Pratt

Institute Libraries

MODERATED USER TESTING REPORT

A-Z Database (Beta Version)

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Acknowledgments

dx. Center for Digital Experiences

Pratt Institute Libraries

Executive Summary

The **Pratt Libraries A-Z Databases** is a research tool that provides students at Pratt Institute access to all the databases subscribed through the school and the host of resources and materials therein. The site is distinct from the Pratt Libraries homepage through its encouragement of users to explore individual databases pertaining to their research interests or to mere curiosity.

Remote Moderated User Testing was conducted with online participants to evaluate usability issues on the A-Z Databases website. Moderated User Tests allow researchers to conduct in-depth user interviews to identify, record, analyze, and prioritize usability issues encountered. This study focused on key features of the A-Z Databases website: search and navigation, guidance offered to users, access to reference resources, discoverability, and reduced cognitive overload. We conducted **eight individual remote usability tests** to evaluate how well the new version of the A-Z Databases archives engages its users.

For this, we identified goals based on key features and insights and created a Moderation Script. Users performed **four tasks**, which used the pre-test, post-test, and tasks sections to prime the visibility. Once the tests were completed and the resulting data analyzed, we decided on **five key recommendations** for improving the new A-Z Databases site:

1. **Recommendation #1:** Add descriptions to clarify function of website and features
2. **Recommendation #2:** Optimizing Search & Filters
3. **Recommendation #3:** Restructure website's side panel to prioritize access to Subject Resources
4. **Recommendation #4:** Add relevant tags on individual databases
5. **Recommendation #5:** Update search results continuously when using search filters

This report details the methodology used, outlines and explains the findings of the user testing, and provides an in-depth review of the recommendations mentioned above. We aim to provide a prioritized list of recommendations to improve search efficiency, reduce cognitive load, and enhance general usability, thus improving user engagement, exploration, and experience on the Pratt Libraries A-Z Databases website for research purposes.

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Introduction

Pratt Institute is a private university founded in 1887. While the university is most notable for its architecture and design programs, Pratt is also the oldest library science school in the country. **Pratt Libraries** is a prestigious academic library offering a vast range of resources to its community. The **A-Z Databases** website is an addition to Pratt Libraries' web interface that allows students to conduct research using databases. Students at Pratt Institute use the school's library website to conduct research and consult with subject specialists about their research interests, much like they would at the physical library. Of the nine subsections of the website, the A-Z Databases is unique in how it invites students to read and explore past the boundaries of the Pratt Libraries site.

Recognizing the importance of the website in facilitating academic research, this testing aimed to assess the site's effectiveness in finding and delivering information, facilitating user interactions, and providing an overall satisfactory experience for visitors. The **Remote Moderated User Testing** method was chosen to evaluate A-Z Databases' desktop website. While the Beta Version of the A-Z Database website displays its content in a cohesive and visually appealing manner and provides a wealth of information for researchers, conducting a Moderated User test will provide specific issues related to the tasks assigned.

We conducted an in-depth evaluation of A-Z Databases using **8 participants.** During the interviews, we observed our participants as they completed a series of tasks, **"think-aloud"** whatever feelings and musings occurred to them, and answered post-task questions. The feedback provided was then disseminated as data and analyzed in order to diagnose problems that could be formulated into actionable recommendations. Analysis of this data led to **five critical recommendations** to improve the usability of the A-Z Databases website. This report provides details on methodology used in this evaluation, the problems identified, and proposed solutions to implement.

Methodology

To evaluate the usability of the Pratt Libraries A-Z Databases website, our team of **four usability experts** conducted **Remote Moderated User Testing**, which is widely considered the gold standard in usability research. Moderated testing allows for the highest assurance in identifying usability issues within a digital interface compared to other methods, such as cognitive walkthroughs and heuristic evaluations. Research suggests that involving just four to five participants from the target user group can expose the majority of usability issues (Rubin & Chisnell, 2011). Despite being the most time-consuming and costly method, **the results of moderated user testing are invaluable for successfully restructuring any digital interface**.

We opted for the **"Think-Aloud" protocol** during our testing sessions to ensure participants felt comfortable sharing their thoughts about the Pratt Libraries database website while completing assigned tasks. A detailed user test plan and the complete testing protocol can be found in Appendix D.

PROCEDURE

Our team of experts conducted the user experience test in four distinct phases: preparation, data collection, analysis, and results.

Preparation:

During the preparation phase, we **collaborated with liaisons from Pratt Libraries** to identify key questions we sought to answer through the user test. These questions included but were not limited to:

1. How does the website present visually?
2. Is it intuitive and easy to navigate?
3. Is the search function helpful? Does it provide relevant results?
4. Is it clear to users when sections are highlighted?

Using the insights gathered from the kickoff meeting, we **developed a comprehensive testing protocol** designed to address these questions.

The protocol included the recruitment of participants using a screener (Appendix A). This screener was developed based on a user profile of the ideal user group created by the team through insights gathered from meetings. Our ideal user group consisted of graduate students, as they tend to use the Pratt Libraries Database website more

frequently due to their advanced course structure. The target user profile was as follows:

- Graduate students
- Age: 22-40 (approximate)
- Reads a lot of resources for research
- Wants to find what they are looking for quickly
- Generally requires: internet access
- Working on a thesis or research assignment

Next, we identified key areas to focus our usability testing on. The protocol included tasks and scenarios for participants to complete, as well as guidelines for the "Think-Aloud" method to encourage participants to express their thoughts while interacting with the website. Tasks were designed using recommendations from Schade (2019).

TASKS

Before presenting the users with the scenario and tasks, they were presented with a pre-test (Appendix D.1). These questions pertained to the users themselves and their areas of interests. It served as a helpful rapport building tool that allowed users to feel comfortable.

Scenario:

You are a student conducting research for a few specific assignments and want to use the Pratt Libraries A-Z Databases to find more information related to the topics.

Tasks:

1. You mentioned that you were recently researching [topic mentioned]. Think about a key concept/word in [topic mentioned]. Can you show me how you would find more information about that concept?
2. Now imagine that, for another assignment, you need to find more information about European Architecture that is free and available publicly, and contains pictures.
3. You are now interested in looking at all the databases available specifically under Industrial Design. How would you go about finding the most relevant databases?

4. You want to reach out to an expert in Industrial Design for further consultation. How would you do this?

After each task, **post-task questions were created to assess** the user's perceived ease of use with each task and to compare their perceptions of different tasks. The next stage was to decide on the pre-test and post-test questionnaires for the participants.

