Assessing the Needs of Users with Disabilities in Pursuit of More Accessible, Inclusive Libraries

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I. Introduction

In 2021 and 2022, Duke University Libraries formed a cross-departmental research team of library staff to explore two primary questions: (1) To what extent are the libraries supportive of disabled users, caregivers, and allies? and (2) How might library staff make library spaces, web interfaces, collections, and services more supportive for these users? To answer these questions, we designed a multi-faceted study that included a literature review and environmental scan, informational interviews, a user survey, and follow-up user interviews.

This is the third mixed-methods user study that Duke Libraries staff have led to learn more about the experiences and needs of marginalized or underrepresented students. We started the studies in 2017, after noticing differences in the ways particular user groups responded to questions about the libraries in a campus-wide survey. We were limited by what we could learn from the survey data, and we wanted to know more about how these user groups experience the library. We developed a series of in-depth user studies, beginning with first generation college students, then moving to Black students, and then to international students, which we intended to begin in 2021 but delayed a year due to the COVID-19 pandemic. That study is currently underway.

We initiated this study of users with apparent and non-apparent disabilities for multiple reasons. First, we received comments about the inaccessibility of library services and spaces through our biennial student satisfaction survey in 2020.³ Additionally, library staff had observed problem spots in the library and on campus for users with disabilities. We wanted to learn more about these issues and identify ways to address them. Because we paused our study of international students, we had capacity for another assessment. After conducting two successful mixed-methods user studies, we felt prepared to adapt our methods and recruitment strategies to achieve our research goals while also acknowledging COVID-related work patterns and safety protocols.

This paper summarizes the research team's methodology, focusing on ways we engaged with users with disabilities. We will briefly describe our findings and highlight ways that library and campus stakeholders might use what we learned to make libraries more inclusive and welcoming for individuals with disabilities, as well as caregivers and allies.

II. Methodology

Combining multiple methodologies allowed the project team to triangulate results and have more confidence in our conclusions. To better understand current support for the target population and any prior research conducted, we began with a literature review and informational interviews with campus stakeholders. The research team then distributed a user survey and conducted four follow-up interviews. Team members used affinity mapping to analyze the interview transcripts and develop themes based on the data. The team then used findings to develop recommendations for improving library spaces, services, web interfaces and collections.

Environmental Scan and Informational Interviews

This project began with a literature review⁴ of existing work on accessibility in academic libraries and more broadly in higher education. The conclusions from the literature mirrored some of the complaints in our past student survey data, including pain points in our physical spaces and a lack of relevant information on our websites.

Following the literature review, we conducted an environmental scan⁵ of library websites for both the information presented on accessibility services and for staffing models related to accessibility. An additional informational interview with an accessibility liaison complemented the environmental scan and provided details on a possible staffing model. The combination of the literature review and environmental scan contributed to some immediate improvements to the information presented on the library's webpage outlining services for patrons with disabilities,⁶ as well as some long-term goals for our website and staffing model.

Further changes to either our services or spaces, however, required additional assessment. The project team began by reaching out to leaders of campus disability groups (Student Disability Access Office,⁷ the Duke Disability Alliance,⁸ and the Disability and Access Initiative).⁹ We requested information about the disability community at Duke and any prior assessments involving the community, and we learned of a 2018 accessibility survey distributed by Duke Disability Alliance. Data from this survey was helpful to gain context for general accessibility issues at Duke, but the libraries were rarely mentioned by respondents. This absence made it even more clear that a library-focused accessibility assessment was needed at Duke.

To gather both broad information and specific details about the experiences of the Duke disability community, the project team chose to conduct a general survey as well as a series of discussion groups.

Survey

The project team identified the following research questions for our survey of the disability community at Duke:

- How well do our current spaces and services (physical and online) serve the needs of users with disabilities?
- Are users aware of the accessibility services offered by the libraries?
- Are there different needs for people who identify as having disabilities, compared with allies and caregivers? For different disabilities?

Blending structures used successfully in past surveys with new ideas tailored to this user community, the survey included questions covering the following topics (full instrument in Appendix 1):

- Demographics (student/faculty/staff, disability identification)
- Library usage (which libraries, how often)
- Barriers to visiting libraries
- Satisfaction with physical spaces
- Satisfaction with remote or online services
- Additional comments

The survey draft was shared with members of the Duke disability community for feedback. The final survey was then distributed through the Duke Disability Alliance, as well as through library staff and social media. The survey was live for about three weeks in late February of 2022. Survey participants were offered the opportunity to enter a drawing for a \$50 Amazon Gift Card. Note that due to the highly sensitive nature of this data, no contact information was captured along with the survey responses. Participants were taken to a separate survey to enter the drawing. In this separate survey, participants also had the opportunity to volunteer to be part of follow-up discussion groups.

The survey received 90 responses. To analyze the data, we performed descriptive statistics for quantitative questions and manually coded about sixty comments submitted in response to six free-text questions. The survey data were synthesized into initial themes and recommendations, which were then used to tailor the script of the follow-up discussion groups.

Discussion groups

The following research questions were identified as priorities for the discussion groups:

- Open opportunity to share experiences thoughts
- What spaces or groups at Duke are especially welcoming to people with disabilities? What makes them welcoming?
- How accessible are library spaces and materials?
- How easy is it to find help in the library?
- What information should we have on our website?

The final script covered general characteristics of welcoming spaces, how accessible Duke's campus is, and how accessible the library is on a variety of dimensions (e.g., study spaces, noise, website, parking).

