

# Digital Scholarship Lab Card Sorting

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Slackify

**Abstract:** A report of the methods, objectives, and findings of Team Slackify's Card Sorting research activity. This document details the specific methodologies and results from a card sorting proctored by members of the student group, Slackify. This test was conducted as a single part of a multiple part research initiative into improving upon the website of the Michigan State Digital Accessibility Lab. Limitations of sample size should be taken into consideration when implementing any of the recommendations produced from this activity.

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## Summary

A Card Sorting activity was performed with 10 participants chosen within the library on Wednesday, October 24th, 2018. The activity was conducted using a Google form. A hybridized closed/open set of categories for the sort were created using the content already on the site as our starting point. The activity included 9 named groups, a “delete” and “other” categories, with a total of 28 cards. In order to gauge the effectiveness of the card sort, a question was added to determine the participants’ opinion on the card sort.

### Recommendations:

With the feedback we received, we recommend that repetitive language within each of the pages is removed. For example, our participants felt it was not necessary to have a ‘Contact Us’ section on the ‘Contact Us’ page, as the page fulfilled their needs. Our second recommendation is to further develop wording on some headings in order to relate to the widest possible audience. For instance, our participants were unsure of what the consultations entailed and were unsure how to categorize this within the groups. Our third recommendation is to remove the in the news section of the website. The content of this page was included in the sort, but not a single user used it as a grouping category for any of the cards. *All considerations of recommendations should take into consideration our limitations in sample size and errors in specific areas of our data.*

## Test Objective

Through this test, we worked to understand how our potential users would organize and best access the content on the Digital Scholarship Lab’s website. The end goal is to organize the content of the site into easily understood categories and make navigation logical and easy to use.

## Participants

We gathered 10 individuals to participate in our card sorting activity. Participants were selected from in and around the library. The card sort activity was not done in the Digital Scholarship Lab in order to reduce bias from people who know a lot about what the Digital Scholarship Lab does. People in other sections of the library that

were willing to spend a couple minutes on a card sorting survey were given a link to a Google Form. If the potential participant seemed hesitant or not wanting to participate we moved on to someone who was more willing to participate to avoid any specifically negative reactions. No additional screening questions were asked in order to keep the results as “natural” as possible.

