Usability Evaluation of the Whitney Museum Website

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Overview

Our firm was retained to provide an evaluation of the Whitney website’s overall usability, including an assessment of the museum library sub-site.

As a first step, we formulated a list of fifteen information seeking tasks. Six of the tasks addressed information contained in the library section of the museum’s site. Tasks included searches for information regarding in person visits to the library as well as searches of library holdings. The nine general tasks encompassed a variety of information gathering objectives ranging from finding membership and admission price information to identifying specific art exhibit and special program details. The complete list of usability task questions is enclosed (page 5, 37).

In the interests of identifying and ultimately selecting a representative sample of individuals to help us test the site we developed a screening questionnaire (page 39) entitled Museum Website Usability Evaluation. The screener was designed to identify individuals based on the extent of their usage of museum and library web sites in general, beginning with the first question regarding frequency of use of the internet to find information about museums. We also asked participants to indicate if they had children so that we could be sure to include some parents as the task list included items relating to the museum’s family programming. Several demographic questions were added for purposes of enabling us to know our test audience. Based on responses from individuals who completed the screener we initially selected nine individuals to participate in our study. Subsequent technical difficulties prevented us from including three of the tests in our final report, leaving us with a participant pool of six.

We used the screener responses to eliminate candidates who indicated that they never look for museum information online or who never use online library catalogs. The six individuals who participated in the study were pretty evenly divided between those who frequently use online museum websites and library catalogs and those who sometimes use such resources. This mix gave us a good representative population which included both casual users and power users. Half of our participants are parents, and they are evenly composed of men and women.

The tests were conducted one on one, over a two week period, with an observer (who is a member of our evaluation team) and a participant in a room together. Each participant performed the same fifteen search tasks on a computer equipped with Morae software, and with a camera and microphone which enabled us to simultaneously record the person performing the task and the web site screens they selected throughout their searches. A copy of the Moderator’s Guide used during the test sessions is attached (page 42).

The audio and visual recordings of the individual tests were reviewed. Task performance was analyzed in terms of quantitative measures including time to completion, number of mouse clicks, difficulty of completion, and number of web page changes. In addition, we analyzed qualitative measures based on user indications of difficulty or frustration, observations of ease of task accomplishment, and review of commonly employed
missteps where they occurred. A breakdown by individual task is included in the next section of this report.

In general, searches for membership information, wheelchair accessibility, procedures for submitting library questions, and signing up for email notification were easily completed by participants. With few exceptions, participants were able to complete the assigned search tasks.

In terms of ease and efficiency of searching, several general patterns emerged from our detailed analysis of the individual tasks.

Participants often failed to identify the exact information they required even though they had in fact found the correct web page.

There was some expression of frustration with the overall navigation system evidenced by repeated clicking on the main navigation labels when looking for secondary level information, and by a fair number of false starts and dead ends throughout the testing process.

Locating specific events taking place at the museum tended to be a somewhat cumbersome process.

Some users encountered difficulties in even locating the main library page. Additionally, there was some user confusion in terms of whether certain web content sections referred to the library.

The enclosed report details these findings and discusses possible means of addressing them. We would be happy to discuss them further.
Task List

Task 1  A friend is coming to visit this weekend. You’ve heard that the Whitney is “pay what you wish” on Friday nights. Locate the starting time of this Friday night program. (page 7)

Task 2  Your uncle is confined to a wheelchair and would like to visit the Whitney. Find information on which of the building’s entrances are accessible. (page 9)

Task 3  You and a friend are interested in free guided tours of the Whitney’s exhibits. Locate the information on the availability of a free docent tour at the Whitney. (page 10)

Task 4  You and a friend often visit the Whitney together. Locate the information on memberships for two people. (page 11)

Task 5  You have heard that a favorite experimental composer, Matthew Van Brink, is doing a family event at the Whitney. Locate the date, time and appropriate age range for this event. (page 12)

Task 6  You’ve heard about the “Seminars with Artists” program at the Whitney. Locate the information on the May 1st seminar with Alice Könitz. (page 14)

Task 7  You need a summer internship. Find the contact information for the Summer Intern program. (page 15)

