



Library Study Spaces and Accessibility

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Research Team

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Purpose:

To understand the library study space needs of students with disabilities.

“Regardless of the color of skin, disability, socioeconomic status, or home situation, antiracist [library spaces] demand excellence in a way that communicates honor to the learner. What is the difference between offering help and designing [spaces] that are helpful to every student? What makes the difference is honor...Honor is most often communicated in the actions that answer the question, ‘Who is most important?’” (p. 18). -Quote adapted from author and educator, Andratesha Fitzgerald’s book *Antiracism and Universal Design for Learning* (2020).

Theoretical grounding:

We approached this problem with the goal of thinking about study spaces through a disability lens.

We developed an idea map to tie principles of disability justice (DJ) to principles of universal design for learning (UDL) and existing research on study space design. We used those ideas to form interview questions. Because DJ and UDL both work from the idea of planning for disability without requiring people to disclose stigmatized identities, we intentionally did not require students to disclose disability status to participate. We will note that as approximately a quarter of the population of the United States has some disability ([CDC](#)), we expect that participants include a mix of people with and without a disability.

Universal design for learning

The UDL framework is a tool to improve and optimize teaching and learning for all people based on scientific insights into how humans learn. UDL Guidelines focus on providing choice, supporting the learner's autonomy, and building a flexible curriculum and methods that adapt to the learner. The framework focuses on expecting and welcoming difference. UDL assumes the barriers to learning are in curriculum, methods, and formats – and do not lie within the learner. UDL does tend to focus on individual choice as the center of optimizing learning. However, interdependence and collective learning are supported by offering multiple means of engaging in learning. ([CAST](#))

Disability justice

The disability justice movement was formed by queer, disabled women of color and takes an intersectional approach to combat ableism from the ground up.

Activist and educator Talila A. Lewis defines ableism as:

A system of assigning value to people's bodies and minds based on societally constructed ideas of normalcy, productivity, desirability, intelligence, excellence,

and fitness. These constructed ideas are deeply rooted in eugenics, anti-Blackness, misogyny, colonialism, imperialism, and capitalism. This systemic oppression leads to people and society determining people's value based on their culture, age, language, appearance, religion, birth or living place, "health/wellness", and/or their ability to re/produce, "excel satisfactorily" and "behave." You do not have to be disabled to experience ableism. (2022)

Disability justice has ten principles as presented by the DJ-based performance organization Sins Invalid (2015). After reviewing UDL checkpoints and concerns raised in existing research on study spaces, we identified four DJ principles that seemed particularly relevant to this project. Those four principles were embedded in the questions we asked. Brief descriptions of these concepts and their relationships can be found in the table below.

Table 1

DJ Principle	UDL Checkpoint	Study Spaces	Interview questions
<p><i>Leadership of Those Most Impacted</i></p> <p>“theory [is linked] with praxis in the struggle for an autonomous and participatory society” (Hall, 2019)</p> <p>Disability identity is in flux and related to the very nature of human embodiment. Disability is unique as an “identity category” because “anyone can enter [it] at any time, and we will all join it if we live long enough” (Hall, 2019)</p>	<p>Checkpoint 4.1 Vary the methods for response and navigation</p> <p>Checkpoint 7.2 Optimize relevance, value, and authenticity</p> <p>Checkpoint 7.3 Minimize threats and distractions – Recognizing ableism and social norms that perpetuate stigmas as a threat to learning addressing this through critical inquiry, etc...</p>	<p>Work student concerns into iterative design processes (Schomberg and Corley, 2022)</p>	<p>How would you like to provide input into library space design? Examples include: more focus groups, having design plans publicly posted for comment ahead of time, and having student representation on planning committees.</p> <p>Is there anything else you would like to say?</p>

