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User Study of the Coates Library Home Page: December 2007

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<u>Introduction</u>

In 2005 and 2007, usability research studies were conducted in the Coates Library at Trinity University. The purpose of these studies was to determine (a) that participants could complete a number of basic tasks using the web site and (b) that navigability and design of the site facilitated the efficient and timely location of critical information and resources. During the course of these projects, participants were open and forthcoming about their perceptions on site characteristics that were indirectly related to usability.

A user study of Trinity University's Coates Library web site homepage was conducted in fall 2007. As opposed to a focus on the usability of the site, this user-centered project sought to answer the following questions:

- Do users find the site easily navigable?
- Do users find the site visually appealing?
- Do users have suggestions for improvement of the current library home page?

Clearly, "usability" in formal terms is less an issue in the study, and focuses more on the opinions of users in the local community.

The following report documents this study and offers answers to these questions based on user survey responses.

<u>Methodology</u>

In summer 2007, a literature review was conducted of published usability study reports for an related but different project. During the process of this review, questions related to "user preferences" and opinions were extracted and saved. After a review of 26 studies, this list of 30 items was sent to the web team for their consideration. Members were asked which questions would seem to offer the most useful information about user perceptions of the library website. Members were also asked to draft and send questions that were not included in the list of suggestions.

Two web team members responded. One member selected specific questions that would be relevant to a study of the local site. A second member sent two questions that were not included in the initial set of options.

Based on these responses, a list of 8 questions (as well as a list of questions related to subject demographics) was finalized and library assistant Nicholas Rejack produced an electronic survey using the SurveyMonkey software (http://www.surveymonkey.com). The survey was initially revised twice; the survey was edited a third time after a review by the web team and the library faculty.

The project received informal approval from the IRB as a continued component of the library's usability research plan. In September 2007, the survey was made active.

Participants in the Survey

Participants for the survey were solicited in two separate ways. First, a link to the survey was posted to the library website. Visitors to the site could access the survey via this link from September 13th, 2007 until December 13, 2007.

To guarantee a substantive research population, students in the university's Essential Computing Skills classes were asked to complete the survey. Three professors asked students to complete the survey during the scheduled class period.

Participants were not solicited on a wider level. After initial preparations were made to seek a larger study population, these plans were changed in light of other surveys that were conducted during the fall 2007 semester.

In total, 107 individuals participated in this survey. The majority of these participants were First Year students (*Table 1*) between the ages of 18 and 22 (*Table 2*). This is the library website's primary demographic, and these users tend to be comfortable with a wide range of web site designs, formats, and web surfing strategies. Of those participating, women outnumbered men at a rate of 2 to 1 (*Table 3*). This statistic is not imperative to the project, but sex identification is one means to determine the balance of the study population.

Table 1. Grade Level of Participants

	Number of Participants	Percentage of Total
First Year	79	73.8%
Second Year	13	12.1%
Third Year	4	3.7%
Fourth Year	6	5.6%
Faculty/Staff Member	5	4.7%

Table 2. Age of Participants

	Number of Participants	Percentage of Total
18–22	101	94.4%
23–30	2	1.9%
Over 30	4	3.7%

Table 3. Sex of Participants

	Number of Participants	Percentage of Total
Male	37	34.6%
Female	70	65.4%

Most participants completed this study during the first half of the 2007 fall semester. Still, 62% of participants—comprised mostly of students new to the university—had received some form of library instruction (*Table 5*). This suggests that participants may have had a working knowledge of the library's online resources, or that they had received instruction or guidance is using the library homepage.

Table 4. Library instruction session experience

	Total of Participants	Percentage of Total
Yes	67	62.6%
No	40	37.4%

What may most interest teachers is the fact that a higher rate of participants preferred to learn by reading (*Table 5*). The other possible responses were fairly equal in comparison to the highest ranking response. Students would appear to be as likely to ask a friend for help as they would a professor or librarian.