Task 8  You’d like to stay current on Whitney exhibitions. Sign-up for email notification. (page 16)

Task 9  You’d like to know the cost of the print “Early Sunday Morning” by Edward Hopper. Locate the price of this print. (page 17)

Task 10  Find the information for scheduling an appointment to visit the Whitney Library. (page 19)

Task 11  You are a visiting researcher who last visited the Whitney Library two months ago. You want to know if there have been any new acquisitions since your last visit. Locate information on items acquired by the library within the last two months. (page 20)
Task 12
You are interested in finding information on Charles Demuth’s late paintings of Lancaster, but cannot visit the Whitney Library in-person. Find information on submitting a reference question to the library. (page 23)

Task 13
You are a Whitney member and your friend is visiting from out-of-town. You want to find out if she can visit the Whitney Library with you. Locate this information. (page 25)

Task 14
You are looking for a book about Jackson Pollock authored by B.H. Friedman. Find information on the availability of this book at the Whitney Library. (page 27)

Task 15
You’d like a reproduction of an image from a rare book available from the Whitney Library’s collection. Find information on obtaining a reproduction of the image. (page 29)
Explanation of Quantitative Analysis

Average Time on Task (seconds):

The average time taken by a participant to complete a task.

Average Mouse Clicks by Task:

The average number of mouse clicks taken by a participant to complete a task.

Average Task Success Score:

Number indicative of the overall difficulty participants had with a task; a relative value. The lowest score (0) indicates a task completed easily by all participants, while the highest possible score (2) would indicate a task left uncompleted by all participants. Score ranges were defined as the following:

- 0.00 – 0.20 = Very Easy
- 0.21 – 0.40 = Moderately Easy
- 0.41 – 0.60 = Moderately Difficult
- 0.61 – 1.00 = Difficult
- 1.01 – 2.00 = Extremely Difficult

Average Web Page Changes:

The average number of times the participants navigated to a new web page while completing a task.

Average Number of Reiterated Searches:

The average number of times a user engaged in a dead end search, then repeated that same dead end search again. This indicates a steadfast belief that the search should produce the desired result even though no result can be found.

Average Number of Dead End Searches:

One of two things: The average of both A) the number of times a participant navigated to a page that they then had to navigate away from in an effort to complete a task, or B) the number of times a participant appropriately used a search box function to locate information and received no results.
Task Evaluations and Recommendations

Task 1  A friend is coming to visit this weekend. You’ve heard that the Whitney is “pay what you wish” on Friday nights. Locate the starting time of this Friday night program.

Selected Quotes

“I found it.”
“Wow this is taking me way too long to do.”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>97.09</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>6.60</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.40</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>4.80</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.50</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>1.00</td>
</tr>
</tbody>
</table>

An average task success score of 0.40 indicates that the task is moderately easy to complete.
An Average Web Page Change score of 4.80 is high for this task, which could be completed in a single web page change.

Qualitative Analysis

The average time on task and average web page changes were unexpectedly high. While this may be partially attributed to this task being the participants’ initial orientation with the website, confusion with the glocal navigation also contributed to the delayed objective completion.
The appropriate information may be located in two locations, “Visit Us” and “Whitney After Hours”. No participant utilized the “after hours” link to locate the appropriate information due to the unclear meaning of the label.
Task Recommendations

Participants repeatedly clicked the category labels of the glocal navigation in an attempt to reach an overview page. Incorporating the option of linking to overview pages within the site will eliminate this confusion.

“Whitney After Hours” program should be re-categorized into the “Education & Events” section of the navigation.

“Visit Us” section fly-out of the glocal navigation should include a link incorporating the word “Admissions”.

“Pay What You Wish Admission” should then be made highly visible on the appropriate content page.
Task 2  Your uncle is confined to a wheelchair and would like to visit the Whitney. Find information on which of the building’s entrances are accessible.

Selected Quotes

“Accessibility. Very nice. Couldn’t be better.”
“That was easy.”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>37.57</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>2.00</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>1.83</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.00</td>
</tr>
</tbody>
</table>

An average task success score of 0.00 indicates that the task was very easy to complete.