From the original survey, 37 participants volunteered to be contacted for follow-up discussion sessions. For the discussion groups, we felt that people would feel most comfortable sharing their experiences in groups comprised of people who identify similarly and experience campus in similar ways. We thought we might want to separate the discussion groups by undergraduates, graduate students, and faculty/staff. We also wanted to make sure we specifically recruited people who identify as having disabilities, in addition to allies and caregivers. We thus developed a screener survey and distributed it to all 37 volunteers. We received 20 responses.

To recruit for the discussion sessions, we reviewed the demographics from the screener survey and identified our high priority demographics. There were five participants who identified as having a disability, all of whom were students (two graduates and three undergraduates). We decided to invite all five to a single discussion session.

Only one person selected that they were a caregiver of a person with disabilities, but two others mentioned having a close family member with a disability in a free-text comment. These three included one undergraduate student, one graduate student, and one faculty member. We decided to invite all three to a single discussion session.

Fourteen people identified as allies. In both the original survey and the screener survey, there were participants who indicated that they have one or more conditions from the list of disabilities but did not identify as someone who has disabilities. We decided to form a discussion group with the six members from the allies group who also indicated that they had a condition that could be considered a disability.

An additional four people responded to the screener survey but indicated that their primary library was one of the professional school libraries. We decided to exclude these participants to focus on the physical spaces represented in the non-professional school libraries.

In the screener survey, we asked for preferences between in-person and virtual sessions. We also offered the choice between discussion groups and individual interviews in case some participants would prefer to speak one-on-one. We found that almost all participants were comfortable with virtual sessions, and most were comfortable with either a group session or an interview. After reviewing the preferences of the people selected for each group, it was determined that all could be conducted virtually.

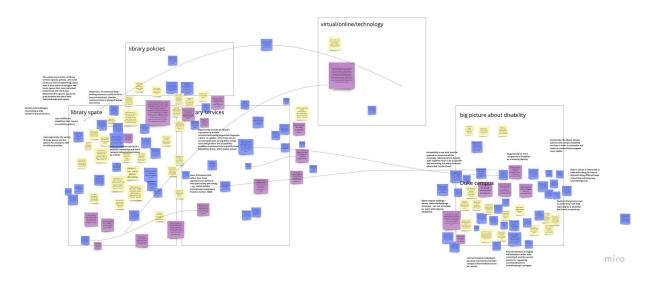
Members of each group were sent a scheduling poll and then an invitation with the selected time. None of the selected times ended up working well for the groups. Two groups had only one person show up, and the other had no one show up. Our project team followed up with those who were selected and offered to schedule one-on-one sessions instead. An additional two people participated in the interviews after this invitation. Our total of four participants included one person from the allies group, one person from the caregivers group, and two people from the group of people who identify as having a disability.

This adjustment may have worked in our favor. Individual interviews might be a more effective approach for this topic area than discussion groups. Users might feel more comfortable sharing sensitive information in an interview, and we would avoid the risk that a particularly vocal participant would dominate the discussion. Each interview lasted between 30 and 60 minutes. Participants each received a \$15 Amazon Gift Card.

The interviews were conducted over Zoom and recorded. Zoom generated an automated transcript, which we then manually cleaned and used for the analysis. The transcripts of the four interviews were analyzed with a lightweight affinity mapping approach. The members of the project team read through each transcript and made sticky notes that represented important themes, concepts, or key quotes. The sticky notes were deduplicated by a member of the team. The team members individually reviewed the full list of sticky notes and brainstormed four to seven high-level themes.

The full team then came together virtually. All of the themes were compiled, and six were selected to use as the basis for clustering the notes: big picture about disability, Duke campus, library space, library services, library policies, and library online resources/technology. We used a Miro¹º board to block out regions for these themes and organize the notes in space according to the themes they connected to.

Figure 1: The team used a Miro board to represent the sticky notes digitally and arrange them in space according to themes and subthemes.



The themes were then subcategorized, and the project team will turn the themes into specific findings and recommendations.

III. Findings

Survey findings

While many of the insights from the survey are combined with the results of the interviews in the discussion below, the survey did showcase an interesting trend in how participants self-identify. As mentioned previously, some participants who indicated that they have one or more conditions from the list of disabilities did not identify as someone who has disabilities. Figure 2 below shows the interaction between a participant's relationship to the disability community and the disabilities they identify as having. There were 54 participants who did not identify as having a disability, but 24 of them also selected one or more options in the question about specific disabilities.

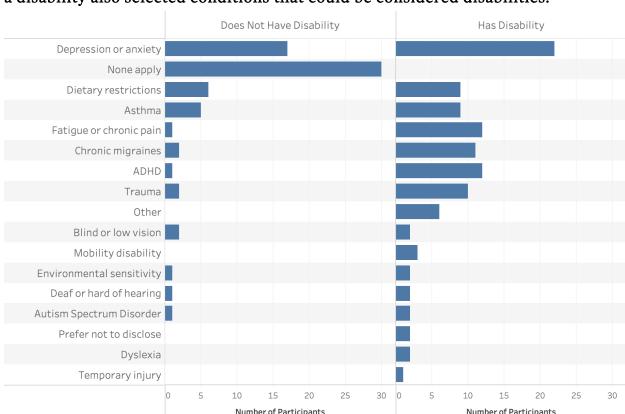


Figure 2: Twenty-four of the 54 survey participants who did not identify as having a disability also selected conditions that could be considered disabilities.

Additional findings from the surveys and interviews are divided into two broad sections: general campus accessibility/inclusion findings and library-specific findings.

