# American Library Association (ALA) 2023 Emerging Leaders Team B Final Report

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#### Introduction

Team B of the 2023 class of American Library Association's (ALA) Emerging Leaders' program was tasked by the Distance and Online Learning Section (DOLS) of the Association of College and Research Libraries (ACRL) to identify accessible tools for online learning.

Our specific project task was to identify how academic librarians consider accessibility in designing and delivering online instruction, and what tools and technologies they use to support accessibility in the online learning environment. Our task was best accomplished by designing, developing, and creating a survey, which will be distributed by DOLS after the completion of the Team B project, to a wide-range of academic librarians involved in online and distance learning.

From February to May 2023, Team B reviewed literature and best practices, and drafted a survey. We received feedback from the DOLS Executive Committee and academic librarian peers, which was incorporated into our final survey. Throughout May and into June, our team put together a poster, video, and this final report to present our work as Emerging Leaders.

This report summarizes our project process, including a literature scan and our goals, methodology, survey development, outcomes, and next steps.

#### **Team Members**

Member Guide

Chimene Tucker, Chair, Executive Committee, ACRL's Distance and Online Learning Section

Staff Liaison

Lauren Carlton, American Library Association (ALA) Staff Member

Team Members

Lee Bareford, Head of the Learning Commons, Georgia Southern University

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#### **Project Goals and Objectives**

ACRL's Distance and Online Learning Section provided Team B with a Project Proposal (Appendix A) which included a Project Description and several goals. The DOLS Project Proposal was issued for review by the 2023 Emerging Leaders cohort in November 2022, alongside nine other proposals. The proposal's original goal was to identify technologies for online instruction that include accessibility and inclusion opportunities. However, recommendations and additional needs outlined by DOLS Chair Chimene Tucker at the Emerging Leaders LibLearnX meeting in New Orleans required the original Project Proposal to be revised.

The Revised Project Proposal (Appendix B) goal was clarified and expanded to address how academic librarians consider accessibility and inclusion when designing and delivering online instruction and learning objects, and determine what resources they use to support accessibility in the online learning environment. The Revised Project proposal included the following objectives:

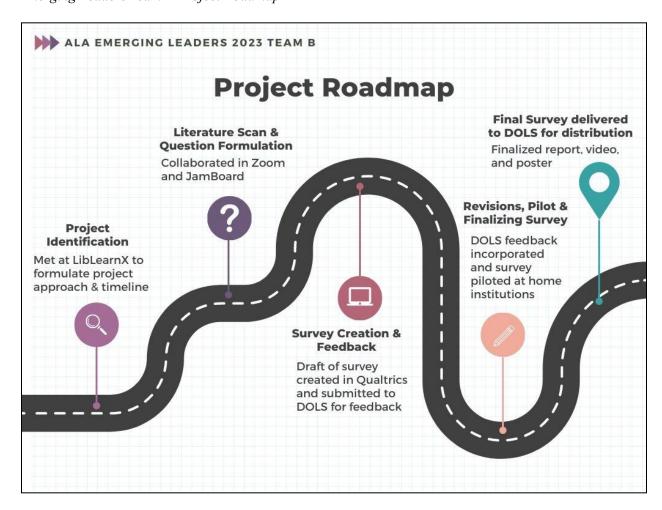
- Design a survey of academic librarians to identify the types, cost, learning curve, and dependence on adaptive technology of online learning tools and technologies they use to address accessibility needs in the online learning environment
- Create and present a poster at ALA Annual 2023, documenting the process and scope of the ACRL DOLS project
- Create a seven-minute video summarizing the ACRL DOLS project
- Document our experiences completing the project in a Final Project Report

#### **Project Overview**

Team B started our project by identifying its key objectives and then created steps which would help us achieve them. We identified our timeline early on to streamline the work being done and ensure that the team met the project's objective by the specified project due-date. Our timeline was divided into five stages, which are visualized in Figure 1. Team B collaborated primarily via Zoom meetings, which were two-hour working sessions scheduled monthly at the beginning of the project, and weekly during our last month of collaboration.

Figure 1

Emerging Leaders Team B Project Roadmap



#### **Project Identification**

Team B's initial meeting and work session occurred on Friday, January 27, 2023 at the ALA LibLearnX conference in New Orleans. Team B had collectively reviewed our project description prior to LibLearnX, but we were informed at that event of changes to the project that DOLS would like us to make. Our original project description (Appendix A) called for Team B to compile a list of resources and tools to increase the accessibility of the online learning environment, and to produce a brochure for ACRL that featured and recommended some of those items. The revised DOLS project objective tasked us to create a survey of academic librarians about the resources they use to increase accessibility in the online learning environment. The survey produced by Team B would ultimately be sent out by DOLS to their listservs. By the end of the first Emerging Leaders meeting, Team B had created a rough outline of what we would need to do to accomplish our objective. We divided up the tasks associated with our next steps, the literature scan and brainstorming our initial complement of survey questions, and got to work.

#### **Literature Scan and Question Formulation**

Team B's first official step working together as a project team was to review the literature to see if other surveys had previously been conducted on the topic of accessibility tools for online education. Initially, we focused on scholarly articles, but we soon decided that the scope of our project required us to look beyond academia to see what types of accessibility tools for online education were out there, and how they were being used. Websites and blogs were included in our review as a result. Due to the broader focus outside of academia, we decided to call this stage in the project a literature scan, rather than a literature review. The literature scan's findings are discussed in detail in the following Literature Scan section.

