** is to develop, pilot, and evaluate the **DSO-Academic Libraries Partnership Model**, built around the **RRDRS service framework**. The researchers have received an internal grant to pilot the proposed study at the University of South Carolina (USC) between May 2023 and May 2024. The pilot project will enable the research team to start working on activities in Phase 1 of the proposed project. Since USC will be ahead of other study sites, the data collected at this site through the pilot project will help the researchers to develop a draft **DSO-Academic Libraries Partnership Model** in Phase 6, which, with preliminary data from other SEC institutions, will be developed, piloted, and evaluated at USC between Fall 2025 and Summer 2026.

Once all data has been collected from all participating SEC institutions, the researchers will fine tune the USC Partnership model to reflect the realities evident in the data from all SEC institutions.

Research Questions

In order to achieve the objectives, the study will address the following research questions:

1. How familiar are DSOs and academic libraries with current legal infrastructure to facilitate access for BVIPD students?

    1.1. Request – Do DSOs have established procedures for BVIPD students to request accessible copies?

    1.2. Remediation – Do DSOs or academic libraries prepare or create an accessible copy upon request or in anticipation of need (For example: for regularly used materials)?

    1.3. Delivery – Do DSOs or academic libraries deliver accessible copies to BVIPD students in appropriate formats and how are the accessible copies delivered?

    1.4. Retention and sharing – Do DSOs or academic libraries retain and create database(s) of accessible copies for future use by BVIPD students?

2. How can DSOs work with academic libraries to serve BVIPD students to meet

the requirements of the **RRDRS service framework?**

3. What are BVIPD students' lived experiences with the current services and how can their lived experiences be improved upon by the implementation of **RRDRS service framework** by DSOs and academic libraries?

4. How might the **DSO-Academic Libraries Partnership Model**, built around the **RRDRS service framework,** help the effective and efficient delivery of accessible content to BVIPD students?
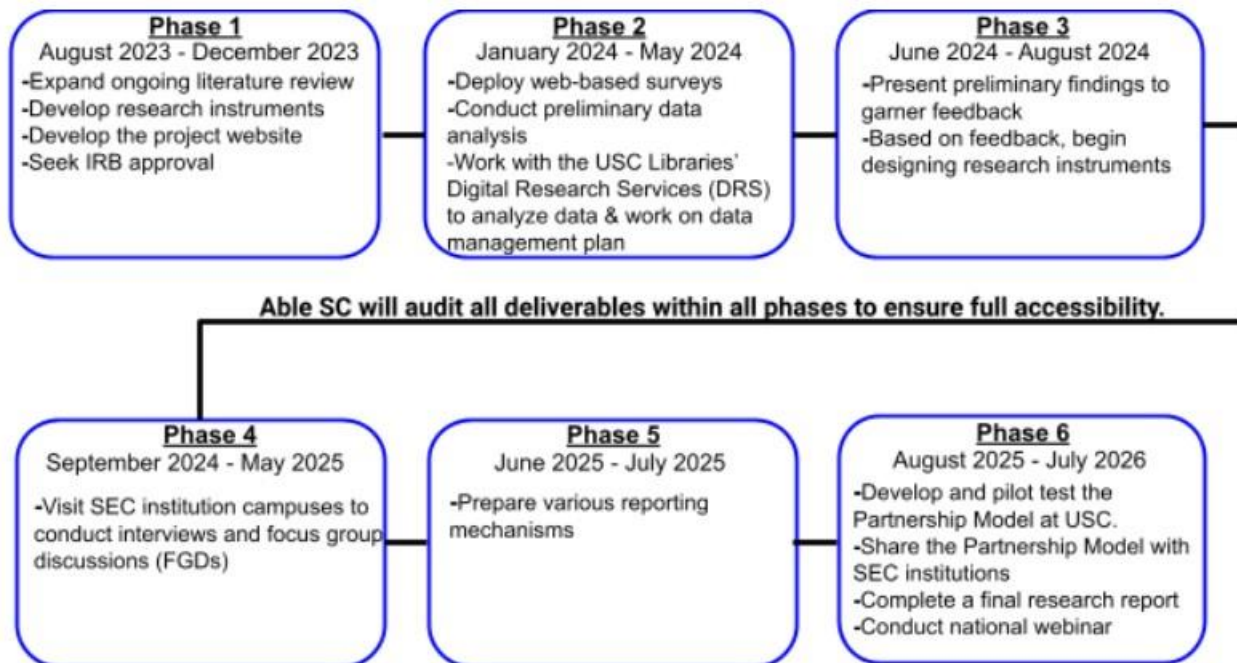
Theoretical Framework