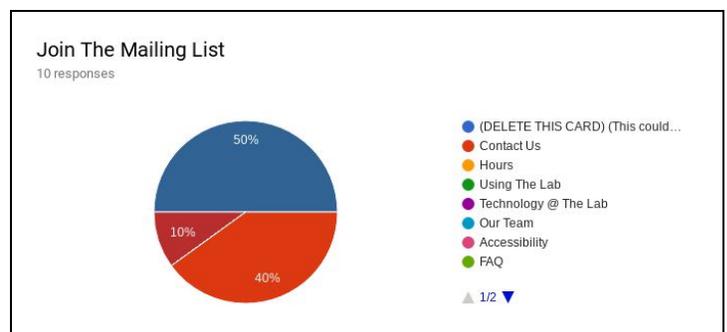
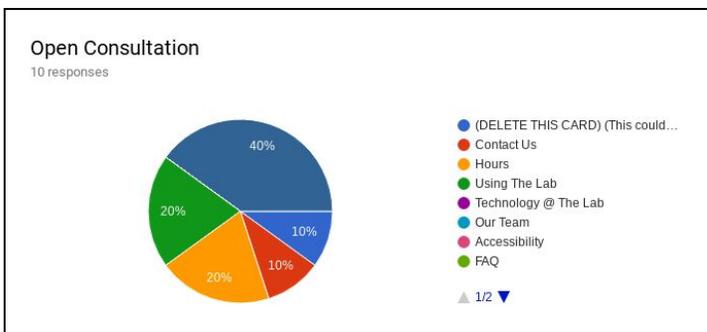
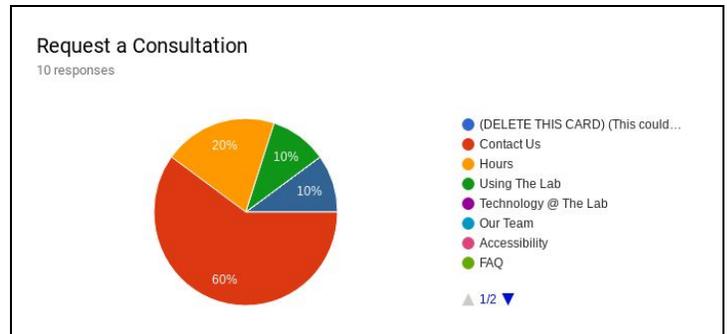
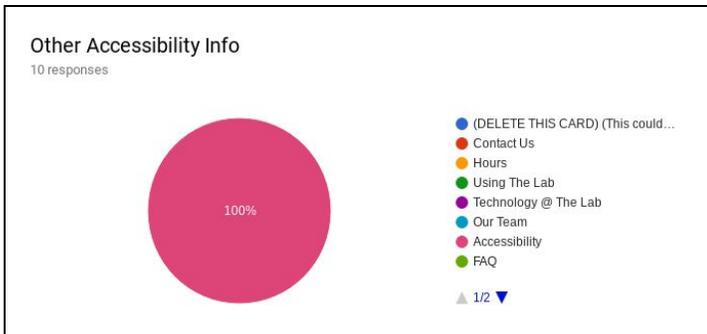
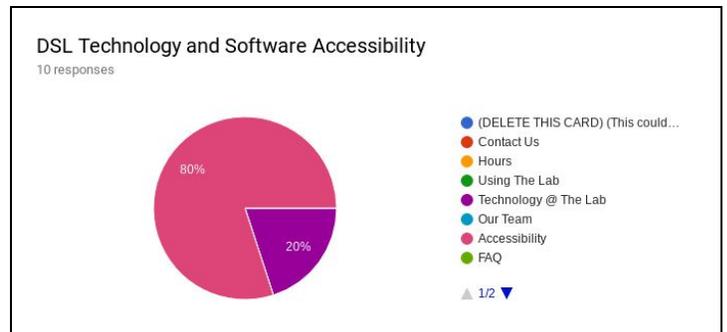
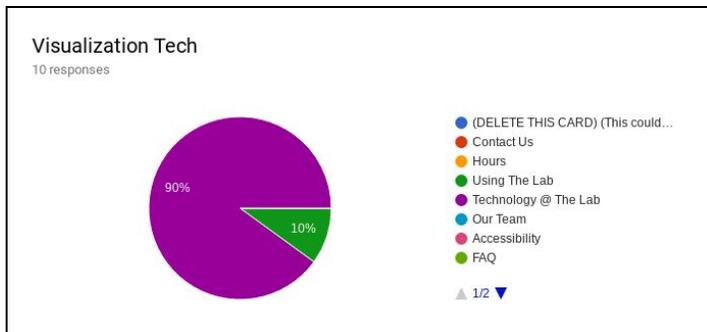
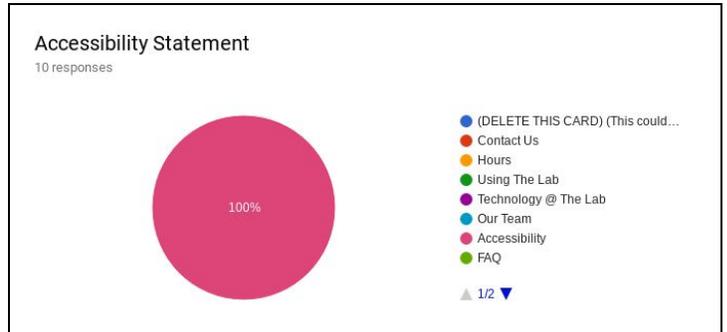
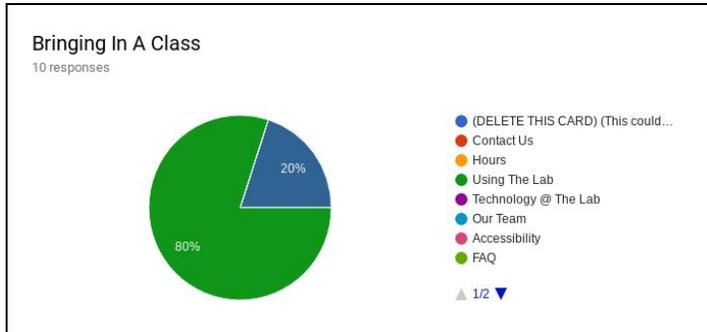
## **Methods Used**