Campus findings

These campus findings are drawn largely from our individual interviews, which gave interviewees space to discuss their experience with the broader campus before getting into library-specific questions.

Duke's elite campus culture is generally not inclusive

"There's an overarching culture that permeates a lot of areas of the university that is an attitude of elite quality... Duke is very clearly upwardly mobile, focused on trying to be an Ivy and in a sort of exclusionary way that excludes a lot of other life experiences..."— Interviewee who identifies as disabled

"Another part of the culture [at Duke] is doing so much all the time... it's really not feasible for a lot of neurodivergent people and then they're kind of shamed for not being able to take on as much. Or alternatively, you just

take on that much and then it breaks you down... it makes you feel like not wanting to share if you're struggling with something."—Interviewee who identifies as disabled

Multiple interviewees asserted that Duke's campus culture was not inclusive. Students discussed how Duke's aspiration to be an academically elite, Ivy League-type institution could exclude people with other life experiences, including those with disabilities. Duke's student culture is often described as being one of "effortless perfection," where students feel pressured to be academically successful, heavily involved in clubs and campus organizations, and maintain a full social calendar while outwardly appearing to balance all these obligations with little to no effort. This culture is at odds with asking for help, and that can make students hesitant to share that they are struggling. Interviewees also described the stigma on Duke's campus around invisible disabilities and being neurodivergent. An interviewee who identifies as an ally noted that they did not feel supported as an ally because Duke did not do enough promotion of resources for people with disabilities.

The built environment of campus is not accessible for people with physical disabilities

"My brother has mobility impairments and I honestly don't know how I would bring him to see my office if he were on campus because of the amount of stairs."—Interviewee who identifies as a caregiver

Interviewees and survey respondents called out a number of locations on Duke's campus where the built environment is not accessible for people with physical disabilities. These included buildings where elevators were located far from the entrance and not apparent upon entering the building. Although Duke, founded in 1924, is not old compared to many peer institutions, many of the older buildings on campus are not fully accessible and present challenges to people with physical disabilities. Interviewees noted the lack of consistency among electric door openers on campus, an important area of concern since many of Duke's buildings have heavy, difficult-to-open exterior doors. Campus built environment issues extend beyond buildings as well. Interviewees discussed how the sidewalks and paths winding through Duke's campus frequently include stairs, and accessible ramp paths are much longer and less direct to get to buildings. The lack of accessible parking on campus is also a major hindrance for people with mobility issues.

University systems and policies are difficult to navigate for people with disabilities

"Accessibility is not built into the structure of the university. It has to happen in a one-off, case-by-case basis, which feels pretty frustrating and inaccessible that you know each person has to hope that they get taken

seriously enough or are seen as disabled enough to require an exception..."—Interviewee who identifies as disabled

Interviewees described the difficulty in navigating university systems and policies as people with disabilities. Accommodations at Duke are highly individualized rather than normalized, and the current system for requesting accommodations is overwhelming to navigate. Although individual staff and faculty could be helpful with accommodations, the process of getting accommodations can be fraught and stressful. Students discussed their concern that they would be treated differently by professors after asking for accommodations. Although interviewees noted that Duke has made efforts to be more inclusive with language (for example, asking for pronouns in classes), infrastructure and systems varied in level of inclusion. Duke policies on missing class for sickness and ending the Zoom option for attending class were criticized as inaccessible for students who are chronically ill.

Library findings

These library findings are drawn from both individual interviews and survey data.

The libraries are generally seen as being more inclusive than the broader campus

"I definitely feel like the library works hard to meet as many people's needs as they can." —Interviewee who identifies as disabled

"I don't think [the library] is inherently inaccessible, but I do not think it is accessible. I think it's kind of neutral. And that it's there, and a lot of disabled people choose not to use it, because it's not additionally accessible. I wish they had more materials to provide for people with disabilities... or at least a space where disabled people can study and feel like they are surrounded by people who will be respectful."—Interviewee who identifies as disabled

Some interviewees perceived the library as being more inclusive and accessible for people with disabilities than the general Duke campus. One interviewee noted that the "library puts in more noticeable effort than many other places on campus." The library is seen as more welcoming and responsive to feedback in comparison to other departments and locations on campus. One interviewee who identifies as a caregiver described librarians as being more thoughtful about inclusivity than the average faculty member.

Another interviewee who identifies as disabled noted that although the library may meet ADA standards, it is not inherently accessible, and there is room for improvement. The interviewee continued, "I've not observed any people who are visibly disabled ever studying in the library and I've been there a lot." Despite being seen by some as better

on accessibility issues and more inclusive than other parts of campus, the library could still be seen as a neutral space.

One of our survey questions asked respondents to identify barriers that limit their visits to the library from a list of options. Of the 60 survey respondents who have a disability, one-third said that "parking [being] inconvenient or unavailable" limited their inperson visits "a great deal." This is an interesting result, as only 3 respondents indicated that they have a mobility disability (5% of all respondents with disabilities). The lack of accessible parking and/or alternative modes of transit is a campus-wide issue at Duke that limits the accessibility of the library. More assessment is needed to determine the potential positive impact of better transportation and parking options on the experience of library users with disabilities.