The theoretical framework used in this project is Jaeger and Burnett's (2010) multi-level information worlds theory, which builds predominantly upon theories of the late Dr. Elfreda Chatman and philosopher Jurgen Habermas, as well as theory and research from a wide range of other fields. According to information worlds theory:

> "Information behavior is simultaneously shaped by immediate influences, such as friends, family and other trusted small world sources, and by larger social influences, including public sphere institutions, media, technology and politics. Information behaviors of all sorts are situated and contextualized, given meaning by the multi-tiered contexts within which they occur." (p. 8)

Accordingly, information worlds have structural and behavioral implications, in that, social constructs (such as the value ascribed to disability and accessibility) and societal structures or infrastructures (such as law) directly and reciprocally inform one another. Information worlds "provides a framework by which to simultaneously examine information behavior at both the immediate and the broader social levels'' (Jaeger and Burnett, 2010, p. 1). The proposed study will analyze five interconnected concepts of Information Worlds (*social norms*-research questions 2 & 4; *social types*-research questions 2 & 4; *information value*-research question 3; *information behavior*-research questions 2, 3 & 4; and *boundaries*-research questions 1) to address the aforementioned research questions. Namely, the study will bring together key stakeholder populations - BVIPD populations, DSOs and academic libraries to determine *whether IHEs in the SEC region are utilizing the expanded legal infrastructure to extend accessible services and content to BVIPD students in online learning.* By bringing each stakeholder group together for focus groups, each group will have "exposure to the perspectives of the other'' (Jaeger and Burnett, 2010, p. 9). Exchanges of information between the boundaries of information worlds (the information world of BVIPD populations and the information world of those providing a service infrastructure to BVIPD populations) will share the social norms of each world and help each stakeholder group to better understand and "shape the ways in which that information is treated, understood, and used" (Jaeger and Burnett, 2010, p. 9). As each stakeholder group better understands the perspectives and the needs of others, each group will have a previously unrealized opportunity to identify their respective needs and perceptions. This information can then be used to identify those institutional barriers to information access and accessibility for BVIPD populations and develop solutions for overcoming them. Ultimately, all stakeholders will contribute to the creation of an accessible, usable infrastructure that meets everyone's needs. The resulting proposed **DSO-Academic Libraries Partnership Model** can then be applied by IHEs to efficiently develop and provide accessible services to BVIPD students, services that are consistent with the current legal infrastructure for accessibility.

Project Design

Phase 1 — August 2023 - December 2023
- Expand ongoing literature review
- Develop research instruments
- Develop the project website
- Seek IRB approval

Phase 2 — January 2024 - May 2024
- Deploy web-based surveys
- Conduct preliminary data analysis
- Work with the USC Libraries' Digital Research Services (DRS) to analyze data & work on data management plan

Phase 3 — June 2024 - August 2024
- Present preliminary findings to garner feedback
- Based on feedback, begin designing research instruments

Able SC will audit all deliverables within all phases to ensure full accessibility.

