USER TESTING REPORT

May 2015

Ingalls Library
THE CLEVELAND MUSEUM OF ART

Prepared for:

Ingalls Library
The Cleveland Museum of Art

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EXECUTIVE SUMMARY

This report details the results from a user test performed on the Ingalls Library website as well as recommendations for improvement based on those results. Located within The Cleveland Museum of Art, the Ingalls Library has a large number of holdings and supports the Museum's collections, exhibitions, research, publications and programs. It is vital that the Library's Online Public Access Catalog (OPAC) be easy to navigate, so that both those familiar with the library as well as new users can find the library resources and information they seek.

A team of four evaluators from Pratt Institute performed a total of eight user tests, focusing primarily on the Ingalls Library OPAC. All testing was conducted using the online software platform, UserZoom. Using this platform, evaluators created pre-test, post-task, and post-test questionnaires in order to assess users experience with the interface both qualitatively and quantitatively.

After testing was completed, evaluators collaborated to determine three main opportunities for improvement on which to focus:

1. Search and Browse Functionalities
2. Display of Search Results
3. E-Shelf Functionality

Further analysis within each of the above categories yielded several findings and, as a result, a plethora of actionable recommendations are presented. These recommendations include, but are not limited to: adopting more user-friendly terminology, clarifying the browse function, providing misspelled word detection, offering faceted searching, and increasing the visibility of the e-shelf feature. The goal of these suggestions is to enhance the overall experience of users of the Ingalls Library OPAC which will, in turn, surely increase the usability and visibility of the Ingalls Library and its website as a whole.

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INTRODUCTION

The Ingalls Library is the art library within The Cleveland Museum of Art. Hosting over 500,000 volumes of art-related resources, the main mission of the Ingalls Library is to support the Museum's collections, exhibitions, research, publications and programs. Therefore, its users consist of a broad range of students, scholars, researchers, art historians, curators, and the general public. The current library user interface promotes access to its Online Public Access Catalog (OPAC: http://library.clevelandart.org/opac), which draws upon resources such as e-journals, bibliographies, art assessments and various digitized, art-related materials to provide a consolidated holdings search.

The Ingalls Library is primarily interested in updating the search functions of its OPAC to promote access and use. Specifically, the Library has requested that our team evaluate the site's different search options as well as the way search results are displayed. For the purposes of this user test, we will focus on identifying usability concerns within the OPAC interface of the Ingalls Library and how to better reach its large user demographic.

METHODOLOGY

For our usability study, we conducted a user test to actualize user participation in a task-based evaluation of the given interface. Important factors involved in a user test are relevant participants, i.e., users, and a controlled environment such as a lab or a specific remote setup. Most user tests also involve a moderator to directly log evaluation notes and maintain structure and pace. In terms of preparation, the user test involves determining due dates, feedback mechanisms and team roles or responsibilities along with recruiting participants, preparing the appropriate evaluation and consent forms, and determining qualitative and quantitative feedback questions or questionnaires (Barnum, 2011). Besides preparation, the user test involves moderation and analysis processes that aid in the gathering and interpretation of statistical and subjective participant results.

To implement our user tests, we first decided upon the following list of participant tasks:

1. You're researching Claude Monet's *Water Lilies* series. Since the Museum owns one of these paintings, you decide the best place to begin researching them is in their library's online catalog. Find what's available in the museum's library about Monet's *Water Lilies*. Save any relevant information about the resources you are interested in since you'll be going to the library later.

2. Please use a different method to find resources available in the museum's library more generally about Claude Monet.
3. Research art auctions in which paintings by Monet were sold. You're particularly interested in the oldest and most recent auctions.
4. Find books and resources recently purchased by the Ingalls Library.

Through these tasks, we hoped to record user responses to specific subject and topical searches, more general searching or browsing, finding recently acquired titles in the library's catalog, sorting or filtering search results, and saving search results. We expected mixed results with these tasks, which also vary in difficulty and level of technical expertise required by users.

Tests were conducted using UserZoom, a web-based tool that incorporates a questionnaire feature with recording of audio, video of the participant and video screen capture. We designed a series of questionnaires including pre-test measures (Appendix XX) for collecting demographic data, post-task questionnaires (Appendix XX) to collect data about each task, and a post-test questionnaire (Appendix XX) to measure overall experience. The post-task questionnaire consisted of both usability measures and experience measures. To get at usability, we employed the standardized multiple-choice questions that make up the System Usability Scale (SUS). Developed by John Brooke in the mid-1980s and considered highly reliable (Bangor, 2009), this scale consists of ten statements, each of which is presented with a 5-point scale ranging from strongly agree to strongly disagree. The statements are:

- I think that I would like to use this website frequently.
- I found the website unnecessarily complex.
- I thought the website was easy to use.
- I think that I would need the support of a technical person to be able to use this website.
- I found the various functions in this website were well integrated.
- I thought there was too much inconsistency in this website.
- I would imagine that most people would learn to use this website very quickly.
- I found the website very cumbersome to use.
- I felt very confident using the website.
- I needed to learn a lot of things before I could get going with this website.

In order to further understand participant experience, we also included the additional free-text questions: "What do you like about the Ingalls Library website?" and "What do you think the Ingalls Library could change about its website to make your experience more enjoyable?"

User recruitment and demographics

To complete the user test, each of the four researchers selected two participants to conduct interface evaluations. To best match the Ingalls Library users, these eight participants were selected based on their convenience and availability as well as their backgrounds in art, museums, libraries or a relevant field of study or profession.

To determine our participants' demographic information, we preceded our user test with a pretest questionnaire containing questions pertaining to age, occupation, preferred online research tools and research history, and familiarity with art-related research. From the pre-test questionnaire, 88% of participants fell within the 25-34 year age range and 13% fell within the 55-64 year age range. The occupations varied, with 50% of the participants representing a "Librarian or Information Professional," 25% representing a "Gallery or Museum Professional," 63% representing "Student," and 50% representing other related professions ("Teacher," "Graphic Designer," "User experience researcher and strategist," "Associate Development Editor"). All participants had previously searched via online library catalogs, and 75% of the participants had previously conducted art-related research Of these 75%, participants had previously conducted art-related research through the following online databases and resources: American Folk Art Museum, Artstor, Artsy, Artforum, Getty Images, Google, JSTOR, Metropolitan Museum of Art (MET) and the Watson Library, Museum of Modern Art (MOMA), New York Public Library (NYPL), Oxford Art Online, Rijksmuseum, and Wikipedia. For the complete pre-test questionnaire and graphical response representations, see Appendix C: Questionnaires & Response.

Study protocol

All user tests were moderated. Each of the four researchers facilitated two testing sessions, each of which lasted between 30 and 45 minutes. To supplement this data, each researcher also took notes using a note-taking form. This included both an indication of whether the participant completed the task as well as general observations made by the researcher. During the test, participants were instructed to "think aloud," a technique in which procedural thoughts and emotional responses are verbalized out loud. This is a way to make explicit not only the actions the participant is taking, but also their reactions to what they are seeing (Barnum, 2011, p. 206). After the test, the participants were offered a reward in the form of chocolate or another type of sweet treat.

Analysis

Following the testing sessions, the four researchers analyzed the quantitative and qualitative data. To begin, a trial session was excluded from the participant list in UserZoom. Each researcher reviewed the video footage captured during the tests they conducted and synthesized observations into a list of problems. As a group, these problems were sorted, consolidated, and prioritized.

FINDINGS & RECOMMENDATIONS

Overall, the visual design of the site appealed to users. When we asked users what they liked about the site, they used words like "sleek", "clean" and "handsome" as well as complimented the site's logo. However, several study participants also commented that the site seemed targeted to catalogers and those with knowledge of libraries.

In our test of 8 individual participants, a total of 32 tasks of four distinct types were attempted. 38% of the time the task could not be completed, 34% of the time the task was completed with difficulty, and 28% of the time the task was completed easily.
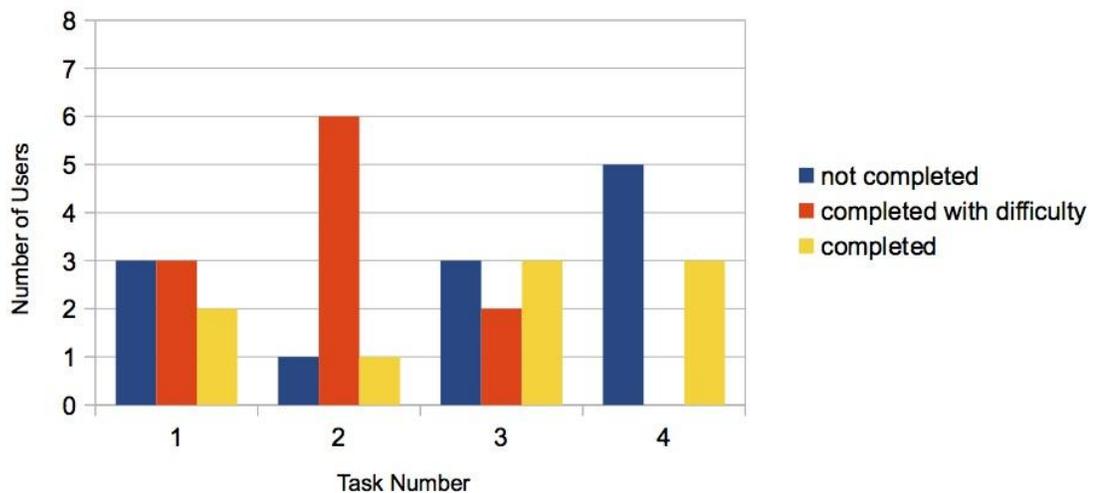
Figure 1. Bar graph displaying task-by-task breakdown of number of users and level of completion for each task.