Space needs vary widely from person to person, so having a broad variety of findable spaces is key

"[The] emphasis on quiet on every level makes it extremely hard for me to study while having tics without a study room, which is often already booked. I am afraid of being asked to be quiet or being stared at by other students."—Comment from survey respondent

Survey respondents and interviewees noted their desire for a variety of study spaces that met their individual needs. An interviewee who identifies as an ally said "providing a variety of different feelings when you're in the library is a good way to support [users with disabilities]." Space needs are varied and complex, and can change on a daily basis for individuals depending on the person's goals when visiting the library. Respondents mentioned that study areas with bright lighting and warm temperatures could be challenging for those with sensory processing issues.

Noise is a major topic any time library study spaces are assessed, and we received a range of feedback on this issue. According to our survey data, physical spaces met the needs of most respondents, but 10% of respondents with a disability indicated that they cannot always find a study space with a noise norm that matches their needs. Multiple interviewees and survey respondents characterized the libraries' very quiet spaces as sometimes being stressful. Students asked for more individual study areas that are accepting of ambient noise where they will not feel as "disruptive" for making minor noises. An interviewee who identifies as disabled appreciated being able to reserve group study rooms with friends so they would not have to hide their tics while studying.

Communicating available spaces, policies, and services is important but challenging

"It's like a maze in the library... it's cool but it's a little overwhelming."— Interviewee who identifies as disabled

The libraries are very complex, and the number of spaces, policies, and services can be overwhelming. Respondents noted the need for communication and outreach in these areas. It is important to communicate spaces, resources, and services both in physical spaces and online, as some users may be more likely to find or seek out information in one realm rather than the other. Users wish it were easier to navigate and locate spaces that meet individual preferences and needs. Some interviewees recounted wandering around library buildings to familiarize themselves with different study spaces the first few times they visited the library, but this may not be an option for users with physical disabilities. Interviewees also mentioned appreciating the online maps of library study spaces, including details on the location of staircases, restrooms, and classrooms. Survey respondents and interviewees offered recommendations for increasing accessibility information on the library spaces webpage and suggestions for improving physical signage.

Interviewee opinions differed on detailed noise rules and policies for spaces. One interviewee who identifies as an ally said that they liked that noise norms are "very established" and "written down" so "everyone should know what they are." Another interviewee who identifies as disabled said the different social rules and noise norms for library spaces can feel overwhelming. More assessment and exploration of this issue may be needed in order to improve communication and coherence of noise norms in library spaces.

The library's ADA Study Room¹¹ is a space that would benefit from more outreach and marketing, as 21.7% of survey respondents with a disability were not aware of this space.

Explicit efforts to be welcoming to people with diverse needs are appreciated

"I definitely appreciate how much the library seems to ask for feedback."—Interviewee who identifies as disabled

Respondents appreciated that Duke Libraries staff made an effort to get feedback on accessibility issues and needs. Interviewees also praised the libraries' exhibits for showcasing diverse races, identities, and backgrounds in both the Duke and Durham communities. One interviewee discussed how they appreciated the library exhibit on the history of Latinx students at Duke¹² and said that the library should continue to reflect others' experiences through exhibits. The newspaper section of the library was also highlighted as an area that fostered inclusivity and thinking beyond the walls of Duke due to its broad range of national and international papers.

Interviewees and survey respondents also offered numerous suggestions of ways the Duke Libraries could be more welcoming to patrons with disabilities. Multiple respondents recommended that the library create sensory friendly spaces for those with sensitivity issues. Loanable fidget spinners and stress balls were also suggested as a potential inclusive resource by multiple respondents. A survey respondent also asked for library signage with increased font size and higher contrast to make signage more inclusive for those with visual impairments. Survey respondents also suggested expanding accessibility of online resources, including offering more audiobooks and online resources with text-to-speech capabilities.

IV. Conclusion

The project team plans to continue its analysis of study findings in order to develop additional concrete recommendations for improvement or changes to library spaces and services. With the goal of enhancing the restorative and participatory nature of our research, we plan to invite study participants and other members of Duke's disability community to review and respond to our report of findings and recommendations. This will be an opportunity for members of the study's target population to ensure their views are accurately represented and to refine or suggest additional recommendations. The project team will then partner with library colleagues and campus stakeholders to implement improvements and assess their effectiveness. As we have done at the conclusion of prior in-depth user studies, we will share our work with pertinent higher education communities interested in learning about and providing support for underrepresented student groups, as well as potential donors interested in funding relevant library services.

This mixed-methods study serves as a model for other libraries who wish to use research methods such as surveys or interviews to learn more about users from marginalized groups. The methods we employed are relatively easy, low cost, and convenient to implement, either virtually or in person. This study highlights ways to collaborate with students and other campus stakeholders and library staff at every stage of the research process, from literature review to recruitment to interviews to analysis—even if participants and staff do not have formal assessment responsibilities or training. We hope the results raised through our research at Duke may prompt similar studies or exploration of issues that affect users with apparent and non-apparent disabilities at other campuses and libraries.

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Appendix 1: Survey Instrument

We're interested in learning how people with visible and non-visible disabilities experience library spaces and online services. Survey participants will be entered in a drawing for a \$50 Amazon gift card. This survey should take about 5–10 minutes to complete.

This survey requires participants to authenticate their identity as a Duke affiliate using Shibboleth, Duke's SSO-authentication service. However, this survey is anonymous: no personally identifying information is stored by the authentication process.

Your responses will help us make our spaces, materials, and services more inclusive. Thank you for your time and valuable input!

Q1. (Required) What is your current status at Duke?