Table 5. Preferred Learning Style of Participants

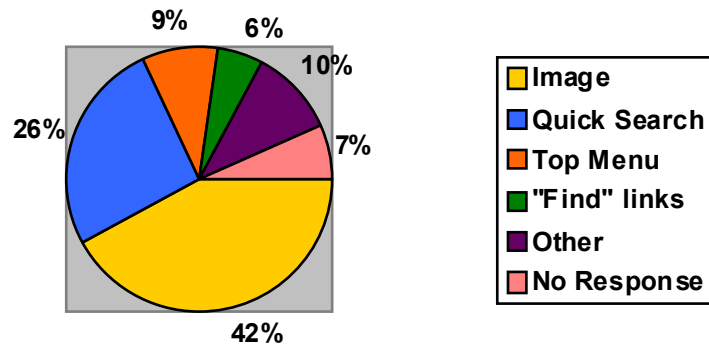|	Total of Participants	Percentage of Total
Read documentation	43	40.2%
Trial and error	23	21.5%
Consult Professors, Library staff, etc.	22	20.6%
Consult friends	19	17.8%

Analysis of Survey Results

After the survey was removed from availability, results and images generated using SurveyMonkey were reviewed. Questions that required manual calculation were completed and graphs or tables were created to present these results. After a brief written description of the results, considerations developed from the results of the survey. Initially titled "recommendations," these considerations are points for thinking about participants' responses or for the development of future user research tools.
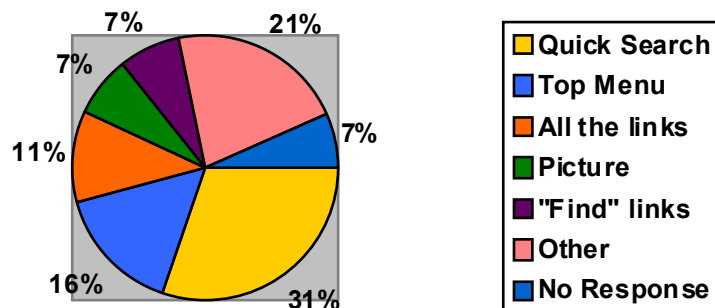
Survey Results

Question 1: Go to the library's homepage. What is the (a) first thing you notice; (b) second thing you notice; and (c) third thing you notice?

This question allows the researcher to determine where the eye is directed when a web reader is confronted with a page of information. As we see in question 5, the page is currently designed to encourage a focus on the central point of the page. Where the reader's eye moves from this point is difficult to determine.

Part A: First thing…

Legend:
- Image
- Quick Search
- Top Menu
- "Find" links
- Other
- No Response

Values: 9%, 6%, 10%, 7%, 42%, 26%

Part B: Second thing…

Legend:
- Quick Search
- Top Menu
- All the links
- Picture
- "Find" links
- Other
- No Response

Values: 7%, 21%, 7%, 7%, 11%, 16%, 31%

Part C: Third thing…

13% 9% 6% 6% 6% 28% 9% 23%

Legend:
- Top Menu
- Quick Search
- All the Links
- "Learn" links
- Picture
- "Find" links
- Other
- No Response
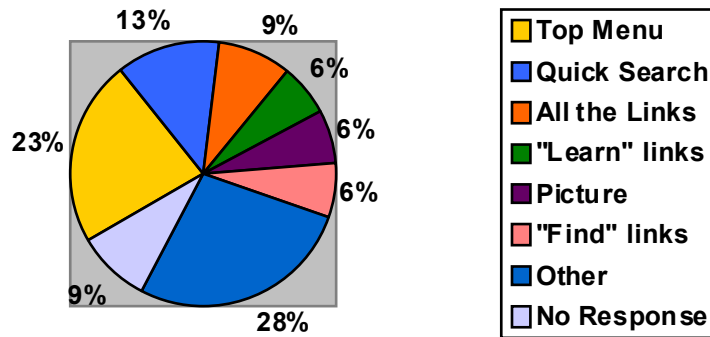
In both the second and third sets of responses, links were often described as being "all of the links," as if the rest of the page beyond the quick search functions was one thing. One participant described it as "jarbal" although one wonders exactly what this means. Another participant referred to "all the words around the search engine."

