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Usability Study of the Coates Library Website at Trinity University: Two Years Later

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**A Usability Study of the Coates Library Website
at Trinity University:**

Two Years Later

March 2007

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Introduction

Purpose of Study

In February 2005, a usability study of the Coates Library website was conducted and a final report of findings was published at the digital commons website in March. This report was designed to be informational and to help guide the library's web team in making revisions, additions, and deletions to the library web's content, structure, and design.

In late 2005, a follow up report was posted to the digital commons that detailed student and faculty responses to a revised version of the website (published online in August 2005). This report also listed in detail the changes that were made based on information collected during the usability study. However, all of the changes that were made independent of the study were not cataloged, and responses of students and faculty related to those changed were not recorded.

In February 2007, as the web team began to make plans for revisions to the site to occur before the Fall 2007 semester, a small number of students participated in usability study sessions. This information will be used to determine what continues to work well after the web team's summer 2005 revisions, and may suggest directions for current and future changes to the library's website.

Process of the Study

The research process described in *The Usability Study of the Coates Library Website at Trinity University: Final Report* (March 2005) was followed for this follow-up study. While changes to the study were suggested in the initial report, for the purposes of following up on the 2005 results, no changes were made to the process.

However, while the original study included more than 70 participants (65 of which were used in the results), only 6 participants were utilized in this study. However, it was the opinion of both of the original study moderators that at an early point in the study progress, patterns and consistencies became set and with few exceptions, held throughout the course of the research project. Further, usability research (in particular, the work of Jakob Nielsen) supports the validity of smaller sample sizes.

Study Population

Recruitment of Study Population

The participants in this follow-up study were volunteers from the Computer Science department's *Computing Skills* classes. This was the same population utilized in the original usability study.

Composition of Study Population

Participants were asked to complete a questionnaire offering basic information. This information is included in Appendix I.

As with the 2005 study, most students were in their first-year at Trinity and represented a variety of academic majors. All of the students are daily users of the internet and email, and a majority of them use the website on a monthly basis.

Aside from the difference in population size, most of the participants had received some kind of library instruction. While instruction by different librarians for different classes will probably focus on specific/varied topics, most students will have used the library webpage related to class exercises or specific assignments. This would not necessarily have an influence on the results of the usability study. While students may be more familiar with the page itself, it is unlikely that they would have received instruction in answering questions similar to a majority of those posed in the tasks.

Study Session Methodology

Study Session Process

The study session methodology used in 2005 was replicated in 2007.

Data Recording

Due to the small number of participants, results were not transferred into a database.

Study Session Results: Tasks

Students were asked to complete the following tasks. The first task was established as a sample task. Participants were allowed to ask questions about the task or the study in general only after the sample task.

Each of the following sections lists (a) the task itself, (b) a general process for how most participants attempted to find the answer, (c) statistics related to how participants attempted to find the answer and (d) possible changes that would improve the usability of the site in relation to this particular task in 2007.

In the drafting of this report, each question was to be accompanied by specific changes made in 2005 that may have led to improved use the site in relation to a particular question. However, since numerous factors could influence the usability of the site in relation to a particular task, assumptions were not made about which changes facilitated improvement. Instead, the complete list of changes made to the website as of August 2005 has been listed in Appendix II.

The Microsoft Word "Comments" feature has been used to help the reader make comparisons between this study's results and the 2005 study. Responses from the 2005 study have been included in the comment, and information related to the 2007 follow-up is included beneath the underlined heading. In addition, statistics information is included for both years (2005 results on the left, 2007 results on the right).

Sample Task: Find the name of the liaison librarian for Biology.

General Process

This task remains troublesome for most participants. Consistently, searchers went to the Library Staff Directory to locate this information first. Three students then tried the *Ask a Librarian* feature but failed to notice the link for liaison librarians.

Students tended to steer clear of the *Faculty Corner* links, possibly based on the assumption that none of the questions posed to them would require the use of links designated for the faculty.