<p><i>Recognizing Wholeness</i></p> <p>“Each person is full of history and life experience.”</p>	<p>Checkpoint 4.2 Optimize access to tools and technologies</p> <p>Checkpoint 7.2 Optimize relevance, value, and authenticity</p>	<p>The physical environment influences how people feel, hear, see, and interact with one another, and that these factors, in turn, have an influence on the individual’s cognition and affective performance (Lundström et al., 2016)</p>	<p>After showing students photos of selected library spaces on each floor: How would you use these spaces?</p>
<p><i>Commitment to Cross-Disability Solidarity</i></p> <p>“isolation undermines collective liberation”</p>	<p>Checkpoint 8.3 Foster collaboration and community</p> <p>Checkpoint 7.3 Minimize threats and distractions – Recognizing ableism and social norms that perpetuate stigmas as a threat to learning addressing this through critical inquiry, etc...</p>	<p>Conflicting space needs (quiet vs social), firm vs soft seating, bright vs gentle lights, feel more safe in a corner vs feel more safe in a visible location, etc. (Winters, <u>2018</u>)</p>	<p>After showing students photos of selected library spaces on each floor: What spaces make you feel like you don't belong or are being excluded?</p>
<p><i>Collective Access</i></p> <p>“flexibility and nuance that go beyond able-bodied/minded normativity”</p>	<p>Checkpoint 4.2 Optimize access to tools and technologies</p> <p>Checkpoint 8.3 Foster collaboration and community</p>	<p>Social relations have been identified as factors affecting student engagement and place attachment or ‘sense of belonging’ to the university, which correlates, for example, with</p>	<p>After showing students photos of selected library spaces on each floor: What parts of these spaces make you feel like you belong and are included?</p>

	<p>Checkpoint 9.1 Promote expectations and beliefs that optimize motivation</p>	<p>students' intrinsic motivation for academic study (Lundström et al., 2016)</p> <p>Spatial design communicates meta-messages that influence how people engage with one another and whether they are able to fully participate in activities (Lundström et al., 2016)</p>	
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Methodology:

We used theory-based interview questions to conduct a qualitative exploration of student needs related to the accessibility of study spaces.

Interviews

Semi-structured individual interviews were conducted using questions grounded in the theoretical models of DJ, UDL, and existing study space research (See the Table above).

We initially planned to recruit participants to online focus groups hosted through Zoom. The scheduling logistics didn't work out the way we had hoped, so we instead shifted to interviewing students studying in the library

Two people conducted interviews with 20 students. Student participants were provided \$10 dining vouchers in thanks for their time. In selecting participants, we walked up to people in the library and asked if they were willing to participate. Most said yes, and some said no. To attempt to get participants of a diverse mixture of racial, gender, and body size, we intentionally sought out people with a variety of skin tones, hair textures, perceived gender presentations, and body sizes. We did not ask demographic questions about race, gender, or disability, so we were reliant on visible markers of difference to get a heterogeneous group of participants from within the existing student population.

Coding

A qualitative codebook of DJ concepts included in the analysis was used to code interview responses. Data was also open coded through thematic analysis to capture any emerging themes.

Table 2

Theoretical Concept/Grounding	Code	Codebook Description
Leadership of Those Most Impacted	+LMI	Centering students with disabilities; Centering students
No Leadership of Those Most Impacted	-LMI	Not centering students
Recognizing Wholeness	+RW	Expecting human variability/needs, proactively designing for those variable needs
Not Recognizing Wholeness	-RW	Does not express need to accommodate for expected human variability or negative view of variability.
Cross-Disability Solidarity	+CS	Recognizing and addressing ableism as source of disability
No Cross-Disability Solidarity	-CS	Medical model of disability or expression of a need for conformity or 'fitting' into normative standards
Collective Access	+CA	Belonging and safety is founded in spatial (physical, visual, auditory) and social cues and are attended to
No Collective Access	-CA	Belonging and safety are founded in individual perspective; or are not attended to in spatial/social ways

Trustworthiness

The trustworthiness of this qualitative analysis was addressed through the use of the qualitative codebook, cross-checking across three independent coders, and a participant validation/member checking process that sought feedback on the researchers' conclusions from the analysis.

We shared interview conclusions with the student public through a Qualtrics survey in the participant validation process. The survey was shared on Library social media and in public library spaces. Responses to the survey confirmed themes we identified and offered additional counternarratives and themes that extended the original analysis.