If we consider the composite results of these three sets of results, we can determine that it is most likely that readers of the library homepage will view the page in this order: middle of page, top of page, left of page, and then right of page.

Considerations: Information about the flow of the eye across a page can be used to help design or redesigned elements to fall within the reader's line of site. In addition, a considerable redesign project might require added research or focus group sessions to determine where the eye falls to make certain that the best possible use is made of both space and design. For example, links that may be necessary on the homepage, but that are not considered high-traffic resources might be placed (on the right side of the web page). Critical information or updates might be located near the middle or top of the page, where most readers will clearly focus upon first visiting the site.

Question 2: Find the page on the library website that tells you where books with call numbers beginning with B are located. Rank the difficulty of finding this page.

With 67% of participants, completing this task was either easy or very easy. The participant's *perception* that locating this information is an easy task is of primary importance in this case. "Easy" vs. "Difficult" is fairly relative, and while one participant may have proceeded in the same steps in the same amount of time as other respondents, their opinions may differ on whether the task was "easy" or not.


27% 6% 49% 18%

Legend:
- Very Easy
- Easy
- Difficult
- Very Difficult
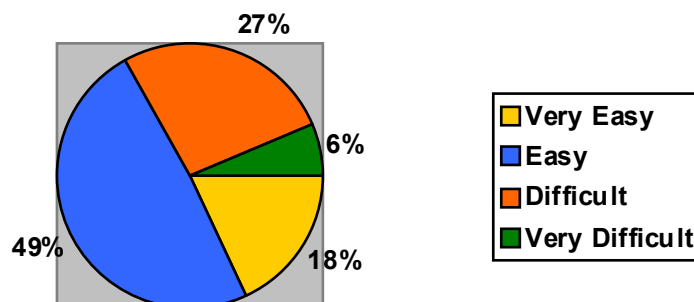
If one compares the statistic for respondents who said the information was "very difficult" to find and those who said it was only "difficult," the 27% of respondents who felt the page was difficult still fall within a median category. If an individual is a new user, the location of this information would be difficult in some respects.

Considerations: Future researchers might ask several navigation questions to determine which tasks are perceived to be easier than others. The data collected for other questions suggests that many primary activities of web page users (searching and finding information) are considered "easy" and "clear." If one were to evaluate which resources were most difficult for the typical user to find, a question such as this along with other questions would be informative.

Question 3: How useful is the MultiSearch box (below the Quick Search box) on the homepage?

Every respondent for this question believed that the MultiSearch box was either somewhat useful or very useful. No participant believed that the search box was not useful at all. 7% of users did not answer the question, and may not have used the resource enough to form an opinion.
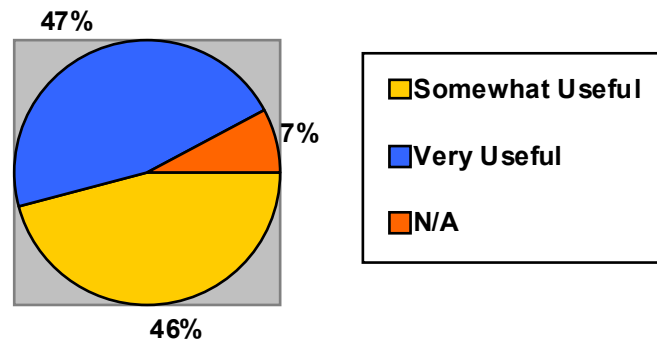
There are two issues to consider. Number one, participants were not asked to "use" the MultiSearch box. They were only asked to state an opinion. If a task involving the MultiSearch box were included, this might result in a different evaluation.

Further testing could determine if the name "MultiSearch," in and of itself, helps to accrue user support for the resource. While librarians and others may realize the lack of efficiency and efficacy in this tool, its very availability as well as a highly rhetorical label will garner support.