A System Usability Scale (SUS) score was also calculated. As outlined in the Methodology section of this report, the SUS consists of ten established statements about a user's perceptions about ease of use. Users rate each statement on a five-point scale of agree to disagree. In our study, data for each of the ten SUS statements was collected

during the post-test questionnaire portion of each testing session. After all participant data was aggregated the SUS score for the site was 35.0, which is below the general SUS average score of 68 for all products (Sauro, 2011). Although the SUS is a number out of 100, the score does not reflect a percentage. Bangor, Kortum, and Miller (2009) applied an additional adjective scale to the SUS, and this was also adapted by Sauro (2011); since the separate adjective scale was found to correlate well with the SUS, it is feasible to use this additional scale to interpret results even though we did not include it in our post-test questionnaire. In both Bangor's and Sauro's scales, the Ingalls Library website scored in the low range, with an adjective of "poor."

In order to address the results of the study, including SUS score and observed user experiences, we present the following recommendations. Our recommendations are grouped under three main areas of focus: (1) search and browse functionalities, (2) the display of search results, and (3) e-shelf feature.

RECOMMENDATIONS: Search and Browse Functionalities

Make advanced search accessible within basic search.

We suggest more clearly articulating the difference between basic search and advanced search to avoid confusion. Several users expressed uncertainty about the difference between the basic search and advanced search features; the value of choosing one type of search over the other was not clear to these users. For example, one user explicitly asked, "What's the difference between basic search and advanced search?" and commented, "advanced search is exactly the same as basic search with more boxes." We observed several users toggling back and forth between the basic and advanced search pages before beginning their searches, apparently attempting to discern the difference between the two types by comparing the page designs supporting the two functions.
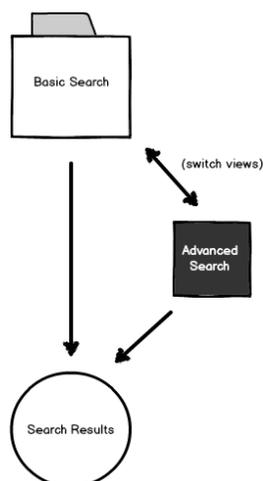
Figure 2. Diagram of a navigational structure where basic and advanced searches are more integrated.

One solution to consider is navigational in nature. We suggest integrating basic and advanced search into one page instead of presenting them on separate tabs/pages. Advanced search should be a link on the basic search page, and users should be able to switch between basic and advanced search "views" without leaving the initial search page. In this structure, advanced search is presented as being subordinate to basic search, which is given priority in the structure. Figure 2 shows this proposed navigational structure in diagram form and Figure 3 shows examples from other libraries' websites.
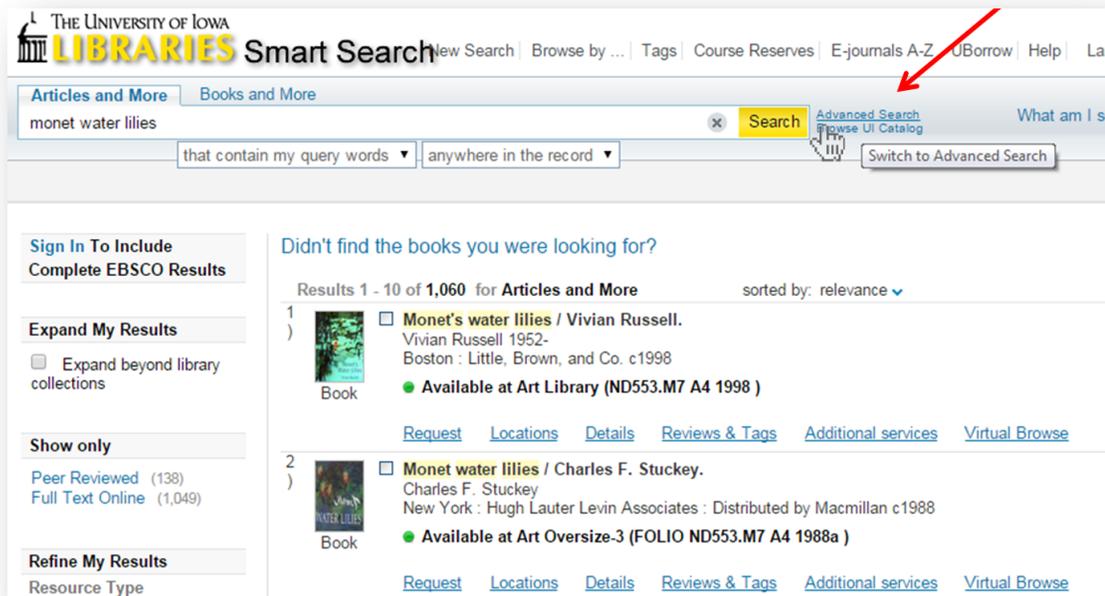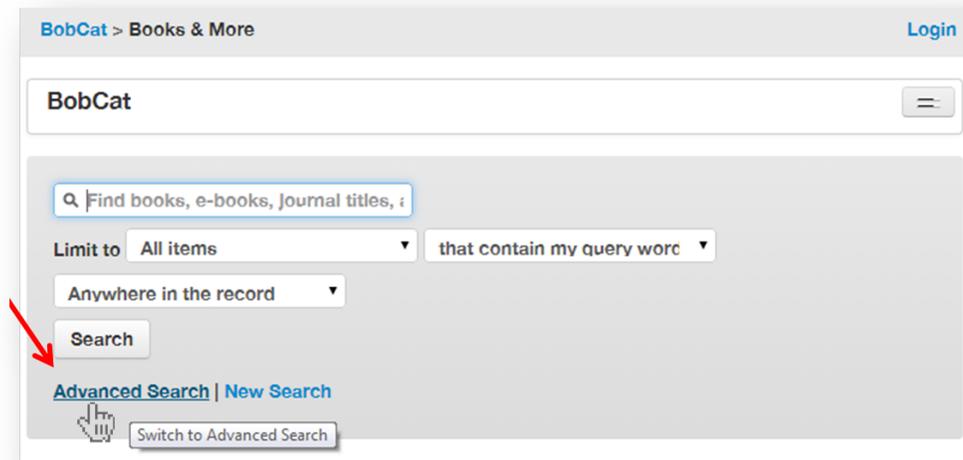
Figure 3. Example of integrated searches from other libraries' websites. On the OPACs of both New York University (NYU, above) and the University of Iowa

(below), advanced search is presented as a link that can be accessed from the basic search page.

Adopt more user-friendly terminology on the search pages.

We recommend adopting terminology that is more familiar to users throughout the search pages wherever possible. Users encountered some unfamiliar terminology on search pages that contributed to an overall sense of confusion about the search process. For example, several users questioned the meaning of the term "words adjacent," a label that appears with yes/no radial buttons on both the basic and advanced search pages. Several users also expressed uncertainty about the meaning of the term "base" in the phrase "Search within (base)" as well as puzzled over the phrases "search excluding art catalogs" and "search including art catalogs" on the pages' drop-down menus.
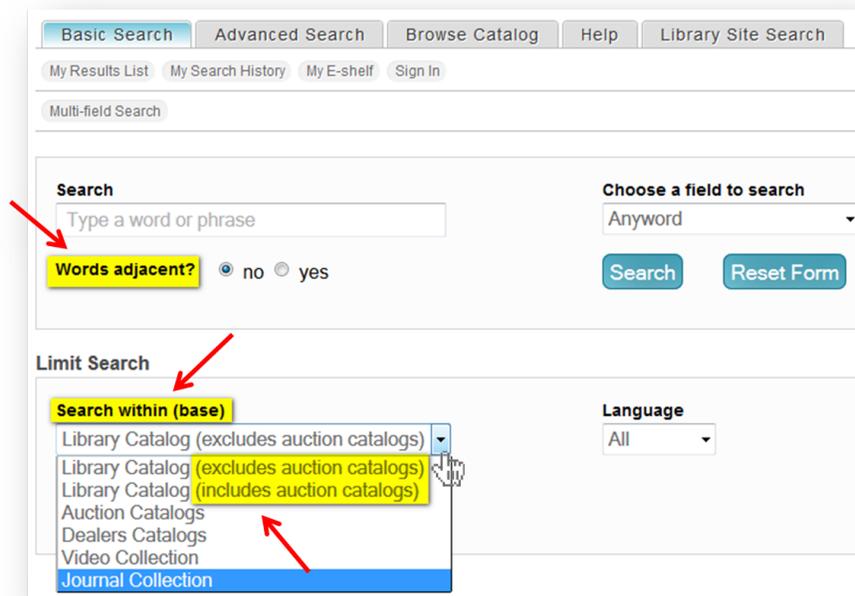
Figure 4. Users expressed uncertainty about the meanings of terms and phrases such as "words adjacent," "Search within (base)," and "includes/excludes auction catalogs."