- 1. Undergraduate Student
- 2. Graduate Student
- 3. Faculty
- 4. Staff
- 5. Other (please specify)

Q2. (Required) Which of the following best describe you? (Check all that apply)

- 1. I have a disability
- 2. I am an ally to individuals with disabilities
- 3. I am a caregiver to someone with a disability
- 4. Other (please specify)_____

Q3. (Required) Please identify **your** disabilities or other circumstances that affect how you interact with your environment, if any. (Check all that apply)

- 1. None of these apply to me (Exclusive)
- 2. Asthma
- 3. Attention-Deficit/Hyperactivity Disorder
- 4. Autism Spectrum Disorder
- 5. Blind or low vision
- 6. Chronic migraines
- 7. d/Deaf or hard of hearing
- 8. Depression and/or anxiety
- 9. Dietary restrictions (whether by choice or allergy)
- 10. Dyslexia
- 11. Environmental sensitivity
- 12. Epilepsy
- 13. Fatigue or chronic pain condition

- 14. Mobility disability
- 15. Speech disability
- 16. Temporary injury
- 17. Trauma
- 18. Other _____
- 19. I prefer not to disclose (Exclusive)

Q4. (Optional) What assistive technology, if any, do you use for learning/research purposes on a regular basis? Do any campus units or organizations help with access to this technology?

Q5. (Required) Which library do you visit most frequently?

- 1. Perkins & Bostock Libraries
- 2. Lilly Library
- 3. David M. Rubenstein Rare Book & Manuscript Library (Special Collections)
- 4. Music Library
- 5. Divinity Library
- 6. Ford Library at Duke's Fuqua School of Business
- 7. Goodson Law Library
- 8. Medical Center Library & Archives
- 9. Pearse Memorial Library at the Duke Marine Lab
- 10. I don't physically visit a library

Q6. Which other libraries do you visit at least twice a semester? (Check all that apply, or skip if you do not visit other libraries at least twice a semester)

(This question will only appear if "I don't physically visit a library" is not selected)

- 1. Perkins & Bostock Libraries
- 2. Lilly Library
- 3. David M. Rubenstein Rare Book & Manuscript Library (Special Collections)
- 4. Music Library
- 5. Divinity Library
- 6. Ford Library at Duke's Fuqua School of Business
- 7. Goodson Law Library
- 8. Medical Center Library & Archives
- 9. Pearse Memorial Library at the Duke Marine Lab
- 10. I don't physically visit a library

Q7. (Required) How frequently do you visit the Duke Libraries?

(This question will only appear if "I don't physically visit a library" is not selected)

- 1. Daily
- 2. More than once a week
- 3. Once a week
- 4. 1-2 times a month
- 5. 1–2 times a semester

Q8. To what extent do the following limit your (in person) visits to the libraries? (Not at all, Somewhat, A great deal, No opinion)

- 1. I am not coming to campus regularly during the pandemic
- 2. I access all the library resources I need online
- 3. I don't have time
- 4. The library isn't open when I need it
- 5. It's too difficult for me to get to the library
- 6. I can't find a space to work or study in the library
- 7. Parking is inconvenient or unavailable
- 8. My coursework or research doesn't require library materials or services
- 9. In the past, I didn't find what I needed
- 10. I have not received good service at the library
- 11. I don't live near Duke University
- 12. I mostly use non-library resources
- 13. Other (please specify)

Q9. (Optional) Any additional comments about what influences your decision to visit the libraries?

Q10. Please rate how well the Duke Libraries' **physical spaces** meet your needs in the following categories:

(scale: Completely meets my needs, somewhat meets my needs, does not meet my needs, I didn't know the library provided this, no opinion)

(This question will only appear if "I don't physically visit a library" is not selected)

- 1. Chairs in study areas
- 2. Tables and desks in study areas
- 3. Spaces with a noise level that matches my study preferences
- 4. Reservable study rooms
- 5. Restrooms
- 6. Public computers
- 7. Help from library staff while in the library

- 8. Access to physical library books and other resources
- 9. Library signage
- 10. ADA Study Room (formerly the Accessible Technology Room) [only visible for undergrad and grad]
- 11. Book retrieval by library staff
- 12. After-hours book drops
- 13. Other (please specify)

Q11. (Optional) Any additional comments about Duke Libraries' physical spaces?

(This question will only appear if "I don't physically visit a library" is not selected)

Q12. Please rate how well the Duke Libraries' **remote or online services** meet your needs in the following categories:

(scale: Completely meets my needs, somewhat meets my needs, does not meet my needs, I didn't know the library provided this, no opinion)

- 1. Help from library staff via live chat (Ask a Librarian)
- 2. Help from library staff via email
- 3. Help from library staff via telephone
- 4. Help from library staff via virtual research consultations
- 5. Information on the library website about library spaces, collections, and services
- 6. Access to online library resources (ex: databases, journals, e-books)
- 7. Ability to reserve study spaces online
- 8. Other: (please specify)

Q13. (Optional) Any additional comments about Duke Libraries' remote or online services?

Q14. (Optional) Any additional comments about current library services for users with disabilities?

Q15. (Optional) Are there other library services you'd like to see offered for users with disabilities?

Q16. Would you like to be entered into the raffle for a \$50 Amazon gift card and/or be willing to participate in future discussions about Duke Libraries?

- 1. Yes (this will take you to a separate survey where you can leave your contact information)
- 2. No (this will end the survey)

Appendix 2: Emails to Recruit Survey Participants

Initial Recruitment Text

Subject:

Is the library accessible? Chance for \$50 gift card!

Email text:

We're interested in learning how people with visible and non-visible disabilities experience library spaces and online services. Complete this short survey and you'll be entered in a drawing for a \$50 Amazon gift card. Your responses are anonymous and will help us make our spaces, materials, and services more inclusive. Thank you for your time and valuable input!