Considerations: Search options that are easily accessible are popular with users, and the availability of search options throughout the library's web pages will be considered positive, even if the resources are not used. Web designers should consider both the functional, use-based benefits to providing search options, as well as the rhetorical strategies involved.

In future studies, a good follow up question would ask how often the participant used the site. This would help researchers determine how much of the response was based on experience or salesmanship.

Question 4: How do you rate the visual appeal (appearance) and layout of the library website?

These two questions were asked together to gauge users' perceptions of page design and the visual appearance of a page. Extremely similar results may suggest that design and appearance go hand in hand in the minds of users. While some people (from Montana State) might believe that aesthetics are not important to the average patron, a consciousness of highly visual and beautiful online texts suggests that perceptions of the efficiency and power of a source may be diminished by limited visual appeal. To best gauge the importance of the issues of visual appeal and layout for participants, the "Not Important" option was included in both surveys.

Part A: The visual appeal is…

Clearly, most participants felt that the library web site's visual presence was good (64%), if not excellent (22%). While designers may worry over how much time is spent, or is not spent, on the visual detailing of a web site, participants responses suggest that the efforts made in relation to the library's web site are appropriate.
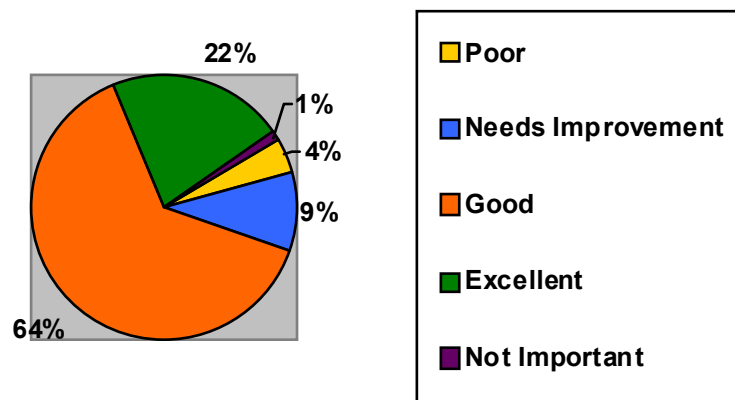

Only 1% of participants felt that the visual appeal of the library web site was not important. While some may look at the page as a gateway to needed information, most surfers prefer to visit and use a resource that shows clear care in visual design.

Part B: The layout is…

While the term "layout" is not defined in the survey, the initial term ("design") was thought to relate too closely with visual appeal. The use of the term "layout," then, was designed to help participants focused on placement.

Compared to results related to visual appeal, an even higher number of participants felt that the layout of the site was good (50%) or excellent (35%).

The "Not Important" category received no responses and was removed from the results in this graph.

35% **1%** **14%**

50%

Legend:
- Poor
- Needs Improvement
- Good
- Excellent
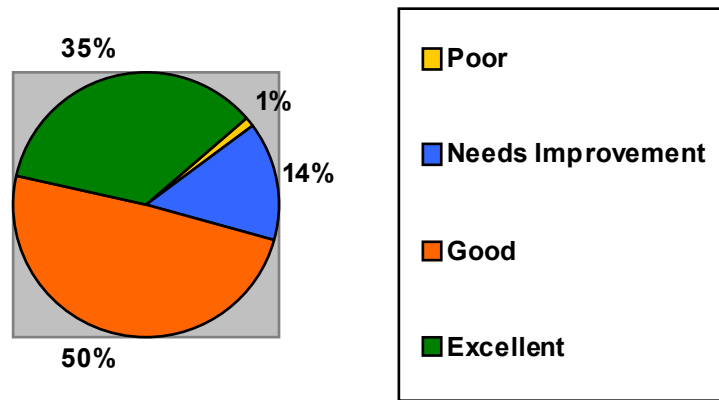
Considerations: Participants' opinions about both the visual appeal and layout of the home page are clearly high. Based on information collected during earlier usability studies, it should be considered that aesthetics are a minor consideration for our local community. A beautiful site that was difficult to use or that yielded little in the way of useful results would suffer on all accounts.