Qualitative Analysis

Participants consistently and directly located the appropriate webpage in order to complete the task. However, due to the location of the information below the fold and the contextual structure of the information, three out of six participants took 20-40 seconds to locate the specific entrance accessibility information.

Task Recommendations

Provide anchor links to subsection information below the page title. Restructure the information layout into concise chunks of information rather than utilizing a narrative structure where information is contextually lost.
Task 3

You and a friend are interested in free guided tours of the Whitney’s exhibits. Locate the information on the availability of a free docent tour at the Whitney.

Selected Quotes

“Daily free exhibition tours. Here’s a schedule. Done!”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>49.96</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>3.00</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.17</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>2.67</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.17</td>
</tr>
</tbody>
</table>

An average task success score of 0.17 indicates that the task was very easy to complete.

Qualitative Analysis

The appropriate information is located in three separate locations (“Visit Us”, Education & Events”, and “FAQ“) within the site. Five out of six participants were able to easily find the information due to its categorization in multiple locations. Subsequent to the evaluation process, information regarding docent tours has been removed from the “Education & Events” section of the website.

Task Recommendations

Reinstate the docent tour information under “Education & Events” and expand it to include all tour info.
Task 4  You and a friend often visit the Whitney together. Locate the information on memberships for two people.

Selected Quotes

“Very good! Done and done!”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>28.84</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>2.67</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>1.83</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.00</td>
</tr>
</tbody>
</table>

An average task success score of 0.00 indicates that the task was very easy to complete.

Qualitative Analysis

All participants were able to easily locate the appropriate information in order to complete the task objective.

Task Recommendations

Organize membership levels and benefits into a concise, graphically appealing table in order to minimize large amounts of textual information and maximize fast, visual location of pertinent information.
**Task 5** You have heard that a favorite experimental composer, Matthew Van Brink, is doing a family event at the Whitney. Locate the date, time and appropriate age range for this event.

**Selected Quotes**

“Dead end.”
“ Took a wrong turn.”
“Let’s see if there’s a search box.”
“Hang on! I’m not giving up. I almost gave up there for a second.”
“Come on! It’s got to be in Kids & Family.”
“This man is not playing here.”

**Quantitative Analysis**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>175.08</td>
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<tr>
<td>Average Mouse Clicks by Task</td>
<td>16.83</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>1.00</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>13.33</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>1.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>2.67</td>
</tr>
</tbody>
</table>

An average task success score of 1.00 indicates that the task is difficult to complete. An Average Mouse Clicks score of 16.83 and an average web page change of 13.33 indicates that participants made multiple attempts to locate the information. Two participants failed to complete the task.

**Qualitative Analysis**

Five out of six participants initially navigated to “Kids & Families” in order to complete the task objective. However, two of the participants navigated away from the page when they were unable to locate the task objective. The appropriate information is located below the fold and visually blends into the descriptive text making it difficult to pinpoint the title of the event. Two participants who attempted to utilize the museum calendar and the calendar search function were unable to locate the appropriate information.
Task Recommendations
Maximize the potential of the calendar by keeping it up-to-date and inclusive of all events, programs, and exhibitions.
Graphically treat the event title in order to differentiate it from the rest of the descriptive text.
Provide a global search function for the site.
Task 6  You’ve heard about the “Seminars with Artists” program at the Whitney. Locate the information on the May 1st seminar with Alice Könitz.

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>77.92</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>7.67</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.67</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>4.83</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.50</td>
</tr>
</tbody>
</table>

An average task success score of 0.67 indicates that the task was difficult to complete.

Qualitative Analysis

Participants were able to utilize the museum calendar to locate the task objective, but utilizing this function was not immediately intuitive.
It was not apparent to participants where to go in the “Education & Events” section of the glocal navigation in order to find the appropriate information.

Task Recommendations
Provide a global search function of the site with an option of faceted search results (events, exhibitions, programs).
**Task 7**

You need a summer internship. Find the contact information for the Summer Intern program.

**Selected Quotes**

“I don’t think I’m in the right place…”

**Quantitative Analysis**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>59.94</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>4.50</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.33</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>2.83</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.67</td>
</tr>
</tbody>
</table>

An average task success score of 0.33 indicates that the task was moderately easy to complete. Two participants averaged 120 seconds for time on task, while the other four participants averaged under 30 seconds time on task. This results in a relatively high average time on task.

