

Heuristic Evaluation of the Digital Scholarship Lab Website

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Executive Summary

This document contains the details and findings from our team's comprehensive heuristic analysis of the Michigan State University's Digital Scholarship Laboratory website. The heuristics we referenced for criteria were from Jakob Nielsen's ten usability heuristics and we ranked these on a predetermined scale. Each member analyzed two key pathways of the site, those being **Reserving a Room** and **Getting Consultation**. Individual analyses can be found in **Appendix B**.

After comparing and discussing our individual analyses and identifying key issues we developed a list of key findings:

- Overall, Control and Freedom is quite good
- Site design is aesthetically pleasing, but contrast and more significant hovering styles would make the site feel more dynamic
- Linking to a site that is out of the control of the lab is highly problematic especially when that site has many problems which are out of the DSL's control
- More clarity of overall location in the site would alleviate confusion

This report details the findings of our heuristic evaluation. In the report, we discuss recommendations based upon these findings as well as the potential limitations of our research.

Introduction

The Michigan State Digital Scholarship Lab is a state-of-the-art technology lab, opened in February 2018. The space in the MSU Library features technologies such as VR headsets, a computer lab with advanced Mac and PC workstations, as well as a 360-degree immersive visualization room that accommodates up to 15 students. The space is available to the public and welcomes users of any discipline or level of experience. In order to aid in presenting information regarding the space and allow for sign-ups for specific areas of said space the lab has its own website.

The website for the DS Lab is currently divided into 9 primary categories/pages. For the sake of this research, we decided to specifically target two pathways in a heuristic analysis, each regarding a specific feature of the site. Each path is a sign-up procedure, one for reserving a space and one for a consultation appointment / receiving consultation during open hours. We felt that by tackling some of the more complex pathways/features of the site we would be able to cover some of the more global heuristic issues while tackling issues specific to the important functions of the site. This choice enabled us to work more efficiently with our time.

During the heuristic analysis, each member of our four-person group operated independently to analyze each of the pathways. We decided to evaluate the pathways using the Jakob Nielsen, 10 usability heuristics. We tried our best to predetermine a scale and organization of the research so that our data would be as compatible as possible. Using our separate research we were able to come together to find similarities and produce some recommendations for the site.

Objective

The key goal of this research was to put our hypotheses to the test, finding the problematic areas of the site and documenting those areas in the most objective way possible.

It is important to note when considering changes based upon our research that even though we attempted to eliminate as much bias as possible in this research, all members of this team are human and we all seem to grade on slightly different scales.

Methods

For the heuristic analysis it was important for each member of our group to have each done an individual analysis. This means that each individual in the group had done an analysis of the task of reserving a room as well as going through the process of making a consultation appointment. These tasks were chosen due to these activities being primary uses of the website and analyzing these aspects of the website are important to understanding the use of the website as a whole. One of the important processes of a heuristic analysis process is to agree on a common scale that we would use as a reference in analyzing the websites that follow the specific tasks that we were analyzing. The scale that we used for grading the web pages against the heuristics is as follows:

1. Not Acceptable or Not Applicable
2. Not Good
3. Passable or Average
4. Good or Above Average
5. Close to Perfect

This scale was chosen in order to give a solid middle option to use for analysis as well as to have variables in the middle that would be used more often than the extremes of 1 and 5. These numbers were rarely used in the analysis due to the nature of the website being professionally done but needing work in order to make better. Once the scale was decided on each group member was given time to do their personal heuristic analysis.

Once the personal analysis was complete, the values of the analysis were averaged to create an average score for the specific heuristic. The

average score for the heuristic was then debated and talked about in order to get a final score in the form of a whole number that we will use to signify the level of improvement needed to be up to the standards of the heuristic.