We prepared a comprehensive script and plan detailing the entire testing process. Several essential components were developed to ensure a smooth and ethical testing experience:

1. **Consent Form (Appendix D):** A consent form was created to obtain permission from participants for audio/video recording of the session, ensuring compliance with ethical research practices.
2. **Moderator Script (Appendix D):** This script included a brief introduction, procedural instructions, task descriptions, and participant debrief, providing structure and consistency across all testing sessions.
3. **Pre-Evaluation Questionnaire (Appendix D1):** Focusing on user demographics, this questionnaire was designed to gather more information about the participants, helping us understand their backgrounds and contexts.
4. **Post-Test Questionnaire (Appendix D3):** This questionnaire focused on participants' thoughts, opinions, and behaviors upon completing the test. First, we conducted the **System Usability Scale Questionnaire (Appendix E)**, with the answers being filled out by the participant on a Google Form during the moderated test. This was followed by discussing the rest of the questions that were open-ended. Pre-test and Post-test questions were asked verbally and later documented by each evaluator.

Data Collection:

In the data collection phase, we conducted remote moderated user testing sessions following the established protocol. Participants were asked to complete a series of tasks and scenarios while verbalizing their thoughts, allowing us to observe their behavior, note any usability issues, and gain insight into their overall experience. A total of **eight sessions** were conducted virtually over *Zoom*, with each session lasting approximately 45 minutes. Throughout the sessions, evaluators documented any friction encountered, tasks completed successfully, time taken, and any notable behaviors or thoughts.

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USER DEMOGRAPHICS

Our user group consisted of graduate students from two related academic disciplines:

- 4 participants from the Information Experience Design program
- 4 participants from the Library and Information Science program

All participants shared a high level of comfort with digital technologies and had prior experience using library catalogs, with four self-identifying as seasoned users. Additionally, they were all familiar with the Pratt Libraries website.

This user group was selected to ensure that the feedback and insights gathered during testing would be relevant to the core audience of the Pratt Libraries database website.

ANALYSIS

Upon completing each user testing session, evaluators meticulously examined their notes and the recorded **"Think-Aloud" sessions**. We clubbed commonly occurring instances through several sticky notes to facilitate a structured analysis process, organizing our observations and findings into coherent categories. Common issues were identified, recorded, and prioritized through both the **Rainbow Sheet (Appendix F) analysis** and the **System Usability Scale (SUS) (Appendix E) analysis**, a reliable tool for measuring user efficiency, intuitiveness, ease, and satisfaction.

After grouping the identified problems, evaluators engaged in in-depth discussions to **determine their severity and explore potential solutions**. We prioritized issues based on two main factors: the severity of the problem and the frequency of occurrence among participants. These major issues were then selected for further examination.

To address these potential usability problems, we developed a series of recommendations outlined in the subsequent Results and Recommendations sections. These recommendations were designed to provide clear guidance for the Pratt Libraries team, enabling them to effectively address the identified issues and improve the overall user experience of their database website.

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# Results

OVERALL FINDINGS

Insights from the participant interviews were summarized, and most users thought the A-Z Databases was a **beneficial resource**. Most of the novice users weren't aware of its functionality but, after completing the tasks, thought they would revisit the A-Z Databases.

Both user groups finished the tasks but incorporated alternative ways since they were sometimes confused. Overall, users thought the **website was clean and easy**, but some changes would help make the user searches efficient and successful.

"Really useful website; it has a lot of potential."

- Novice Users

We gathered data during the post-test with the System Usability Scale (SUS), which led us to draw conclusions about the website's efficiency, intuitiveness, ease, and satisfaction. Interestingly, the novice users had a low score of 57.5%, while the expert users had a fairly high rating of 80.6%. The average rating of 69.1% is borderline between *needing improvement* and *good.*
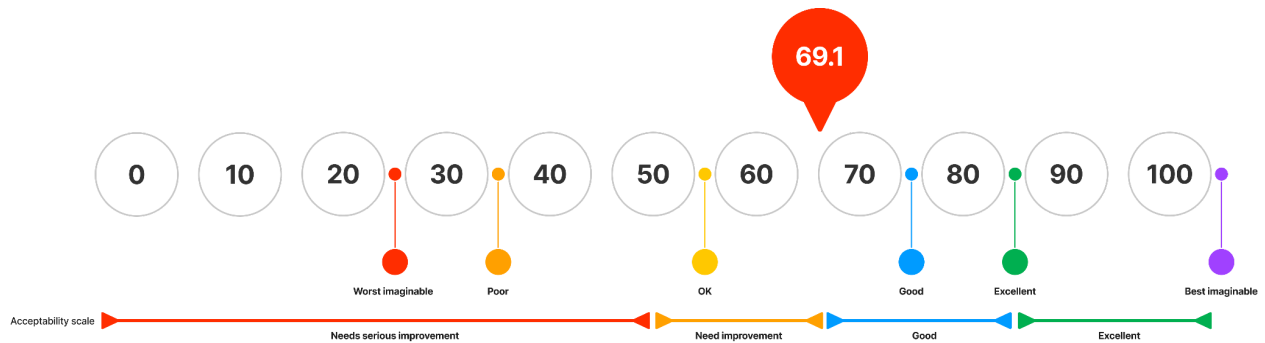
System Usability Score for A-Z Databases (Beta Version)

This hypothesizes that the website needs to change more to cater to the needs of new/novice users first and then implement modifications suggested by expert users.

Both user groups thought highly of the resource but felt there were some limitations that hindered their search process. We propose implementing the following recommendations on the A-Z Databases (beta version) so students can conduct easy and successful research.

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1. **Recommendation #1:** Add descriptions to clarify function of website and features
2. **Recommendation #2:** Optimizing Search & Filters
3. **Recommendation #3:** Restructure website's side panel to prioritize access to Subject Resources
4. **Recommendation #4:** Add relevant tags on individual databases
5. **Recommendation #5:** Update search results continuously when using search filters
6. **Additional Recommendations**
   a. Additional keywords/tags in the backend
   b. Reimplementing the live chat option
   c. Option for Dark Mode on the website

"It's really easy but I can imagine someone else can get **overwhelmed**"

- Expert Users.