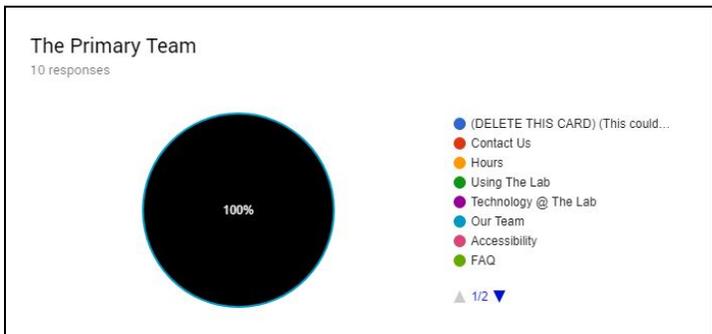
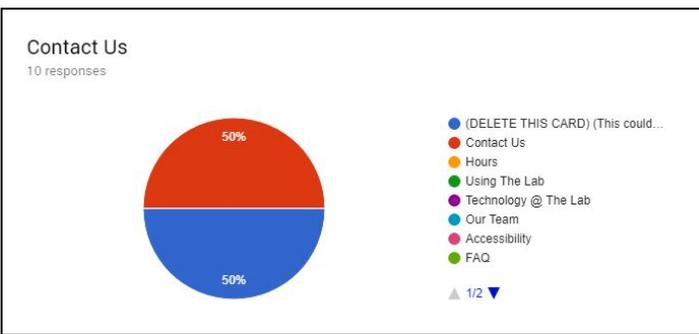
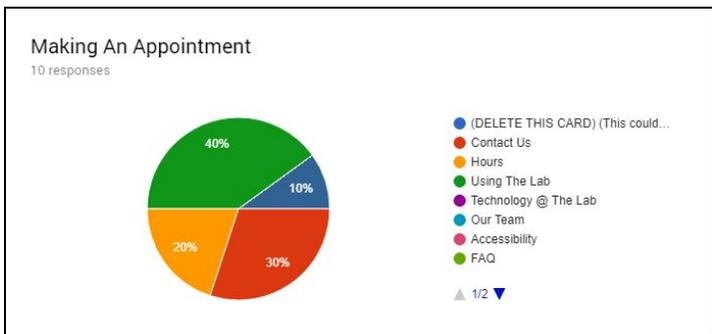
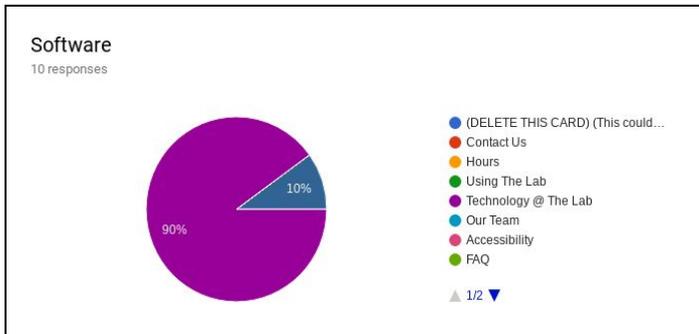
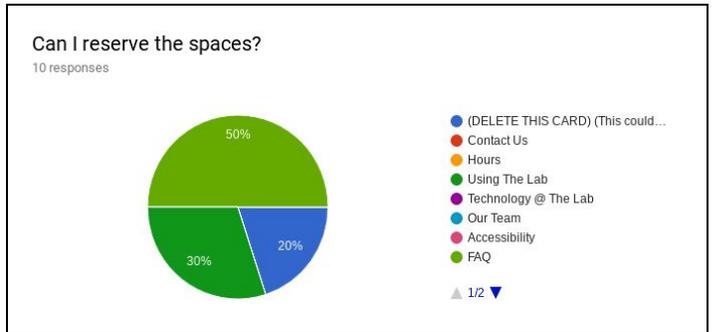
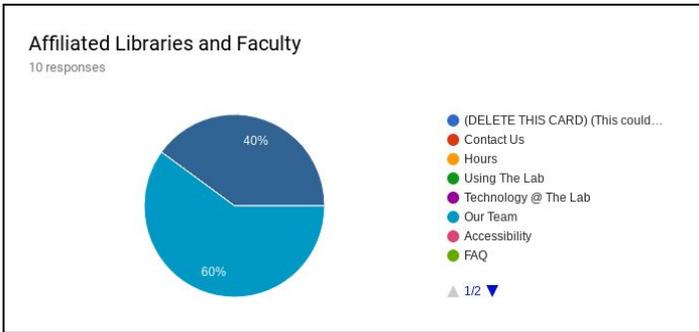
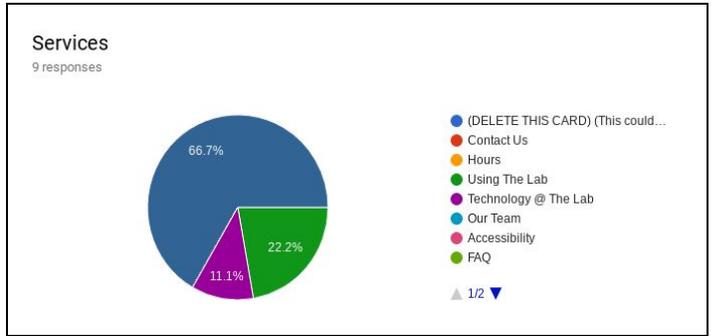
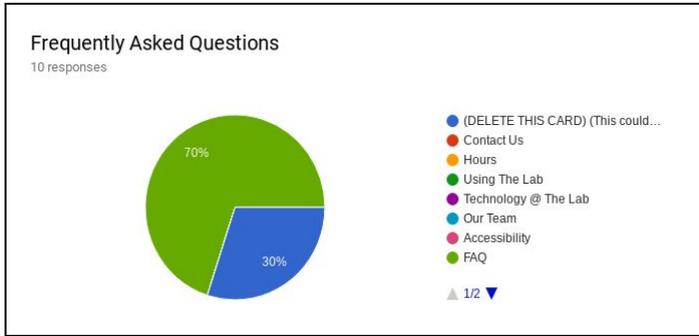
Our methodology was to simulate a pen and paper card sorting activity by using a Google Form survey that our team created. We choose to use Google Forms because of the data collection analysis/functions available. It was important for us to achieve both the portability and analysis functionality of a Google form while still receiving the same amount of information and organic incite one would normally receive from a pen and paper card sort. Each participant filled out the form independently.