Data

Task 1: Reserve a Room in the DS Lab

Site: DSLab	Task: Reserve a Room						
Heuristic	Home Page	Using the Lab Page	Reserve a Room Page	Home Page Average	Using the Lab Average	Reserve room Average	Heuristic Average
Visibility of System Status	Ryan:3 Joe:4 Jonnie:2 Sarah:2	Ryan:1 Joe:3 Jonnie:3 Sarah:3	Ryan:3 Joe:3 Jonnie:2 Sarah:2	2.75	2.5	2.5	2.58
Match Between System and Real World	Ryan:3 Joe:4 Jonnie:2 Sarah:2	Ryan:2 Joe:3 Jonnie:4 Sarah:3	Ryan:3 Joe:3 Jonnie:2 Sarah:2	2.75	3	2.5	2.63
User control and freedom	Ryan:4 Joe:4 Jonnie:N/A Sarah:4	Ryan:4 Joe:2 Jonnie:3 Sarah:3	Ryan:4 Joe:3 Jonnie:3 Sarah:3	4	3	3.25	3.63
Consistency and Standards	Ryan:4 Joe:4 Jonnie:2 Sarah:3	Ryan:4 Joe:5 Jonnie:4 Sarah:4	Ryan:1 Joe:2 Jonnie:1 Sarah:1	3.25	4.25	1.25	2.25
Error Prevention	Ryan:3 Joe:3 Jonnie:2 Sarah:3	Ryan:3 Joe:2 Jonnie:4 Sarah:3	Ryan:3 Joe:2 Jonnie:3 Sarah:3	2.75	3	2.75	2.75

Recognition rather than recall	Ryan:2 Joe:5 Jonnie:4 Sarah:2	Ryan:2 Joe:5 Jonnie:5 Sarah:2	Ryan:3 Joe:4 Jonnie:5 Sarah:3	3.25	3.5	3.75	3.50
Flexibility and efficiency of use	Ryan:2 Joe:3 Jonnie:4 Sarah:3	Ryan:2 Joe:4 Jonnie:4 Sarah:3	Ryan:4 Joe:3 Jonnie:2 Sarah:2	3	3.25	2.75	2.88
Aesthetic and minimalist design	Ryan:3 Joe:4 Jonnie:1 Sarah:3	Ryan:3 Joe:4 Jonnie:3 Sarah:3	Ryan:1 Joe:4 Jonnie:1 Sarah:3	2.75	3.25	2.25	2.50
User recognize, diagnose, and recover from errors	Ryan:1 Joe:4 Jonnie:1 Sarah:N/A	Ryan:1 Joe:N/A Jonnie:N/A Sarah:N/A	Ryan:3 Joe:3 Jonnie:N/A Sarah:3	2	1	3	2.50
Help and Documentation	Ryan:1 Joe:1 Jonnie:1 Sarah:1	Ryan:1 Joe:N/A Jonnie:3 Sarah:1	Ryan:1 Joe:1 Jonnie:1 Sarah:2	1	1.66	1.25	1.13
Task Average:				2.75	2.84	2.53	2.63
Final Score				3	3	3	3.00

Task 2: Consultation Hours:

Site: DSLab	Task: Consultation Hours						
Heuristic	Home Page	Using the Lab Page	Consultation	Home page average	using the lab average	Consultation Group Average	Heuristic Average
Visibility of System Status	Ryan:3 Joe:4 Jonnie:2 Sarah:2	Ryan:1 Joe:3 Jonnie:3 Sarah:3	Ryan:1 Joe:3 Jonnie:2 Sarah:2	2.75	2.50	2.00	2.42