PROBLEMS & RECOMMENDATIONS

RECOMMENDATION #1: Add descriptions to clarify function of website and features

THE PROBLEM

An oft-repeated confusion mentioned by novice users was **a fundamental lack of an idea for what purpose the A-Z Databases served**. Both the function of the site and the definition of what constitutes a "database" was unclear to uninitiated users. To this end, **sections like "Featured Databases" and "Best Bets" further confused them**, as the panels lacked context as to why the links provided therein were set aside and grouped together.

Throughout our interviews, it became clear that this confusion had deterred students from using the site at all. Inversely, the experience granted to them during the course of the interviews advised their conception of the site and engaged them with a previously untapped mode of research.

Lacks explanation of what databases are and context for the site as a whole

Both fail to note by what criteria these databases were set aside for

"It would be helpful to know why they've recommended these ones especially - just some kind of **rationale** for why I am seeing these first"

- Novice User

A-Z Databases (Beta Version)

OUR SOLUTION

We recommended adding descriptions to the various sections from our user feedback to provide context to new and novice users to get context and functionality. We propose that the A-Z Databases header's description be rewritten to better define a database. This will **provide clarity and purpose** to the student as they start their research. Similarly, the *'Best Bets!'* and *'Featured Databases'* sections should have descriptions since they show databases relevant to the user's search and are hand-picked by librarians. Novice users had no idea by what standard these databases were curated, so **adding some context in a description will give the feature an impactful personal touch**.

> "I just think that it could **more clearly guide you**… using it is complex, which makes it a bit difficult to use as beginner"
>
> *- Novice User*

Described the role of the database for clarity

Rationale for how and why these links are grouped together

Proposed Design Changes - Adding Descriptions

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RECOMMENDATION #2: Optimizing Search & Filters

THE PROBLEM

Search & Navigation is a student's first interaction with the A-Z Databases website, and it is essential to understand the functionality of the website. During the interview, we observed user behavior and noticed that students were confused by the two search bars. **3 out of 4 novice users** initially interacted with the Pratt Libraries search bar and were diverted from the A-Z Databases webpage. It took time for novice users to understand the purpose of the A-Z Databases as a resource, but moving forward, they still **faced difficulty applying the filter categories**. The novice users forgot the category names as the **title disappeared once a filter was applied**. The options mentioned within the *'Type Filter'* **were incongruous and uncategorized**.

Both user types employed interesting methods of clearing their search filters, and **none of the 8 participants** clicked on the *'Clear Filters'* button. The issue lies in the 'Clear Filters' button's discoverability and the complexity of the search bar. **The cognitive load caused a lack of visual attention.** Additionally, both expert and novice users were confused about the purpose of the *'Vendors' filter*.

> "**I'm not too confident using the system** because I was frustrated that it was hard to go beyond general search terms or whittle them down"
>
> *- Expert User*

Two levels of search categories	Filter category disappears	Incongruous and uncategorized search inputs	Button squished between the filter categories and search button

A-Z Databases (Beta Version)

OUR SOLUTION

We propose the following changes within the search tab for easy and efficient searching. Firstly, we recommend **splitting the search bar into two separate unit**s. Progressive disclosure will help reduce the cognitive load and distribute visual attention. It simplifies the UI of the webpage by reducing the perception of clutter (2022, Progressive disclosure controls - win32 apps). Additionally, **one-line descriptions** should be added to each search category to aid novice users in their research.
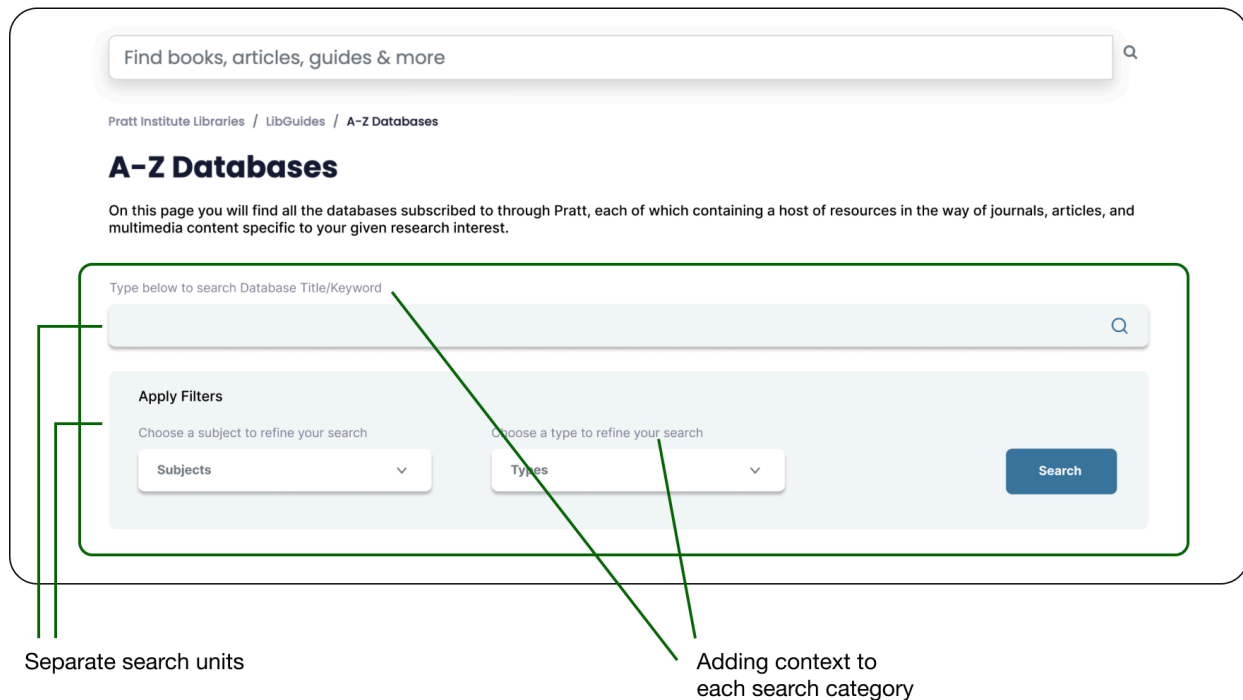
Proposed Design Changes - Search Units

Secondly, the categories within a specific filter should have **checkboxes** for promoting the idea of multiple selections, which was not very obvious in the beta version, along with the **filter title and the number** indicating the number of filters applied. After applying this filter, a secondary 'Clear Filter' button would appear next to the primary 'Search' with enough white space.