One student tried to use the home page “Multisearch” box to find the answer.

One student used the *Where is...?* link and found the Google search box. Interestingly enough, once she had used this successfully, she went back to the Google search box on the *Where is...?* page to answer 4 other questions.

One participant found the right answer in a way that I had never seen before. The participant went to the *Library Instruction* link under the Faculty Corner, then clicked on the *Request Library Instruction* button. The participant selected the *Select Liaison Areas* button and chose “Biology.” The librarian’s name automatically was entered into the line above and she had her answer.

Statistics

Participants completing the task	15	4
Participants not completing the task	50	2
Avg. time spent on task	1:56	1:21
Avg. clicks spent on task	5	5

Possible Changes

1. Include liaison assignments on the directory page. This is the most obvious solution considering 6 out of 7 participants went there first.
2. Make the *Ask a Librarian* page less text oriented. Consider a grid or table format rather like the tables used on the *Reserves* pages.
3. Make the Google search box a home page item.

Ultimately, it is doubtful that students *must* be able to contact their liaison librarian. It can expedite matters, but since we’re a fairly small bunch, forwarding questions or appointments requests is handled fairly easily. Clearly, they could find “a librarian” if they needed one---regardless of liaison area.

Comment: Most participants clicked on the “Library Staff Directory” in their initial attempt to answer the question. A number tried to use the scroll/retrieve options, and some used the Internet Explorer “Find” box with the word “biology” as a search term.

While a number of participants went to the “Ask a Librarian” link, few found the hot-link to the liaison librarian list in the paragraph under “Ask a Librarian by Email.”

After attempting these routes, most successful participants used the “Contact Your Librarian” link under the Faculty section of the webpage. Other participants who completed the task found the “Liaison Librarian” page under either the “About the Library” heading or the “About the Library: More” link.

Comment: 1. Include liaison assignments on the “Library Staff Directory” page.
2. Break out the block text on the “Ask a Librarian” page.
3. Reconsider the use of the term “liaison librarians” as it may be considered library jargon. An option might be “subject librarian” or “subject specialists.” Highlighting the relationship between the librarian and the topic as opposed to the librarian and the department might be more useful for students, and still a functional shift for teaching faculty.

Task #1: Find out if the library owns the book Gallery of Maps in the Vatican.

General Process

Students found this answer by using the Books and Media button or by clicking on the Find Books link. Overall, the speed of searching was improved (possibly due to changes made to the latter page). I also noted that more students were using the buttons as opposed to links, a change from the last study.

Statistics

Participants completing the task	57	6
Participants not completing the task	8	0
Avg. time spent on task	:58	:29
Avg. clicks spent on task	3	3

Possible Changes

None suggested.

Task #2: Find out if the library subscribes to The Journal of Criminal Law?

General Process

All of the students found the answer to this question quickly and with little effort. Most used the Journal button immediately to begin searching. In 2005, the number of students completing the task and those not completing the task was even. This is a clear improvement. Since TDNet now supports "The" as the introductory word of a title, this is the most likely reason for improved speed.

Statistics

Participants completing the task	33	6
Participants not completing the task	32	0
Avg. time spent on task	2:17	:40
Avg. clicks spent on task	4	2

Possible Changes

None suggested.

Comment: Overall, students were able to answer this question one of two ways. Some went directly to Quest. Others went to "Find Books" before finding Quest.

Those who had difficulty answering the question tended to become lost on the "Find Books" page, where they immediately began scrolling into the links to other library catalogs. A considerable number of participants missed the Quest link at the top of the list (either initially or completely

Comment: 1. Link "Find Books" directly into Quest, since most users will be looking to find the book at Trinity. Presenting other options could occur on a different page.
2. The hot-link for "Quest" could be changed to "Trinity University Catalog." The other hot-links are school names. Patrons may expect that as a matter of consistency, Trinity will be listed in a similar fashion.
3. The "Quest" link could be given greater focus and priority on the "Find Books" page so that scanning/scrolling patrons do not immediately miss the link.
4. Pages featuring tables should be consistent. In a two column table, links should either always be on the right or always on the left. There are a number of pages with titles or description on the left and links on the right; there are more pages with the opposing configuration. This kind of consistency will help readers situate themselves on each page without a great deal of effort.