Match Between System and Real World	Ryan:3 Joe:4 Jonnie:2 Sarah:2	Ryan:2 Joe:3 Jonnie:4 Sarah:3	Ryan:4 Joe:5 Jonnie:3 Sarah:4	2.75	3.00	4.00	3.38
User control and freedom	Ryan:4 Joe:4 Jonnie:N/A Sarah:4	Ryan:4 Joe:2 Jonnie:3 Sarah:3	Ryan:3 Joe:3 Jonnie:3 Sarah:3	4.00	3.00	3.00	3.50
Consistency and Standards	Ryan:4 Joe:4 Jonnie:2 Sarah:3	Ryan:4 Joe:5 Jonnie:4 Sarah:4	Ryan:4 Joe:5 Jonnie:2 Sarah:4	3.25	4.25	3.75	3.50
Error Prevention	Ryan:3 Joe:3 Jonnie:2 Sarah:3	Ryan:3 Joe:2 Jonnie:4 Sarah:3	Ryan:3 Joe:N/A Jonnie:5 Sarah:4	2.75	3.00	4.00	3.38
Recognition rather than recall	Ryan:2 Joe:5 Jonnie:4 Sarah:2	Ryan:2 Joe:5 Jonnie:5 Sarah:2	Ryan:2 Joe:5 Jonnie:5 Sarah:3	3.25	3.50	3.75	3.50
Flexibility and efficiency of use	Ryan:2 Joe:3 Jonnie:4 Sarah:3	Ryan:2 Joe:4 Jonnie:4 Sarah:3	Ryan:2 Joe:4 Jonnie:4 Sarah:3	3.00	3.25	3.25	3.13
Aesthetic and minimalist design	Ryan:3 Joe:4 Jonnie:1 Sarah:3	Ryan:3 Joe:4 Jonnie:3 Sarah:3	Ryan:3 Joe:4 Jonnie:3 Sarah:4	2.75	3.25	3.50	3.13
User recognize, diagnose, and recover from errors	Ryan:1 Joe:4 Jonnie:1 Sarah:N/A	Ryan:1 Joe:N/A Jonnie:N/A Sarah:N/A	Ryan:1 Joe:N/A Jonnie:N/A Sarah:N/A	2.00	1.00	1.00	1.50
Help and Documentation	Ryan:1 Joe:1 Jonnie:1 Sarah:1	Ryan:1 Joe:N/A Jonnie:3 Sarah:1	Ryan:1 Joe:N/A Jonnie:1 Sarah:1	1.00	1.66	1.00	1.00
Task Average:				2.75	2.84	2.93	2.84
Final Score				3	3	3	3

Note: any evaluation marked with an N/A was excluded from the total count when averaged. For example in task 2, the “Help and Documentation” heuristic for the “Using the Lab Page”, the numerator was the sum of the individuals values and the denominator was 3, regarding the 3 values that made up the sum of the numerator in the average function.

Key Findings

The key findings from this heuristic activity is that the Digital Scholarship Lab’s Website needs work but, the website’s functionality is not in as bad of a spot as we thought going into it. This means that most of the work that needs to be done on the website is relating to aesthetics and some minor information architecture rather than a lot of back-end coding. With the average result of the analysis of reserving a room and the analysis of consultation hours being 3. It is evident that the website is passable overall when we reference the scale that was decided upon before the analysis.

The ways in which the Digital Scholarship Lab’s Website works well for these two intended purposes are as follows: user control and freedom, and recognition and recall. These categories all received scores above 3.5 on average. The ways in which the Digital Scholarship Lab’s Website does not work well for its intended purposes are in the categories of: user recognition and recovery from errors, and help and documentation. These categories both received scores below 2.5 on average.

For the activities individually there are differences in how the web pages perform when looking in the context of the task at hand. The task of reserving a room works well on the heuristics of: recognition and recall, and user control and freedom. This task works poorly on the heuristics of: consistency and standards, and help and documentation. This is due to it being part of a completely separate website.

The task of finding consultation hours works well on the heuristics of: consistency and standards, recognition rather than recall, and user control and freedom. This task works poorly on the heuristics of: User recognition, diagnosis, and recovery from errors, help and documentation, and visibility of system status.

Discussion

Home page

We found the home page to be a little unusual, but not too difficult to navigate. The overall design is minimal, but not aesthetically engaging. The home page lacks depth and has a flat, heavy feel. There was an overall lack of connection between the top navigation, and the current page and there is no indication on the top nav what page the user is on. This lack of consistency is confusing and the user is forced to recall where they are rather than recognizing through guidance from page elements. This puts too much work on the user. There are no help resources available other than the standard MSU contact information. This leaves the user lost and frustrated when in a confusing situation. We found the button hover effect to be too subtle, a

more dramatic effect would help inform the user that the element is a button.

Using The Lab Page

This page also has a minimal design and aesthetic. The text is easy to read and all content is related to how to use the lab. The top header and navigation is consistent throughout the site, again the top navigation does not indicate or denote in any way what page the user is on. This page has a similar layout and design to other pages on the site. Content on the page is digestible, but the user has to scroll to see all available information. There were a lot of links used for important features where buttons should have been used. Page hierarchy and organization was inconsistent and at times redundant. There was a “Bring In A Class” section on the page as well as “Bring Your Class to the lab” link in a different section on the page.