Lastly, the 'Types Filter' inputs should be **categorized for efficient searching**. This will make scanning and applying relevant search categories easy for quick results.

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Filter Title with the number

Checkbox fields to indicate select multiple options

Apply Filters

Choose a subject to refine your search

Subjects (1) ∧

☐ Anthropology
☐ 16mm film
☑ Architecture
☐ Archives
☐ Art & Design Education

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All   Q R S T U
A

Clear Filter CTA

Choose a type to refine your search

Types ∧

Clear Filter   Search

☐ Citation/Index
☐ Dissertation & Theses
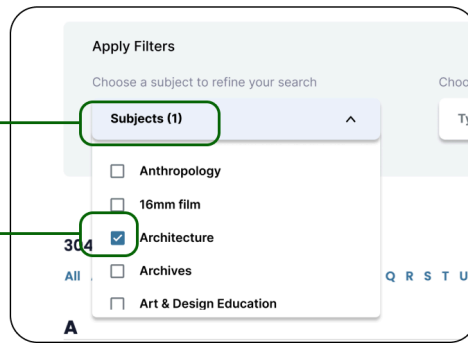
Categorized inputs within filter for efficient searching

☐ Ebooks
☐ Full-text
☐ Multimedia

Q R S

Icon Legend ∧

🖼 contains images
🚫 missing images
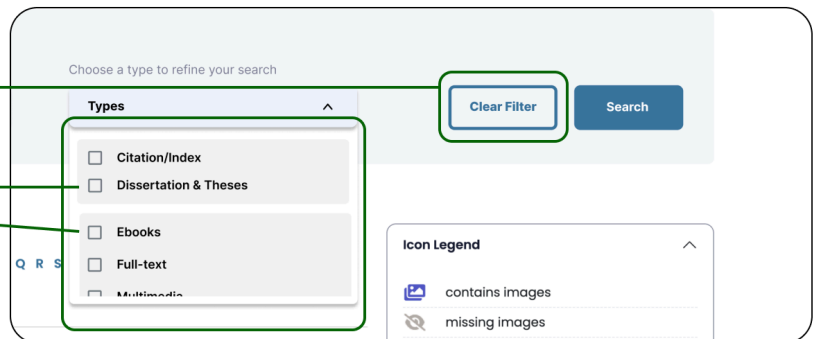
Proposed Design Changes - Filter Categories

RECOMMENDATION #3: Rework website's side panel to prioritize access to Subject Resources

THE PROBLEM

Subject Resources is a popular and helpful feature implemented to provide users access to experts and curated guides on subject-specific research. We wanted to test this feature to understand its impact and usability. Our study showed that users found **Subject Resources** to be one of the most important and helpful features of the A-Z Databases website. However, **7 out of 8 users** mentioned that the content under subject resources was hard to find and could be easily missed, especially because of the content-heavy side panel sections.

Subject Resources section too far down the webpage and could be easily missed by users

Long list of databases under this section can be overwhelming for users

Expansion link not obvious or visible

"Great that there is a point person to go to directly who is an expert on the field you want to learn about & the link to subject guides is really helpful as well - **I just wish it was more visible**"

A-Z Databases (Beta Version)

OUR SOLUTION

To increase the visibility of the subject resources available to the users, we propose to restructure the side panel sections to move the **Subject Resources section to the top**, under Icon Legend. We recommend adding a title for the Subject Specialist, as well as a list of all the Subject Guides available for easier access. In addition, we propose that **Feature Databases** and **New / Trial Databases** limit their visible list to **three databases**, which could be expanded to view all databases in the list.

Restructuring the side panel in these ways will **provide more visibility** to the subject resources feature, and allow users easy access to additional resources when they require (Chung, 2023).

"The subject guides are really helpful because it walks you through the process for researching this area and the databases. **I find it more curated and trustworthy & than a search result.**"
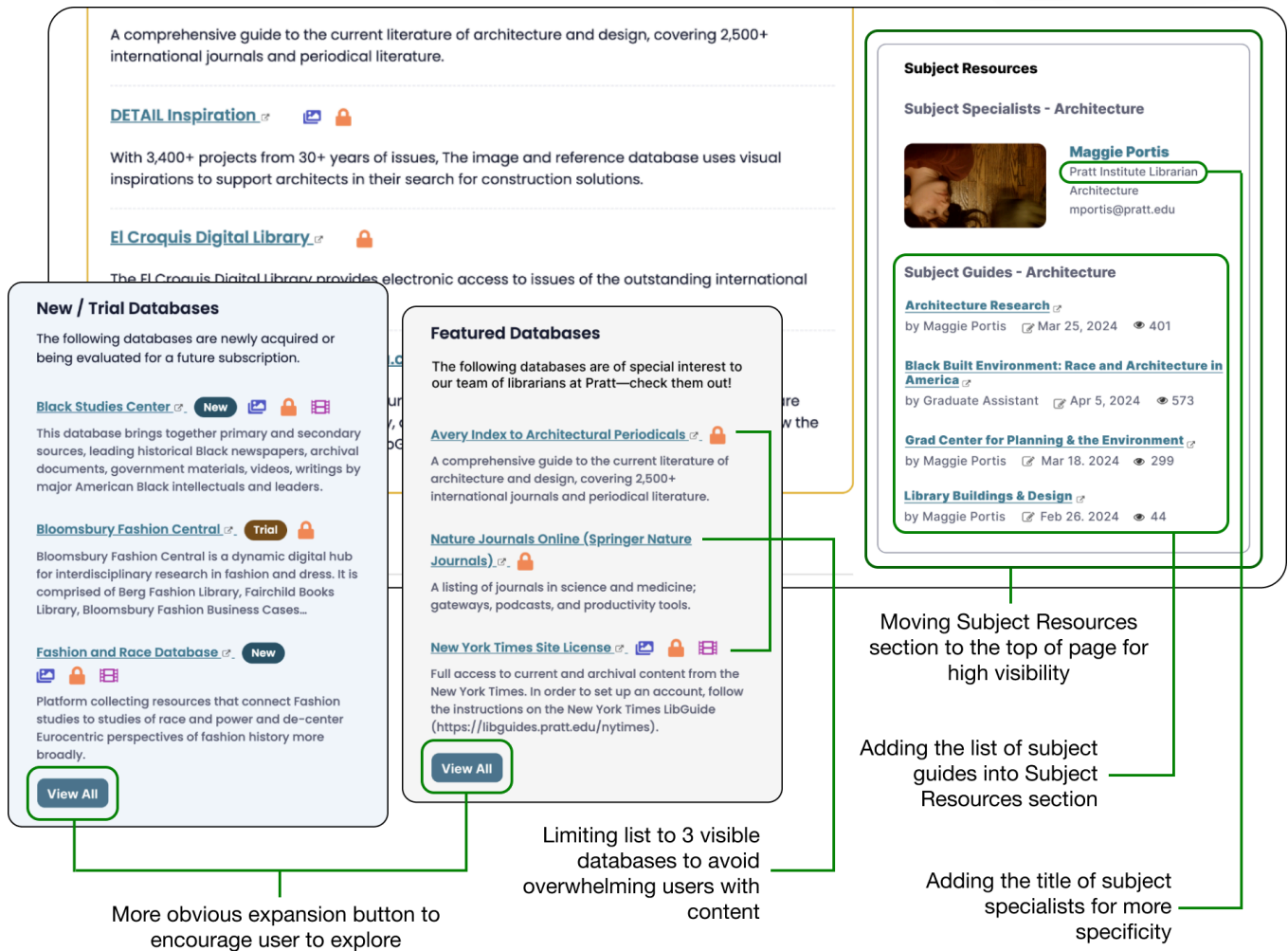
Proposed Design Changes - Side Panel and Subject Resources