Comment: Many students failed to answer this question--either completely or correctly. The primary problem was with the title of the text. Students using "the" in their search received "no" answers in both quest and TDNet.

Comment: 1. Include a brief message or alert in TDNet that if a title begins with "the," "a," "an," etc., that these should be dropped when searching.
2. Highlight or consider alternatives to the current "More Instructions" notice in Quest. Information about searching with articles appears below the fold in font that is easily dismissed. Consider how using bold in this box is helpful, or how quick titles for each tip might refrain from featuring a block of text.

Task #3: Find information on the library's loan periods and overdue policies for Trinity students.

General Process

Most participants found the *Services and Policies* link quickly. From there, two used the *Borrowing* link to find the answer. Four went to *Interlibrary Loan* first---again, this is most likely due to the word "loan" in the question.

None of the participants used *Circulation* to find the answer. This, like *Access Services*, probably remains very much a "library" term---even though it is the more familiar of the two.

The shorter time spent on the task, and the number completing the task compared to the 2005 study suggests that changes made to the *Services and Policies* page have been successful.

Statistics

Participants completing the task	32	6
Participants not completing the task	33	0
Avg. time spent on task	2:17	1:16
Avg. clicks spent on task	6	5

Comment: Most participants were able to navigate to the *Services and Policies* page in completing this task. Once there, they were not certain about their next step. If they read the descriptions of the link, they might go to access services. More often, they were not able to make the connection.

Some students went to the interlibrary loan link on the services and policies page. The word "loan" was clearly being used as a keyword here, suggesting the important and crucial role keywords and buzzwords play at the site.¹

Once exposed to the "About the Library" link, a number of test subjects used the "Where is...?" link or the Site Index under the "More" link to find the answer.

Possible Changes

None suggested.

Comment: 1. Extend or enhance the *Access Services* description on the *Services and Policies* page.
2. Offer an *Access Services* link, as well as other links on the services and policies page related to specific information. For example, there could be a link for "Loan periods and overdue policies" or a link for "Alumni circulation privileges." This is a second level page, and because it is designed to offer guidance to services and policies, these services and policies should be more apparent on the second level. Listing departments when patrons expect to see services and policies may be confusing or cause misdirection.
3. Include a link to the Site Index on the home page.

Task #4: Find information on receiving a book from another library.

General Process

There was little consistency in the way participants answered this question. The *Borrow Items* and *Get Stuff* links were used, as was the link under *Services and Policies*. The *Borrow Items* under the Faculty corner was used by 3 of the 6 participants, but this may have more to do with the fact that it is on the left side of the page.

Statistics

Participants completing the task	63	6
Participants not completing the task	2	0
Avg. time spent on task	:36	:16
Avg. clicks spent on task	2	1

Comment: There is no doubt that the library home page is successful in many ways, including directing patrons to interlibrary loan services. Almost every participant answered this question correctly. A larger number of test subjects used the "Borrow Items from another Library" link under the faculty corner.

There is one challenge with this question. Subjects who completed task #3 using the "Services and Policies" page may have observed the "Interlibrary Loan" link along with its description. It could be surmised that those using this route actually *learned* the route by participating in the study.

Possible Changes

1. None suggested by the study.

Comment: 1. In the future, if space is required for a new link, the "Get Stuff" link under the "Learn How to..." heading would be an option.

Task #5: Find a list of web resources related to Business.