Once we compiled a list of sources to guide our project, we started to brainstorm which questions we would ask academic librarians in our survey, what form the survey would take, and how we would shape the semantics of each question to better get the results we were looking for. Team B met several times via Zoom during this stage. We collaborated in JamBoard, as well, so we could visualize our ideas and group proposed questions by theme. Soon we had a pool of core questions we would refine into a survey draft. We returned once again to the information gathered by our literature scan and began creating working definitions of key terms that we would use in the survey. The list of terms we created definitions for are listed in Table 1 along with their definitions.

#### **Survey Creation and Feedback**

The process of creating a draft survey comprised the majority of Team B's efforts. We decided to use Qualtrics to ensure respondent anonymity, and to use Likert-scale questions in as many cases as possible to more accurately collect quantitative data. We decided to use a matrix response format for the questions we would ask about the types of resources academic librarians use to increase the accessibility of their online learning tools and environments. While we acknowledged that matrix table questions are not ideal in surveys due to the increased demands they require of respondents' time and attention span, we felt like they were still the only approach we could take that would achieve the types of answers we needed. We presented the initial survey draft to DOLS to get feedback about their user experience when completing the survey, and to identify aspects of the survey that were problematic or otherwise unclear. We met with members of DOLS via Zoom during their April 19, 2023 meeting and were given the opportunity to explain our rationale behind the survey's design. The DOLS members in

attendance gave us direct feedback and offered suggestions during that meeting. The process of creating the survey is discussed in greater detail in the following Survey Development section.

#### Revising, Pilot Testing, and Finalizing Survey

Once we received initial feedback from DOLS, we applied revisions to the draft survey accordingly and further finessed the question formats and phrasing. Once the draft survey was revised, we distributed it again, but this time to select reference and instruction librarians at each of Team B's home institutions. Those librarians generously offered feedback about the survey design, clarity of the questions, and the overall user experience. During this stage of feedback and review, Team B was able to verify that our initial revisions were successful, and identify any remaining areas that were vague, confusing, or problematic from a user interface perspective. We collected all feedback from our colleagues in our Team B Google Drive, reviewed it as a group, and then applied all needed revisions in another online Zoom working session. This process is also described in detail in the following Survey Development section.

#### **Delivery of Survey and Project Materials to DOLS**

The final stage of Team B's project was to deliver the final survey to DOLS, and our project report, video, and conference poster to the ALA Emerging Leaders program by June 1, 2023. Throughout the Month of May, Team B collaborated weekly in two-hour long working Zoom sessions. We worked directly in Google Docs, Google Slides, and Canva to create our project materials during those sessions. Team B will present our project materials at the Emerging Leaders presentation event at ALA National in Chicago on June 23, 2023.

#### Literature Scan

After identifying Team B's project goals and objectives and revising the project description, our next step was to conduct a focused and concise scan of literature about the state

of accessibility services in libraries, with a specific focus on what librarians are doing to address the accessibility needs of online learners. The literature scan was used to inform the creation of our own survey of academic librarians about the types of support they provide to address accessibility needs in the online learning environment, including the online learning objects they create or third-party tools they use. We quickly noticed that the literature did not include a survey focused on this specific aspect of online library instruction for people with disabilities.

Despite this gap in the literature, our scan identified scholarly and professional articles that detailed a broad range of online learning issues and obstacles affecting college students with disabilities, and outlined the types of assistive and adaptive technologies being used by teachers and librarians in the online learning environment. The articles included in the scan also helped us create working definitions for terms we would use in our final survey, such as accessibility, online learning objects, universal design, etc. Citation information for reviewed articles was logged in a spreadsheet (Appendix C) and categorized by source type and the type of disability the article focused on.

Several of the sources we reviewed, including those by the Invisible Disability Project (n.d.), Pionke (2018), and Brown et al. (2020), were instrumental in helping Team B shape the definitions that would be provided to users in our survey instrument. It was essential to soundly base our definitions on the specific language used to describe accessibility and disability so we could avoid confusion and accurately describe the information we were requesting from survey respondents. Similarly, the literature scan helped us to compile a list of technologies that are currently being used to enhance the accessibility of online learning content for students with disabilities. Lists and review articles by Bisagno and Haven (2002), the CollegeCliffs Editorial

Staff (2023), and Queen's University Alumni Review (2017) provided information about the technologies we included in the matrix questions in Team B's final survey.

Looking at the collected articles from a macro perspective further helped us identify three distinct themes in the literature that would inform our survey design and shape the language used in our survey questions.

#### Accessibility Issues are Pervasive in Academic Libraries

The first theme indicated by the literature is that accessibility has been and remains a pervasive issue in libraries of all types, particularly in the wake of the COVID-19 pandemic. During and after the pandemic, the shift to remote instruction and digital access to library resources exacerbated accessibility issues and exposed the pervasive lack of support for students with disabilities. For example, a study by Meleo-Erwin et al. (2021) revealed that fewer than 20% of academic libraries in the New York metropolitan area provided links to specific support services on their disability/accessibility webpages. 17% of those libraries did not include a link to a disability/accessibility resources page on their website at all.

Further, Ashmore et al. (2020) conducted a survey of LYRASIS member libraries serving small and medium-sized institutions and discovered that 55% of them did not have a policy guiding which systems were used to host library content on the internet, such as systems that have built-in accessibility tools. This finding indicates that those libraries largely left training on accessibility in content systems was not widespread or left to individual librarians to seek out. However, the same survey indicated that librarians often received training about accessibility when creating their own locally-hosted digital content.

Specifically in terms of online instruction, Graves and German (2018) reviewed academic library websites to determine if there was any evidence of inclusive practices in library

instruction programs. While they found that 93% of surveyed libraries provided information about disability services on their websites, the majority of their instruction websites lacked accommodation statements or links to disability services. This demonstrated a lack of information about services for students with disabilities at their point of need. None of the surveyed libraries included an accommodation statement or question on all four of the study's touchpoints, which were the library's disability webpage, instruction webpage, instruction request form, and calendar of events.