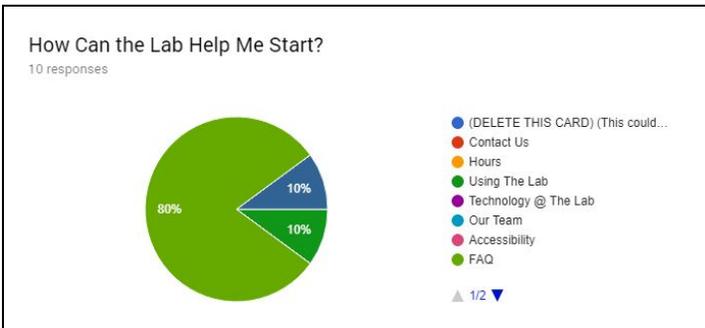
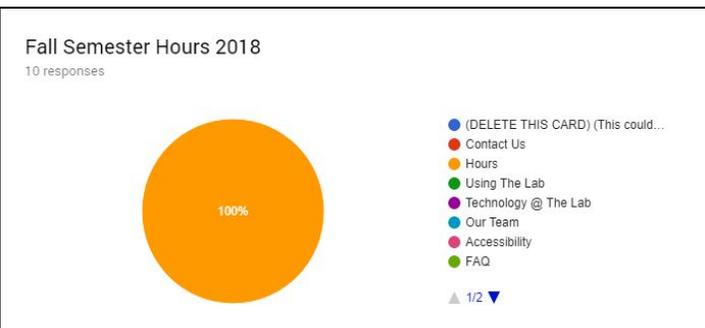
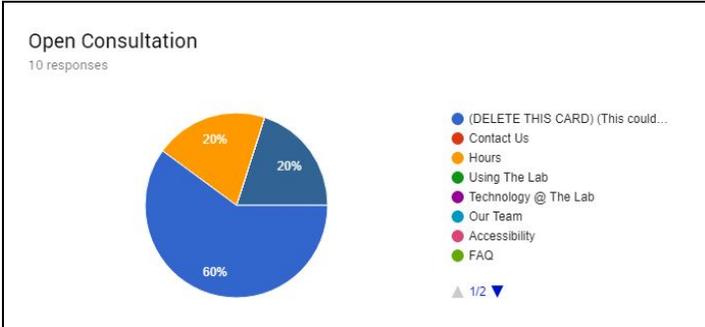
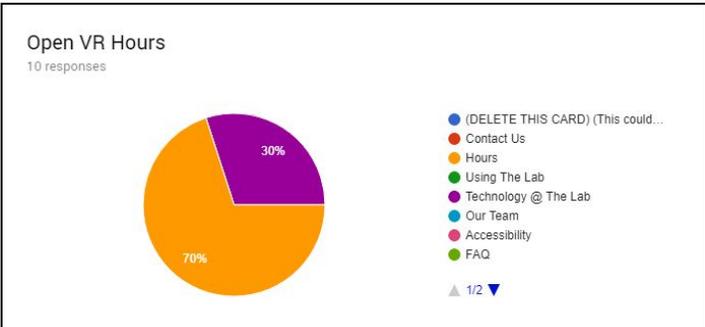
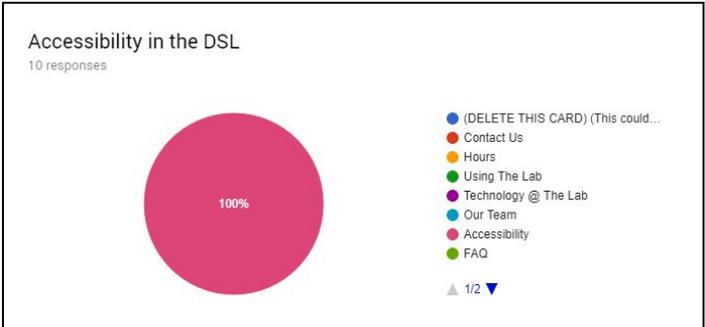
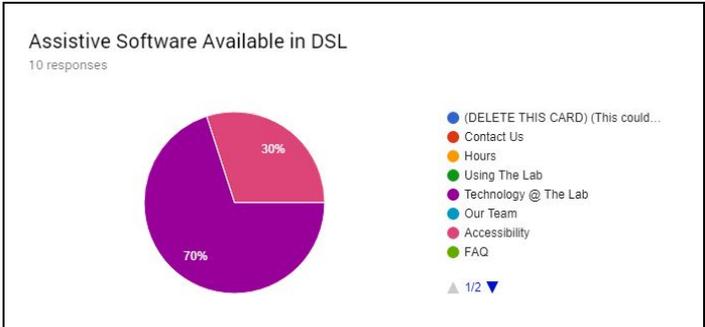
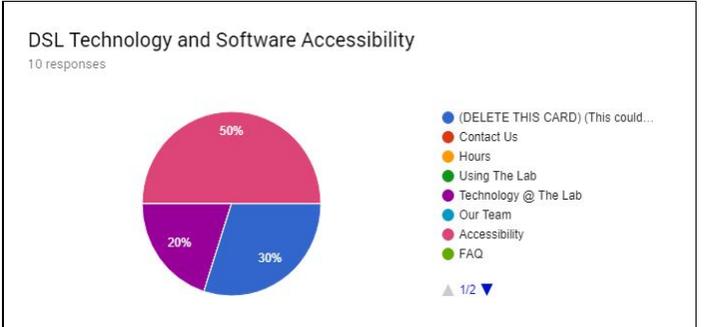
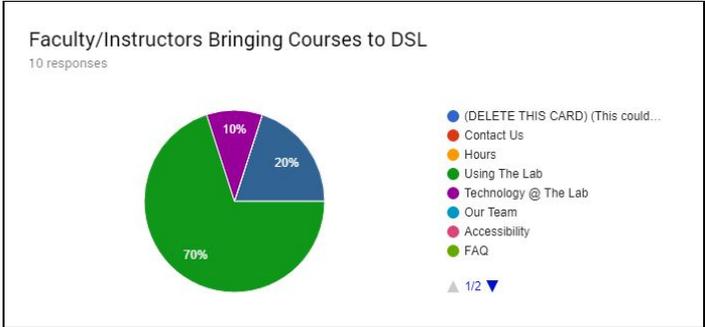
We used our own hybridized format in for our activity. Our card sort is neither open nor closed. Our participants were given the option to omit a card or create a new category as they saw fit. This was done in order to reduce the amount of confusion due to the digital nature of this card sort. If we had an easier way to access participants in the large group then it would have been better to give the group a set of physical cards to work with. That method may have yielded better results.