General Process

This question seemed to cause more challenges during the follow up study. Two years later, the terms “web” or “electronic” or “online” have become even more conflated---they are interpreted as synonyms.

Half of participants went to the *Articles and More* page and generated the menu of Business databases. The distinction between online subscription databases and sites on the World Wide Web may not be important enough (to students) to distinguish. In the end, does it give them what they want? Or not?

Statistics

Participants completing the task	55	4
Participants not completing the task	10	2
Avg. time spent on task	:58	1:21
Avg. clicks spent on task	4	5

Comment: A large number of participants answered this question correctly. Most went to the “Resources by Subject” link and clicked on Business before finding the websites link.

Less often, there were two other avenues taken by users. Some clicked on the “Find” heading or “More” link under the “Find...” heading and found the link for web sites. A significant number went to Course Related links, were redirected to the Economics or Marketing course guides (due to the message next to Busn). While these were not links set aside for “business,” everything about the task completion process told the participant that this was the correct answer.

Possible Changes

There are a number of ways to make the librarians’ internet resource selections more prominent for students. I would assume that with our current issues concerning web page real estate, we are probably not going to spend much effort in advertising or directing visitors explicitly toward internet resources.

The question itself also poses problems---more so than two years ago. This means that we have to decide we accept the conflation of terms or if we spend more time and effort teaching people the differences between our electronic resources and web resources.

Comment: 1. For this specific situation, remove the “see” link from the BUSN entry on the Course-Related Links list.
2. Course-related research guide creators might be diligent in their presentation to clarify that the guide is for a specific course or situation. Further, links back to other home page resources might be helpful

Task #6: Find a scholarly journal article on diabetes that was published in 2004.

General Process

More than half of participants tried the *Journals* link first, and even selected the “Articles” option on the search menu. I think they would have found an answer, except that they were not given a 2004 article.

Comment: Methods for answering or attempting to answer this question varied more than with any other question. This stands to reason, as there are numerous ways to complete the task.

No one used the *Resources by Subject* page to get the answer on this go-around. Participants also did not limit their database options once they had decided to use the *Articles and More* link. After failing at the “Journals” link, 4 out of 6 users went to the *Articles and More* page and then directly into Academic Search Premier.

Statistics¹

Participants completing the task	27	3
Participants not completing the task	36	3
Avg. time spent on task	2:47	2:52
Avg. clicks spent on task	7	7

Possible Changes

None suggested.

Comment: 1. The “Find Articles, Journals, and Newspapers” page assumes that students will know that to find articles, one will use a database. In fact, to find journals and newspapers is to find a complete text and finding articles occurs inside of journals or newspapers. Two links should be offered, one for “Find Articles” that links toward or to databases. Another link should give direction for finding journals and newspapers. Since a patron looking for an article or a number of articles on the topic will probably not browse journal and newspaper contents, separating these links will recognize the very different tasks that are being completed in either “finding articles” or “finding journals.”

¹ The 2005 statistics listed in the table total only 63 participants of the 65 recorded on all other portions of the study data. Data related to two participants were not fully entered into the database and could not be used. These two results were removed from the aggregate data.

Task #7: Find out if Professor Heather Sullivan has items on electronic reserves for her classes.

General Process

The success rate for this question improved and all of the participants completed the task. Oddly, half started by using the *Place Materials on Reserve* link. The reasoning for this---well, I leave it to you.

Statistics

Participants completing the task	41	6
Participants not completing the task	24	0
Avg. time spent on task	1:34	1:12
Avg. clicks spent on task	5	5

Possible Changes

1. The suggestion that the Faculty Corner be removed and a link to a faculty page be included instead would help with clarity on a question like this. Were it not for the fact that the word "Reserve" was included in the *Place Materials on Reserve* link, participants would never have clicked there.

There is probably some confusion, also, for new students about what "Reserves" even are. The idea of electronic reserves is something of a holdover from print, so this may be related to the fact that students do not know what "Reserves" are until they actually have to find one.