Clarify the site's browse function.

On the "Browse Catalog" page, we recommend making the search box an ancillary part of the page design instead of a required step in the browsing process. Based on their experiences with browsing interfaces in other systems, several users said that the browse function (on the "Browse Catalog" tab) behaved differently than expected. In particular, we observed some confusion around the requirement that users enter search terms in a

search box at the beginning of the browsing process, as this traditionally is an activity associated with searching and not with browsing. One study participant commented, "When I'm browsing, I expect to click around and find things… This [browse function] is just another search."

We suggest that lists of browse-able categories should be added to the browse page, and the system should allow users to enter the information space through these different categories. The search box should still be available, but it shouldn't be a *required* part of browsing. To illustrate, Figure 5 show examples of category-based browsing interfaces in other systems.
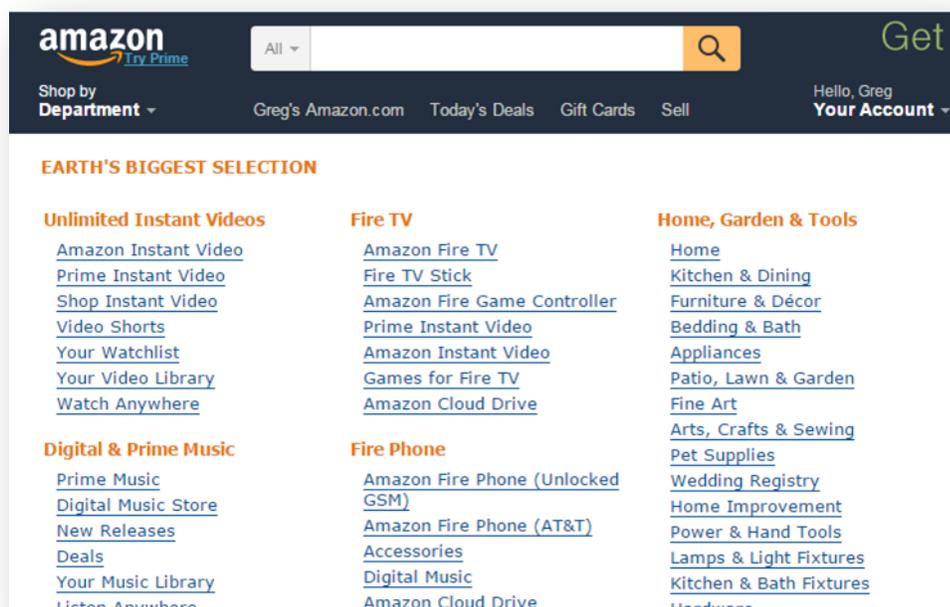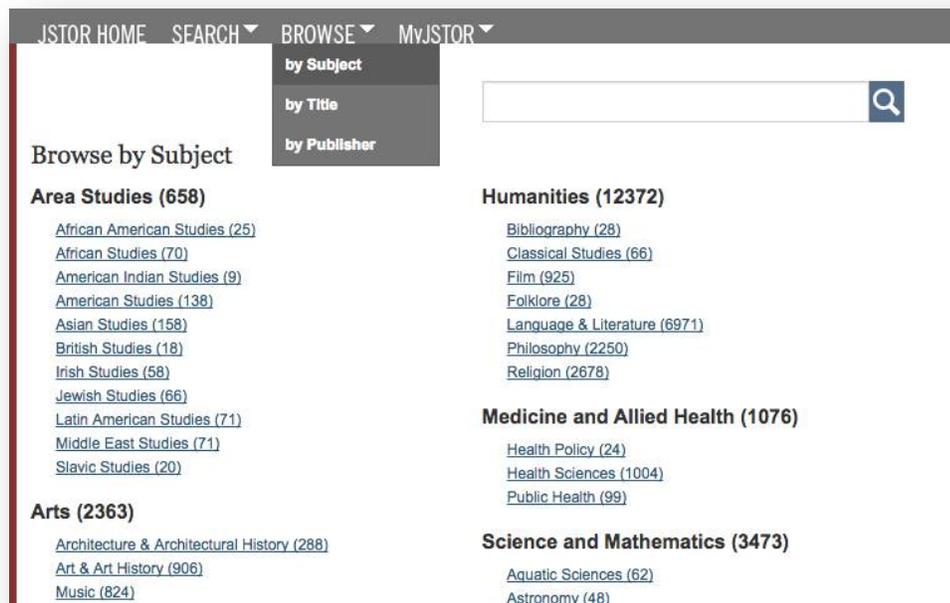
Figure 5. Examples of category-based browsing systems. Above, JSTOR's browse-by-subject page. Below, Amazon's shop-by-department page.

Change the purpose of the upper right corner search box.

We suggest minimizing the redundancies in search on the site by reconceiving the "Search the Catalog" search box as a tool for searching the library's website, not the library's catalog. Several users utilized the "Search the Catalog" search box in the upper right corner of the home screen during searches and expressed surprise when the search results seemed to match those generated from a basic catalog search. The difference between the "Search the Catalog" search box and other types of search on the site was not immediately clear to these users. For instance, one user asked explicitly on the post-test questionnaire, "What's the difference between the magnifying glass [i.e., the "Search the Catalog" search box] and the basic search?"

The search box might have an input prompt that reads, "Search the library site." As a corollary to this change, we suggest removing the "Library Site Search" tab from the catalog search area in the middle of the page. Figure 6 shows these suggested changes.
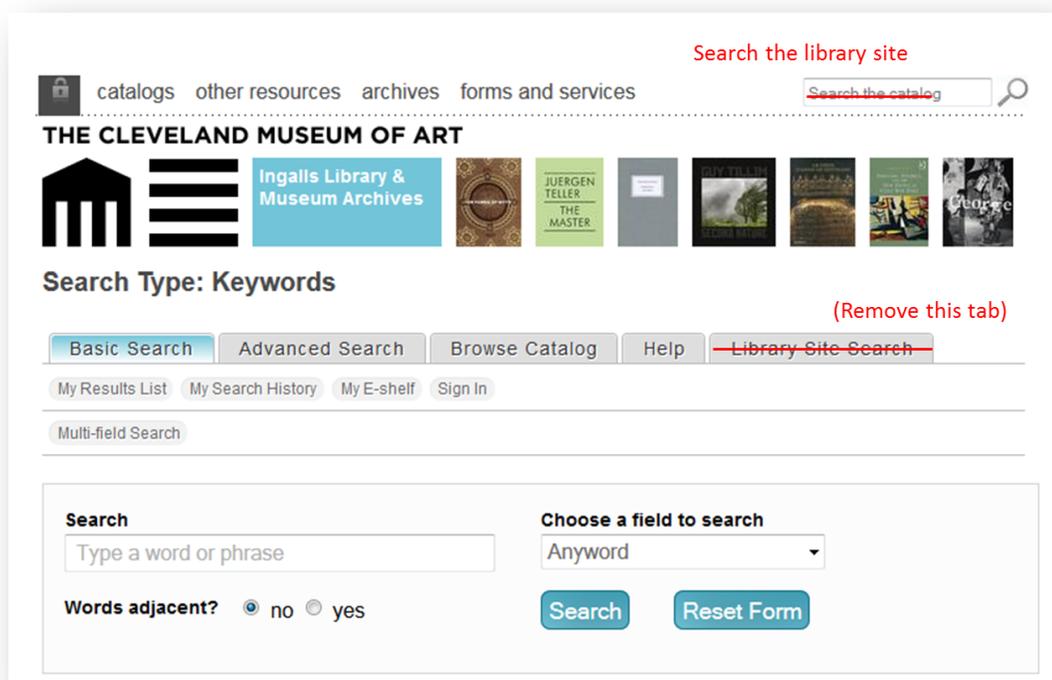
Figure 6. Suggested changes to the "Search the Catalog" search box and the "Library Site Search" tab.

RECOMMENDATIONS: Display of Search Results

Display search results immediately during advanced search.