**Qualitative Analysis**

The two participants who had the most trouble with this task both believed that the objective would be found under an education heading.

**Task Recommendations**

Place an additional link to the internships page under the Education and Events section.
Task 8. You’d like to stay current on Whitney exhibitions. Sign-up for email notification.

Selected Quotes

“This, I’ll bet, is going to be easy.”
“I’m happy with that.”
“That was easy.”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>22.46</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
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</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>1.83</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.33</td>
</tr>
</tbody>
</table>

An average task success score of 0.00 indicates that the task was easy to complete.

Qualitative Analysis

Participants were able to easily locate the e-mail registration function due to its ubiquitous presence throughout the website.
Two out of six participants navigated away from the homepage in order to locate the e-mail registration function.

Task Recommendations

Distinguish the bottom navigation links from the bottom contact information by color and location, by either placing the address and phone information below the links and coloring the contact text white, or by right justifying the contact info to create a separation in the center of the line, and coloring the text white.
Task 9  
You’d like to know the cost of the print “Early Sunday Morning” by Edward Hopper. Locate the price of this print.

Selected Quotes

“Ooh there’s a whole Edward Hopper section. I almost missed it.”
“Is Art Port the store?”
“It’s interesting because it’s so… hidden.”
“Ok, where’s the shop?”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>152.67</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>9.80</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.60</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>8.00</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.33</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>1.40</td>
</tr>
</tbody>
</table>

An average task success score of 0.60 indicates that the task was moderately difficult to complete.
An average of 1.40 dead end searches per participant is a high number, indicative of an extremely hard to find objective.
Time on task ranged from 54 to 320 seconds, with other participants falling somewhat evenly in between, indicating that the difficulty is not an aberration.

Qualitative Analysis

One participant mistook “Art Port” to be the museum online store.
There was a general assumption, for whatever reason, that the store was not under Visit Us. Several participants preferred multiple other menu headings (specifically, About the Whitney and Support Us) over Visit us when searching for the store.
Task Recommendations

Include a link to the online store in both the Support Us and About the Museum navigation menus.
Consider creating a widget to the online store on the front page.
Task 10 Find the information for scheduling an appointment to visit the Whitney Library.

Selected Quotes

“Maybe it’s gonna be under Education.”
“Big bust.”
“Maybe there’s a backdoor?”
“It’s amazing a place with all this money can’t have a very good website.”
“Library! I don’t know why I didn’t see that!”
“They hid that one well.”
“No, I’m in a bad area here.”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>107.04</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>9.33</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.67</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>6.00</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.17</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.83</td>
</tr>
</tbody>
</table>

An average task success score of 0.67 indicates that the task was moderately difficult to complete.
An average of 9.33 mouse clicks for a task that could be completed with only one, combined with an average of 0.83 dead end searches per participant, is indicative of an objective that is obscure and difficult to locate.
Of the 6 participants, three located the objective with ease, while three had considerable difficulty, indicating that the problem was not an isolated occurrence.

Qualitative Analysis

Several participants had difficulty locating the library main page in the glocal navigation. One participant was unable to the library main page, but located the appropriate information in the FAQ section.
Task Recommendations

The single most important recommendation, applicable to all five library tasks, is to create a menu within the main navigation bar specifically for Library, which would contain (at a minimum) the following sections:

Library Information: (structured in a similar manner to the main Hours and Information menu item) containing hours, contact information, access information, and a much more concise (and less narrative) version of the current Library menu item.

WhitneyCat link.

Library FAQ (including a more thorough discussion of the information provided within Library Info: who can visit, when, collection information, etc. A link should be placed within the anchors section of the standard FAQ that links to the library FAQ as well.

Rights and Reproduction (which would be available here in addition to its current location), to clarify that it does, in fact, apply to the library.

New Acquisitions Search item that would link directly to the New Acquisitions search function within WhitneyCat.

Again, reduce the amount of narrative-style text by emphasizing FAQs, bullet points, and succinctness.
**Task 11**

You are a visiting researcher who last visited the Whitney Library two months ago. You want to know if there have been any new acquisitions since your last visit. Locate information on items acquired by the library within the last two months.