[insert link]

Deadline to complete the survey: Tuesday, March 1

Reminder Text (send one or two reminders)

Subject:

Reminder: Is the library accessible? Chance for \$50 gift card!

Email text:

Reminder: If you haven't already completed this survey, make sure you respond before Tuesday, March 1 for a chance at the \$50 Amazon gift card.

Survey details: We're interested in learning how people with visible and non-visible disabilities experience library spaces and online services. Complete this short survey and you'll be entered in a drawing for a \$50 Amazon gift card. Your responses are anonymous and will help us make our spaces, materials, and services more inclusive. Thank you for your time and valuable input!

[insert link]

Deadline to complete the survey: Tuesday, March 1

Appendix 3: Screener Survey

The Duke University Libraries staff is hosting discussion groups to learn how people with visible and non-visible disabilities experience library spaces and online services. If you are interested in participating in one of the discussion groups, please fill out this screener survey **no later than Friday, March 18**.

We will invite a subset of people who complete this screener survey to participate in the discussion groups. Discussion sessions will be scheduled in the last week of March and the first week of April.

Q1. (Required) Please enter your contact information below.

- Name (first and last)
- Duke email

Q2. (Required) What is your current status at Duke?

- Undergraduate Student
- Graduate Student
- Faculty
- Staff
- Other (please specify)

Q3. (Required) Which of the following best describe you? (Check all that apply)

- I have a disability
- I am an ally to individuals with disabilities
- I am a caregiver to someone with a disability
- Other (please specify)

Q4. (Required) Please identify **your** disabilities or other circumstances that affect how you interact with your environment, if any. (Check all that apply)

This information will help us with scheduling and help make the session a more personalized experience. If you would rather not disclose your disabilities, please select the "I prefer not to disclose" option at the end of the list.

- None of these apply to me
- Asthma
- Attention-Deficit/Hyperactivity Disorder
- Autism Spectrum Disorder
- Blind or low vision
- Chronic migraines
- d/Deaf or hard of hearing
- Depression and/or anxiety
- Dietary restrictions (whether by choice or allergy)
- Dyslexia
- Environmental sensitivity
- Epilepsy

- Fatigue or chronic pain condition
- Mobility disability
- Speech disability
- Temporary injury
- Trauma
- Other
- I prefer not to disclose

Q5. (Required) Do you prefer meeting in person (on-campus) or virtually? (Check all that apply)

- In person (on campus)
- Virtual

Q6. (Required) Do you prefer participating in a group discussion or an individual interview? (Check all that apply)

- Group discussion
- Individual Interview

Q7. (Required) Which library do you visit most frequently?

- Perkins & Bostock Libraries
- Lilly Library
- David M. Rubenstein Rare Book & Manuscript Library (Special Collections)
- Music Library
- Divinity Library
- Ford Library at Duke's Fuqua School of Business
- Goodson Law Library
- Medical Center Library & Archives
- Pearse Memorial Library at the Duke Marine Lab
- I don't physically visit a library

Q8. (Optional) Is there any additional information you would like to share?

Appendix 4: Interview Script

Introduction and warm-up (3-5 min)

As we get settled in, I'm going to post a short form to the chat.

[paste URL of form in chat]

We'll use the info in this form to purchase Amazon gift cards to thank you for your time today. This information will be used for accounting/tax purposes only. Please take a

moment to fill this out before you leave today's session (I'll remind you again at the end).

Welcome, everyone, and thank you for being here. My name is [name], and I work in [library/department]. Library staff want to be sure they are fully meeting the needs of particular groups of library users at Duke. In the past we've talked with first generation college students and Black students, and this year we are focusing on accessibility and the needs and experiences of library users with disabilities.

You were invited to this session because you:

[for allies] identify as an ally to those with disabilities. Some of you also identify as having an apparent or non-apparent disability (for instance, asthma, depression, anxiety, dietary restrictions). During our discussion today, please feel free to respond to questions as an ally and/or as a person with a disability if you identify as such. If it feels important to indicate that your response is specific to a particular aspect of your identity, please feel free to say that, but you certainly don't have to. Are there any questions about this?

[for caregivers] identify as a caregiver or ally to a family member with disabilities. During our discussion today, please feel free to respond to questions as a disability ally and/or as a caregiver of a person with a disability if you identify as such. If it feels important to indicate that your response is specific to a particular aspect of your identity, please feel free to say that, but you certainly don't have to. Are there any questions about this?

[for people who identify as having a disability] identify as having an apparent or non-apparent disability (for instance, ADHD, asthma, depression, anxiety). If it feels important to indicate that your response is specific to a particular aspect of your identity, please feel free to say that, but you certainly don't have to. Are there any questions about this?

Also, as I ask questions, please keep in mind that there are no right or wrong answers, and you don't have to answer every question. It's also most useful to us if you are candid and frank about your feelings about the library. We want to hear what is NOT working about campus and about the library, because that information helps us make things better for Duke users.

In just a moment, I'll begin recording, and you'll be asked to check that you are aware we are recording this session. We are only recording for notetaking purposes. Nothing you say today will be connected to your name. Are there any questions or concerns about this?

Okay, I'll begin recording now.

Here are a few ground rules that we have found helpful in keeping these discussions productive [review ground rules -post abbreviated version in chat].