We suggest always providing a list of search results immediately when conducting a catalog search. While using the advanced search, study participants demonstrated confusion when search results were not instantly displayed on the page. Likewise, users did not uniformly recognize the "Item Count" link as the intended way to access search results. All expressed the expectation for a list of results upon searching rather than an item count number, and a few users did not even recognize the importance of the item count as a link to the advanced search results. Specifically, one user claimed that the number of the side of the search bar did not readily suggest search results and two other users thought that the search was unsuccessful because no list of results appeared. As visualized in Figure 7, no listed results appear when searching for "Monet," and only a small line of text below the search box indicates that clicking on the item count will retrieve the subset results.
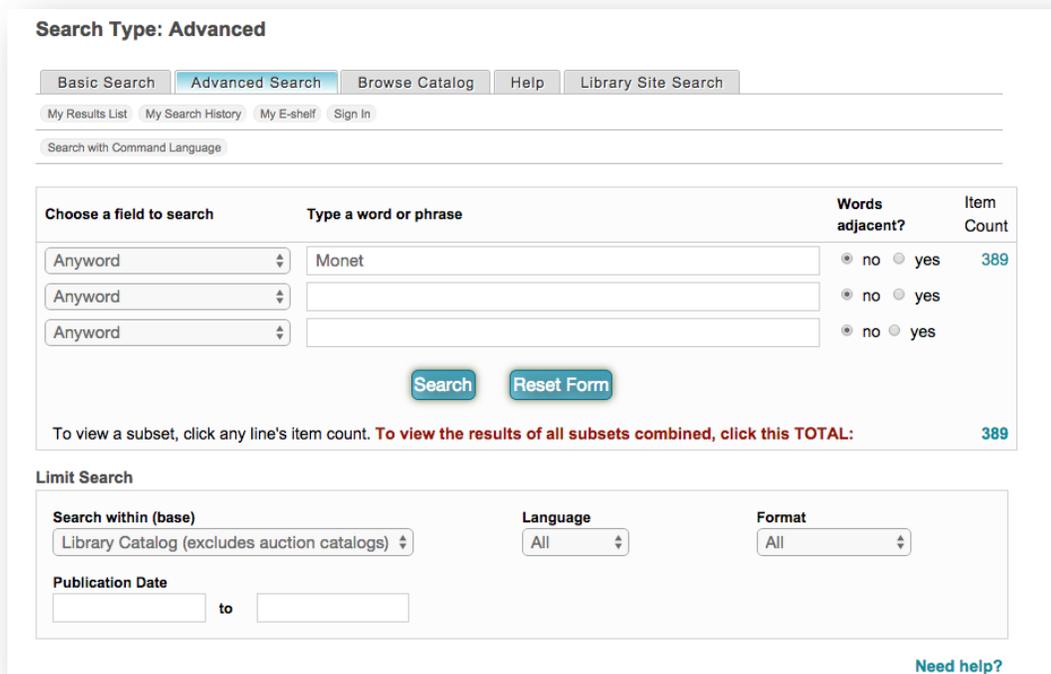
Figure 7. The current "Advanced Search" results page, with "Item Count"

To increase the visibility of the advanced search results while preserving the item count function, the site could simply display the combined subsets search results underneath the search field (Figure 8). To clarify that the different subsets can be searched individually, the new results page could keep the text "To view a subset, click any line's item count" and eliminate the combined search text. These changes in the display of advanced search results would allow for direct user feedback as well as maintain the advanced search

option to directly click each subset's individual item count.

Figure 8. Mockup of "Advanced Search" with both "Item Count" and listed combined subset results

Provide detection and feedback for misspelled words.

Count	Word Index Entry
10	lilliana
2	lilliane
6	lillich
45	lillie
1	lilliecrona
	lillies
1	lillingston
2	lilliput
2	lillis
2	lilliu
6	lillo

Figure 9. Above, advanced search result after attempted search using a misspelled word. Below, adjacent words list provided after an attempted basic search with a misspelled word.

We suggest incorporating a tool into the OPAC to detect commonly misspelled words to immediately offer feedback to users. At least two participants were observed misspelling the word "lilies" as "lillies" during testing sessions. In one of these instances, while using both the advanced and basic search features, the user never realized they were misspelling this word. In the advanced search, after the search button was clicked the item count was zero and in the basic search, a word index showing adjacent words was shown (Figure 9).

As a result, this user attributed the failure of their search to the system. One way to address this is to include a list of commonly misspelled words in the database and display a message with a spelling suggestion. A good example that could serve as a model is found in the University of Iowa Libraries' Smart Search catalog, as shown in Figure 10.
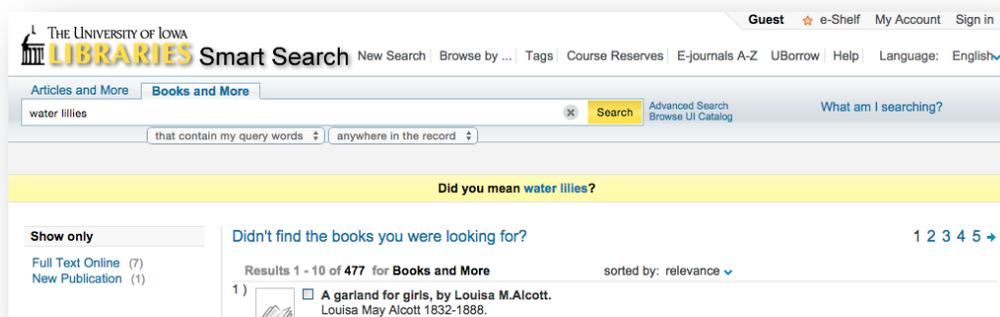
Figure 10. Example of misspelled word feedback from the University of Iowa Libraries' OPAC.

Allow users to sort search results by column heading

We recommend creating additional functionality to sorting displayed search results. In both "Basic Search" and "Advanced Search," sorting the way in which search results were

displayed proved troublesome for five out of the eight tested participants. While the search results provide users with an abundant amount of resources, the participants expressed the need for clearer or more familiar filter and sort options to increase the results' relevancy. One participant in particular articulated the desire for the search interface to be "more consistent with the filtering/formatting in academic databases" (Appendix C: Post-task questionnaire and responses). Five other participants communicated frustration specifically with the filter or sort options for language and year, which greatly impacted the completion of the selected user test tasks.

Figure 11 demonstrates the current search results' "Sort options," which include combined search filters by "author/year," "author/year(up)," "year/author," "author/title," "title/year," "title/year(up)," "year/title," and "sale/title." The image also shows the current column headings, of which only two are clickable or can be used to filter the corresponding results.

Figure 11. Current search results for "Monet," with combined "Sort options" and few clickable metadata heading filters

To promote more user-friendly sort and filter options, the site should align the "Sort options" with the current column headings of "Author," "Title," "Year," "Date of Sale," "Locations," and "Electronic." Additionally, the "Language" filter that only appears at the bottom of the search results list should be added, as this was another point of frustration for users. Matching the filters to the column headings and adding the "Language" filter would increase the sort options familiarity as well as increase the interface's term or language consistency. The website should also make all of the headings clickable to provide an alternate way to turn filters on or off. Within this filter functionality, users would be able to click a heading to change the alphabetical or chronological order of the

results. Figure 12 serves as an example of these proposed "Sort options" and column heading changes.
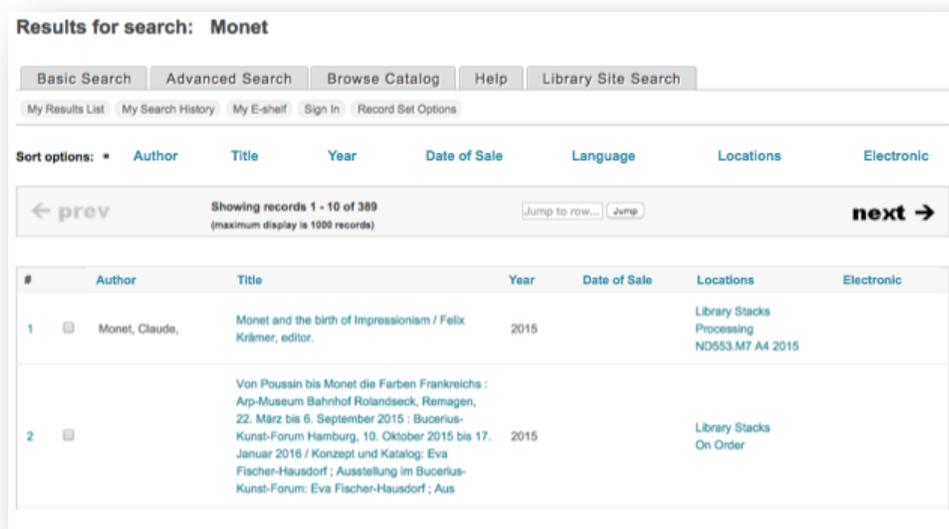
Figure 12. Search results for "Monet," with proposed clearer "Sort options" and clickable metadata heading filters

Provide faceted search refinement options.