**Selected Quotes**

“Can I remember what I did to get there? No I cannot!”

**Quantitative Analysis**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>82.02</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>8.25</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.75</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>5.50</td>
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<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.50</td>
</tr>
</tbody>
</table>

An average task success score of 0.75 indicates that the task was moderately difficult to complete. Each of the 4 testers took at least 70 seconds to complete the task, indicating that the objective’s location is not intuitive.

**Qualitative Analysis**

Two participants’ results from this task had to be discarded due to moderator error, but both discarded tasks took the Collection Recent Acquisitions page to be the Library New Acquisitions to be the answer, due to its proximity within the same menu to the Library and WhitneyCat pages. Of the four participants that did successfully complete the task, two of these also went to the Collection Recent Acquisitions page, indicating a general trend towards mistaking this page as pertaining to libraries.
Task Recommendations

A separate navigation menu category for the library (see task 10, first recommendation). This new menu would contain its own New Acquisitions Search function, which would go directly to the WhitneyCat New Acquisitions function, and would more clearly be associated with the Whitney Library, vs. Whitney art acquisitions. Including the word “Art” in the Collections Recent Acquisitions item would clarify its nature.
Task 12  You are interested in finding information on Charles Demuth’s late paintings of Lancaster, but cannot visit the Whitney Library in-person. Find information on submitting a reference question to the library.

Selected Quotes

“Now I know how to get there, but can I remember how to get there? No I cannot.”
“I feel like I’m cheating here with that FAQ.”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>30.99</td>
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<tr>
<td>Average Mouse Clicks by Task</td>
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<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>1.50</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.00</td>
</tr>
</tbody>
</table>

An average task success score of 0.00 indicates that the task was easy to complete. There were no dead end or reiterated searches for this question, which speak to the ease of obtaining the information.

Qualitative Analysis

Most participants had already located the Library page for a previous task, which should be taken into account when examining the results for this task. All participants were able to locate the appropriate information quickly. One participant, though unable to locate the library’s main page, was able to locate the appropriate information in the FAQ.
Task Recommendations

A separate navigation menu category for the library (see task 10, first recommendation). Information should also exist within proposed Library FAQ page. This would logically fit within a “Research” subheading within that FAQ.
**Task 13**  You are a Whitney member and your friend is visiting from out-of-town. You want to find out if she can visit the Whitney Library with you. Locate this information.

**Selected Quotes**

“I think she’s gonna have to pay.”

**Quantitative Analysis**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>78.67</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>6.67</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.33</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>2.83</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.50</td>
</tr>
</tbody>
</table>

An average task success score of 0.33 indicates that the task was moderately easy to complete.

An average time on task of 78.67 with a relatively low 2.83 Average Web Page Changes indicates that the task objective was not easily identifiable within the navigation menu, requiring a lot of initial reading on the part of the participant.

**Qualitative Analysis**

Participants utilized the “Membership Benefits” page to answer the question and inferred that the friend would not be able to visit the library.

Question is misleading in that members are not allowed to visit the library unless they make an appointment as a visiting scholar.
Task Recommendations

A separate navigation menu category for the library (see task 10, first recommendation). The proposed Library Info page should more clearly (and more succinctly) indicate who can and who cannot use the library. Information should also exist in the Library FAQ page, which should also be linked to from the main FAQ page.
Task 14  You are looking for a book about Jackson Pollock authored by B.H. Friedman. Find information on the availability of this book at the Whitney Library.

Selected Quote

“I should try some other way to get to the library here. Maybe Education?”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>87.59</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>12.83</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.33</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>7.67</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.00</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.67</td>
</tr>
</tbody>
</table>

An average task success score of 0.33 indicates that the task is moderately easy to complete.
An average of 7.67 web page changes is not unreasonable considering the breadth of the task.
An average of 0.67 dead end searches per participant can be largely attributed to the poor search algorithms used by WhitneyCat.