Accessibility can remain a concern in academic libraries that conform to ADA accessibility standards. For example, Pionke and Manson (2018) found that many aspects of library services, such as outreach and research, are left out of ADA compliance standards. The authors state that libraries must perform active outreach to people with disabilities to truly become equitable in their services. To address this need, the authors created a series of disability-specific web pages using Springshare's LibGuides 2.0 platform that provided information about and library resources for people with those disabilities.

Chee et al. (2022) build on the idea that people with disabilities are often inadvertently overlooked or left out of accessibility considerations in their study about the accessibility of library online learning objects. Their study found that students with disabilities are rarely included in library website usability tests, and thus online learning objects frequently fall short of the needs of students with disabilities. The authors' detailed study points out opportunities to enhance accessibility across the spectrum of online-hosted open educational resources, including a variety of text-centric document formats, images and GIFs, interactive tutorials, presentation slide decks, and more. They close by advocating for librarians to become proactive contributors to accessible online learning objects, rather than passive auditors of accessibility.

#### **Accessibility Issues Extend Beyond Disability**

Disability is a significant factor in considering the accessibility of online learning tools, but the literature scan also indicated that equity of access despite one's ability was also a primary concern. For example, lack of access to reliable technology including computers and wireless internet prevents many students from connecting to and gaining the benefits of the online learning environment (Robert, 2021).

Access to free or low-cost educational resources is also a problem. Schultz (2021) demonstrated that even attempting to address the accessibility issue that expensive educational resources like textbooks present can be difficult due to the time and effort required by librarians to create open educational resources (OER). These findings prompted Team B to consider accessibility through a wider lens so that we could more specifically compose our survey questions and focus responses on librarians' experience addressing the needs of online students with disabilities.

#### Universal Design for Learning Makes a Difference

Our scan of the literature revealed several studies, conducted over the last decade, that demonstrate how essential Universal Design for Learning (UDL) is for ensuring that library instruction, both in-person and online, is equitable and effective for students of all types. For example, a study by Roberson et al. (2022) indicated that students with disabilities often struggle with the same issues other students experience, but often at an increased level of difficulty. Distractions in the physical environment, such as noise, clutter, and lack of table space to study were amplified for students with disabilities, and issues with online resources, such as blocks of text and density of links and menus on the library's website made it difficult for student with

disabilities to locate information resources there. Reconsidering these experiences through the prism of UDL could help make the library more accessible to students with disabilities.

More specific to library instruction, Bastone & Clement (2022) point out that traditional information-literacy one-shots increase equality by presenting information to all students in the same way, but they do not present information to learners in an equitable way. Instead, the conventional format of the one-shot prevents students with different learning styles from benefiting from instruction. The authors argue that disability must be centered in the design of information literacy instruction and that it is essential to apply principles of UDL so students can approach instructional content using their own learning styles.

In a similar vein, Basham et al. (2020) discussed the incompatibility of standards-based curricula with the needs of diverse and differently-abled learners. The abrupt shift to online learning during the COVID-19 pandemic also demonstrated how unprepared the education system was to support students with disabilities in an online environment in which technology rather than student needs and accessible pedagogical design drove learning interactions. The authors argue that online learning environments that offer multiple ways for students to engage with content, facilitate their own choice-based learning strategies, and express their knowledge create an individualized learning experience that will meet the specific needs of individual students, especially those with disabilities.

Consider as a whole, the information gathered from our literature scan supported our idea that more information is needed about the available resources that librarians can use to increase the accessibility of the online learning objects they create and the wider online learning environment their resources and services are a part of. We applied what we learned during the development of the Team B Qualtrics survey.

#### **Survey Development**

When looking at creating the survey instrument, it was critical that we considered the following factors:

- Research methods: qualitative, quantitative, or mixed method
- Platform (Google Forms, Survey Monkey, Qualtrics or other)
- User experience
- Working definitions of specific terms included in the survey to ensure mutual understanding among survey takers

The following sections provide an in-depth look at the process by which we created the survey instrument (Appendix D) and prepared it for distribution.

#### **Development of Instrument**

Team B decided that the survey would be hosted via Qualtrics, a common survey platform in academic libraries which provides the anonymity that is necessary for participation.

Question Suggestions

Once the literature scan was complete and reviewed, we brainstormed together via a Google JamBoard, identifying potential survey questions and grouping them by common themes. These questions were further refined in a shared document, allowing for continued group feedback outside of the group's regularly scheduled meeting.

#### Qualtrics Draft

Once the questions were finalized, a survey draft was created in Qualtrics. Ultimately, we decided to use quantitative questions to attempt to narrow the scope of the survey. As a team we knew that there were some specific elements that needed to be included to provide a better user experience for survey takers. Most notably, the team developed working definitions for terms

that would be used throughout the survey to convey a universal understanding of survey objectives.

**Working Definitions & Tool Tips.** Working definitions were created for common terms used in the survey to ensure that participants had a clear understanding of the concepts in question. The working definitions are defined in Table 1.