RECOMMENDATION #4: Add Relevant tags on individual databases

THE PROBLEM

When searching for topics of interest, **A-Z Databases** provides a robust list of relevant and helpful databases. However, most users expressed a **desire for more information about the major topics covered** within each database. This additional information would allow them to more effectively evaluate the databases and identify those most relevant to their needs**.**

304 Databases

All A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

A

A+T Architecture Publishers ⧉ 🔒

a+t architecture publishers, an editorial company independent from any institution or professional group, produces books and magazines about architecture. These publications, accessible digitally, are bilingual (English/Spanish) and distributed worldwide.

Academic OneFile ⧉ 🔒

A resource for full-text journals and reference sources covering technology, medicine, social sciences, the arts, theology, and a number of other disciplines. This resource provides access to millions of articles from 20,000+ scholarly journals and other sources—including thousands of podcasts and videos.

Users wished that they had more information about the topics covered under each database.

A-Z Databases (Beta Version)

OUR SOLUTION

To address the need for more detailed information about the databases and facilitate users' search experience, we **propose implementing a subject tagging system**. This system will categorize databases based on relevant themes and topics, allowing users to filter and search for keywords and databases tailored to their specific areas of interest. Moreover, this tagging system will enable users to **retrace their database searches to relevant topics**, further enhancing usability and efficiency.

"It would be nice to have something to lead you to more **narrow and niche subjects** - especially if your user doesn't know exactly what they are looking for."

- Expert User

Visible "tags" added to databases such as subject, types or keywords.

Proposed Design Changes - Database Search Results Including Tags

RECOMMENDATION #5: Update search results continuously when using search filters

THE PROBLEM

3 out of 8 participants expected the search results to dynamically update when applying or removing filters **without the need to manually click** the search button each time. Additionally, users resorted to less efficient methods to update/clear search results, like clicking the back arrow on the browser, reloading the page, or unchecking filters and clicking search again, instead of utilizing the provided clear filter option.

On selecting the subject, the results do not change.

Users have to click on search to generate results

"I assumed the search results will refresh (on selecting a filter) on their own but they don't"

- Expert User

A-Z Databases (Beta Version)

OUR SOLUTION

Providing users with **instantaneous, dynamic feedback** that **automatically updates search results** as users apply or remove filters will eliminate the need for users to click the search button repeatedly and streamline the search process.

On selecting the subject, the results automatically refresh.

Users don't have to click on "search" to generate results

Proposed Design Changes - Automatic Generation of Results

ADDITIONAL RECOMMENDATIONS

#1: Recommendation - Additional Keywords/Tags in the Backend

THE PROBLEM

Users felt they needed some help finding relevant information since they didn't know how the search works but didn't know what to look for. They were confused and felt the options available were limited.

OUR SOLUTION

We believe adding additional tags to each database on the webpage's backend would help students generate their desired search results. Therefore, more keywords/tags should be added to databases on the backend to help users broaden their search results.

> "I would be disinclined to use it because it made me feel very stupid using it - if felt like I couldn't figure my way out of using it"
>
> *- Novice User*

#2: Recommendation - Reimplementing the Live Chat Option

THE PROBLEM

Users find emailing about a simple search process tedious and would rather opt for the live chat option. Live chat is quick, but mailing and waiting for a response generally takes time and hinders the research process.

OUR SOLUTION

We recommend returning the live chat option since users find it more convenient for consultation than emailing someone, which would be a deterrent.

> "Pratt Libraries has this **Live Chat option** which I have used and found very helpful... but I don't think I'll email the Subject Specialist"
>
> *- Novice User*

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#3: Recommendation - Option for Dark Mode on the Website

THE PROBLEM

Expert Users mentioned advanced features that are focused more on ease of use. Many users are accustomed to using the dark theme.

OUR SOLUTION

We believe this could be implemented in the future to allow users to customize settings according to their preferences and make the most of the resource.

"I think this website looks a lot **cleaner and has a better layout** than the way they currently display... I would like the option to **switch to dark mode** for better accessibility and readability"

- Expert Users

Conclusion

As a premier academic library, Pratt Institute Libraries offer a vast amount of resources for students to access. The A-Z Databases website offers students an exciting and unique approach to their research that emphasizes the use of external sources. This user testing initiative sought to elevate the digital experience for visitors, ensuring a seamless and enjoyable online journey, particularly when exploring different databases. The findings from the study identified **five crucial areas** where usability can be improved:

1. **Recommendation #1:** Add descriptions to clarify function of website and features
2. **Recommendation #2:** Optimizing Search & Filters
3. **Recommendation #3:** Restructure website's side panel to prioritize access to Subject Resources
4. **Recommendation #4:** Add relevant tags on individual databases
5. **Recommendation #5:** Update search results continuously when using search filters

Our analysis and follow-up discussions revealed that most users, experts and novices alike, found the A-Z Databases to be an extremely helpful resource but lacked awareness of its purpose and function prior to being interviewed. Users expressed appreciation of the site's clean design and ease of use and even intended to revisit it for current or future research endeavors. The **diverse user group**, including novice and expert users, ensures that the recommendations are inclusive and address Pratt Libraries' users' varied experiences and needs.