Phase 4 — September 2024 - May 2025
- Visit SEC institution campuses to conduct interviews and focus group discussions (FGDs)

Phase 5 — June 2025 - July 2025
- Prepare various reporting mechanisms

Phase 6 — August 2025 - July 2026
- Develop and pilot test the Partnership Model at USC.
- Share the Partnership Model with SEC institutions
- Complete a final research report
- Conduct national webinar

The project will employ a mixed method design using qualitative (interviews and focus groups), and quantitative methods (survey-questionnaire). Data will be collected from fourteen (14) members of Southeastern Conference institutions. The choice of the SEC region is largely due to the geographical location of the research team. This will make it more feasible for team members to visit campuses for data collection activities with participants. Although most SEC institutions are R1 institutions, the processes and procedures for serving BVIPD students should be similar at most IHEs around the United States. The results can be applicable to and replicated by other institutions throughout the U.S. The project will be carried out in six phases over a three-year 36-month period beginning August 1, 2023 and ending July 31, 2026.

Sampling and Participant Selection: The Southeastern Conference has fourteen members, including the flagship public universities of ten states, three additional public land-grant universities, and one private research university. The research team will use **purposeful sampling** to select BVIPD student participants. BVIPD student participants enrolled as either undergraduates or graduates will be selected based on their status of current or previous enrollment in an online course at an SEC institution. The research team will travel to each SEC institution to conduct interviews and focus groups with BVIPD students living on or near campus. However, in an effort to include BVIPD students who may not be able to physically come to campus, separate interviews and focus group discussions will be conducted with remote students via a tele- or video- conferencing platform. BVIPD student will only participate in the study after accepting an invitation from the DSOs sent on behalf of the researchers.

The interviews will be conducted with 10 BVIPD students per institution and focus groups will include 5-7 BVIPD students. Focus groups will be conducted after the interviews to follow up and clarify preliminary findings. To help ensure participation from BVIPD students, BVIPD focus group participants will each receive a $100 gift card. The goal is to ensure effective participation by all BVIPD students selected for the study.

In order to protect student identity, privacy, and be consistent with The Family Educational Rights and Privacy Act (FERPA), student participants will be identified with the assistance of DSOs, who have records of BVIPD students that are registered with their offices. Coordinating with DSOs will ensure access to study participants and will assist the research team by ensuring that each student's accessibility needs are met throughout the study. The research team is aware of a major limitation in this approach in that many students living with a disability either choose not to disclose their status to

DSOs or are unable to qualify for assistance due to a lack of an official diagnosis, which can be expensive and time consuming to obtain. While the team is aware that these students' opinions and accessibility needs are no less important, DSOs will be the point of access to student participants for this proposed work as one must be registered with a DSO to benefit from the **RRDRS service framework**. A future study will investigate why students don't register with DSOs or encounter difficulties that discourage them from completing the process of registering. That same study will investigate ways in which students can be encouraged to register with their campus DSO in order to take advantage of the **RRDRS service framework**.

Academic librarians participating in the study should be those who work directly with BVIPD students. All participants will be required to give written consent in order to take part in the study.

PHASE 1 (8/23 to 12/23): The groundwork for the project will be carried out by expanding on an ongoing literature review on services for BVIPD students provided by DSOs and academic libraries. Researchers will find additional literature on BVIPD students in online classes. In this phase researchers will also develop research instruments, develop the project website, and seek IRB approval. The project team has received an internal grant from USC. Most of the activities in this will have started at USC through funding from this grant. **Able SC will audit all deliverables within this and all phases to ensure full accessibility.**

PHASE 2 (1/24 to 5/24): The research team will deploy web-based surveys to collect data from at least 2 DSO staff members per institution (Research Question 4) and conduct preliminary analysis of the collected data.. The sample size for DSO staff member surveys will come to a minimum of 28. The team will work with the Digital Research Services (DRS) at the University of South Carolina Libraries to analyze text and numeric (quantitative) data using the data analysis and visualization services and software available in the department (Nvivo, SPSS, and others). In addition to data analysis, the DRS support staff will assist the research team in designing and executing high quality data management plans consistent with the prevailing Federal Government policies and procedures. **Able SC will audit all deliverables within this and all phases to ensure full accessibility.**