**Table 1**Working Definitions

Accessibility	"The ability to be accessed; especially in reference to the design of products, devices, services, or environments for people with disabilities" (Invisible Disabilities Project, n.d.)
Distance teaching & learning	Teaching and learning that does not take place inside the library i.e. via video call, learning management system, LibGuide, etc.
Teaching tools or learning objects	Any tools or objects utilized for teaching including, but not limited to, LibGuides, Zoom, study guides, and prerecorded video lessons
Universal Design for Learning (UDL)	"Designing instruction that accounts for everyone's abilities and disabilities" (Brown, Welhouse & Wolfe, 2020)
Adaptive technology	Tools "which adapt existing technology specifically to meet the needs of users with disabilities" (Queen's University, 2017).  Examples include screen enlarger software, screen readers, and voice recognition software
Instruction	Including but not limited to, synchronous or asynchronous lectures, seminars, workshops, or the creation of online learning objects

The definitions were defined toward the beginning of the survey and were later incorporated as tooltips that would expand upon hover or click. Integrating tooltips required us to write custom HTML code so that we could use them effectively. One of our work colleagues at

Georgia Southern University worked with us to write the code as seamlessly and accessible as possible.

Question Creation & Survey Flow. The survey questions are a mix of multiple choice, Likert scale, and matrix-style questions to collect data on demographics, instruction, online learning tools and accessibility of those online learning tools.

Due to the extensiveness of the question matrices, we decided to set the display logic to only display the options that were selected by participants in the following questions to reduce survey fatigue, which will be explained further later in the section.

#### Questions 1-2: Demographics

While demographic information can certainly be an important part of data collection, as a team we decided that it was not the most important category. As such, we decided to ask questions on the type and size of the institution for each respondent as simple multiple-choice responses.

Questions 3-7: Background on Instruction & Accessibility & Institution Policies. At the beginning of this section we introduced the working definitions that would guide the rest of the survey (see Table 1 for complete definitions). Utilizing a mix of Likert scale and multiple-choice questions, we first wanted to glean what percentage of respondents' job responsibilities were dedicated to instruction and lesson development, specifically in an online learning environment. We also took this opportunity to establish whether accessibility standards/guidelines and what aspects of accessibility were considered by respondents when developing their online learning content, as well as whether the respondents' institutions have policies guiding accessibility in development of (online) learning content.

Questions 8-16: Online Learning Tools & Accessibility. Much of the survey was meant to focus on what resources academic librarians use in an online learning environment and the accessibility of those resources. We felt the best way to ask about the resources was to use matrix tables. Question 10 provided a matrix table with a select list of resources we identified as commonly used from the literature scan, as well as an opportunity for respondents to add additional answers as needed if the choices provided were insufficient. Figure 2 showcases the matrix table for Question 10 with all the options visible.

Figure 2

Question 10 Matrix Table

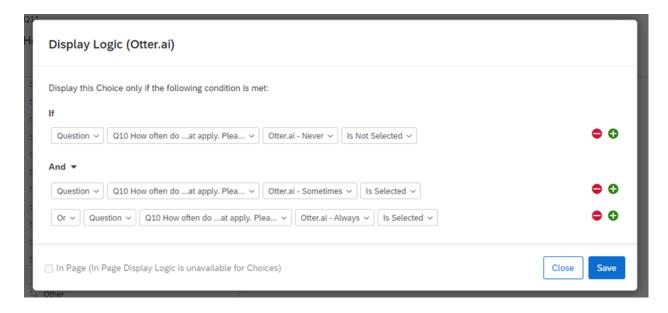
	Never	Sometimes	Always
va Live Captioning for ducation			
ragon Speech Recognition			
rammarly			
urzweil 3000			
indMeister			
tter.ai			
ead&Write			
ignly			
/ebAnywhere			
eb Captioner			
ther Resource			
Other Resource			
Other Resource			

As illustrated in Figure 3, questions 11-14 were set up so that only responses selected in Question 10 would be shown throughout the survey. This was done to avoid respondents getting

overwhelmed by the choices provided in the matrix tables and allow them to only answer questions about the resources that they *use*. Based on consistent feedback, we made sure to include multiple disclaimers for survey respondents explaining that only the answers selected would be asked about moving forward in the survey (during pilot tests, several people misinterpreted the matrices as being broken due to selections from Question 10).

Figure 3

Display Logic Example for Matrix Questions



#### **Pilot Tests & Feedback**

#### DOLS/Project Sponsor Feedback

After several revisions, the survey was submitted to our project sponsor, ACRL's DOLS, for the executive board to review and provide feedback on. The board had in-depth feedback that helped us reorganize the survey, as well as improve the clarity of the questions for respondents. Through their feedback, we were able to clarify some definitions and reorganize the survey.

#### Pilots at Team B's Home Institutions

Once we incorporated feedback from DOLS, we piloted the survey in our own institutions to further refine the survey to prepare it for turning over to DOLS at the ALA Annual Conference in June.

#### **Final Version**

The final version of our survey will be ready for distribution on June 1st, 2023, and will be available for visitors to complete at Team B's table at the ALA Annual Conference Emerging Leaders event on June 23rd, 2023.

#### **Takeaways**

#### **Literature & Technology Scan**

Through our literature scan, we begin to consider the core concepts for accessibility in library instruction. We curated a bibliography of 42 documents that guided our discussions on what survey questions to include in this project. We also noticed areas where there was a lack of sufficient literature on accessibility in library instruction. Our literature scan also revealed some new technologies that aided us in considering what tools might be available for librarians to use in online instruction. We discussed which technologies would be the best candidates to include in our survey questions and we left space for respondents to type in other technologies that they found useful in their instruction work.

We also learned about accessibility and instruction standards and developed working definitions for the terms 'Accessibility,' 'Distance teaching & learning,' 'Teaching tools or learning objects,' 'Universal Design for Learning (UDL),' and 'Adaptive technology,' which helped us develop our survey questions.

#### **Survey Development**

Through the project development we learned how to construct a survey. We carefully considered the terms we used in the survey and how they might be perceived by the respondents. Using the working definitions we included links to the literature we considered in the survey itself for the survey respondents to have access if needed. We discussed survey methods and data collection. We considered the best qualitative and quantitative data points that would be useful for the DOLS committee members to receive in the survey responses.