- 1. I have a series of questions for you. As I said, you don't have to answer every question. We'll be moving fairly quickly so we can cover lots of topics and not take too much of your time. If there are additional thoughts you'd like to share later, please feel free to reach out to me.
- 2. For some questions, I will ask you to think and write down your response before we discuss as a group. Go ahead and take a moment to locate a pen and paper, or open a note taking doc on your computer.
- 3. We're a small group, so it's fine for you to simply unmute and speak, or if you'd prefer to post your responses in the chat, that's fine, too. You may also use "raise hand" if you like.

For the chat:

- 1. Fine if you don't have an answer to every question.
- 2. We'll move quickly, but please follow up after today's session if you'd like to share more.
- 3. Have a pen and paper or note taking doc available to take a few notes while we talk.
- 4. You may unmute and speak or post your responses in the chat. Also fine to use the "raise hand" icon, but you don't have to.

Okay, are we ready to begin?

Warm-up (2 min)

Brief intros from participants by way of chat questions (moderator to post their responses and then read these other's responses along with the person's name if appropriate)

- something in your current space that we would see if we were together in person? (maybe a coffee cup or laptop sticker or picture)
- something you're sipping or munching on right now, or something you hope to snack on later today
- something you read or watched or listened to today that was interesting or enjoyable
- now, take a moment to look away from your computer screen and notice (see, smell, hear) something that brings you joy or makes you smile. If you like, post what you see, smell, hear in the chat.

Sense of belonging (15 min)

- 1. [omitted for caregivers] SCRATCH PAPER: What has helped you feel welcome and supported at Duke? Think about the people, services, or spaces you feel are most supportive and meet your needs at Duke or in Durham. Take a moment to type or write these down. We'll discuss these in a moment.
- 2. [omitted for caregivers] DISCUSSION: What makes the people, services, or spaces that you wrote down feel particularly helpful and supportive for you?
- 3. [omitted for caregivers] SCRATCH PAPER: What has made you feel *unwelcome* at Duke? Take a moment to write your thoughts on the blank paper in front of you; then we'll discuss as a group. [Discuss as a group.]
- 4. [only for allies and caregivers] SCRATCH PAPER: Now, think about your experience as a disability ally and/or caregiver to people with disabilities. Take a moment to write the phrases or words that come to mind when you think about your allyship for those with disabilities.
- 5. [only for allies and caregivers] DISCUSSION: What does allyship to people with disabilities at Duke mean to you? To what extent does Duke support you as an ally to people with disabilities? Have there been times when you've felt unsupported as an ally?

Campus as inclusive space (5–7 min)

1. Think about your experience as a [person with a disability|disability ally and/or caregiver of a person with a disability] at Duke. From your perspective, to what extent does Duke University feel inclusive of people with disabilities?

Library — experience (20 min)

- 1. SCRATCH PAPER: What words or feelings come to mind when you think about the libraries at Duke? Take a moment to write these down. PAUSE. Would anyone like to post one or two of their words or feelings in the chat? This is completely optional, but feel free to post if you like.
- 2. Have you used the libraries at Duke? Think about library study spaces, websites, research materials, visits from a librarian to your class, workshops, etc. How have you used these during your time at Duke?
- 3. If you have not used the library, what has kept you from using it?
- 4. If you have used the library, what about the library works well for you? Again, think about all aspects of library spaces and programs.
- 5. What about the library does not work well? Again, think broadly about library spaces and services and the library website/online resources.
- 6. Think about your preferred noise levels for studying, collaborating with others, etc. Do the libraries' physical study spaces match your noise preferences? Are there spaces that work particularly well for you? Spaces that don't work well?
- 7. There are various ways library users can get help from staff. Think about the last time you asked for help from a librarian or library worker. How did you get help? How did that work for you?

- 8. The Covid-19 pandemic has altered many things over the past two years, including how people study and use the libraries. To what extent have your library usage and study habits changed over the last years? What changes, if any, do you foresee in the coming months?
- 9. [If it hasn't already come up:] We understand that some library users consider the parking situation to be a barrier to visiting the libraries. If you had a magic button that would make it easier for people to use the library and any of its services, what would your magic button do? Think for a moment, write down your idea if you like, and then we'll discuss. [Discuss as a group.]
- 10. [time permitting] Now, think about the Duke Libraries website. [link to DUL homepage in the chat] What information do you look for on the library website? Have there been times when you've looked for information about using the library that you were not able to find? Please describe.

Libraries as inclusive space (10 min)

- 1. Again, think about your experience as a [person with a disability|disability ally and/or caregiver of a person with a disability]. From your perspective, to what extent does the library feel supportive, inclusive, and welcoming of people with disabilities?
- 2. Based on your experience, how might the library be more supportive, welcoming, or inclusive of people with disabilities?

Conclusion (1 min)

Those are all the questions I have. I've really enjoyed talking with you this afternoon. Thank you for taking the time to meet with me. I'd be happy to meet with you later if you'd like to share anything else.

If you haven't done so already, please take a moment to complete this short form.

[paste URL of form in chat]

Again, we'll use the info in this form to purchase Amazon gift cards to thank you for your time today. This information will be used for accounting/tax purposes only. We'll email gift cards to the same address we used to schedule today's session unless you'd prefer we use a different email address.

Appendix 5: Emails to recruit discussion group participants

Invitation to screener survey

Subject:

\$15 gift card! Improve library services for people with disabilities

Email text:

Dear [First Name],

Thank you for completing the Duke Libraries Accessibility Survey. I'm reaching out because you indicated that you might be available to participate in future discussions about Duke Libraries.