PHASE 3 (6/24 to 8/24): Preliminary DSO survey data will be presented over summer at conferences such as the Association on Higher Education and Disability (AHEAD) conference and garner input from participants. If there is no opportunity to present, researchers will conduct small meetings with DSO professionals at the AHEAD conference to get feedback. Based on the feedback from the conference, researchers will begin designing instruments for the focus group discussions and interviews. **Able SC will audit all deliverables within this and all phases to ensure full accessibility.**

PHASE 4 (9/24 to 5/25): Due to this being a travel-heavy period, involving collection of data from all 14 institutions, this particular phase will last longer than previous phases. A member of the research team will visit SEC institution campuses to conduct interviews and focus group discussions (FGDs) over a two-day period. On the first day of site visits, the research team will conduct interviews with ten individual BVIPD student participants per institution (Research Question 3 & 4).

A FGD will be conducted with DSO staff and academic librarians (Research Question 1, 2, 3, & 4). FGDs will be the final step in data collection to verify data gathered via surveys/questionnaires and interviews from Phase 3. **Able SC will audit all deliverables within this and all phases to ensure full accessibility.**

PHASE 5 (6/25 to 7/25): The researchers will take advantage of the summer period to analyze and interpret data from Phase 4. Various reporting mechanisms will be prepared. **Able SC will audit all deliverables within this and all phases to ensure full accessibility.**

PHASE 6 (8/25 to 7/26): Phase 6 is longer than other phases because it involves two major activities. The first activity will be the research team beginning the dissemination of research findings (conference presentations, journal publications, webinars for targeted groups) as opportunities present.

The second activity will be to develop, pilot, and evaluate the **DSO-Academic Libraries Partnership Model**, built around the **RRDRS service framework**.

Fall 2025: The first iteration of the **DSO-Academic Libraries Partnership Model** will be developed and pilot tested at USC. In the fall of 2025, the research team will work with the Student Disability Resource Center, the DSO at USC, to identify potential courses with current BVIPD student enrollment where the model will be tested. Advisement for spring registration begins in September, giving the DSO enough data on which BVIPD student is registered in which online class for the spring 2026 semester. On behalf of the research team, the DSO will send out invitations to registered BVIPD students to participate in the pilot. Students who elect to participate will give informed consent, both to maintain high ethical standards and satisfy requirements of the IRB process. Because these students may be different from the participants from previous study phases, this informed consent is different from the informed consent from earlier phases of the study.

Spring 2026: The rest of the pilot activities will be conducted in spring of 2026 and will follow the **RRDRS service framework** based on preliminary findings from the research data. If the preliminary findings show the need to amend the **RRDRS service framework**, those changes will be integrated prior to piloting the model. Towards the end of the Spring 2026 semester, data will be collected from participating students, DSO staff, and academic librarians at USC on the effectiveness of the model. All will be given the opportunity to offer their feedback on their experience with the success of **RRDRS service framework** via a study exit survey.

Summer 2026: The research team will write up the findings from the pilot and earlier phases of the study and present the outcomes during a half day national webinar to all SEC DSOs, academic libraries, and BVIPD student participants. The research team will also invite participants from the LAA, AHEAD, the National Federation for the Blind, and ACRL - Universal Accessibility Interest Group conferences. Part of the webinar will be devoted to a feedback session on the feasibility of the model. Representatives of all SEC institutions will be invited to see how the model applies to their differing environments. The project team will complete a final research report. **Able SC will audit all deliverables within this and all phases to ensure full accessibility.**

Diversity Plan: By its very nature, the proposed project fulfills IMLS diversity goals and initiatives. Persons who are differently-abled have been marginalized from library services (Epp, 2006; Copeland, 2011; 2012; 2023; Bonnici et al., 2015; Majinge and Mutula, 2018). Although situations continue to improve, much remains to be done. The proposed project focuses on increasing access and information use for and among BVIPD students and bringing equity to a historically marginalized group. It is a social justice and human rights issue. All project materials and FDG notes that do not breach participants' confidentiality will be made available in accessible formats. Able SC, a federally-recognized disability-led advocacy organization, has agreed to review all materials to ensure they are accessible and meet the needs of BVIPD students.