We learned how to use Qualtrics to build the survey. This was a new technology for our group, and we worked together to learn how to build a survey. We learned about formatting our questions with different response types and how to best capture that data from our respondents.

We presented our survey draft to the DOLS committee and received their constructive feedback on the survey. Their comments were carefully considered by our team and were useful in further refining the final survey.

#### **Next Steps**

Team B will be in attendance at the 2023 ALA Annual Conference in Chicago, IL, and will present their project at the Emerging Leaders' poster session on June 23, 2023. At this year's conference, we will circulate our survey via a web link and QR code to collect responses.

Following the 2023 ALA Annual Conference, DOLS will continue to circulate the survey to academic librarians through various channels.

After survey responses have been collected, the responses will be analyzed and the results used to promote inclusive and accessible online learning tools to DOLS members and beyond.

Team B may be involved in the analysis and circulation of results of the survey. As an organizing body that is integral in the online learning community, survey responses will inform DOLS'

future plan to promote accessible and inclusive online tools and technologies, and host webinars for those interested in incorporating additional tools that are accessible for various users.

#### Acknowledgements

Team B of the 2023 ALA Emerging Leaders would like to thank the ALA Emerging Leaders' program and the Distance and Online Learning Section (DOLS) of ACRL for their support of this program. We would like to especially thank Chimene Tucker and the rest of the DOLS Executive Committee for their help and support of this project. A special thank you to Beatrice Calvin, Christina Fuller-Gregory, and Libby Holtmann for hosting and coordinating this year's Emerging Leaders.

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#### Appendix A

ACRL-DOLS Emerging Leaders 2023 Initial Project Proposal

#### **EL23 Project Proposal ACRL-DOLS**

**Project Title:** Online Instruction Technology

Unit/Organization Submitting Proposal: ACRL Distance and Online Learning Section

**Project Description:** Identify technologies for online instruction that include accessibility and inclusion opportunities.

#### **Expected Goals and Outcomes:**

- Identify online tools and technology for online instruction that can provide access for users with accessibility differences.
- Create a list and brochure of technology and tools for anyone who is conducting instruction online that are inclusive for accessibility.

#### **Next steps for this project:**

• Meet with the emerging leaders to identify tools, develop a work plan and timeline.

#### How does the organization intend to incorporate this project:

The Distance and Online Learning Section (DOLS) is integral in the online learning community. With this project DOLS will prompt the tools and technologies, host webinars for those interested in incorporating additional tools that are accessible for various users.

#### Appendix B

ACRL-DOLS Emerging Leaders 2023 Revised Project Proposal

#### **EL23 Project Proposal ACRL-DOLS**

**Project Title:** Online Instruction Technology

**Unit/Organization Submitting Proposal:** ACRL Distance and Online Learning Section (DOLS)

**Original Project Description:** Identity technologies for online instruction that include accessibility and inclusion opportunities.

**Revised Project Description:** Identify how academic librarians consider accessibility in designing and delivering online instruction, and what tools and technologies they use to support accessibility in the online learning environment.

#### **Project Objectives:**

- Design and create a survey of academic librarians about the types of support they provide to address accessibility needs in online learning tools, objects and environments.
- Identify online learning tools and technologies librarians are using for accessible learning and instruction and their associated cost, learning curve, and compatibility with adaptive technologies.
- Create and present a poster at ALA Annual 2023, documenting the process and scope of the ACRL DOLS project.
- Create a seven-minute video summarizing the ACRL DOLS project.
- Document the survey development process in the Emerging Leaders' Final Project Report.

#### **Next steps for this project:**

- Present updated project proposal to ACRL DOLS Executive Committee.
- Present draft of survey to ACRL DOLS Executive Committee at April 2023 meeting.

#### How does the organization intend to incorporate this project:

The Distance and Online Learning Section (DOLS) is integral in the online learning community. With this project DOLS will promote the tools and technologies, host webinars for those interested in incorporating additional tools that are accessible for various users.

## Appendix C

#### Literature Scan

Authors	Year	Title	DOI/Link	Source Type	<b>Disability Focus</b>
American Library Association	2022	Library service to persons with disabilities	https://libguides.ala.org/libservice-disa bility	Website	Multiple
Ashmore, B., Grogg, J.E., et al.	2020	An accessibility survey of libraries: Results, best practices, and next steps	https://doi.org/10.1080/0361526X.2020 .1703496	Scholarly Article	Multiple
Bajaj, P., Khan, P., et al.	2021	Teachers' intention to continue the use of online teaching tools post Covid-19	https://doi.org/10.1080/2331186X.2021 .2002130	Scholarly Article	Multiple
Basham, J. D., Blackorby, J. et al.	2020	Opportunity in crisis: The role of universal design for learning in educational redesign	https://files.eric.ed.gov/fulltext/EJ1264 277.pdf	Scholarly Article	Universal Design
Bastone, Z. & Clement, K.	2022	Serving everyone or serving no one? Examining the faux-equity of the one-shot	https://doi.org/10.5860/cr1.83.5.780	Scholarly Article	Access Equity
Bisagno, J.M. & Haven, R.M.	2002	Customizing technology solutions for college students with learning disabilities	https://www.ldonline.org/ld-topics/assis tive-technology/customizing-technolog y-solutions-college-students-learning	Website	Learning Disability
Brown, R., Welhouse, Z., et al.	2020	Keeping up with universal design for learning	https://www.ala.org/acrl/publications/keeping_up_with/udl	Website	Universal Design
Burgstahler, S.	2021	20 tips for teaching an accessible online course	https://www.washington.edu/doit/20-tip s-teaching-accessible-online-course	Website	Universal Design
Chee, M., Davidian, Z., et al.	2022	More to do than can ever be done: Reconciling library online learning objects with WCAG 2.1 standards for accessibility	https://doi.org/10.1080/19322909.2022. 2062521	Scholarly Article	Multiple
Chodock, T. & Dolinger, E.	2009	Applying universal design to information literacy: Teaching students who learn differently at Landmark College	https://www.jstor.org/tc/accept?origin= %2Fstable%2Fpdf%2F20865172.pdf&i s_image=False	Scholarly Article	Universal Design