To learn more about how the libraries meet the needs of users with disabilities, we're hosting discussions (both in groups and one-on-one) in late March and early April. Participants will each receive a \$15 Amazon gift card.

If you'd like to participate in a group discussion or interview to share more about your experiences, please [fill out this short screener survey](survey link) by **Friday, March**18. The questions on the form will help us tailor sessions to participants' experiences.

[Sign up for a discussion session](survey link)

Volunteers who are selected will be able to schedule a session convenient for them. We may not be able to accommodate everyone due to a limited number of spots. Thank you for considering this request and helping Duke Libraries staff improve services to better meet your needs!

Best,

Angela

Your privacy is important to us:

We truly value the many unique perspectives that students bring to Duke, and it is important to the Libraries to understand all students' experiences, backgrounds, and information needs. We hope you will consider joining us. While the Libraries will summarize what we learn from the discussion sessions in a report that will be shared with library staff and publicly on our website, your participation in the discussion sessions will be confidential. Participants' names will not be included in any report, and your name will not be associated with anything you say. However, if you participate in a group session, you will not be anonymous to the other group participants during the discussion. We will ask everyone present to please keep what is said confidential out of respect for each other.

Follow the link to opt out of future emails: [Click here to unsubscribe](unsubscribe link)

Reminder for screener survey

Subject:

Last chance: \$15 gift card! Improve library services for people with disabilities
Email text:
Dear [First Name]
Just a final reminder that today is the last day to sign up for a discussion session or interview (details below). Thanks for your help improving library services!
Best, Angela
[include the full text of the original invitation]
Invitation to scheduling poll
Subject:
Invitation for library group discussion
Email text:
Dear [First Name],
Thank you so much for filling out the screener survey for our Duke Library accessibility follow-up conversations. I'm happy to invite you to join a virtual group discussion session . The discussion session will be scheduled for one hour over Zoom, and participants will each receive a \$15 Amazon gift card. (For note-taking purposes only, we will be recording these sessions.)
Please indicate your available times using the Doodle poll below by Tuesday, March 29 . We will send a confirmation of the selected time and connection details on Wednesday the 30 th .
[Share your availability](Doodle poll link)
Thanks again for your time! We look forward to speaking with you soon!
Best, Angela
Invitation to discussion session
Subject:

Library group discussion scheduled for [date and time] Email text: Hello everyone, Based on the responses to our Doodle poll, we have identified [date and time] as the best time for your group (Zoom details below). Please feel free to join, even if you were unable to complete the Doodle poll. We'll start promptly at 12pm, and some of the questions will ask you to have a piece of paper or a blank document open to write down your thoughts. We're sorry if the time doesn't work for you, but thank you so much for your interest and willingness to participate! Best, Angela [Zoom details] Notice of non-selection Subject: Not selected for library discussion session on library accessibility Email text: Hello everyone, Thank you so much for filling out the interest form for our upcoming discussion on library accessibility. We selected a group for the upcoming discussions session based on the overall responses, and because of the need to keep the group small enough to allow full participation, we were not able to include you in the group this time. Thank you so much for your willingness to share your experiences! Best wishes for the rest of your semester. Best,

Angela

Endnotes

- ¹ "In-Depth User Studies," Assessment & User Experience Strategy Department, Duke University Libraries, accessed November 28, 2022,
- https://library.duke.edu/about/depts/assessment-user-experience/user-studies.
- ² "In-Depth User Studies," https://library.duke.edu/about/depts/assessment-user-experience/user-studies.
- ³ "Biennial User Satisfaction Surveys," Assessment & User Experience Strategy Department, Duke University Libraries, accessed November 28, 2022, https://library.duke.edu/about/depts/assessment-user-experience/biennial-surveys.
- ⁴ Wang, Candice. 2021. "Literature Review of Accessibility in Academic Libraries and Higher Education." Assessment & User Experience Strategy Department, Duke University Libraries, July 9. https://docs.google.com/document/d/10F-5cQilgci0iBPP58VyV6xfbp9sjNPQ4Y_QpKfY1yk/edit?usp=sharing.
- ⁵ Dunefsky, Chadwick, and Carrie Wilson. 2021. "Library Accessibility Services Environmental Scan." Assessment & User Experience Strategy Department, Duke University Libraries, November.
- https://public.3.basecamp.com/p/sBSHbaUBnxAdN2jwgZsNQ7Gq.
- ⁶ "Services for Patrons with Disabilities," Duke University Libraries, accessed November 28, 2022, https://library.duke.edu/services/disabilities.
- ⁷ "Students," Duke Disability Management System, accessed November 28, 2022, https://access.duke.edu/students.
- ⁸ "Duke Disability Alliance," Disability at Duke, accessed November 28, 2022, https://sites.duke.edu/disabilityatduke/dda/.
- ⁹ "Disability and Access Initiative," Disability at Duke, accessed November 28, 2022, https://sites.duke.edu/disabilityatduke/disabilityatduke/disability-access-initiative/.
- ¹⁰ "The Visual Collaboration Platform for Every Team | Miro," Miro, accessed November 28, 2022, https://miro.com/.
- ¹¹ "ADA Study Room," Duke University Libraries, accessed November 28, 2022, https://library.duke.edu/about/ada-study-room.
- ¹² "Our History, Our Voice: Latinx At Duke // Nuestra Historia, Nuestra Voz: Latinas/Os/Es/X En Duke," Duke University Libraries, accessed November 28, 2022, https://exhibits.library.duke.edu/exhibits/show/latinx/intro.