In addition to creating new sort options for search results, we also recommend providing faceted search capabilities to allow users the flexibility to narrow search results by many different criteria. During testing, users displayed a preference for beginning their research by conducting a basic search with the intention of further refining their search results later. Several users explicitly stated that they expected more search refinement options on the search results page as well as expressed being overwhelmed by having to sift through large numbers of search results, many of which are not what they are looking for. While looking for books about Monet, for instance, one participant selected a record and was disappointed to later find out it was not a book but a film. Similarly, two other participants became frustrated to get a large number of search results for books in French, as they did not speak the language. By allowing users to search as specifically or as broadly as they would like, adding the capability for faceted searching would remedy these issues. To illustrate, Figure 13 provides an example of user-friendly faceted search refinement in an academic library OPAC.
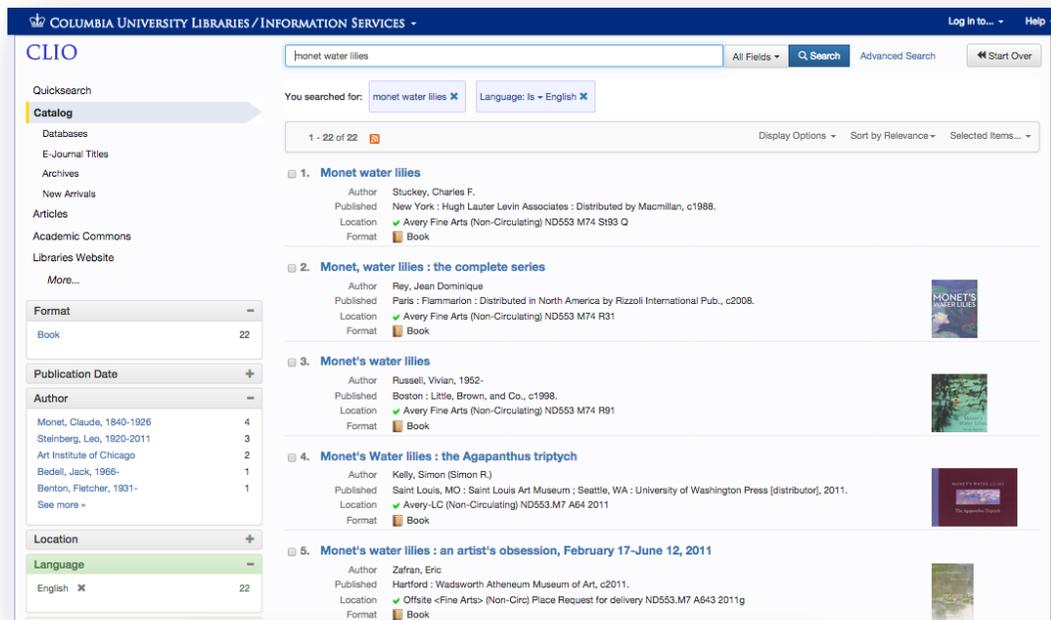
Figure 13. Example of faceted searching in Columbia University Libraries' OPAC.

Add a "View All Search Results" option.

Fortunately for Ingalls Library users, the online search functionality provides an ample amount of search results displaying available library resources. While the user test participants appreciated the high amount of searchable holdings, three out of the eight participants expressed frustration in browsing multiple pages of results. Browsing page-by-page overwhelmed two participants, and another participant found that items checked or selected on one page would not remain selected upon moving through other pages. As indicated in Figure 14, the current search results page includes "next" and "prev" arrows to browse the multiple page results.

To serve users who may wish to see all results on one page (rather than on multiple pages), the Ingalls Library should consider altering its search results navigation bar to include a "view all" page viewing option (Figure 15). This option should appear adjacent to the "next" arrow to allow users the options of viewing all search results at once or browsing page-by-page. Additionally, this "view all" option will also allow users to select results all at once and without losing selections upon navigating to the next page.
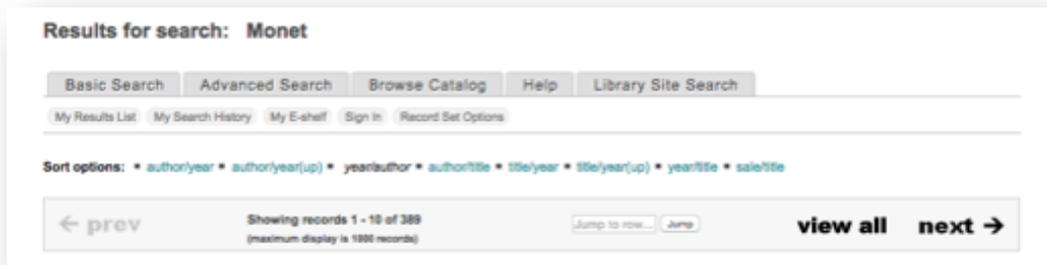
Figure 15. Proposed search results navigation bar with "view all" option

Include images or icons to represent item types
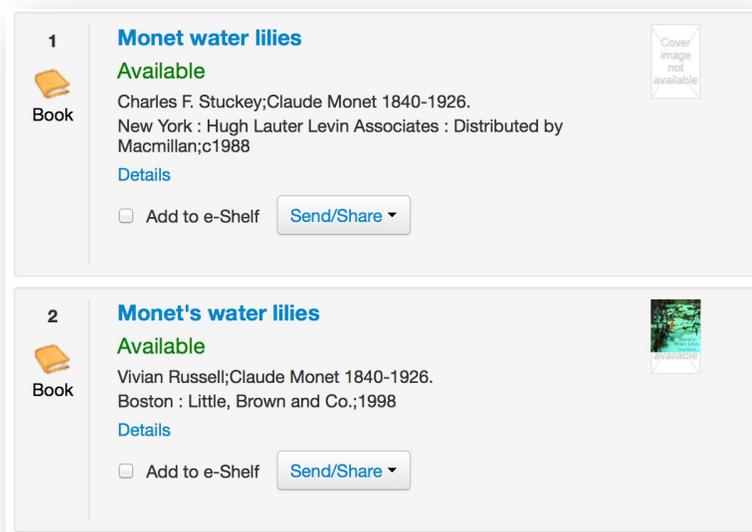
Figure 16. Screenshot of NYU's BobCat showing both a book icon and scanned image of the book's cover.

We recommend including images or icons for each record returned in a search to help users scan and interpret results. In testing sessions and in the post-test questionnaire, users expressed an interest in seeing images of the books and other items. One participant was overwhelmed by the search results page and described having a hard time scanning through the results. A solution is that employed by the NYU Libraries' OPAC, BobCat, which includes both an icon and an image of the resource if available (Figure 16).

RECOMMENDATIONS: E-Shelf Functionality

Increase visibility of e-shelf feature.
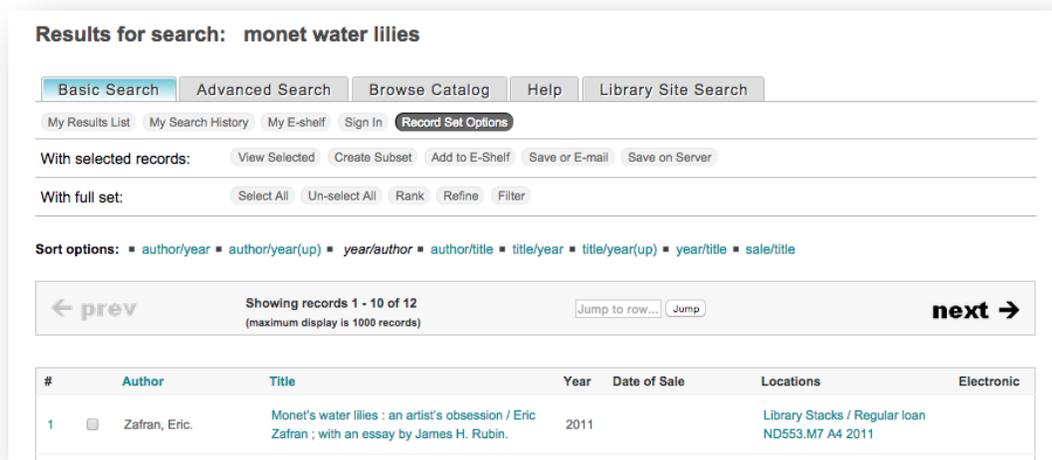
Figure 17. Current search results page with expanded "Record Set Options" displaying e-shelf buttons.

Providing options for users to save catalog records of interest is an invaluable tool, which can save a great deal of time and effort when conducting research online or planning a visit in person; the e-shelf function does exactly that. Making sure users are aware of this feature will improve their experience conducting research in the Ingalls Library OPAC. During testing, all eight participants struggled to figure out how to save relevant search results. For instance, several participants would select items on the search results page and then click "My E-Shelf" to no avail. Participants struggled with where to find the option to save their search results, and two even noted that they would have expected to find the buttons they were looking for to be located just above the checkboxes on the left-hand side of the search results page. In total, only three participants eventually discovered the tools they were looking for on the search results page were under "Record Set Options" (Figure 17).

In order to make the e-shelf functionality more visible on the search results page, we recommend moving the "Add to E-shelf" and "Save or Email" buttons out from under "Record Set Options" to just above the search results list on the left, as specifically suggested by users (Figure 18).

Reduce complexity of e-shelf functionality on search results page.