Coleman, M. & Berge, Z.L.	2018	A review of accessibility in online higher education	https://ojdla.com/archive/spring211/coleman_berge211.pdf	Scholarly Article	Multiple
CollegeCliffs Editorial Staff		50 online tools for college students with disabilities in 2023	https://collegecliffs.com/great-online-to ols-college-students-with-disabilities/	Website	Multiple
Creamer, D.	2007	Universal instructional design for libraries	https://search.ebscohost.com/login.aspx ?direct=true&AuthType=ip,shib&db=e dsbl&AN=RN223600851&custid=gso1 &custid=gso1&groupid=main&profile =eds	Scholarly Article	Universal Design
Digital Library Federation	n.d.	Accessibility auditing resources	https://wiki.diglib.org/Accessibility_Auditing_Resources	Website	Multiple
Frank, J., Salsbury, M. et al.	2021	Digital equity & inclusion strategies for libraries: Promoting student success for all learners	https://www.jstor.org/stable/10.2307/48 644452	Scholarly Article	Access Equity
Geelong Regional Libraries	n.d.	Library disability access & inclusion survey	https://www.surveymonkey.com/r/GRL C_Accessibility	Other	Access Equity
Graves, S.J. & German, E.	2018	Evidence of our values: Disability inclusion on library instruction websites	https://muse.jhu.edu/article/698633	Scholarly Article	Multiple
Huggett, C.	2017	Virtual training tools and templates: An action guide to live online learning	https://galileo-georgiasouthern.primo.e xlibrisgroup.com/permalink/01GALI_ GASOUTH/1r4bu70/alma9916137027 302931	Other	Multiple
Invisible Disability Project	n.d.	Words matter	https://www.invisibledisabilityproject.org/words-matter	Website	Multiple
Ismail, A. & Kuppusamy, K.S.	2022	Web accessibility investigation and identification of major issues of higher education websites with statistical measures: A case study of college websites	https://doi.org/10.1016/j.jksuci.2019.03 _011	Scholarly Article	Multiple
Jaeger, P.T.	2018	Designing for diversity and designing for disability: New opportunities for libraries to expand their	https://doi.org/10.33137/ijidi.v2i1/2.32 211	Scholarly Article	Multiple

		support and advocacy for people with disabilities			
Kumbier, A. & Starkey, J.	2016	Access is not problem solving: Disability justice and libraries	https://muse.jhu.edu/article/613919/pdf	Scholarly Article	Access Equity
Kurianski, K.M., Marzocchi, A.S. et al.	2021	Tools for humanizing mathematics classes in a virtual world (and beyond)	https://doi.org/10.1080/0020739X.2021 .1985178	Scholarly Article	Multiple
Lund, B.D., Wang, T., et al.	2019	Comparing accessibility of learning management and library management systems for students with disabilities in the United States, China, and Nigeria	https://members.aect.org/pdf/Proceedings/proceedings19/2019i/19_13.pdf	Conference Proceedings	Multiple
McAlvage, K. & Rice, M.	2018	Access and accessibility in online learning	https://files.eric.ed.gov/fulltext/ED5939 20.pdf	Other	Multiple
Meleo-Erwin, Z., Kollia, B. et al.	2021	Online support information for students with disabilities in colleges and universities during the COVID-19 pandemic	https://doi.org/10.1016/j.dhjo.2020.101 013	Scholarly Article	Access Equity
Merlo, A. & Akeroyd, J.	2022	Meeting sustainable goals through improved accessibility: A call to action	http://repository.ifla.org/bitstream/1234 56789/2063/1/s5-2022-merlo-en.pdf	Other	Access Equity
Mulliken, A. & Falloon, K.	2018	Blind academic library users' experiences with obtaining full text and accessible full text of books and articles in the USA: A qualitative study	https://doi.org/10.1108/LHT-08-2017-0 177	Scholarly Article	Visual
National Federation for the Blind	n.d.	Higher education accessibility online resource center	https://nfb.org/programs-services/center-excellence-nonvisual-access/higher-education-accessibility-online-resource	Website	Multiple
Pionke, J.J.	2017	Toward holistic accessibility: Narratives from functionally diverse patrons	https://doi.org/10.5860/rusq.57.1.6442	Scholarly Article	Multiple
Pionke, J.J.	2018	Functional diversity literacy	https://doi.org/10.1108/rsr-02-2018-002 4	Scholarly Article	Multiple
Pionke, J.J.	2017	Beyond ADA compliance: The library as a place for all	https://academicworks.cuny.edu/ulj/vol 23/iss1/3	Scholarly Article	Universal Design