## Data Collected

A data sheet of the information can be found [here](#). Higher fidelity images of the data can be provided upon request.

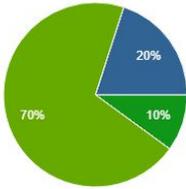






### How Can the Lab Help with My Project that I Have Started?

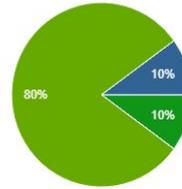
10 responses



- (DELETE THIS CARD) (This could...)
  - Contact Us
  - Hours
  - Using The Lab
  - Technology @ The Lab
  - Our Team
  - Accessibility
  - FAQ
- ▲ 1/2 ▼

### How Can the Lab Help with My Project that I Have Started?

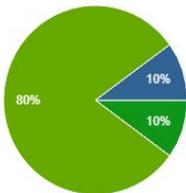
10 responses



- (DELETE THIS CARD) (This could...)
  - Contact Us
  - Hours
  - Using The Lab
  - Technology @ The Lab
  - Our Team
  - Accessibility
  - FAQ
- ▲ 1/2 ▼

### What spaces will be available exclusively for CAL?

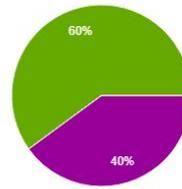
10 responses



- (DELETE THIS CARD) (This could...)
  - Contact Us
  - Hours
  - Using The Lab
  - Technology @ The Lab
  - Our Team
  - Accessibility
  - FAQ
- ▲ 1/2 ▼

### How can I learn more about new Tech?

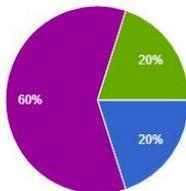
10 responses



- (DELETE THIS CARD) (This could...)
  - Contact Us
  - Hours
  - Using The Lab
  - Technology @ The Lab
  - Our Team
  - Accessibility
  - FAQ
- ▲ 1/2 ▼

### How can I learn more about new Tech?

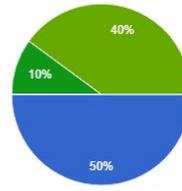
10 responses



- (DELETE THIS CARD) (This could...)
  - Contact Us
  - Hours
  - Using The Lab
  - Technology @ The Lab
  - Our Team
  - Accessibility
  - FAQ
- ▲ 1/2 ▼