We also suggest reducing the complexity of e-shelf functionality on the search results page. As previously mentioned, participants struggled when trying to save selected search results. Terms such as "Record Set Options" were unfamiliar to them, and they often mixed up the "My E-shelf" and "Add to E-shelf" buttons. One user in particular described the experience of attempting to save search results as "deceptively complex." To remedy these concerns, we recommend eliminating many of the options made available from the search results page, e.g., "Record Set Options," as well as renaming "My E-shelf" to "View E-shelf" to reduce ambiguity. Furthermore, to help draw a clearer connection between selecting records and saving them to the e-shelf, an additional option is to change the checkboxes to stars and add the star icon to the e-shelf buttons (Figure 18) much like the experience of "bookmarking" to save web pages in many standard web browsers.
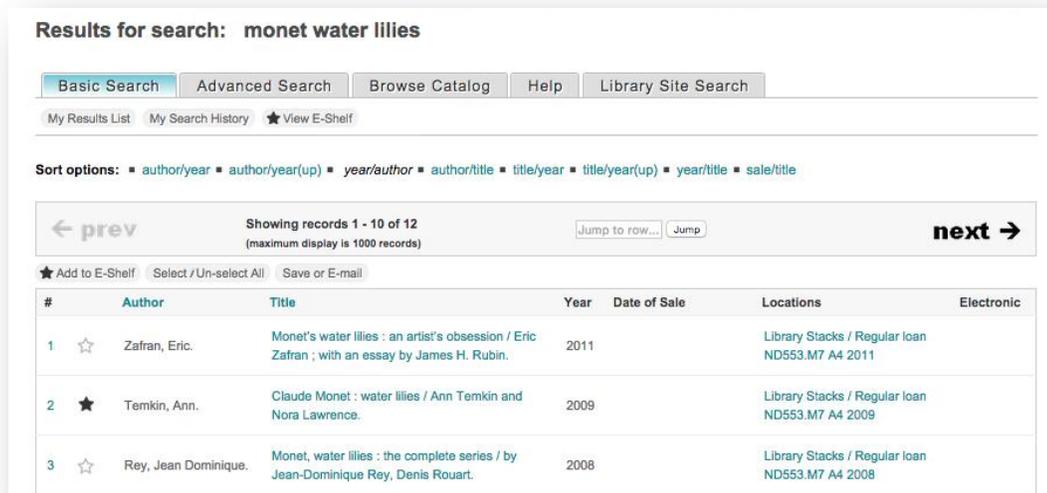
Figure 18. Mockup of search results page with improved e-shelf functionality via reducing, reshaping, renaming & relocating buttons.

CONCLUSION

The Cleveland Museum of Art's Ingalls Library provides a wealth of valuable art-related resources in support of the Museum's collections, exhibitions, research, publications and programs. Ergo its wide range of users include students, scholars, researchers, art historians, curators, and the general public. It is crucial that the Library's OPAC be easy to navigate, so that both those familiar with the library as well as new users can find the library resources and information they seek.

By analyzing the results of the user tests, we identified three main opportunities for improvement in order to enhance the overall usability of the Ingalls Library OPAC: (1) search & browse functionalities, (2) display of search results and (3) e-shelf functionality. Particular issues within these three categories were identified and subsequent actionable recommendations were made in order to remedy the concerns raised by users. These suggestions include, but are not limited to: adopting more user-friendly terminology, clarifying the browse function, providing misspelled word detection, offering faceted searching, and increasing the visibility of the e-shelf feature. Implementing these changes is sure to improve the overall experience of Ingalls Library OPAC users, which will, in turn, help to increase the usability of the Ingalls Library and their website as a whole.

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APPENDICES

APPENDIX A: Participant Consent Form

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144 West 14th Street, Sixth Floor
New York, NY 10011

Purpose

The purpose of this study is to evaluate the usability of the Ingalls Library Website (http://library.clevelandart.org/opac). This study is part of a Pratt Institute graduate level class, under the supervision of Professor Craig MacDonald.

Procedure

If you agree to be in this study, you will be asked to do the following:
1. Find resources pertaining to a specific artist and art work;
2. Find resources pertaining to a specific artists;
3. Research art auctions; and,
4. Find newly purchased book and resources.

Voluntary Nature of the Study/Confidentiality

You are voluntarily taking part in this study. At any point you are welcome to tell the moderator that you would like to discontinue your participation in the study. You may also ask the moderator any questions at any time during the study. Your name and personal information is completely confidential and will only be accessible to the members of the project team.

Contacts and Questions

If you have any questions after the study is complete, you may contact:

Statement of Consent & Recording Release

I agree to participate in the study conducted and recorded by Pratt Institute.

I understand and consent to the use and release of the recording by Pratt Institute. I understand that the information and recording is for research purposes only and that my

name and image will not be used for any other purpose. I relinquish any rights to the recording and understand the recording may be copied and used by Pratt Institute without further permission.

I understand that participation in this usability study is voluntary and I agree to immediately raise any concerns or areas of discomfort during the session with the study administrator.

Please sign below to indicate that you have read and you understand the information on this form and that any questions you might have about the session have been answered.

Date:_____

Please print your name:_____

Please sign your name: _____

Age:_____ **(Note: You must be 18 years of age or older to participate in this study. Let the experimenter know if you are under 18 years old.)**

Thank you!
We appreciate your participation.

APPENDIX B: Moderator Materials

Moderator Checklist

Before participant arrives:

- Turn on computer & be sure UserZoom is loaded properly and ready to go.
    - Username: ▮▮▮▮
    - Password: ▮▮▮▮
    - Make sure to install the video plug-in
- Get refreshments set up.
- Ensure you have all of the following:
    - Script
    - Enough printed consent forms (one for each participant)
    - Enough moderator notes documents (one copy for each user test)
    - Pens/Pencils

When participant arrives:

- Welcome participant. Introduce yourself. Thank them for participating.
- Offer refreshment.
- Set participant up at designated computer.
- Read script for Introduction & Informed consent and follow instructions.

After consent form is signed:

- Read Pre-Test Questionnaire script & follow instructions.
- Read Introduction to Tasks script & follow instructions.
- Read Task #1 script & follow instructions.
- Read Task #2 script & follow instructions.
- Read Task #3 script & follow instructions.
- Read Task #4 script & follow instructions.

Once all tasks are completed:

- Read Post-Test Questionnaire script & follow instructions.
- Read Debrief script & follow instructions.
- Thank participant again and provide them with "Thank You" treat.

Moderator Script

Introduction and Informed Consent Script

Hi! My name is _____. I am a one of four members in a group of students studying Usability Theory and Practice at Pratt Institute.

Thank you for agreeing to participate in this study examining the online library catalog of the Ingalls Library. Part of the Cleveland Museum of Art, the Ingalls Library is a place to search for art-related information and resources, including books, art catalogs, auction catalogs, videos and journals. Your feedback will inform our group's recommendations for how to improve the library's website. By the way, I am not affiliated with the Ingalls Library so don't feel like you have to filter your comments. Nothing you say today will offend me, so please speak your mind!

During our session together, I will be reading from a script to ensure that all study participants receive the same instructions. I will be observing you as you interact with the Ingalls Library website through a tool called UserZoom, which will guide you through four tasks and several questionnaires. UserZoom will record video of you and your screen as well as audio.

During the session, I will ask you to please think aloud and verbalize your thoughts about your experience with the website as they occur. After you have finished working through each task, you will be prompted to complete a post-task questionnaire.

We want to know what you expect to happen when you make a choice and whether it meets with your expectations or not. We want to know what surprises, what delights, what confuses or even frustrates you, and why. If you find at any point that you're not sure what to do or you're trying to figure something out, tell us what you're thinking. When you share with us what you're thinking as you go along, we get a better understanding of how the process works for you. For instance, you might say, "I'm clicking on this link. . . . Oh, that's not what I expected to happen" or "Yes, it took me exactly where I wanted to go."

I might ask you questions during the study, and you may ask me procedural questions, but I will not be able to answer questions about the how the website works while you are completing the tasks.

I want to emphasize that we are not testing you, but rather the website. We subscribe to the idea that if you encounter a problem, it's not your fault--it's the website's! We are very interested in what you have to say about the Ingalls Library website, and there are no right or wrong answers.

Please read this user consent form.

Are you comfortable signing this form?

Do you have any questions so far?

Thank you!

Pre-Test Questionnaire Script

Before we begin the tasks, please fill out this pre-test questionnaire so that we can better understand your background.

Thank you.

Just so you know, we've keyed you up at the Ingalls Library search page. The Ingalls Library is the library of the Cleveland Art Museum, and the interface logo and design reflects this association. However, the specific website you will be interacting with is for the library, not the museum.

Task 1 Script

For the first task, you're researching Claude Monet's *Water Lilies* series. Since the Museum owns one of these paintings, you decide the best place to begin researching these paintings is on their library's online catalog. Find what's available in the museum's library about Monet's *Water Lilies*. Save any relevant information about the resources you are interested in since you'll be going to the library later.

Once you are finished working through this task, please click the "OK" button. Please note that you do not have to complete the task to finish working through it, and you may choose at any point to move on to the next task. As previously mentioned, there will be a short, two-question post-task questionnaire to complete after you click "OK."

For reference, the current task description will always be present at the bottom of your UserZoom screen.

[Let them know when the camera and on-screen recording starts and stops -- so they're not surprised when they suddenly see their face in the window at the bottom of the screen]

Thank you, it was really valuable for me to observe your experience.

Task 2 Script

For the second task, please use a different method to find available museum library resources more generally about Claude Monet.

Again, please click the "OK" button when you are finished working through the task.

Thank you.

Task 3 Script

For the third task, research art auctions in which paintings by Monet were sold. You're particularly interested in the oldest and most recent auctions.