Pionke, J.J. & Manson, J.	2018	Creating disability libguides with accessibility in mind	https://doi.org/10.1080/19322909.2017. 1396277	Scholarly Article	Multiple
Queen's University Alumni Review	2017	Campus news: Assistive and adaptive technologies	https://www.queensu.ca/alumnireview/articles/2017-05-25/assistive-and-adaptive-technologies	Website	Multiple
Roberson, C.A., Barefield, T., et al.	2022	Students with disabilities and library services: Blending accommodation and universal design	https://doi.org/10.1016/j.acalib.2022.10 2531	Scholarly Article	Universal Design
Robert, J.	2021	EDUCAUSE quickpoll results: Flexibility and equity for student success	https://er.educause.edu/articles/2021/11/educause-quickpoll-results-flexibility-and-equity-for-student-success	Website	Access Equity
Schultz, T.A. & Azadbakht, E.	2021	Open but not for all: A survey of open educational resource librarians on accessibility	https://doi.org/10.5860/crl.82.5.755	Scholarly Article	Access Equity
Smith, C.	2021	Challenges and opportunities for teaching students with disabilities during the COVID-19 pandemic	https://doi.org/10.32674/jimphe.v5i1.26 19	Scholarly Article	Multiple
Stanford Office of Accessible Education	n.d.	Assistive technology for online learning	https://oae.stanford.edu/students/remote -learning-coping-during-covid-19/assist ive-technology-online-learning	Website	Multiple
Taylor, M.A.	2016	Improving accessibility for students with visual disabilities in the technology-rich classroom	https://doi.org/10.1017/S104909651500 1134	Scholarly Article	Visual
Vartic, V. & Oprişan, E.	2019	Use of assistive technologies in accessibility of information for students with visual impairments	https://www.ceeol.com/search/article-detail?id=782874	Conference Proceedings	Visual

#### Appendix D

#### Survey Instrument

## A Survey of Accessibility and Online Learning Tools

Survey Summary: This survey is sponsored by the Distance and Online Learning Section (DOLS) of the ACRL. We are seeking to collect data on which online learning tools are being used by academic library workers for instruction and how those tools support accessibility in the online learning environment. All academic library workers who play a role in distance and online instruction are invited to participate.

If you have any questions about this survey, please contact Chimene Tucker at cetucker@usc.edu.

This survey should take about 15 minutes to complete.

Your participation in this study is voluntary, and all data collected will be anonymous. By completing the survey, you are voluntarily agreeing to participate and can exit the survey at any time. You are free to skip or leave blank any particular question for any reason.

Consent I agree to participate in the survey
○ Yes (1)
Q1 How would you describe your library? Select all that apply.
O Public academic library (1)
O Private academic library (2)
O Public special library (law, military, medical, etc.) (3)
O Private special library (law, military, medical, etc.) (4)
2-year college library (5)

	○ Tribal library (7)
	Other (6)
Q2	What size is your institution?
	O Very Small (less than 1,000 FTE enrollment) (1)
	O Small (1,000-2,900 FTE enrollment) (2)
	O Medium (3,000-9,999 FTE enrollment) (3)
	O Large (10,000 or more FTE enrollment) (4)

Definitions: for the next questions, please use the following working definitions.

**Accessibility**: "The ability to be accessed; especially in reference to the design of products, devices, services, or environments for people with disabilities" (<u>Invisible Disabilities Project</u>, n.d.).

**Distance teaching & learning**: Teaching and learning that does not take place inside the library for the learner or student (e.g. via video call, learning management system, LibGuide, etc.).

**Teaching tools or learning objects**: any tools or objects utilized for teaching including, but not limited to, LibGuides, Zoom, study guides, and prerecorded video lessons.

Universal Design for Learning (UDL): "designing instruction that accounts for everyone's abilities and disabilities" (Brown, Welhouse & Wolfe, 2020).

**Adaptive technology**: tools "which adapt existing technology specifically to meet the needs of users with disabilities" (<u>Queen's University</u>, 2017). Examples include screen enlarger software, screen readers, and voice recognition software.

**Instruction**: including but not limited to, synchronous or asynchronous lectures, seminars, workshops, or the creation of online learning objects

	0	10	20	30	40	50	60	70	80	90	100
What percentage of your workload is dedicated to instruction?											
What percentage of your instruction occurs in an online learning environment?											
Q4 How often do you consider acces to the design of products, devices, se		-		•			-		•		nce
to the design of products, devices, se (Invisible Disabilities Project, n.d.) a instruction that accounts for everyone 2020) standards, guidelines, and best tools or objects utilized for teaching guides, and videoed lessons?	ervices and Ur e's ab t pract	s, or en niversa ilities a ices w	viron l Des and d hen d	ments ign fo isabil esign	s for por Leadities" ities"	peoplerning (Brown our or	e with (UD) wn, W	n disa L) "d Velhoo learni	bilitie esign use & ng ol	es" ing Wolf	e,
to the design of products, devices, se (Invisible Disabilities Project, n.d.) a instruction that accounts for everyone 2020) standards, guidelines, and best tools or objects utilized for teaching	ervices and Ur e's ab t pract	s, or en niversa ilities a ices w	viron l Des and d hen d	ments ign fo isabil esign	s for por Leadities" ities"	peoplerning (Brown our or	e with (UD) wn, W	n disa L) "d Velhoo learni	bilitie esign use & ng ol	es" ing Wolf	e,
to the design of products, devices, se (Invisible Disabilities Project, n.d.) a instruction that accounts for everyone 2020) standards, guidelines, and best tools or objects utilized for teaching guides, and videoed lessons?  Never (1)	ervices and Ur e's ab t pract	s, or en niversa ilities a ices w	viron l Des and d hen d	ments ign fo isabil esign	s for por Leadities" ities"	peoplerning (Brown our or	e with (UD) wn, W	n disa L) "d Velhoo learni	bilitie esign use & ng ol	es" ing Wolf	e,
to the design of products, devices, se (Invisible Disabilities Project, n.d.) a instruction that accounts for everyone 2020) standards, guidelines, and best tools or objects utilized for teaching guides, and videoed lessons?  Never (1)  Sometimes (2)	ervices and Ur e's ab t pract	s, or en niversa ilities a ices w	viron l Des and d hen d	ments ign fo isabil esign	s for por Leadities" ities"	peoplerning (Brown our or	e with (UD) wn, W	n disa L) "d Velhoo learni	bilitie esign use & ng ol	es" ing Wolf	e,