Reserve a room page:

The Reserve a Room page is actually on a completely different website, including a different setup, which is confusing and visually jarring. We also noticed that there is not an easy way for the user to get back to the Digital Scholarship Lab website. We then noticed that there is no help or assistance on this page other than the 24/7 support line for MSU. This can very easily be problematic when a user is on this page and experiences some sort of difficulty, and then having to result in using the 24/7 support line for MSU, which may not solve the user’s problem. The website itself is not minimal in any manner and feels quite hectic and busy. The overall style of this website is not at all consistent with the rest of the site. As we mentioned above, this page is actually on a completely different website.

The breadcrumb menu at the top is nice to look at and is easy to understand. It's also easy to choose between the different menu options (reserve time/room/area of the library). However, once you click on a reservation time, it's not as easy to reverse that action if the user does make an error. A menu below the times does pop up, and the trash/delete icon is very small and no text pops up to indicate that is how you delete/change. Throughout this site, the language used could be more concise. There are some acronyms that are used that aren't quite exactly clear. Overall, this page feels very inconsistent compared to the rest of the site. The first thing the user sees is the "Accessibility Accommodations" paragraph, which appears to seem as if it is a notification of system status, but in actuality, it is a notice. It is also too wide to be easily read. Interestingly, times on the calendar that are not within scholarship lab hours are present, however, they are also un-clickable and non-responsive.

Consultation Hours Page:

The Consultation Page is a very static, unchanging page where users can understand what is going on. However, this page seems to be a conglomerate of all hours related to the lab, rather than having any real consultation type information on it. The overall design is quite minimal and somewhat aesthetically pleasing. The page itself seems very efficient and succinct page in the sense that it portrays all of the necessary information with no lack or excess of information. The bolded headers help to easily separate content for the user. Overall, this page is consistent with the other pages in the Digital Scholarship Lab website from a design and informative perspective.

Conclusion

In conclusion, the Digital Scholarship Lab's Website is in need of changes but not to the severity that was thought. The results of the heuristic analysis are not what was expected when we had looked at the website as a whole, however, once the requirement to complete certain tasks was introduced, the website functioned at an acceptable level. This acceptable level is a good start and should not be completely tossed out. We want to use the results of this heuristic analysis to subtly change elements of the website in order to make both its form and function better.

A small, but possibly important recommendation that our team has for the Digital Scholarship Lab team is: to consider the current landing page for reserving a room at the MSU Library, in relation to whether or not it should continue being a part of this website. This is likely a larger problem than our group can see, and would likely require more work than would be worthwhile or might be a bureaucratic impossibility while functioning inside of the library. We came to this recommendation through actively testing this workflow, and the dramatic shift of aesthetics and functionality is not a pleasant experience for the user.

The primary requirements of our team's work will be creating or recommending the use of information for a help and documentation portal, and the design of an interface that improves feedback to users for errors and the status of the system.

References

[Nielsen Norman Group: 10 Usability Heuristics for User Interface Design](#)

Appendix A:

A. Group Member A Evaluation:

Heuristic	Home Page	Using the Lab Page	Reserve a Room Page	consultation hours
Visibility of System Status	2 Not great, it's not clear this is the home page, this comes off as more of a navigation menu/page	3 ok, "using the lab" is at the top of the page, its clear to the user where they are. The "using the lab" in the top nav is not highlighted or bolded/underlined etc.. which is unusual.	2 Moved to a completely new site and page with different layout. You have to search to find "Digital Scholarship Lab" on the page. I'm not sure how much say the DS Lab has in this, so we might not be able to improve this.	2 unchanging page, only status/update is the "FALL SEMESTER HOURS 2018" header
Match Between System and Real World	3 language is good, navigation is a little unusual, this may cause issues. hover effect is very subtle, might want to make this more noticeable. the order of the modules could be better organized. The top nav and main nav don't match, there is only 'About', 'Using the Lab' and 'Contact'	3 this is ok, but you have to scroll to see all the options, a secondary nav would be helpful	2 coming from the DS Lab this is very jarring, the user has to reacquaint themselves with the page as it's a completely different set up. The terminology is also confusing, its not clear what 'W201J' is referring to, I'm assuming the rooms. There are a couple of paragraphs that are	4 language is english, times are bolded and standard days/times are used