Our recommendations focus on highlighting these strengths while addressing changes to improve search efficiency, reduce cognitive load, and enhance general usability, thus improving user engagement, exploration, and experience. We believe that the five recommendations we proposed will not only achieve these goals but also bring the site to the forefront of Pratt Libraries' repertoire and inspire students to blaze new trails with their research.

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Appendix

A: SCREENING QUESTIONNAIRE

Google Form Questionnaire used to screen and recruit participants for the Pratt Libraries A-Z Databases Usability Study.

Pratt Libraries Research Recruitment Survey

We are conducting a study for Pratt Libraries. Please take a few minutes to complete the survey. If you are chosen to participate in our study, you will be eligible for a $10 Amazon gift card as compensation.

If you have any questions, please reach out at nthakkar@pratt.edu

Thank you! We appreciate your time :)

Disclaimer: Participation in this survey doesn't guarantee compensation.

nthakkar@pratt.edu Switch account

Not shared

* Indicates required question

Email address *

Your answer

What is your preferred name? *

Your answer

What are your pronouns?

Your answer

What is your age? *

○ 18-22
○ 23-25
○ 26-30
○ 31-35
○ 36-40
○ 40+

Are you a student at Pratt Institute? *

○ Yes
○ No

Student Information

What level of education are you completing? *

○ Undergraduate
◉ Graduate

What is the name of your program/major? *

sfd

Have you ever used the Pratt Institute Library's website or any other university library website? *

◉ Yes
○ No

Library Information

Please specify which library websites you have used in the past year. (List all) *

☐ Pratt Libraries
☐ Other Public Libraries
☐ Other University Libraries

For what purpose did you use the library website(s)? *

☐ Class Assignment
☐ Academic Research
☐ Thesis
☐ Personal Research
☐ Other:

How frequently do you use any of the websites you listed in the above question to conduct research? *

○ Every day
○ 1-2 times a week
○ Once a month
○ Rarely

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What device do you typically use to access the library website(s)? *

☐ Desktop/Laptop

☐ Mobile

☐ Tablet

Have you ever used the A-Z Databases feature before on any library website? *
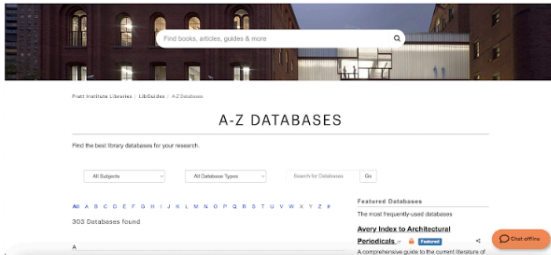
○ Yes

○ No

○ I'm not sure

Would you be willing to participate in in a 30-minute usability session for our study? It will take place remotely on Zoom. Participants who are chosen will be compensated with a $10 Amazon gift card for their time. *

○ Yes

○ No

Back   **Submit**   Clear form

B: USER PROFILE & SCREENING RESPONSE DATA

Table of user profiles from the participants in our Remote Moderated User Test and Screening Questionnaire responses.

User	Age	User Group	Name of Program	Libraries Used Before	For What?	How Often?	Device Used?	Used A-Z Databases Before?
P1	23-25	Novice	Information Experience Design, MS	Pratt Libraries, Other Public Libraries, Other University Libraries	Class Assignment, Academic Research, Thesis	Once a month	Desktop/Laptop	Yes
P2	23-25	Expert	Library and Information Science, MS	Pratt Libraries, Other Public Libraries	Class Assignment, Personal Research	1-2 times a week	Desktop/Laptop	Yes
P3	18-22	Novice	Information Experience Design, MS	Pratt Libraries, Other Public Libraries	Class Assignment, Academic Research, Personal Research	Once a month	Desktop/Laptop, Mobile	I'm not sure
P4	23-25	Expert	Library and Information Science, MS	Pratt Libraries, Other Public Libraries, Other University Libraries	Class Assignment, Academic Research, Personal Research, Work in the Pratt Manhattan Library providing reference services and using the library website for other purposes	Every day	Desktop/Laptop	Yes
P5	26-30	Novice	Information Experience Design, MS	Pratt Libraries, Other Public Libraries, Other University	Class Assignment, Academic Research,	Once a month	Desktop/Laptop	Yes

					Libraries	Personal Research			
P6	31-35	Expert	Library and Information Science, MS	Pratt Libraries, Other Public Libraries, Other University Libraries	Class Assignment, Academic Research	Once a month	Desktop /Laptop	Yes
P7	26-30	Novice	Information Experience Design, MS	Pratt Libraries, Other Public Libraries	Class Assignment, Academic Research, Thesis, Personal Research	1-2 times a week	Desktop /Laptop, Mobile	Yes
P8	23-25	Expert	Library and Information Science, MS	Pratt Libraries, Other Public Libraries, Other University Libraries	Class Assignment	Once a month	Desktop /Laptop	Yes

C: PARTICIPANT CONSENT FORM

PURPOSE:

Pratt Institute is conducting usability testing of the Pratt Libraries A-Z Databases Website. We are interested in determining whether people can accomplish common tasks and easily find information using this site. The session will not test you or your tech abilities, but your participation will help us determine where improvements can be made to the interface.

PROCESS

During this session, you will be asked to complete some tasks using the Pratt Libraries A-Z Databases Website and fill out a pre-test and post-test questionnaire. As you complete the tasks, one or more members of our team will observe your screen and take notes. In addition, the session will be captured on Zoom's audio, video, and screen recordings for future review by our team members. The session will take approximately thirty minutes.

If, for any reason, you do not want to complete a task, you may say so and we will move on. If you do not want to continue the session, you may end the session and leave at any time.

Approximately 8 people will participate in this study. Results from all sessions will be included in a usability report to be presented to Professor Sam Raddatz from the Pratt Institute School of Information and Pratt Libraries. Your name will not be included in the report nor will your name be associated with any session data collected. There are no risks associated with participating in this session.

RIGHT TO REFUSE OR WITHDRAW:

Participating in Pratt Institute usability testing of Pratt Libraries A-Z Databases Website is entirely voluntary and you may refuse to participate, or may discontinue your participation at any time with no adverse consequence. You may also refuse to complete any portions of the study and/or refuse to answer any questions you wish not to answer.

CONFIDENTIALITY:

Every effort will be made to maintain the confidentiality of your study records. Your responses are for internal use only. Your name will not be associated with any data you

provide, and no identifying information will be shared with anyone outside of the research team.