Again, please click the "OK" button when you are finished working through the task.

Thank you.

Task 4 Script

For the fourth task, find books and resources recently purchased by the Ingalls Library.

Again, please click the "OK" button when you are finished working through the task.

Thank you.

Post-Test Questionnaire Script

Thanks. Now please fill out the post-test questionnaire. Do you have any thoughts about the Ingalls Library website in general?

Debriefing Script

You did it! Thank you for all of your insights and feedback on the Ingalls Library website. We really appreciate you taking the time to be a participant in our user test. All the information you provided will be anonymous and confidential. We will review the video, audio, and your questionnaire responses and combine them with our other user test results to create a report evaluating the Ingalls Library website. Do you have any further questions or final thoughts for me? Feel free to contact us later with any feedback.

Please help yourself to a sweet treat. Thanks again for participating!

APPENDIX C: Questionnaires & Responses

Pre-test questionnaire and responses

Indicate your age.
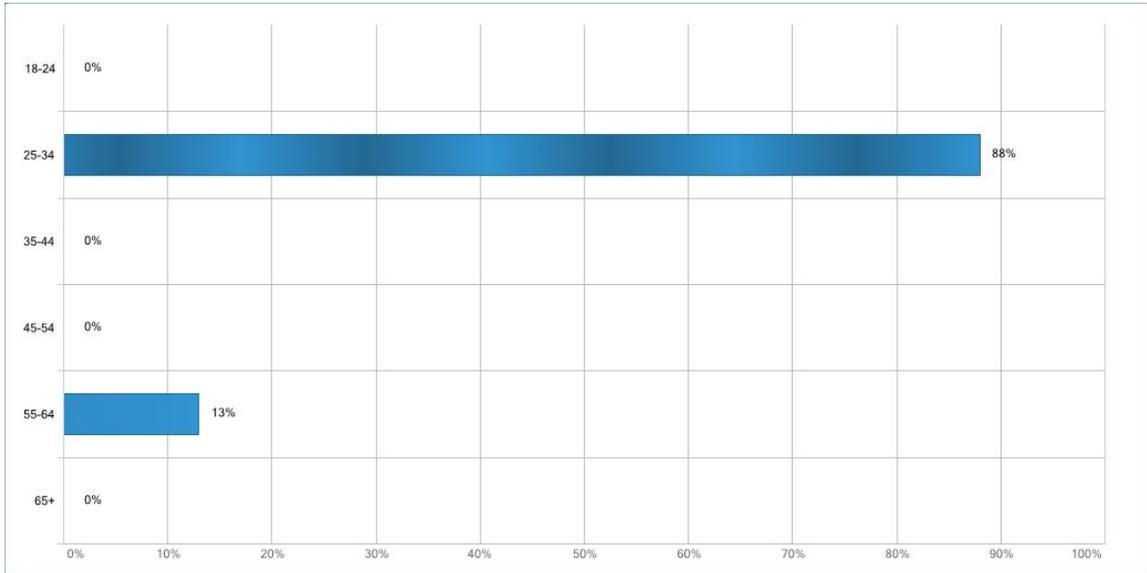
What is your occupation? (Check all that apply.)
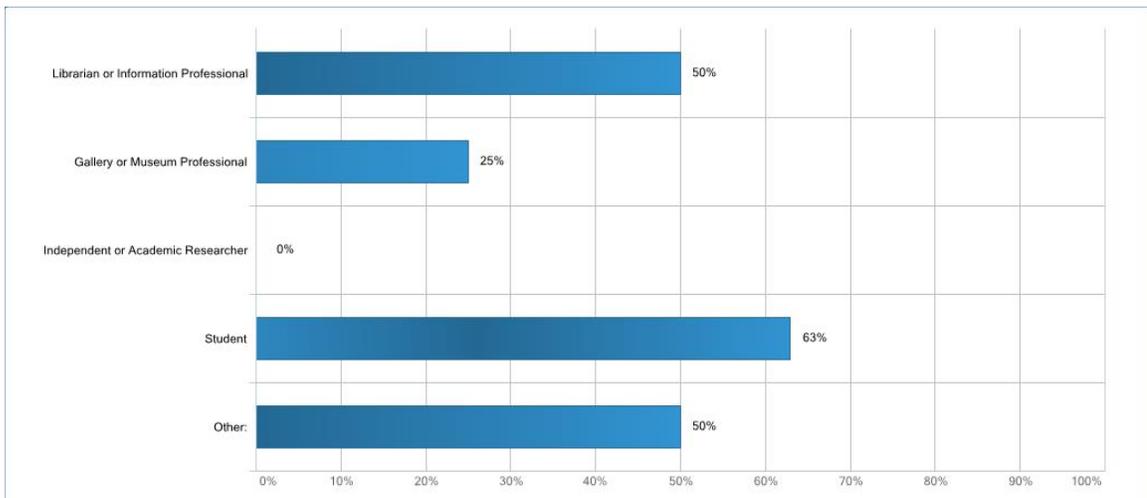
Other:
"Teacher"
"Graphic Designer"
"User experience researcher and strategist"
"Associate Development Editor"

What are your preferred online research tools?
(For example, Google, WorldCat, NYPL):

"Google, OCLC, Worldcat, Library of Congress Authority Headings, Bookseller's websites, Wikipedia, Poetry Foundation, and Museum's catalog."

"Google"

"Google mainly, NYPL, Bing"

"1.) Google 2.) JSTOR 3.) WorldCat"

"Google scholar, Pratt Libraries' website"

"Google, worldcat"

"Google"

"Google"

Have you ever searched for resources using online library catalogs?

Yes	100%
No	0%
Not sure	0%
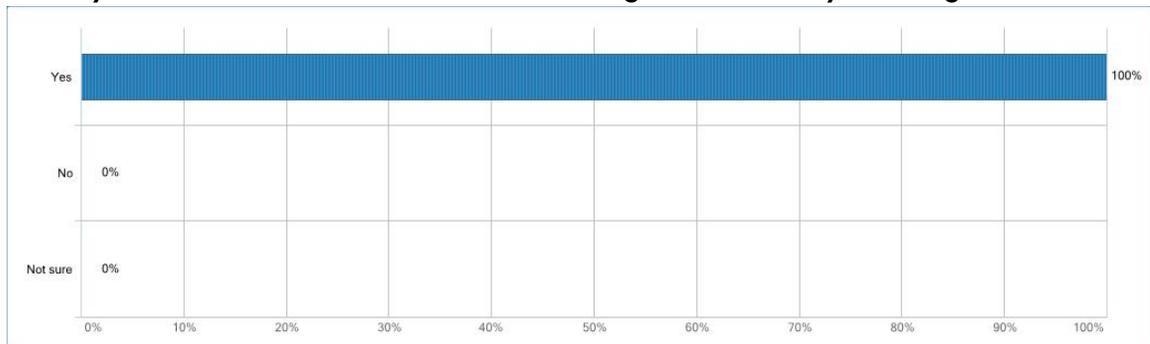
Have you ever conducted art-related research?

Yes	75%
No	25%
Not sure	0%
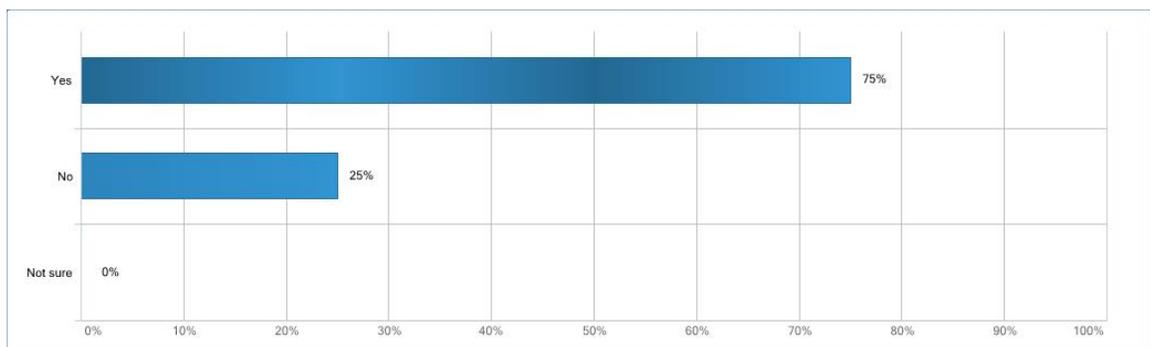
If yes, which websites or resources have you used specifically for art-related research?

"Not sure"

"NYPL, Metropolitan Museum of Art, Rijksmuseum, Getty, MOMA"

"JSTOR, Artstor, BHI, Wikipedia, Oxford Art"

"American Folk Art Museum (where I currently work), The Watson Library"

"I have usually used Google to look up artwork in the past."