	and a search bar, while in the main nav there is 9 objects.		too wide which makes them difficult to read. The breadcrumb menu is helpful.	
User control and freedom	4? this is ok, the top header/nav stays throughout all the pages, so it's easy for the user to go back to the homepage. More indication of where the user currently is on the top nav would be better.	3 ts clear where the user is, but again the top nav should also reflect this. Because the hover effect/affect is to underline the item, the search bar should probably not have a permanent underline. A breadcrumb menu might be a good solution, it's not bad, but its not good. The user can go back to the home page by clicking the DS Lab in the top left corner.	3 breadcrumb menu at the top is solid, though this is a different site. Maybe on the 'using the lab' page this should be noted somewhere. It's easy to choose different menu options, though once you click on a reservation time, its not as easy to get rid of. A menu below the times pops up, and the trash/delete icon is very small and not text pops up to indicate this is how you delete/change.	3 this is a very simple page to navigate, there isn't much for the user to interact with, just reading the times and days of operation
Consistency and Standards	3 the modular nav is only seen on the home page, the majority of the other pages have a similar, one column scroll style format. The header at the top is consistent throughout	4 one column/scroll style is consistent with other pages on the site. Top header is consistent	1 completely different site and style	4 This page is consistent with the other pages, except the home page.

Error Prevention	3	3	3	4 the use of boded headers and easy to read typeface help prevent user errors in with reading the text.
Recognition rather than recall	2 inconsistency between main nav and top nav is an issue. User has to go back to the home page/main nav to see all options.	2 user has to scroll a lot to see all options, a menu or secondary nav would help. Top nav doesn't reflect where the user is	2-3 again, this is a completely different site. The table could be labeled better, a calendar pops up when "select a date" is pushed, drop down menus are predictable. There isn't a way to go back to the DS Lab site	3 again this is a very simple page,there aren't a lot of objects on the page, there instructions/information about the lab hours is easy to read and not overwhelming.
Flexibility and efficiency of use	3 this isn't too difficult to navigate, the text is easily read. It's not super clear that the boxes are buttons, the text moves slightly when the mouse hovers over it, but I think a bigger movement or more noticeable change would be stronger and more clear.	3 straightforward to use, though not efficient. The user has to scroll a lot to see all options	2 not great, there isn't a clear way to get back to the DS Lab site, the table for reserving a room is set up a little weird and there aren't header rows for it. Overall the user has to think and try things to operate this page. It's not efficient. If you want to change the reservation time a menu bar pops up below the table and you have to delete your current reservation -> the delete icon is small	3 this is an efficient page in that the information is succinct and to the point. The lab hours are visible on the screen.

			and difficult to tell what it does.	
Aesthetic and minimalist design	3 the dark colors feel heavy and blocky and flat. The grey is nice, there are no images of the DS Lab on the homepage, this would help add depth.	3 boring, but clean, user has to scroll a lot	3 very different to the ds lab site, poor content organization, two large paragraphs at the top, no header within the page space	4 Very minimal, not a lot of text, and minimal colors are used
User recognize, diagnose, and recover from errors	N/A	N/A	3 red error message pops up when user tries to make more than one reservation at a time.	N/A
Help and Documentation	1 FAQ could be considered help, or the contact page, but other than that nothing else.	1 site map -> page not found. contact info leads to a google form	2 24/7 support line, contact information, call msu, pretty solid. Not much direction on the page though.	1 no help available on the page besides the footer, but those are general MSU help contact info.