### Can I reserve the spaces?

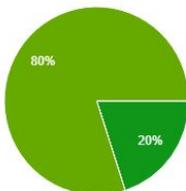
10 responses



- (DELETE THIS CARD) (This could...)
  - Contact Us
  - Hours
  - Using The Lab
  - Technology @ The Lab
  - Our Team
  - Accessibility
  - FAQ
- ▲ 1/2 ▼

### Who can use the lab space?

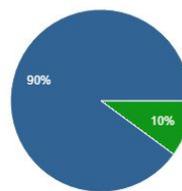
10 responses



- (DELETE THIS CARD) (This could...)
  - Contact Us
  - Hours
  - Using The Lab
  - Technology @ The Lab
  - Our Team
  - Accessibility
  - FAQ
- ▲ 1/2 ▼

### LAB Values

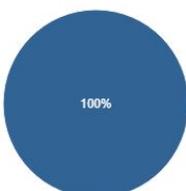
10 responses



- (DELETE THIS CARD) (This could...)
  - Contact Us
  - Hours
  - Using The Lab
  - Technology @ The Lab
  - Our Team
  - Accessibility
  - FAQ
- ▲ 1/2 ▼

### More about the Lab

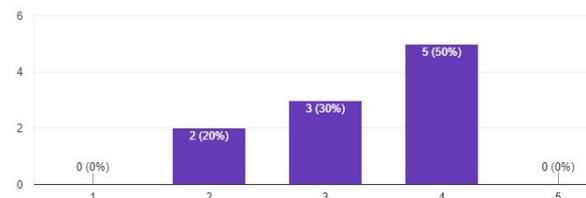
10 responses



- (DELETE THIS CARD) (This could...)
  - Contact Us
  - Hours
  - Using The Lab
  - Technology @ The Lab
  - Our Team
  - Accessibility
  - FAQ
- ▲ 1/2 ▼

### How do you feel about this Card Sorting Activity?

10 responses



## Issues With Data Collection

These 5 cards were unintentionally sorted twice by each participant in the Google Forms survey:

1. Open consultation
2. DSL technology and software accessibility
3. How can the lab help with my project that I have started?
4. How can I learn more about new tech?
5. Can I reserve the spaces?

This error impacts the data because the responses were not the same when the cards were unintentionally sorted twice. Some participants were unsure of what to do when they came to a mistake on our end. Due to the nature of our hybridized format, they were able to eliminate the cards that didn't make sense to them and/or were repetitive and this problem was solved with the formatting and the organization of the activity.

Card	Groups for Iteration 1	Groups for Iteration 2
Open consultation	60% Delete This Card 20% Hours 20% About the Lab	40% About the Lab 20% FAQ 20% Hours 10% Contact Us 10% Delete This Card
DSL technology and software accessibility	80% Accessibility 20% Technology @ the Lab	50% Accessibility 30% Delete This Card 20% Technology @ the Lab
How can the lab help with my project that I have started?	70% FAQ 20% About the Lab 10% Using the Lab	80% FAQ 10% About the Lab 10% Using the Lab
How can I learn more about new tech?	60% FAQ 40% Technology at the Lab	60% Technology at the Lab 20% FAQ 20% Delete this Card
Can I reserve the spaces?	50% FAQ 30% Using the Lab 20% Delete This Card	40% FAQ 50% Delete This Card 10% Using the Lab

## Analysis

For this analysis we've included the five cards that were sorted twice by participants. It would be unethical and bias of us to interfere with the results of the data in any way. All calculations are used with 28 cards plus the repeated 5, for a total of 35 cards. The repeated cards denoted with a "\*".

Statistics	Cards
<p><b>50% or More Participants Agreed on 83% of the cards</b></p>	<ul style="list-style-type: none"> <li>● Join the mailing list</li> <li>● Request a consultation</li> <li>● Services</li> <li>● Bringing in a class</li> <li>● Software</li> <li>● Visualization tech</li> <li>● Affiliated libraries and faculty</li> <li>● Faculty/instructors bringing courses to DSL</li> <li>● DSL Technology and software accessibility</li> <li>● Assistive software available in DSL</li> <li>● Open VR hours</li> <li>● Open Consultation*</li> <li>● How can the lab help me start</li> <li>● How can the lab help with my project that I Have started?*</li> <li>● How can the lab help with my project that I Have started?*</li> <li>● What spaces will be available exclusively for CAL?</li> <li>● How can I learn more about the new Tech?*</li> <li>● How can I learn more about the new Tech?*</li> <li>● Can I reserve the spaces?*</li> <li>● Can I reserve the spaces?*</li> <li>● Who can use the lab space?</li> <li>● Frequently asked questions</li> <li>● Lab values</li> </ul>