Results:

Voice

Students indicated a range of preferences in response to the question about how they would like to have a voice in library design decisions. The vast majority indicated that student opinions should be solicited, but a mix of involvement levels was requested. The participant validation survey results were similarly mixed.

Responses fit within the leadership category of Those Most Impacted / Checkpoint 7.2 Optimize relevance, value, and authenticity, but the level of desired engagement varied. There was some interest in focus groups and interviews. More passive options included feedback stations and surveys. More active options that would allow more opportunities for leadership and relationship-building included having student representatives on the design committee or open forums to gather feedback on design ideas. The open forums idea may be especially useful for supporting the Cross-disability Solidarity/UDL Checkpoint 8.3 Foster community among those who choose to attend.

Usage

Students used all floors of the library to serve different purposes. Depending on their goals at any particular time, many students appreciate moving between louder social spaces and quieter dedicated study spaces and having a variety of furniture to support those different needs. This variety supports the disability justice goals of Recognizing Wholeness and Collective Access, as well as Checkpoint 8.3 Foster collaboration and community and Checkpoint 9.1, Promote expectations and beliefs that optimize motivation. When asked about this idea in the follow-up survey, all respondents agreed with this point.

The availability of group study rooms was mentioned several times as important to their success. However, while students noted that having unmediated access to study rooms might cause unfairness if the first person there decided to “hog the space,” the three-hour study room limit was noted as restrictive when working on very large projects that take many hours to complete.

First floor.

Students like studying on the first floor when they want a mix of socializing and study time. Students choose their location based on whether they want to see and be seen by their friends (central areas) or when they want people around but less noise (quiet study areas and perimeter areas). The comfortable furniture on the first floor is also enticing. One drawback of studying on the first floor is the open computer tables, which were described as crowded together and not providing enough room to spread out. Another thing that was noted in the interviews and the participant validation survey, respectively, is that if a student wants to just come in for a short study break, the computers take a long time to load, and traveling to the more remote, less-social areas can be time-consuming.

Second floor.

Students like to use the second floor for individual study and for “focused group study” because it’s less noisy than the first floor and not uncomfortably quiet like the third floor. The wooden chairs were noted as a study distraction due to their discomfort.

Third floor

The third floor was observed to be too quiet by several students, who don’t feel comfortable studying there. When asked about this in the participant validation survey, response was split between those who agreed and those who disagreed with this point.

ERC

Students had a broad mix of reactions to the ERC. Some noted it as a comfortable, colorful place where they could study and relax simultaneously, especially in the booths that make it easy to sprawl. Other students “forgot it exists” or find it too dark.

Belonging

Most of the responses in this category relate to Recognizing Wholeness and Collective Access / Checkpoint 8.3 Foster collaboration and community and Checkpoint 9.1 Promote expectations and beliefs that optimize motivation.

While some students indicated that they feel like they belong throughout the library, several students pointed out specific features of different areas that impact their sense of belonging. The first floor was identified as an area where students from non-white racial groups can see other people who look like them. Many students also commented that being able to talk comfortably while studying made the first floor and the ERC particularly inviting.

Another theme that came up is how seeing other people studying helps students get in the right headspace, and the second floor was mentioned as particularly helpful for this (“I’m more productive here”). This phenomenon is sometimes described in disability circles as parallel play or body doubling, in which you “play” near someone without interacting or “mirror” what someone else is doing to stay accountable ([Gehlert](#)). This sort of activity can also support low-stress social bonding ([Vershbow](#)). Following the interviews and influenced by another library that provides virtual study hours ([Evenser and Chase](#)), we asked whether students would like the library to provide an online equivalent of this in the participant validation survey. Half the respondents said they would not find this helpful while the other half said that they would or that maybe they would find this helpful. We also asked students if they would like the library to provide social opportunities to meet other students, two-thirds of respondents said yes to that question.

Exclusion

Most of the responses in this category indicate ways the library is not supporting Collective Access or Recognizing Wholeness, related to Checkpoint 7.3 Minimize threats and distractions.