There are no recommendations related to the current iteration of the home page. However, this type of testing—using a number of possible options when major web page revisions are to take place—might yield valuable information to designers.

Question 5: What two things do you like most about the library website?

This question asks for two responses for a specific reason. Initial answers are often quick and instinctive. The second response will often demand a different degree of thinking, and may require that a choice be made between competing elements. Table 6 includes a listing of web site elements that participants like the most. Table 7 includes participants' second responses.

Table 6. First Response

Elements	Total of Participants
Quick Search Function	25
Organization/Layout	24
Clear Link Labels	8
Top Menu Buttons	5
Rotating Image	4
RefWorks	3
Full-Text Access	3
Other	23
No Answer	12

Table 7. Second Response

Elements	Total of Participants
Comprehensive/Many Sources	12
RefWorks	11
Easy to Use	11
Organization/Layout	10
Quick Search Function	7
Visual Appeal ("It's pretty.")	5
Access to Librarians/Assistance	5
Other	26
No Answer	20

In comparing the two tables, it would appear that the organization and layout of the site, as well as the availability of quick searching from the homepage, are the most consistently popular features on the home page. RefWorks and the clarity of link labels would follow. In relation to clarity, the words "clear" and "easy" were used repeatedly to describe resources in a positive manner. At the same time, the comprehensive character of the site and a wealth of available resources are also important to these participants. This suggests that the challenge must continue to offer larger and larger collections of resources while maintaining clarity and ease of access and use.

Considerations: One of the challenges in providing images and search interfaces on the home page is the creation of a tunneled view of the page itself. Surfing eyes drill to the center of the page. Some web design theory suggests that online readers have traditionally looked to links on the left, moving right, based on Western traditions in reading. The re-centralization of the page suggests that if students and others use the middle of the page as a starting point, they will then browse toward the right if their needs aren't met by centralized links. However, we know from the first question that this may not be the case, and that a decentralized page design may lead to left-to-write browsing only after the mid-section has been set aside.

Ultimately, the easiest way for designers to gauge contemporary or popular strategies for link layout and placement would be to continue to observe popular design structures in highly trafficked websites (particular search engines or online commercial resources). While design "theory" may take time to change, user perceptions and desires do not and are often reflected in the designs of these popular resources. Whether or not popular resources dictate the design or follow user needs is secondary to the fact that they set the standard, and do so in a fairly brief amount of time.

Question 6: How would you make the site better?

Admittedly, the inclusion of this question is a shot in the dark. It is difficult to determine if answers are based on (a) prior extended experience in using the site, (b) their experience in answering the first five questions in the survey, or (c) their lack of interest in developing solutions.

Of the 107 participants in the survey, 29 individuals did not respond to this question. 20 participants responded that they liked the site exactly as it is. 10 participants did not know how the site could be improved; however, this does not mean they believe that it cannot be improved.

Of the remaining 48 participants, answers were widely varied. Table 6 shows responses that received more than a single mention.

Table 6. Suggestions for improving the library website

| Suggestion	Total of Participants
Visual Improvements (color, font)	6
Fewer Links	3
Bigger Links	3
Change "Contact Us" option to "Need Help?" or similar	2

Overall, participants were mixed on what types of changes might improve the home page. In addition to the suggestions in Table 6, the following comments seemed particularly interesting:

- TDNet search function on the home page
- Quick links to Academic Search Complete
- Make it easier to find class categories; i.e., make it easier to find a "Music" category of resources
- Have a Spanish version
- Allow alumni to access materials via the internet (clearly, our lone alumni participant)
- Group items on the home page better. There are so many options to look at that it's hard to find what you need quickly.
- Contact phone should be on the front page.
- Audio
- Make working hyperlinks on the maps that show where books are located
- Since the search boxes are so large, it's hard to see anything else.
- As long as RefWorks stays, it's good.