Design f disabilit	ments for people with disabilities" (Invisible Disabilities Project, n.d.) and Universal for Learning (UDL) "designing instruction that accounts for everyone's abilities and ies" (Brown, Welhouse & Wolfe, 2020) standards, guidelines, and best practices for? It that apply.
	Assignment design (1)
	Course design (2)
	LibGuides or equivalent (3)
	Live session (4)
	Recorded session (5)
	Other (6)
	Not applicable (7)
of produ Disabilit any tool	t types of accessibility "The ability to be accessed; especially in reference to the design acts, devices, services, or environments for people with disabilities" (Invisible ties Project, n.d.) needs have you considered when developing online learning objects or objects utilized for teaching including, but not limited to, LibGuides, Zoom, study and videoed lessons? Select all that apply.
	Auditory (1)
	Learning/cognitive (e.g. ADHD, autism, depression or anxiety, dyslexia, etc.) (2)
	Motor/mobility (3)
	Seizures (e.g. photosensitive epilepsy, etc.) (4)

Q5 Which aspects of the online learning environment do you consider accessibility "The ability

to be accessed; especially in reference to the design of products, devices, services, or

Visual (5)
Other (please specify) (6)
None (8)
Q7 Does your library or institution have an accessibility "The ability to be accessed; especially in reference to the design of products, devices, services, or environments for people with disabilities" (Invisible Disabilities Project, n.d.) policy to guide the creation of instructional content for the online learning environment?
O My library does and my institution does not (1)
O My institution does and my library does not (2)
O Both my library and institution do (3)
O Neither my library or my institution do (4)
O Not sure (5)
Q8 Which resources do you use to increase the accessibility of your online learning environment or objects (e.g. specific software, apps, browser extensions, etc.)?
Q9 How often do you use the resources you listed in the prior question to increase the accessibility of your online learning environment or objects?
○ Seldom (1)
O Sometimes (2)

• Frequently (3)				
O Always (4)				
Q10 When developing or accessibility "The ability devices, services, or envin.d.)?	to be accessed; espe	ecially in reference to the	design of products,	
O Not important (1	)			
O Somewhat impor	tant (2)			
O Very important (	3)			
Q11 How often do you use the following resources for library instruction? Select all that apply. Please note that selected responses will carry forward for Q12 through Q15.				
	Never (1)	Sometimes (2)	Always (3)	
Ava Live Captioning for Education (1)				
Dragon Speech Recognition (2)				
Grammarly (3)				

Kurzweil 3000 (4)		
MindMeister (5)		
Otter.ai (6)		
Read&Write (7)		
Signly (8)		
WebAnywhere (9)		
Web Captioner (10)		
Other Resource (11)		
Other Resource (12)		
Other Resource (13)		

Disclaimer: for the following questions, only the resources you marked as Sometimes or Always in the previous question will be visible, as they are intended to capture your comments on the resources you already use.

Q12 How would you rate the learning curve of the resources you use?

	Easy (1)	Moderate (2)	Difficult (3)
Ava Live Captioning for Education (1)			
Dragon Speech Recognition (2)			
Grammarly (3)			
Kurzweil 3000 (4)			
MindMeister (5)			
Otter.ai (6)			
Read&Write (7)			
Signly (8)			
WebAnywhere (9)			
Web Captioner (10)			
Other (11)			
Other (12)			

Other (13)		

Q13 Overall, how would you rate the associated cost for users of the accessibility "The ability to be accessed; especially in reference to the design of products, devices, services, or environments for people with disabilities" (Invisible Disabilities Project, n.d.) tools you use?

	Easy (1)	Moderate (2)	Difficult (3)
Ava Live Captioning for Education (1)			
Dragon Speech Recognition (2)			
Grammarly (3)			
Kurzweil 3000 (4)			
MindMeister (5)			
Otter.ai (6)			
Read&Write (7)			
Signly (8)			
WebAnywhere (9)			

Web Captioner (10)								
Other (11)								
Other (12)								
Other (13)								
Q14 How much does a resource's cost affect your decision to use it?								
O Significantly (1)								
O Note worth (2)								
O Not much (3) O Not at all (4)								
Q15 How dependent on adaptive technology tools "which adapt existing technology specifically to meet the needs of users with disabilities" (Queen's University, 2017) are the resources you use? Examples of adaptive technology include screen enlarger software, screen readers, and voice recognition software.								
	Easy (1)	Moderate (2)	Difficult (3)					
Ava Live Captioning for Education (1)								

Dragon Speech Recognition (2)		
Grammarly (3)		
Kurzweil 3000 (4)		
MindMeister (5)		
Otter.ai (6)		
Read&Write (7)		
Signly (8)		
WebAnywhere (9)		
Web Captioner (10)		
Other (11)		
Other (12)		
Other (13)		

Q16 When designing online or distance instruction, how often do you take the following into consideration?

	Never (4)	Sometime s (5)	Often (6)	Always (7)	Not Sure (8)	N/A (10)
ADA Standards for Accessible Design (or country equivalent if outside of the USA) (1)						
Web Content Accessibility Guidelines (WCAG) (3)						
Your institution's accessibility guidelines (2)						
Other guideline/standar d (5)						

Q17 Are there any other accessibility tools or resources you use that you would like us to know about?

Q18 This is the end of the survey. Once you submit, your responses will be recorded and they cannot be changed. Please use the back buttons to review answers as needed before submission.

Thank you for taking the time to participate in the survey!