VIDEO CONSENT:

As part of this study, we'd like to record your screen and video reactions to the website. The recordings will only be used for research purposes and will not be made public.

If you wish to speak with someone about your participation in this study or feel you were not treated as described, please contact Professor Sam Raddatz at sraddatz@pratt.edu.

By signing below, you agree that you have read and understand this form, consent to video and screen recording, and will participate in this research study.

Date: [TODAY'S DATE]

Print Name: [FULL NAME]

_____

Signature

D: MODERATION SCRIPT & PLAN

Introduction & Informed Consent (3 min)

Hello [name], I'm [name] a part of a Usability Research team at the Pratt Institute to gather usability feedback on a newly designed database searching tool they've created for students. I will be leading you through this session today, and I'll be reading from a script to ensure consistency across the sessions, so please bear with me.

We are testing the A-Z Databases tool to learn how people will be using it. This session will take about 30-45 minutes and involves you completing a single task.

As I am not a part of the team that created this tool, please try to be as blunt and honest as possible. Nothing you say about this website will hurt my feelings. As you use this site, I'm going to ask you as much as possible to try to think out loud: to say what you're looking at, what you're trying to do, and what you're thinking. This will be a big help to us. If you have any questions or concerns during the session, please don't hesitate to ask. However, because I want to hear your thoughts, I may not be able to answer them until the end of the session.

Please note that we are testing the Database tool, not you. You can't do anything wrong here. In fact, this is probably the one place today where you don't have to worry about making mistakes. Finding out about areas that you find confusing or hard to use will help us understand areas that we can make better.

At the end of this meeting, I'll give you more information about the $10 Amazon Gift Card as compensation for your participation.

Also, with your permission, I would like to record our session, with your video turned. I will be capturing the screen, our facial reactions, and our conversations. The recordings are confidential and are used only for analysis and review. They will not be shared with anyone besides our research team and our client - the Pratt Libraries. Videos will not be public or published in any form. Do I have your permission to record this session, and are you comfortable keeping your video turned on?

[SEND LINK TO INFORMED CONSENT FORM] [LINK TO FOLDER]

[TURN ON RECORDING]

Do you have any questions for me before we begin?

Could you go ahead and share your screen. Please make sure that the video preview is at the bottom of the screen, so that you are able to view the website entirely.

Great! Let's begin with the interview.

D.1: PRE-TEST QUESTIONS

Interview Script (35 mins)

Starting the Session: Icebreaker + Pre-test Questions (5-7 mins)

1. Please tell me a little bit about you. What are you studying (major/program)? What is a recent assignment that you conducted academic research for?

     ○ *Moderator: If they look confused, provide examples (Searching for references/sources, reading existing literature/data, etc.)*

2. Are you planning on doing a thesis at the end of your program?

     ○ If yes, what's your potential topic?

     ○ How are you planning to conduct your research?

     ○ *Moderator: Use this to base subject-related questions for the database.*

3. If not, can you tell me about a particular topic you were researching last?

     ○ *Moderator: Use this to base subject-related questions for the database.*

Please click on the link sent in the chat to get started!

[SEND LINK TO A-Z Databases WEBSITE]

Please start sharing your screen so I can see what you are doing.

[START TIMER]

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D.2: TASKS & POST-TASK QUESTIONS

Scenario

You are a student conducting research for a few specific assignments and want to use the Pratt Libraries A-Z Databases to find more information related to the topics.

Tasks & Post-task Questions (12-15 mins)

Moderator: The post-test metric is based on participants' thoughts, behaviors, or opinions so please follow up if needed after tasks are completed.

Task #1: You mentioned that you were recently researching [insert topic they said]. Think about a key concept/word in [insert topic they said]. Can you show me how you would find more information about that concept?

- Post-task: Based on what you've seen on the website so far, what do you think this site is about? What kinds of resources are available on this website?
  - *Moderator: Make a note of this answer - needs to be used in post-test questions*
- Post-task: Was there anything you found confusing or unclear about the website so far?
  - *Moderator: Use the participant's area of study/thesis to ask this question*
- Justification: This is to see which search bar participants use instinctively and how they navigate the website. Also, to see if they understand the concept of a database search & if further description is required on the page.

Directions: Please Exit if you were redirected to the Pratt Libraries' Research Guides.

Note for Moderator: New search might make user utilize the Clear Filter feature (maybe)

Task #2: Now imagine that, for another assignment, you need to find sources with more information about European Architecture that is free and available publicly, and contains pictures.

- Post-task: Ask for ease of use metric (Likert Scale)
  - *Moderator: Key search words: 'european', 'architecture', 'multimedia', 'open access' (Testing search and filter features)*

Go ahead and start a new search.

Note for Moderator: New search might make user utilize the Clear Filter feature (maybe)

Task #3: You are now interested in looking at all the databases available specifically under Industrial Design. How would you go about finding the most relevant databases?

- Post-task: Ask for ease of use metric (Likert Scale)
- Post-task: Do you have any particular thoughts about this section here? [lead to Best Bet section in Industrial Design page and identify it]

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- Justification: To see if they react to the Best Bet feature on the Subject specific page.

Task #4: You want to reach out to an expert on Industrial Design for further consultation. How would you do this?

- Post-task: Ask for ease of use metric (Likert Scale)
- Justification: To see if they find the Subject Specialist at the bottom of the page (To see if the content needs to be moved back up to the top as on original database page)

Thank you! That concludes the task-based section of the study.

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D.3: POST-TEST QUESTIONS

Post-test (5-7 mins)

Do you mind filling out this short questionnaire about the A-Z Databases system you've looked at today?

[SEND SUS QUESTIONNAIRE LINK]

Great! Could I ask you a few follow up questions concerning everything you've looked at today?

Moderator: This metric is based on participants' thoughts, behaviors, or opinions so please follow up if needed.

1. When we started this session, you said you thought the site was for [...], now that you've looked around how has your opinion changed, if at all?

2. Out of everything we just looked at during this session, what did you like the most?

3. What did you like the least?

4. Would you visit this site again? Why or why not?

5. Is there anything else you'd like to tell me that I haven't asked you about?

Debriefing (1 min)

Thank you for being part of this study, your participation is valuable to us. I just want to double-check again that you are alright with us using this confidential recording for our team's research analysis.

Great!