Qualitative Analysis

One tester has difficulty formulating her search, using terms that should logically bring results but do not, taking several tries before broadening her search by reducing limiters. Another tester repeatedly (8 times) clicked on the author’s name on the catalog search results page, expecting it to link to that author’s books, before realizing he needed to click a separate link to the left of the author’s name. Two other participants moused purposefully over the name without clicking, in an attempt to determine whether the name acted as a link or not.
Task Recommendations

A separate navigation menu category for the library (see task 10, first recommendation). Improve search algorithms used by WhitneyCat to provide better results on a wider array of searches.
Redesign the search results pages to be more intuitive – Advanced Search and Basic Search provide results in completely different formats. This should be standardized.
Task 15. You’d like a reproduction of an image from a rare book available from the Whitney Library’s collection. Find information on obtaining a reproduction of the image.

Selected Quotes

“After this you’re gonna have to show me the proper way to get to the library.”
“I’m at a loss on this one.”
“Boo on that one.”

Quantitative Analysis

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time on Task (seconds)</td>
<td>74.53</td>
</tr>
<tr>
<td>Average Mouse Clicks by Task</td>
<td>5.67</td>
</tr>
<tr>
<td>Average Task Success Score (range of 0-2. Lower scores equal greater success rate)</td>
<td>0.50</td>
</tr>
<tr>
<td>Average Web Page Changes</td>
<td>4.33</td>
</tr>
<tr>
<td>Average Number of Reiterated Searches</td>
<td>0.50</td>
</tr>
<tr>
<td>Average Number of Dead End Searches</td>
<td>0.67</td>
</tr>
</tbody>
</table>

An average task success score of 0.50 indicates that the task was moderately difficult to complete.
One participant failed to complete the task.
Of those that completed the task, four took 33 seconds or less, while a fifth took 2 minutes.

Qualitative Analysis

One participant, after 5 library questions, was still unable to locate the Library sections in the menu, and was still using the FAQ section to obtain what information was possible.
One participant failed to notice the Rights and Reproductions menu item, even though he is aware of the location of the Library item, possibly due to the distance and lack of proximity between the two items.
**Task Recommendations**

A separate navigation menu category for the library (see task 10, first recommendation). This makes relevant information easier to locate, and reduces the vagaries of what menu items (Rights and Reproductions, New Acquisitions, etc.) apply to the library and what do not.

The Rights and Reproductions page should be restructured so that the information is presented more succinctly, in less of a narrative format.

If the legal nature of the information prohibits truncating, placing a short FAQ style section at the top, which links to the complete sections through anchors.

Provide a clearer visual indicator that the anchors at the top of the FAQs page are anchors (small arrow image, etc.).
Overall Observations

Although user experiences varied, certain patterns emerged during our review of the test data. In a number of instances users continued searching even after they had landed on the correct web page, because they failed to see the information they were looking for. This was especially noticeable in the task that required finding the hours for “pay-what-you-wish” on Friday evenings. The 6pm starting time is a mere two clicks from the home page, under “Visit Us … Hours & Information”, where all of our participants found it, just not always on the first try. The typefaces, text sizes and arrangement of text on that page made it difficult for people to see the information that was right in front of them (Figure 1).

![Figure 1. Low visibility of “pay-what-you-wish”](image1)

Similarly, users often correctly selected the “Kids & Families” screen, within the Education and Events section, which contained the information regarding the Matthew Van Brink event only to fail to locate the appropriate program listing on the page (Figure 2). Some participants navigated away from the correct page when they were unable to complete the task.

![Figure 2. Low visibility of event title](image2)

When users were asked to locate handicap accessible entrances, they consistently went to the appropriate page, but half of them took additional time to locate the specific entry within the page. The information lies below the fold of the page and it blends with the other descriptive information surrounding it (Figure 3).
Several users navigated away from the home page while attempting to complete an email sign-up task, because they did not recognize the navigation links on the bottom of the page -- they were indistinguishable from the similarly colored contact information (Figure 4).

Several enhancements which would mitigate this type of user frustration are – use of more readable text size, use of differentiating type fonts, use of color schemes with higher contrast, and the development and use of templates for displaying related information. Reorganizing content into more concise chunks of information, with links to longer descriptions or related information would eliminate much of the user discomfort associated with staring at a screen without seeing the answer.