B. Group Member B Evaluation:

Heuristic	Home Page	Using the Lab Page	Reserve a Room Page	Open Consultation Page
Visibility of System Status	2 - overall, the homepage does a very poor job of this, but in some ways it can still be used right now	3 - you can easily see what's going on, but it could be better	2 - somewhat easy to understand, but maybe it's just me because I'm tech-savvy, someone else might not quite understand what's	2 - you can somewhat understand what's going on, but it also has Lab Hours, which I feel like is a separate thing from a consultation

			going on	
Match Between System and Real World	2 - again, its okay, but not perfect, could definitely use some new wording	4 - the wording seems fine to me	2 - definitely some words and codes that don't make sense	3 - wording seems okay, however, users could be confused by "project management" and "scoping" if they are inexperienced
User control and freedom	N/A - users wouldn't necessarily "make a mistake on this page" other than choosing the wrong box and click the back button to go back to the homepage	3 - other than clicking the back button, there's nothing, which is okay	3 - again other than clicking the back button, there's nothing, which is okay	3 - other than clicking the back button, there's nothing, which is okay
Consistency and Standards	2 - About the Lab, Using the Lab, and Technology at the Lab all could be under the same category	4 - wording seems consistent and easy to understand	1 - the wording of the rooms aren't quite clear	2 - wording is definitely consistent, but I don't know that for sure this is the best use of wording possible
Error Prevention	2 - these titles could at least have a description explaining what type of info you would find on each page, to prevent an error of going to the wrong page	4 - very few links, which make it a good design in the sense that it is hard to make a mistake	3 - not many places to click, so it could be difficult for a user to make a mistake	5 - no links at all, so no way to make a mistake
Recognition rather than recall	4 - in this case, the user easily can see all of the options available, other than the hidden sublinks	5 - all options are visible	5 - all options are visible, but something about this page makes it difficult to understand	5 - all options are clearly visible

Flexibility and efficiency of use	4 - both unexperienced and experienced users could easily use this	4 - both unexperienced and experienced users could easily use this	2 - I think an experienced user could definitely use this. but an unexperienced one could have a lot of issues. I was somewhat confused at certain points	4 - both unexperienced and experienced users could easily use this
Aesthetic and minimalist design	1 - minimalistic? yes. aesthetically pleasing? not at all.	3 - minimalistic? yes. aesthetically pleasing? kinda. could definitely be better.	1 - minimalistic? no. aesthetically pleasing? no.	3 - minimalistic? yes. aesthetically pleasing? kinda. could definitely be better.
User recognize, diagnose, and recover from errors	1 - nothing of this that I see.	N/A - I don't see any error messages	N/A - I don't see any error messages	N/A - I don't see any error messages
Help and Documentation	1 - I don't see any help buttons anywhere	3 - no actual button that says "help", but a few different ways to contact someone at the lab	1 - no actual "help" button anywhere. there is one spot to report a "tech issue", but that wouldn't help me if I was confused	1 - I don't see any help buttons anywhere

C. Group Member C Evaluation:

Heuristic	Home Page	Using the Lab	Reserve a Room	Open
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		Page	Page	Consultation Page
Visibility of System Status	4. The homepage status is relatively clear. The page itself doesn't have very much context. With more contrast the buttons would more clearly appear as buttons making functionality more clear	3. Page content is divided up, but: hierarchy isn't as clear as it could be ie using buttons instead of links for important features. Accessibility Statement header seems out of place	3. Page is busy and use of color is inconsistent. The Accessibility Accommodations box appears seemingly as a notification of system status, but in actuality it is a notice. (Different color should be used here or the styling should be changed) Times on the calendar that are not within scholarship lab hours are present, but unclickable and nonresponsive. (These times should be removed altogether or a response should happen upon click)	3. When clicking a link to come to open consultation it would be expected that I would be taken to a page dedicated to open consultation, that is not the case. The open consultation heading should be at the top at the very least
Match Between System and Real World	4. Content is divided well, changes could be made to optimize and organize the content into fewer categories	3. Language and content is digestible, but, again, Accessibility Statement seems out of place on this page	3. Language could be more concise and acronyms are used that aren't exactly clear (CTL)	5. Language is clear and concise
User control and freedom	4. Similar to the System and Real World, categories could be optimized to help guide the user better and lessen confusion	2. Link to reserve a room takes the user to a completely different website! By not creating a hierarchy of	3. After a time is reserved, the user is able to change the request or delete it. Refer to Visibility of System Status.	3. Refer to Visibility of System Status (Due to unspecified page, control seems to be lacking.)