Your comments and feedback are extremely useful and appreciated. Please fill out this Google Form to receive your $10 Amazon Gift Card as compensation for your participation. Feel free to fill it out on this call so I can clarify any questions you have. You should receive your gift card in the next 2 weeks. If there's any trouble getting the gift card, please let me know via email.

[SEND LINK TO GIFT CARD COMPENSATION]

If you have any questions or concerns, please feel free to contact me. Thank you again for your time, have a great day.

[STOP RECORDING]

E: SYSTEM USABILITY SCALE (SUS) TESTING

The System Usability Scale questionnaire (Brooke, 1996) and results from user testing.

QUESTIONNAIRE:

System Usability Scale Questionnaire

Please fill out this short questionnaire about the **Pratt Library's A-Z Database** website system. We appreciate your time and the feedback provide will support our research. Please reach out to your moderator if you have any question.

Thank you.

nthakkar@pratt.edu Switch account

Not shared

* Indicates required question

Full Name *

Your answer

Email address *

Your answer

Moderator Name *

○ Indrani

○ Marko

○ Navya

○ Smridhi

System Usability Scale - Questions

1. I think that I would like to use this system frequently *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

2. I found the system unnecessarily complex *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

3. I thought the system was easy to use *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

4. I think that I would need the support of a technical person to be able to use this * system

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

5. I found the various functions in this system were well integrated *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

6. I thought there was too much inconsistency in this system *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

7. I would imagine that most people would learn to use this system very quickly *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

8. I found the system very cumbersome to use *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

9. I felt very confident using the system *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

10. I needed to learn a lot of things before I could get going with this system *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

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ANALYSIS & RESULTS:

User Group	Participant	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	SUS Total
Novice	P1	4	2	4	1	4	4	4	1	3	1	75
Expert	P2	4	2	4	1	3	2	5	1	4	2	80
Novice	P3	4	3	5	1	4	1	3	1	5	1	85
Expert	P4	4	1	4	1	5	1	5	1	4	1	92.5
Novice	P5	2	4	2	1	3	4	3	4	1	2	40
Expert	P6	4	3	3	2	4	2	3	2	2	2	62.5
Novice	P7	2	4	2	5	2	5	3	4	4	3	30
Expert	P8	4	1	4	1	3	2	5	1	5	1	87.5

Table 1: User's System Usability Score and Total

System Usability Score Averages	
Novice (4) Average	57.5
Expert (4) Average	80.625
All (8) Average	69.0625

Table 2: Average of SUS Scores of each User Group

SUS Score	Grade	Adjective Rating
> 80.3	A	Excellent
68 - 80.3	B	Good
68	C	Okay
51 - 68	D	Poor
< 51	F	Awful

Table 3: System Usability Scoring Ranges

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F: RAINBOW SHEET OF TEST OBSERVATIONS

Table that shows a list of observations and issues that users encountered during the Remote Moderated User Test. Color coordinated using the Rainbow Sheet method to identify which of the 8 users encountered each of the 26 issues documented.

No.	Problems Faced	P1	P2	P3	P4	P5	P6	P7	P8
	Search & Navigation								
1	Novice users were confused as to the function of the website, and thought it would be helpful to have a description/guide for using the database search	█		█		█		█	
2	Users expected the Type filters that are also present in the legend to have the relevant symbols for visual continuity					█	█		█
3	Users found the Type Filter to be a vague label, and the options under it were incongruous and uncategorized		█			█	█	█	█
4	Users assumed that search results would continuously update when filters were applied/removed instead of having to click search every time	█					█	█	
5	Users confused Pratt Library search bar with A-Z Databases search bar	█			█			█	
6	Users thought it would be helpful if visible "tags" were added to databases (subject, types, keywords) to find relevant results. Additionally, tags would help users retrace database searches to relevant topics	█				█	█	█	
7	Users employed ineffective methods to clear search results (back on chrome, reloading page, unchecking filters and clicking search again, etc.) rather than using the clear filter option	█	█						
8	Users found that more keywords should be added to databases to help users broaden their search results. Novice users felt like they were hitting a dead end with their search inputs and were not sure how to proceed					█	█		█
9	User forgot the name of the filter category because it disappears when filters applied/input is typed in	█				█	█		
10	Users were confused by the function of the vendors filter	█	█		█			█	

#	Observation								
11	Users expected the number of databases in different filters to indicate number of search results possible based on already applied input settings	🔴					🔵		
12	Users didn't seem to realize the filters could be typed as well as selected					🔵 (cyan)			
	A-Z Databases Scale								
13	Users expected that the A-Z scale would represent a list of alphabetized subjects, but could not find appropriate search results because of the common misconception that database names would be similar to the subject it represents	🔴	🟠	🟡		🔵 (cyan)			🟣
14	Clicking "All" under a subject doesn't take the user to all databases, only all databases in the subject which confused users					🔵 (cyan)			
15	The A-Z scale for navigation not found to be helpful unless the user is familiar with a specific database/resource since databases names do not accurately represent the information/resources they provide.					🔵 (cyan)			
16	Users seemed to be overwhelmed by the broad range of databases available through the A-Z navigation scale			🟡					
	Best Bets Feature								
17	Users wanted a rationale for why databases were chosen to be under "Featured Databases"					🔵 (cyan)	🔵		
18	Users wanted a rationale for why databases were chosen to be under "Best Bets" so that users can trust recommendations			🟡		🔵 (cyan)	🔵		🟣
19	Users believe "Best Bets" is a vague label and does not communicate its function (users mentioned "recommendations" would be easier to understand")	🔴		🟡			🔵		
	Subject Resources Feature								
20	Users feel that a live chat option is more convenient for consultation rather than emailing someone, which would be a deterrent	🔴							
21	Users mentioned that they wanted to know the title of the "Subject Specialist" assigned to each subject for more information (librarian, professor, etc.)		🟠	🟡			🔵		

22	Users felt that the content under "Subject Resources" was placed too far down the page, and was hard to find	🟥	🟧	🟨		🟦	🔵	🟪	🟣
23	Users needed help navigating the A-Z Databases website, and users mentioned that providing the "Subject Guides" under "Subject Resources" more visibility would be helpful				🟩	🟦			
Visual Design									
24	Lock/Unlock symbolism felt like inappropriate representation of access to information						🔵		
25	Users felt that the colors of icons/symbols used in the legend were too bold			🟨			🔵		
26	Users mentioned that they would like the option to switch to dark mode on the website						🔵		

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