Comment: This is a complex task, and answers were not always accurate due to specific problems with links on the home page. First, students may or may not have known how to define "reserves." Second, many did not seem to grasp the fact that electronic reserves and print reserves were listed in separate locations. ___Methods for answering the question varied, primarily due to the reserves pages linked from the library's home page. ___The "Reserve Readings" link under "Find" goes to a table with links to three types of reserves. ___The Reserves tab at the top of the home page goes to the print reserves list in Quest. There is an "E-Reserves" button underneath the search interface, but a link to "Tiger's Lair" is on an equal level. The two buttons become lost. Further, one might assume that if the term "electronic reserves" is used, that a patron will assume that "e-reserves" means the same thing. It is still only an assumption.¹ The Reserves tab at the top of pages on the second level goes to either the print reserves or the electronic reserves, but this path is inconsistent depending on the page from which the patron is linking. ___Finally, the Reserves link at the bottom of the home page goes to electronic reserves with little explanation for why this selection has been made. ___One point of confusion rested on the use of the word "reserve" as a noun ("Reserves"), as an adjective ("Reserve Readings"), and as a verb ("Reserve Rooms").

Comment: 1. Distinguish between print and electronic reserves. In fact, saying "print reserves" and "electronic reserves" would be helpful.
2. Offer a database that covers print and electronic reserves.
3. Reduce the number of home page options for finding reserves. Further, there should be a consistency in these links. Since they all go to different locations, the idea behind offering differing routes to the same information has become backward in this situation. Instead, you have the same route to different information. If patrons find reserves once, their chance of finding it again through the same route will be slim.
4. Edit the faculty corner link "Reserve Rooms." The page itself is actually titled "Reserving Rooms." This might be an alternative. "Room Reservation Request" is another way of keeping the same idea without using the word "Reserve" as a verb.

Study Session Results: Post-Exercise Survey

The following questions were posed to study participants after completing the study session exercise. Due to the smaller study population, all of the participants' responses have been quoted. However, any responses of "none" have been edited.

Question 1: *What are the strongest or best characteristics of the library website?*

"I liked the 'Where is...' part. It was very helpful when I was searching for something."

"Everything's worded simple and to the point, making it easy to understand everything."

"Has quick links for numerous things right on the front page."

"I feel that the home page is amazing at guiding you to the right spot for what you are looking for."

"The Journal Search."

"It is pretty easy to navigate and find things."

Question 2: *How helpful is the design of the library website?*

"I think it is laid out very well."

"Very helpful."

"Pretty helpful."

"I found the design extremely helpful."

"Very helpful. I like the bar with the (buttons) on the top."

"It is very helpful."

Question 3: *Can you list or briefly describe problems that you've had in the past when using the library website?*

"Sometimes I am not sure where to go but I don't know if that is me or the website."

"Just finding a specific article just now, but that was more of the search website and figuring that out."

"Finding reserves for professors."

"I had trouble before finding things, but recently am having a lot less trouble. It helped to have a librarian work with one of my classes. I still don't know everything that is at the page, but the librarian explained some things so there's less to wonder about."

"Difficulty finding resources."

Question 4: *What suggestions do you have for improving the library website?*

"Put a few more quick links on the main page for navigation ease."

"Have a help option." (*I love this response for so many reasons.*)

Question 5: *Do you have any thoughts or observations related to this usability exercise?*

"I thought it was a great exercise. I think I actually learned some helpful tips."

"Some tasks seem hard to accomplish right from the start if there is no obvious link to it on the home page."

"It was good to see how my skills were and showed me new things on the library page."

Conclusion

As a follow up to the original study, this report shows that the usability of the website was improved after changes made in summer 2005. It also shows that for most of the tasks considered "most common" among students (and probably faculty and staff as well), visitors to the site can find the answers they need in a short amount of time.