It is also worth noting, that in the post-test survey questionnaire, members of our user group demonstrated a reluctance to agree with the statement that use of the site was a pleasant experience, or that navigation throughout the site was easy to use. Participants were also observed repeatedly clicking navigation labels (e.g. when trying to find the appropriate secondary navigation choice for the “pay-what-you-wish” Friday evening program) in an attempt to get a clear idea of the next level of choices. The long lists of choices in the fly outs in the global navigation made it difficult for users to remember or to intuitively understand how the information is organized.
The global navigation bar does not appear consistently below the Whitney logo throughout the site. The bar “floats” from that position to a position above the Whitney logo and essentially frames the top part of the page (Figure 5).

![Figure 5. Global navigation bar is inconsistently placed across site](image)

On many pages the Whitney logo on the top left corner is linked to the homepage in accordance with current standards. However this feature is not persistent across the site and caused some user frustration when attempting to repeatedly click a logo that was not linked.

Any site navigation should be consistent in its labeling and placement within the layout throughout the entire site. An entire restructuring and relabeling of the site content will reduce the amount of frustration and time a user must expend while navigating the site. The overall least successful task performance, in terms of time spent as well as the number of page changes, in our study was the search for the Matthew Van Brink family event. Participants were unable to get there via the calendar function. To a lesser, but still significant extent, searches for the Alice Konitz seminar event were more time consuming and accomplished with greater difficulty and more page changes than most users expected. The calendar function got them to the answer, but not easily.

More disciplined updating of the calendar and improvement of the calendar’s search functionality might help alleviate the difficulty. Restructuring the content within the broad “Events” category would further facilitate searching. The provision of a site-wide search capability (events, exhibitions, programs) would enhance user satisfaction with this section as well as with the web site as a whole. Such satisfaction could, in time, result in increased ticket sales.

The usability testing of the library sub-site with a separate list of six tasks enabled us to observe several patterns. Most noticeable was the difficulty users had in finding the library main page under the heading “The Collection” (Figure 6) on the homepage. Participants experienced a high level of dead ends in their search processes, even in searches for information on the library’s main page. Users who got there for one task did not necessarily remember how to do it again. More specifically, some of the searchers for recent library acquisitions mistook a collection recent acquisition page for the library page of that topic. Participants seeking to complete a task requiring searching of the library’s catalog encountered a number of dead ends thereby demonstrating inadequacies in the WhitneyCat’s search algorithms. There was some difficulty in finding the “Rights & Reproduction” information regarding an image in a rare book as that section is not visibly linked to the library home page.
Giving the library its own heading in the primary navigation scheme on the home page and throughout the site would be a major step in addressing the identified areas of user frustration. Using more appropriate and consistent type fonts & sizes, and dividing the information into well organized, concise chunks of content would further maximize user satisfaction with the site.
Whitney Museum Post-Test Questionnaire

A post-test survey indicated that all participants felt there was just enough information per page throughout the site. Two thirds of the participants agreed that -- the site links took them where they expected to go, the site’s text was clear and easy to read, and using the library site was a pleasant experience. Four out of the six participants either agreed or strongly agreed with the assertion that scrolling within drop down menus was easy to use.

It is, however, interesting to note that our user participants did not express general agreement with the statements that use of the site was a pleasant experience, or that navigation throughout the site was easy to use. The most prominent response to both of these questions was an unwillingness to agree or disagree.
Task List

General Tasks

1. A friend is coming to visit this weekend. You’ve heard that the Whitney is ‘pay what you wish’ on Friday nights. Locate the starting time of this Friday night program.
2. Your uncle is confined to a wheelchair and would like to visit the Whitney. Find the information on which of the building’s entrances are accessible.
3. You and a friend are interested in free guided tours of the Whitney’s exhibits. Locate the information on the availability of free docent tour at the Whitney.
4. You and a friend often visit the Whitney together. Locate the information on memberships for two people.
5. You have heard that a favorite experimental composer, Matthew Van Brink, is doing a family event at the Whitney. Locate the date, time, and appropriate age range for this event.
6. You’ve heard about the ‘Seminars with Artists’ program at the Whitney. Locate the information on the May 1st Seminar with Alice Könitz.
7. You need a summer internship. Find the contact information for the Summer Intern program.
8. You’d like to stay current on Whitney exhibitions. Sign-up for email notification.
9. You’d like to know the cost of the print ‘Early Sunday Morning’ by Edward Hopper. Locate the price of this print.