		content the user is forced to skim through the page to find the specific information they need		
Consistency and Standards	4. Page design is consistent. Search result page button design is not consistent with other button designs.	5. Page design is consistent	2. Page is inconsistent due to it being a part of a different site	5. Page design is consistent
Error Prevention	3. Refer to Visibility of System Status, System and Real World, and User Control/Freedom	2. Refer to Visibility of System Status, System and Real World, and User Control/Freedom	2. Refer to Visibility of System Status	N/A
Recognition rather than recall	5. Controls are clear and optimized, tabbing works as expected	5. Controls are clear and optimized, tabbing works as expected	4. A more responsive design would allow for better recognition	5. Controls are clear and optimized, tabbing works as expected
Flexibility and efficiency of use	3. Controls are optimized, but search results aren't very direct. Ex: When searching for "sign up" categories and page based results are given, but some results aren't applicable at all. It would appear that the system is searching for any possible page with the word sign or the word up. The problem with this is the pages resulting	4. Controls are clear and optimized, tabbing works as expected, buttons as opposed to links for important features would allow for more direct interaction, getting both advanced and non advanced users to what they need more quickly	3. A refined responsive design would allow for easier, more efficient access for all	4. Controls are clear and optimized, tabbing works as expected, but the nonspecificity of the page causes the page to be less efficient

	may not even have a 'signup' link or schedule at all.			
Aesthetic and minimalist design	4. Design is aesthetic and not overwhelming. Higher contrast would improve overall experience	4. Aesthetic is minimalistic	4. Aesthetic is somewhat busy	4. Aesthetic is minimalistic
User recognize, diagnose, and recover from errors	4. Errors in search produce a no results page. "Try again, would you kindly?" seems like a strange error message and isn't very consistent with the voice of the site.	N/A	3. Refer to Visibility of System Status	N/A
Help and Documentation	1. Help page/documentation is not included in the site	N/A	1. Help page/documentation is not included in the site or not clearly labeled or found	N/A

D. Group Member D Evaluation:

Heuristic	Home Page	Using the Lab	Consultation Hours	Reserve a Room
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Visibility of System Status	3, boxes have a hover effect to show movement	1, static unchanging webpage	1, static unchanging webpage		3
Match Between System and Real World	3, the colors and theming is similar to the real life DSLab but it has no real equivalent in daily life	2, matches similar information pages but nothing in the real world	4, looks very similar to real life hours boards	3, works similar to the other digital room booking systems	
User control and freedom	4, allows the user to navigate the webpage without much difficulty	4, allows the user to navigate the webpage without much difficulty	3, allows the user to navigate the webpage without much difficulty	4, allows the user to navigate the webpage without much difficulty	
Consistency and Standards	4, consistency across the entire DSLab website	4, consistency across the entire DSLab website	4, consistency across the entire DSLab website	1, not at all consistent with the DSLab theme	
Error Prevention	3, there is not a lot of room for errors on these websites	3, there is not a lot of room for errors on these websites	3, there is not a lot of room for errors on these websites	3, there is not a lot of room for errors on these websites	
Recognition rather than recall	2, there's not a lot of carry over between different pages besides the theming	2, there's not a lot of carry over between different pages besides the theming	2, there's not a lot of carry over between different pages besides the theming	3, there's more information available for viewing	
Flexibility and efficiency of use	2, there is not a lot of efficiency of information on the website, leaves a lot of searching for the user	2, there is not a lot of efficiency of information on the website, leaves a lot of searching for the user	2, there is not a lot of efficiency of information on the website, leaves a lot of searching for the user	4, the user only has to use one player	

Aesthetic and minimalist design	3, the design style uses as little information as necessary but isn't as appealing	3, the design style uses as little information as necessary but isn't as appealing	3, the design style uses as little information as necessary but isn't as appealing	1, this page differs from the design and is not appealing
User recognize, diagnose, and recover from errors	1, there is not a lot of availablity for errors but there is no help to recover from them	1, there is not a lot of availablity for errors but there is no help to recover from them	1, there is not a lot of availablity for errors but there is no help to recover from them	3, there is a bit of error recovery but it is not implemented to the best way possible
Help and Documentation	1, there is no available help or documentation page	1, there is no available help or documentation page	1, there is no available help or documentation page	1, there is no available help or documentation page