A new study should be devised after the next major revision of the website. New questions should be drafted that correct some of the problems described in the original usability study report. In addition, some tasks may change in relevance or importance over time.

While this small study is appropriate as a follow up, the next analysis of the library website's usability should include more participants. A sample population of 20 people should be appropriate for this research.

Appendix I: Composition of the Study Population

Age of Participants

Age 18	2
Age 19	3
Age 22	1
Total	6

Sex of Participants

Male	2
Female	4
Other	0
Total	6

Academic Status of Participants

First-Year	5
Other	1
Total	6

Participants' Major Areas of Study

Undecided	2
Business	2
Accounting/Finance	1
Education	1

Participants' Use of the Library Website (lib.trinity.edu)

Daily	0
Weekly	2
Monthly	4
Once a semester	0
Never	6

Participants' Use of the Web

Daily	6
Weekly	0
Monthly	0
Once a semester	0
Never	0

Participants' Use of E-mail

Daily	6
Weekly	0
Monthly	0
Once a semester	0
Never	0

Participants Receiving Library Instruction (at some point prior to the study)

Yes	5
No	1

Appendix II: Report of Specific Changes in Response to the 2005 Study

The following is a brief catalog of changes made to the library's website as they appear in the August 2005 iteration. Changes are defined in three ways: structural changes, labeling changes, or content changes. In those cases where a link is new or the linked content is unique to the August 2005 revision, changes are not divided by category.

The following titles correspond to links at the library's home page (lib.trinity.edu):

- I. Home Page
 - a. structural change: links focused on the left and right margins
 - b. structural change: library image located in center column
 - c. structural change: rearrangement of buttons in top and bottom toolbar
 - d. labeling change: label change for two links in the top and bottom toolbar
 - i. "Quest" label is now "Books & More"
 - ii. "Databases" label is now "Articles & More"
 - e. labeling change: links renamed under "Faculty Corner" heading
 - f. content change: news located in center column beneath image
 - g. content change: search box included at bottom of middle column
 - h. content change: "First Year Seminar" link removed from "Find" column
 - i. content change: "Library Instruction" link added under "Faculty Corner"
 - j. content change: Reserves links on homepage made more consistent
- II. Articles & More (Databases)
 - a. structural and labeling change: "Wondering Where to Start?" button moved and renamed to "What Subject Do I Want?"
 - b. content change: revision of links in the "Sort Databases by Subject" tool
 - c. content change: link added for "New Databases"
- III. Reserves ... Reserve Readings (Find Reserve Materials)
 - a. labeling change: "E-Reserves" is now "Electronic Reserves"
 - b. content change: simplified, clarified instructions for patrons
- IV. Quest (Course Reserves Search)
 - a. structural change: links to "Electronic Reserves" and "Blackboard" made more obvious with button and font color
 - b. labeling change: "E-Reserves" is now "Electronic Reserves"
 - c. content change: "Blackboard" link corrected
- V. Journals, Articles, Newspapers (Find Journals, Articles, Newspapers)
 - a. labeling change: "Wondering Where to Start" link changed to "What Subject Do I Want?"
- VI. Books (Library Catalogs)
 - a. structural change: link to Quest simplified, clarified, and highlighted
 - b. structural change: tables simplified
- VII. Course-Related Links (Course Guides)
 - a. structural change: links organized by category
- VIII. Library Instruction
 - a. all new link with all new content

- IX. Request Equipment & Rooms (CLT)
 - a. labeling change: link name changed and location name changed from IMS to CLT (departmental name revision)
- X. Cite Sources
 - a. all new content
- XI. Hours
 - a. structural change: simplified introductory matter
- XII. Services and Policies
 - a. structural and labeling change: single table split into separate tables labeled "Services" and also "Policies"
- XIII. Ask a Librarian
 - a. content change: link added for chat reference service
- XIV. Where is...?
 - a. labeling change: link name changed and location name changed from IMS to CLT (departmental name revision)