Library Tasks

10. Find the information for scheduling an appointment to visit the Whitney Library.
11. You are a visiting research who last visited the Whitney’s library two months ago. You want to know if there have been any new acquisitions since your last visit. Locate information on items acquired by the Library within the last two months.
12. You are interested in finding information on Charles Demuth’s late paintings of Lancaster, but cannot visit the Whitney’s Library in person. Find information on submitting a reference question to the library.
13. You are a Whitney member and your friend is visiting from out of town. You want to find out if she can visit the Whitney library with you. Locate this information.
14. You are looking for a book about Jackson Pollock authored by Bill Friedman. Find information on the availability of this book at the Whitney Library.

15. You’d like a reproduction of an image from a rare book available from the Whitney Library’s collection. Find information on obtaining a print of the image.
Museum Website Usability Evaluation

1. How often do you...
   - Use websites to find information about frequently museums you plan to visit never sometimes frequently
   - Use online library catalogs frequently never sometimes frequently
   - Attend events, lectures, seminars, or continuing education classes at a museum never sometimes frequently

2. At a museum, have you ever...
   - Taken a group tour Y N
   - Listened to a self-guided audio tour Y N
   - Arranged a tour for a large group of people Y N

3. Do you have any children?
   ( ) Yes ( ) No

4. What is your age range?
   ( ) Under 30 ( ) 30-39 ( ) 40-49 ( ) 50-59 ( ) 60 or over

5. What is your gender?
   ( ) female ( ) male

6. What is your highest level of education?
   ( ) high school ( ) some college ( ) 4 years of college ( ) graduate education

7. Please contact me for possible participation in a 30 moderated and observed study of a museum website.

FIRST NAME: ___________________ EMAIL: ___________________
Post-Test Questionnaire

Post Museum Website Usability Questionnaire

First a few questions on the site in general and then a few question specific to your use of the library section of the site.

1. **Overall, using the site was a pleasant experience:**
   
   SA  A  NAnorD  D  SD

2. **Overall, the navigation throughout the site was easy to use:**
   
   SA  A  NAnorD  D  SD

3. **Overall, the links on the site took me to where I expected:**
   
   SA  A  NAnorD  D  SD

4. **Overall, the scrolling within drop down menus was easy to use:**
   
   SA  A  NAnorD  D  SD

5. **Overall, the amount of information on each page was:**
   
   Just Enough  Too Much  Too Little

6. **Overall, the text on the site was clear and easy to read:**
   
   SA  A  NAnorD  D  SD

7. **Overall, the page layout throughout the site, made information easy to find:**
   
   SA  A  NAnorD  D  SD

8. **Using the Library site was a pleasant experience:**
   
   SA  A  NAnorD  D  SD
9. The Library site was easy to use:

SA A NAnorD D SD

10. The Library catalog search results were well presented and organized:

SA A NAnorD D SD

11. What was memorable about using the Whitney Museum website?
Moderator’s Guide

Introduction

Welcome to this usability study of the Whitney Museum’s website. Thank you for volunteering. The results of your evaluation and that of others, will be used to improve the site.

My name is ____________ and I will be moderating your study today. The study should take about 30 minutes. During that time you will be asked to complete, as best you can, 15 tasks using the Whitney Museum website. Each task is written on a card that I will hand to you to first read and then to complete [hold up first card to show as example]. After a task is completed I’ll ask you to return to the museum’s home page before beginning the next task.

Do you see that web camera? [point to web camera]. During the test your reactions and comments will be recorded and so will your mouse action on the screen. I’ll try to be as quite as possible. However, if during the test you have questions, just ask.

Do you have any question before we begin?

Ok, let’s begin with the first task [Start test in Morae, once started hold first task # up to camera]

********Remember before each task to hold task # in front of web camera********

Tasks Completed

Great, you’re finished with the tasks. There’s a few quick questions that I’d like you to answer before you go [try to memorize this verbatim}