National Impact
BVIPD Student Benefit: This research has the potential to improve the personal experiences, equitable access to information and education, likelihood of academic success, and subsequent ability to enjoy a full life experience for a group that is often overlooked and neglected in less inclusive environments. Equitable access to information is a deterministic precursor to equitable access to education. In turn, equitable access to education has important implications for increased access to employment and income earning potential. The goal is for other institutions of higher learning *nationwide* with similar structures to be able to utilize that proposed model to service BVIPD student populations. Although the project will provide a deliverable in the form of the proposed model, the primary goal will be to improve the lives of individual BVIPD students, as increased and more equitable access to education can also

positively impact their subsequent employment and income earning potential.

DSOs and Academic Libraries Benefit: The project will *propose* a **DSO-Academic Libraries Partnership Model** that shows how DSOs and other critical services on campus can build workflow systems that utilize the existing legal infrastructure to facilitate the efficient *request* for accessible content, *remediation* or *creation* of that content, *delivery*, and *retention* and *sharing* of accessible content. DSOs will be empowered to provide faculty with the education regarding the needs of BVIPD students and to help faculty develop and implement responsive strategies in the design and delivery of accessible courses.

Nationwide Impact: Findings will be shared widely with all DSOs, libraries, students, and other stakeholders through a project website, as well as peer reviewed and professional publications for academic and professional communities. Additionally, the research team will write up the project report and present the outcomes during a national webinar in Phase 6 to share the model and accept feedback. This webinar will involve SEC DSOs, academic libraries, BVIPD student participants, LAA representatives, AHEAD representatives, representatives from the National Federation for the Blind, and all other stakeholders identified during the course of this project. Multi-stage findings of the project will be presented at conferences organized by DSOs and academic libraries, such as the ACRL's annual conference - Universal Accessibility Interest Group, the National Federation for the Blind, and AHEAD. The LAA has endorsed this project through a letter of support and has pledged to advise the research team as needed throughout the life cycle of the project. Given the representation of major IHEs within the LAA member consortia, this partnership helps assure the project's national impact.

Supporting Documents:
1. References (Supportingdoc1)
2. Able SC Letter of Commitment (Supportingdoc2)
3. Library Accessibility Alliance Letter of Support and Letter of Support from Professor John Unsworth, PI for Educational Materials Made Accessible and Dean of Libraries & University Librarian for the University of Virginia (Supportingdoc3)
4. Graduate Assistant and Consultant Bio-Job Description (Supportingdoc4)
5. Research questions and corresponding data collection and analysis methods, and Sample research instrument questions (Supportingdoc5)

	Year One												Year Two												Year Three											
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July
Phase One	█	█	█	█	█																															
Expand ongoing literature review																																				
Develop research instruments																																				
Develop the project website																																				
Seek IRB approval																																				
Phase Two						█	█	█	█	█	█																									
Deploy web-based surveys																																				
Conduct preliminary data analysis																																				
Work with the USC Libraries' Digital Research Services (DRS) to analyze data & work on data management plan																																				
Phase Three											█	█	█																							
Present preliminary findings to garner feedback																																				
Based on feedback, begin designing research instruments																																				
Phase Four														█	█	█	█	█	█	█	█	█														
Visit SEC institution campuses to conduct interviews and focus group discussions (FGDs)																																				
Phase Five																							█	█												
Prepare various reporting mechanisms																																				
Phase Six																									█	█	█	█	█	█	█	█	█	█	█	█
Develop and pilot test the Partnership Model at USC.																																				
Share the Partnership Model with SEC institutions																																				
Complete a final research report																																				

Digital Products Plan

The Digital Products Plan (DPP) for the proposed project is organized into the four required areas:

1) Type: What types of digital products will you create?