	<ul style="list-style-type: none"> <li>● Primary team</li> <li>● Accessibility statement</li> <li>● Other accessibility info</li> <li>● Accessibility in the DSL</li> <li>● Fall semester hours 2018</li> <li>● More about the lab</li> </ul>
<b>100% of Participants Agreed on 17% of the total cards</b>	<ul style="list-style-type: none"> <li>● Primary team</li> <li>● Accessibility statement</li> <li>● Other accessibility info</li> <li>● Accessibility in the DSL</li> <li>● Fall semester hours 2018</li> <li>● More about the lab</li> </ul>
<b>34% of the cards were divided into 2 groups</b>	<ul style="list-style-type: none"> <li>● Contact us</li> <li>● Bringing in a class</li> <li>● Software</li> <li>● Visualization tech</li> <li>● Affiliated libraries and faculty</li> <li>● DSL Technology and software accessibility</li> <li>● Assistive software available in DSL</li> <li>● Open VR hours</li> <li>● How can I learn more about the new Tech?*</li> <li>● Who can use the lab space?</li> <li>● Frequently asked questions</li> <li>● LAB Values</li> </ul>
<b>20% of the cards were divided into 3 groups</b>	<ul style="list-style-type: none"> <li>● Join the mailing list</li> <li>● Services</li> <li>● Faculty/instructors bringing courses to DSL</li> <li>● DSL Technology and Software accessibility</li> <li>● Open Consultation*</li> <li>● How can the lab help me start</li> <li>● How can the lab help with my project that I have started?*</li> </ul>

	<ul style="list-style-type: none"> <li>• How can the lab help with my project that I have started?*</li> <li>• What spaces will be available exclusively for CAL?</li> <li>• How can I learn more about the new Tech?*</li> <li>• Can I reserve the spaces?*</li> <li>• Can I reserve the spaces?*</li> </ul>
9% of the cards were divided into 4 or more groups	<ul style="list-style-type: none"> <li>• Making an appointment</li> <li>• Request a consultation</li> <li>• Open consultation*</li> </ul>
Participants were divided evenly for 1 card.	<ul style="list-style-type: none"> <li>• Contact us</li> </ul>

## Results

### Card Grouping

Group	Cards
Contact us	Request a Consultation: 60%
Hours	Open VR Hours: 70% Fall Semester Hours 2018: 100%
Using the Lab	Make an Appointment: 40% Bringing in a Class: 80% Faculty/Instructors Bringing Courses to DS Lab: 70%
Technology at the Lab	Software: 90% Visualization Tech: 90% Assistive Software Available in DS Lab: 70% How Can I Learn More About New Tech?: 60%
Our Team	Affiliated Libraries and Faculty: 60% The Primary Team: 100%

	Open Consultation: 60%
Accessibility	Accessibility Statement: 100% Other Accessibility Info: 100% DS Lab Technology and Software Accessibility: 80% DS Lab Technology and Software Accessibility: 50% Accessibility in the DS Lab: 100%
FAQ	How Can the DS Lab Help Me Start?: 80% How can the Lab Help with My Project that I Have Started?: 70% How can the Lab Help with My Project that I Have Started?: 80% What Spaces Will be Available exclusively for CAL?:80% How Can I Learn More About New Tech?: 60% Can I Reserve the Spaces? 50% Who Can Use the Lab Space?: 80% Frequently Asked Questions: 70%
Ambiguous	Contact Us: 50% Delete this card 50% Contact Us
Delete This Card	Open Consultation: 40% Open Consultation: 60% Can I reserve the spaces?: 50%
In The News	N/A
About the Lab	Join the Mailing List: 50% Open Consultation: 40% Services: 66.7% Lab Values: 90% More About the Lab: 100%

**Categories**

Card	Groups
Join the Mailing List	About the Lab: 50% Contact Us: 40%

	In the News: 10%
Open Consultation	About the Lab: 40% Using the Lab: 20% Hours: 20% Contact Us: 10% Delete This Card: 10%
Request a Consultation	Contact Us: 60% Hours: 20% Using the Lab: 10% About the Lab: 10%
Contact Us	Contact Us: 50% Delete this Card: 50%
Making an Appointment	Using the Lab: 40% Contact Us: 30% Hours: 20% About the Lab: 10%
Services	About the Lab: 66.7% Using the Lab: 22.2% Technology @ the Lab: 11.1%
Bringing in a Class	Using the Lab: 80% About the Lab: 20%
Software	Technology @ the Lab: 90% About the Lab: 10%
Visualization Tech	Technology @ the Lab: 90% Using the Lab: 10%
Affiliated Libraries and Faculty	Our Team: 60% About the Lab: 40%
The Primary Team	Our Team: 100%
Accessibility Statement	Accessibility: 100%
Faculty/Instructors Bringing Courses to DSL	Using the Lab: 70% About the Lab: 20% Technology @ the Lab: 10%
Other Accessibility Info	Accessibility: 100%
DSL Technology and Software Accessibility	Accessibility: 80% Technology @ the Lab: 20%