"Artsy Oxford Art Online JStor Artforum Google"

Post-task questionnaire and responses

TASK 1

Overall, I am satisfied with the ease of completing this task.
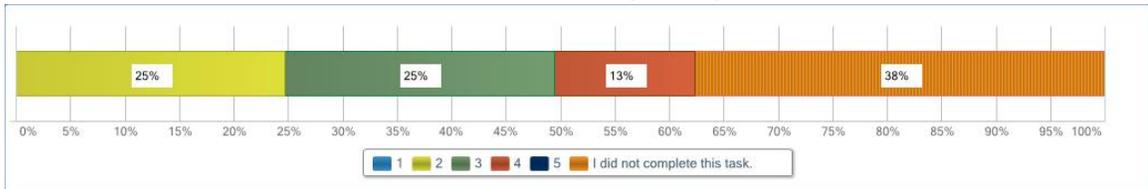
I am satisfied with the amount of time it took to complete this task.
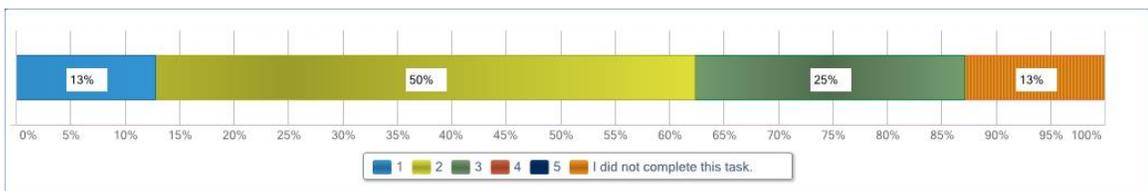
TASK 2

Overall, I am satisfied with the ease of completing this task.
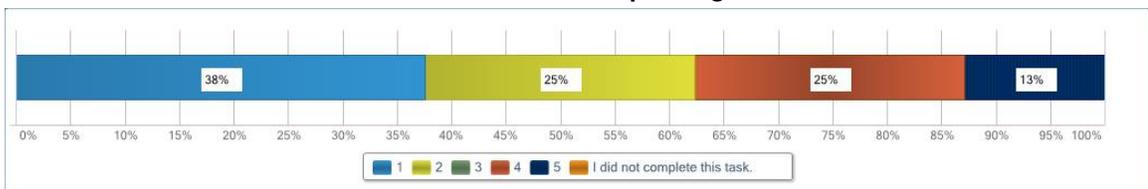
I am satisfied with the amount of time it took to complete this task.
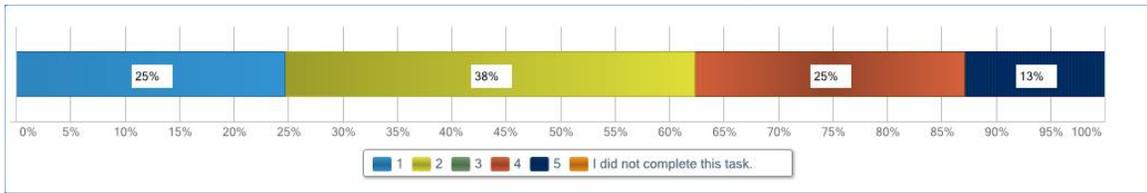
TASK 3

Overall, I am satisfied with the amount of time it took to complete this task.
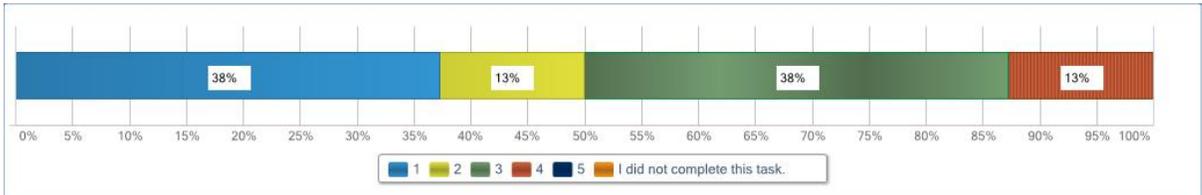
I am satisfied with the amount of time it took to complete this task.
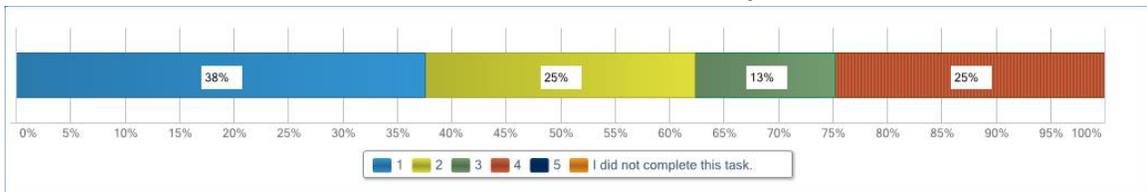
TASK 4

Overall, I am satisfied with the ease of completing this task.
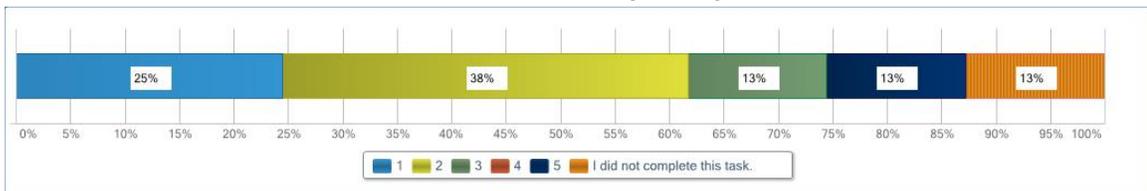
I am satisfied with the amount of time it took to complete this task.
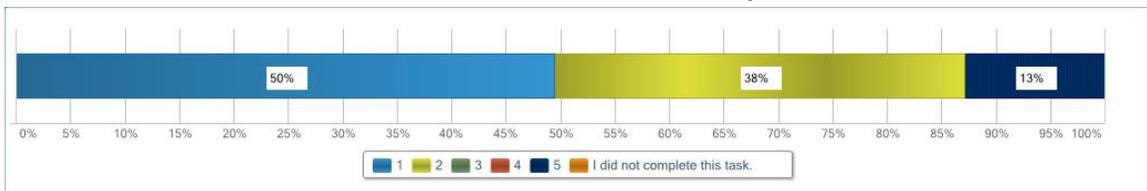
Post-test questionnaire and responses

Would you use the Ingalls Library website in the future?
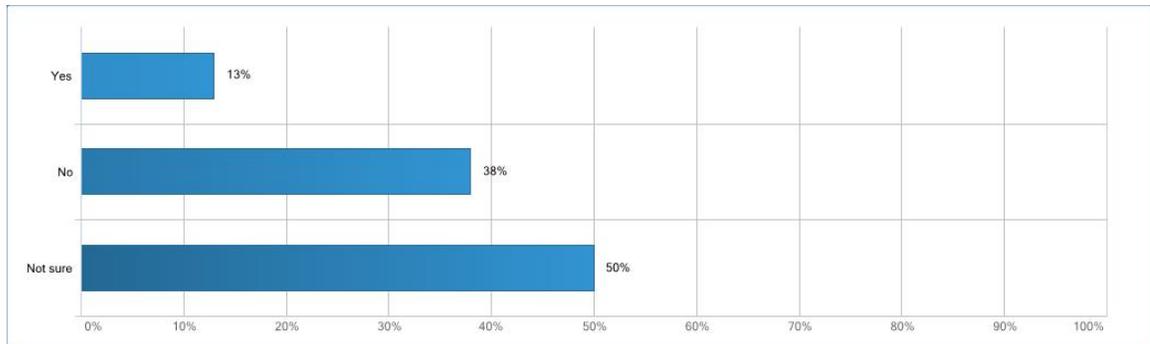
What do you like about the Ingalls Library website?

"Their logo is nice. They cater to catalogers and librarians with their search indexes, but this is also a con. Their auction searches were nice."

"I like the different search options available."

"Looked basically clean and not over complicated."

"handsome, sleek, contemporary appearance"

"Nothing"

"I liked the dynamic menu at the top of the site, however it fell to the background and I never thought to access it until the last task. The design was clean and not distracting.   There are a lot of options when searching for materials."

"Not much - I didn't find it very intuitive. I'm not a current student, so I don't go onto library catalog sites very often. If I did, I might have been quicker with my searches here today."

"Nothing"

What do you think the Ingalls Library could change about its website to make your experience more enjoyable?

"Everything. The search indexes, adding a "refine search" bar that is not in command language, more average user friendly choices, better organization of result searching, clearer way to save results, more information in the records, and more

diverse ways to search and browse. Better ways to search artists, rather than having to use author as an option. More subject headings that are specific in the records."

"Maybe make the tabs at the top more noticeable for users, I did not notice they were there until task 4."

"Maybe some color could help, the all white could get confusing."

"more consistent with the filtering/formatting in academic databases (feel like i need to learn all over again how to browse)"

"A lot. For example, simply add some imagery and less text."

"Make the top menu larger and more visible. PICTURES of the material. I had hit the previous page button a lot I could never figure out how to show all of the results at once."

"I think most students now want instantaneous results. If they don't get the info immediately, it's frustrating. The site could be a bit more intuitive. The search boxes should be clear, the advanced search should be clear and user friendly. What's the difference between the magnifying glass and the basic search?"

"make the search functionality and features up to date with current search functionalities on other websites."