A project website will be created. Additional digital products are scholarly (about 5); non-scholarly papers (about 3); reports to IMLS (2); audio recordings (interviews - 140 student interviews, 10 per institution), and focus group discussions (FGDs) with DSOs and academic librarians (14 FGDs, 1 per institution); and webinar recordings (1 webinar in phase 6 to present and receive feedback on the **DSO-Academic Libraries Partnership Model**).

Software and platforms to be used in creating the digital products will include the following: Microsoft programs (Excel, Powerpoint, Word), data collection and analysis software (Nvivo, SPSS, and Qualtrics), and accessibility software (CaptionSync - to provide closed captioning to accommodate respondents accessibility needs in meetings). Digital recorders will be secured from the School of Information Science at USC.

The digital products will be stored in the following open formats: Office Open XML (alternative to XML), OpenDocument (alternative to DOC), PDF, CSV, OpenOffice presentations (alternative to PPT), and MPEG-4**.**

2) Availability: How will you make your digital products openly available (as appropriate)?

All data in different password protected formats will be stored on the PI's/Co-PI's work laptops until it is ready for analysis and/or deposit in the Open Science Framework. Since the Open Science Framework is not HIPAA-compliant, all personally identifying information will be removed from any text and statistical data before uploading to the data repository. All data will be backed up on a high density external drive under password protected files to be safely kept by the PI/Co-PI for at least 3 years beyond the project life cycle.

Additionally, data associated with reports or publications stored on the project website or journal websites will be linked to the publications in each location.

3) Access: What rights will you assert over your digital products, and what limitations, if any, will you place on their use? Will your products implicate privacy concerns or cultural sensitivities, and if so, how will you address them?

All products will be issued under the Creative Commons license CC BY 4.0. Essentially anyone can share the data ("copy and redistribute the material in any medium or format") and adapt ("remix, transform, and build upon the material"). In so doing, the user ("licensor") "cannot revoke these freedoms as long as you [they] follow the license terms", that is, impose new legal restrictions. In addition, they should attribute this project as the source of the data.

Digital content will primarily be hosted on the project website where it will be openly available to anybody with access to the Internet after personal identifying information has been removed. The webmaster and Able SC will ensure that all content on the project website is audited when it is first

uploaded and periodically checked for accessibility. Some deliverables, like published journal articles and conference papers where research data is required or accepted, will be accompanied by the applicable anonymized data sets. Likewise, any submission to USC's institutional repository (https://scholarcommons.sc.edu/) will be accompanied with relevant data files. ONLY anonymized data will be shared. No audio data will ever be shared. Instead, data will be stored on the laptops and high-capacity external drives owned and controlled by the PI and Co-PI.

Since the primary target of the study are Blind, Visually Impaired, and Print-Disabled (BVIPD) students in online learning environments, some of that information may potentially reveal disabilities of individual participants. It is the plan and goal of this project to strip data collected (interviews, focus groups, and surveys) of any personally identifying information. Anonymizing individual identifiers will be created and used to refer back to primary data (e.g. University of South Carolina-Participant 1, Participant 2, etc). That way, no published results or shared data can be traced back to individual participants. Data will be aggregated where necessary and possible to avoid instances where individual participants can be identified. These protections will be afforded to student participants and staff (DSOs and academic librarians) to allow them to speak candidly and avoid retribution if they speak negatively about the institution's accessibility efforts, procedures, and services. Finally, the DSOs will serve as intermediaries between the researchers and the student participants. BVIPD students will only participate in the study after accepting an invitation from the DSOs sent on behalf of the researchers.

The University of South Carolina's IRB process is rigorous and meets all Federal Law and guidelines regarding use of human subjects for research. The PI and Co-PI have successfully secured and helped other researchers secure IRB approval for past projects. Confidentiality and privacy of participants is of utmost importance to the research team. Both PI and Co-PI have years of qualitative and quantitative research and have worked in a variety of settings that require cultural sensitivity.