Considerations: Most web team members will have explored some of these issues as they review the site for planned revisions. The recommendations of the survey participants, while not all useful, are helpful in allowing us to see a variety of options that may not otherwise be considered.

Question 7: If you have a question about the library or its resources, would you rather (a) browse a list of library resources and services or (b) use a search box to find the answer?

This question would seem less relevant than others, considering the fact that the library web site currently allows both kinds of options. The difference may be that the home page itself is comprised of a series of categorized lists. The search box for the library site is on a second level page ("Where is...? Search Our Site").

|	
■	Browse a List
■	Use a Search Box
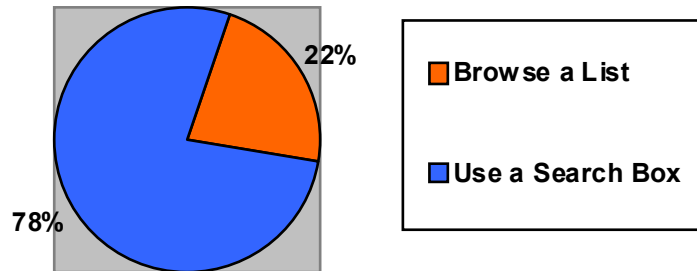
There is a clear majority of participants who would prefer to guide a search on their own without benefit of a list of sources and locations. However, this preference does not speak to (a) the ability of an individual to navigate the site or (b) sustaining site usability. Without further testing, it is difficult to determine if user preference, in this case, may cause more navigation issues.

Considerations: See response for Question 3.

Question 8: Using the library website, locate the call number for the book in our collection entitled Good Looking: Essays on the Virtue of Images. What did you use to find the call number?

Most participants used the "Books and Media" quick search box on the library's homepage to find this book. Results were split between those who described changing the search option in the box and those who did not provide a description.

■	Books & Media Tab
■	Quick Search
■	Undetermined
■	Incomplete
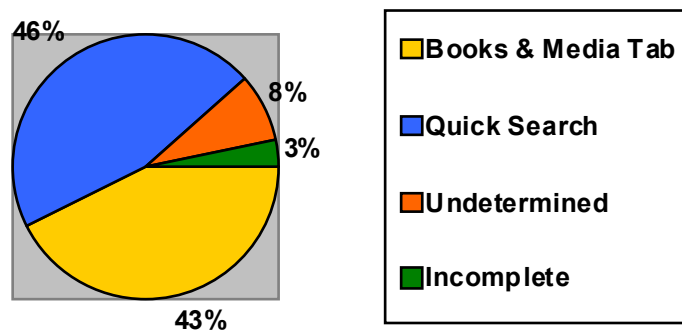
The use of the quick search box was evenly matched by users of the "Books and Media" tab. A high number of participants specifically described using the "Simple Search" option.

8% of participants found the book, but did not describe their process. Ultimately, 97% of those surveyed were able to locate the information, meaning that regardless of their process, patrons should have few difficulties in locating specific items in the library's book and media database. A small number of participants were not able to answer the question, or said they could not find the call number.

Considerations: Participants use the simplified term "Quick Search" to describe both the Books and Media Search and MultiSearch on the homepage. Clearly, this is a term that is working to explain the search option and speaks to searchers' preferences. In future, if other searches are included in on the homepage, this term may serve as a default label for all search options, i.e., "Books and Media Quick Search," "Articles Quick Search," or "Library Website Quick Search."

Conclusions

The results of this survey will not be surprising to most readers. However, it is useful to reaffirm that our expectations of "what users want" continues to fall in line with users' preferences. Overall, the library web site and the people who create these resources meet or exceed the expectations and preferences of a high majority of study participants. Future studies that focus on these or similar issues may take lessons from challenges apparent in this survey, particularly the broad scope and the lack of baseline or follow-up questions.