DSL Technology and Software Accessibility	Accessibility: 50% Delete this Card: 30% Technology @ the Lab: 20%
Assistive Software Available in DSL	Technology @ the Lab: 70% Accessibility: 30%
Accessibility in the DSL	Accessibility: 100%
Open VR Hours	Hours: 70% Technology @ the Lab: 30%
Open Consultation	Delete this Card: 60% About the Lab: 20% Hours: 20%
Fall Semester Hours 2018	Hours: 100%
How Can the Lab Help Me Start?	FAQ: 80% About the Lab: 10% Using the Lab: 10%
How Can the Lab Help with My Project that I Have Started?	FAQ: 70% About the Lab: 20% Using the Lab: 10%
How Can the Lab Help with My Project that I Have Started?	FAQ: 80% About the Lab: 10% Using the Lab: 10%
What spaces will be available exclusively for CAL?	FAQ: 80% About the Lab: 10% Using the Lab: 10%
How can I learn more about new Tech?	FAQ: 60% Technology @ the Lab: 40%
How can I learn more about new Tech?	Technology @ the Lab: 60% FAQ: 20% Delete this Card: 20%
Can I reserve the spaces?	FAQ: 50% Using the Lab: 30% Delete this Card: 20%
Can I reserve the spaces?	Delete this Card: 50% FAQ: 40% Using the Lab: 10%

Who can use the lab space?	FAQ: 80% Using the Lab: 20%
Frequently Asked Questions?	FAQ: 70% Delete this Card: 30%
LAB Values	About the Lab: 90% Using the Lab: 10%
More About the Lab	About the Lab: 100%

## Appendix A: Card Listings (\* Indicates the card was repeated)

Primary team

Accessibility statement

Other accessibility info

Accessibility in the DSL

Fall semester hours 2018

More about the lab

Contact us

Bringing in a class

Software

Visualization tech

Affiliated libraries and faculty

DSL Technology and software accessibility

Assistive software available in DSL

Open VR hours

How can I learn more about the new Tech?\*

Who can use the lab space?

Frequently asked questions

LAB Values

Join the mailing list

Services

Faculty/instructors bringing courses to DSL

DSL Technology and Software accessibility

Open Consultation\*

How can the lab help me start

How can the lab help with my project that I have started?\*

What spaces will be available exclusively for CAL?

Can I reserve the spaces?\*

Making an appointment

Request a consultation

Open consultation\*

## **Appendix B: Recommendations**

From all of the data we have gathered it seems that the information architecture of the DSL website could use a change that would make the information on each page more in line with what users expect. Some of the mismatches in expectation and reality could be due to the audience of the card sort not understanding what was meant by each of the headings but only a little of the mismatch is due to the heading not seemingly belonging where it is currently put on the website.

It appears that the audience does not know what either consultations or assistive technology is. It is possible that due to the nature of the card sort they don't have the original context of the situation that would be helpful in understanding what these different terms are. It is in our recommendation to not cater the information architecture of your website to those who aren't sure about the terminology. However, looking into the actual content and the words that are used to describe the lab and its services might be helpful in drawing in more people into the lab.

Almost all of the headings should stay where they currently are. The majority of the audience agreed that the placement of most of the headings are in their optimal spot which is good for the people who designed the interface in the first place. The only instance where a heading should actually change spots is the accessibility statement which would need to be moved from about the lab to the specific section on accessibility.

There were more cards that needed to be deleted than moved. These few categories to be deleted are the categories that have the same name as the page overall. This makes sense, it doesn't seem necessary to have a section called "contact us" on the "contact us" page.

## **Appendix C: Lessons for the Future**

Going into this project without having very much experience doing card sorting activities in the past was a struggle for us. We were apprehensive about going out and getting participants at first and we had spent a lot of time in the background working on the process of the card sort. For us, doing a large card sort with physical cards and a large group of people working together was ideal but we could not exactly find a way to do that. This led us to choose to make a Google Form. We had assumed that there would be a loss of physicality due to the lack of cards but that this wouldn't have too

much of an impact on our results. This did not end up being correct. The Google Form was a good start but certainly left a lot to be desired. Graphs and statistics were helpful in understanding results but only to a point due to the fact that some of the headings were duplicated in the survey. This probably was not a big influencer in how the audience answered questions overall but certainly would have been easier to avoid if we were using real cards for people to sort. Having a hybrid format worked well because when people found issue with our format they could tell us and delete the card. This helped our results more closely reflect the actual feelings/opinions of our users than if we would have had a completely closed card sort. Overall this project was a learning experience for us and gave us an appreciation for getting down to basics and it reminded us why so many UX people carry so many sticky notes with them all the time.