4) Sustainability: How will you ensure the sustainability of your digital products?

Data will be collected in a variety of formats (Excel or CVS questionnaire) and audio and transcription text data (interviews and FGDs). All data will primarily be stored on the laptops and high-capacity external drives owned and password controlled by the PI/Co-PI. Additionally, data associated with reports or publications stored on the project website or journal websites will be linked to the publications in each location. Finally, some deliverables, like published journal articles and conference papers where research data is required or accepted, will be accompanied by the applicable anonymized data sets. Likewise, any submission to Open Science Framework will be accompanied with relevant data files. ONLY anonymized data will be shared. No audio data will ever be shared.

Examples of project websites previously created and sustained by the web-person include the following:

https://sc.edu/study/colleges_schools/cic/research/sponsored_awards/promoting_health/index.php (IMLS funded).
https://sc.edu/study/colleges_schools/cic/research/sponsored_awards/equip/index.php(IMLS funded).
http://sjgn.uofsccreate.org/ (Library of Congress funded)

As noted, the first two are hosted on the College of Information and Communications' (CIC) website under "Sponsored Awards and Grants" where grants received by college faculty and staff have been hosted since 2016. This webpage is CIC's commitment to sustaining and making available all grant-funded projects now and in the future.

<div align="center">**Organizational Profile**</div>

A. Organizational Description

University of South Carolina Mission Statement
The primary mission of the University of South Carolina is the education of the state's diverse citizens through teaching, research, creative activity, and service. The University of South Carolina provides all students with the highest-quality education, including knowledge, skills, and values necessary for success and responsible citizenship in a complex and changing world (retrieved from: http://ipr.sc.edu/mission/system_ms.htm)

School of Information Science Mission Statement
The University of South Carolina School of Information Science's mission reflects our commitment to encouraging excellence in research and teaching; creating leaders committed to diversity and public service; promoting creativity; and encouraging the development of innovative practices that contribute to the creation of knowledge, advance cultural heritage stewardship, and improve our understanding of the important roles that libraries, information, and technology play in an empowered global society. This statement is available in the most recent ALA accreditation report completed during the 2016-2017 academic year.

Service Area
The University of South Carolina system is the largest university in the state, serving more than 41,000 students from around the globe through its flagship Columbia campus, three senior campuses (Aiken, Beaufort, and Upstate), and four regional campuses (Lancaster, Salkehatchie, Sumter, and Union). With a flagship campus recognized by the Carnegie Foundation as a top research and service institution and nationally ranked in start-up businesses, the University confers nearly 40% of all bachelor's and graduate degrees awarded at public institutions in South Carolina (retrieved from: http://ipr.sc.edu/mission/system_ms.htm)

Organizational History
The University of South Carolina system is the largest university in the state, serving more than 41,000 students from around the globe through its flagship Columbia campus, three senior campuses (Aiken, Beaufort, and Upstate), and four regional campuses (Lancaster, Salkehatchie, Sumter, and Union). With a flagship campus recognized by the Carnegie Foundation as a top research and service institution and nationally ranked in start-up businesses, the University confers nearly 40% of all bachelor's and graduate degrees awarded at public institutions in South Carolina (retrieved from: http://ipr.sc.edu/mission/system_ms.htm). Founded in 1801, the then-named South Carolina College flourished pre-Civil War, overcame postwar struggles, was re-chartered in 1906 as a university, and transformed itself as a national institution in the 20th and 21st centuries. In its 50th year, the School of Library and Information Science boasts a current enrollment of approximately 350 undergraduate and graduate students, a close partnership with the South Carolina Center for Community Literacy, and the University of South Carolina's literacy outreach program, Cocky's Reading Express.

B. External Funding
   a. **Proposed Project**
      N/A

   b. **Proposed Project Director**
      N/A

C. External Partnerships