The third floor repeatedly came up as too quiet, with one student describing trying to study there as “it feels like I can’t even breathe.” When asked about this in the participant validation survey, response was split between those who agreed and those who disagreed with this point. Research on contextual and identity-based perceptions of safety indicate that a combination of factors leads many women across social class, racial background, and disability status to fear isolated and dark settings ([Koskela and Pain](#)). This fear is often based on personal trauma histories or patterns of violence in different communities. Research on the topic suggests that simply making changes to the built environment will not provide safety when the source of violence is societal. However, the fear that some students expressed does have an impact on how (and how effectively) they use different study spaces.

The darkness of the ERC, the dark coloring of the pillars on the first floor, and some of the furniture on the first floor also came up as off-putting. Several students requested that we use lighter coloring and better lighting. One student described the fluorescent lights on the first floor in terms of how they “don’t make it feel brighter but do give you a headache.” The darkness was also referenced in relation to the MavPods, which several students noted as inaccessible. Even those who can fit inside them observed that they don’t provide enough room to spread out study materials. One student who has used the standard MavPods commented on how the larger, accessible MavPods in the CSU have better light and are nicer to study for individual study. This is in line with what a few other students mentioned about the importance of providing accessible, individual study rooms.

Recommendations:

Variability in preferences and the use of library study spaces was a common theme that arose from all interview questions. This finding was consistent with our theoretical grounding of both DJ and UDL, which frame variability as expected and welcome. The existing variation in seating, lighting, noise level and individual and social study spaces in the library also supports this expectation for variability.

In an act of cross-disability solidarity, the library might enhance messaging around different study space needs. The library might consider providing background knowledge to students (UDL Checkpoint 3.1) to share why and how study spaces are designed to support collective access. This could also highlight patterns, big ideas, and relationships within the rationale for the library study spaces organization (UDL Checkpoint 3.2).

It would be helpful to consider how many different users could perceive that content by offering alternatives to visual and auditory content (UDL Checkpoint 1.2, 1.3). This could take the form of library signage or posters, social media posts, augmented reality such as a QR code, among other possibilities, and/or other multimedia content (UDL Checkpoint 5.1 uses multiple media for communication). Additional ways the user could

customize the content (UDL Checkpoint 1.1), such as translation to various languages (UDL Checkpoint 2.4).

The content could further center those most impacted by inviting students to submit and be compensated or awarded a grant/scholarship/stipend for submitting multimedia representations of messaging (UDL Checkpoint 2.5), including text, visual art, micro-stories, poems, audio/video, etc. that could be displayed in corresponding study space areas.

This enhanced messaging about existing library spaces may also support planning and strategy development for use of study spaces and to find out how students are using or want to use these spaces (UDL Checkpoint 6.2). Additional ways to support planning might include considerations for busy times of the semester. For example, the library might include ways to display to student end-users the availability status of group study rooms in real-time. The library could pursue ways to offer additional flexible and advanced scheduling options for group study spaces. The campus website, existing checkout system, and integration with the MavLife app might be options to explore as technological means for doing so.

Additional recommendations based on these findings might include space design considerations such as those referenced in the discussion section, particularly:

- Regularly invite student input into the design of library spaces. Consider ways to vary the methods for response and navigation of giving input such as those suggested by students: online forums, design committees, feedback stations in the library, conduct focus groups/surveys, among others. (UDL Checkpoint 4.1).
- Optimize access to tools and technologies that are designed to support the needs of students with different sensory needs (UDL Checkpoint 4.2) and minimize threats and distractions (UDL Checkpoint 7.3) by assuring all library spaces are accessible.
- Foster collaboration and community (UDL Checkpoint 8.3) by offering various social events that offer multiple ways to engage including parallel play/study, structured and unstructured conversation or activities, online, in-person, etc.

Future research:

In Spring 2023, researcher Jessica Schomberg will be teaching an Honors course that has the potential to build on the findings of this report by facilitating student-led assessments of different parts of the library in terms of disability accessibility.

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