

University Library Website Usability Study Report

March 8, 2004

Submitted by the:

University of Calgary Library Website Usability Study Team

Alix Hayden
Maureen Hyland
Jennifer Lee
Don MacMillan
Sue McKee
Shauna Rutherford
Shawna Sadler
Lorraine Toews (chair)
Darlene Warren (sponsor)
Justine Wheeler

University Library Website Usability Study Report

1.0 Introduction

Purpose: The University Library Website Usability study was conducted to obtain data on the usability of the current University Library website. This data will be used to inform decision making in the subsequent re-design of the website.

2.0 Methods

2.1 Study participants

- University of Calgary faculty members (5 participants)
 - Business
 - English
 - Medicine – Family Medicine
 - Medicine – Physiology
 - Medicine – Cancer Epidemiology

- University of Calgary undergraduate students (6 participants)
 - Communications
 - Kinesiology
 - Medicine – Undergraduate (3)
 - Physics

- University of Calgary graduate students (6 participants)
 - Business
 - English*
 - Medicine – Cell Biology
 - Medicine – Community Health Sciences
 - Nursing
 - Sociology

* The University Disability Center was contacted to assist in recruiting a disabled student participant. This participant was partially visually impaired, and also had limited movement of her upper limbs.

A test moderator from the Usability Study Team administered the usability study test individually with each study participant. A recorder from the Usability Study Team recorded the movements of the participant through the website and noted the participant's comments. The participant's navigation through the website and his/her comments were also recorded on videotape.

The test moderator asked the participant a series of pre-test questions aimed at eliciting the participant's opinions about, and usage of, the Library website. The moderator then provided the study participant with a list of ten questions that required the participant to search the University Library website for specific kinds of information. The participant was asked to "think aloud" while searching the website, verbalizing his/her thought processes. Finally, the moderator asked the participant several post-test questions to elicit further information on the usability of the website.

2.2 Study Questions

The pre-test open-ended questions were designed to elicit the participants' opinions about and usage of the University Library website. The task questions were designed to test the usability of the University Library website for key tasks typically performed by faculty, staff, and students. Finally, the post-test open-ended questions were designed to elicit any further opinions brought to light during the process of navigating the website.

See Appendix for a complete list of questions.

3.0 Results

Four individuals analyzed the study data. Initially, all four researchers reviewed one interview transcript to ensure inter-rated reliability. As subsequent interviews were analyzed, common themes regarding usability emerged. A list of standardized themes and sub-themes was developed and used to code all interview transcripts. The video recordings of interviews were reviewed to analyze the navigation paths taken by each participant.

The results presented in sections 3.1 – 3.4 are a synopsis of participant commentary from pre-test questions, post-test questions, and think aloud protocols from task questions. For ease of use by the website redesign working groups, the results have been arranged in three broad categories: why participants used the Library website, what participants liked (and want retained in the redesigned website), and what participants liked least and recommend be changed in the redesigned website. Within these three categories, results have been grouped in common usability themes. Verbatim quotes from individual participants have been selected from the study data to illustrate certain points. The examples cited are composites of comments made by several participants.

Section 3.5 presents the results from the navigation, task oriented questions only. This section focuses on the navigation paths used by participants to answer the task question.

3.1 Why do you use the Library website?

Participant responses included:

- Library Research
 - Find journals
 - Find books
- Library Services
 - Renew books
 - Find Library hours
 - Find locations of various libraries on campus
 - Find courses being offered
 - Order documents not held at the University Library
 - Book workrooms
 - Bibliographic software help
- Content-Based Information
 - MADGIC pages
 - Statistics Canada documents

- Image Centre databases

3.2 What do you like best about the University Library Website?

a) Navigation

Number of access points

- *Services* menu was fairly complete
- Like *About the Library* – useful information

Hierarchy/architecture

- Like options available in left menu bar on the home page

Ordering of lists

- Like *Quick Links* to help narrow down categories of information
- Like list of e-journals
- Like journal article indexes organized alphabetically, and by subject
- Like that there is a quick link from the University web page to the Library web site

Seamless access

- Like SFX
- Useful to have definitions of ID and PIN numbers on authentication screens

Terminology - Consistency

- *About the Library* – makes sense to have library hours here

Service

- Like instruction sessions offered – bibliographic software
- Like *Quick Links* to *Order Documents*
- Like the way library hours are posted in monthly calendars– easy to discern

Context-sensitive help

- Find database descriptions in *Subjects Covered* column on *Indexes & Abstracts* page are helpful in deciding which database to search

Information Literacy

- Before library instruction from librarian I did not know where to begin my search
- *Online help*
- Like that there are lots of places to get help on site

b) Design

- Like simplicity of page – no animation, flashing colours
- Like University Library website better than the University website

Aesthetic - Photos

- Like the photos (younger participants expressed this)

Aesthetic - Colour

- Like black & white text – easy to read (older participants expressed this)

c) Library Catalogue

- Readable pages, easy to identify which books are checked out
- Catalogue is well laid out - tells you what journals you have and where they are and what years you have and whether there are gaps
- Catalogue is probably the most intuitive part of the Library web site
- Like Catalogue link on top black menu bar
- Can easily renew books online
- Like that there are links to e-journals in the Catalogue

3.3 What do you like least about the University Library Website? What changes do you recommend to the University Library Website?

a) Navigation

Number of Access Points

Problems:

- Overwhelmed by the number of options and choices on website – not sure where to start a search
- Some participants stated that they ignore a lot of the information on a page
 - Example: Ignore *Action to Take* column on the right side of the *Indexes & Abstracts* page

Participant Comments/Recommendations:

- Want Library to quality filter, prioritize, and group information in smaller chunks, with less text and fewer links on pages
 - Like subject-specific subsets of the website
 - Example: Business Library page, Health Sciences Library page
 - Would like a “quick links” or “hotlist” feature of the most frequently used links, resources, services on the first page
 - Want a broadcast search feature prominently located on the first page to help them select which resources to search – triage function
- Reduce the amount of redundancy – do want multiple ways to find information, but find the current amount of redundancy confusing and time consuming
 - Comment: “There are several ways to access e-journals”
 - Comment: “There are so many catalogues – how do I know which one to use?”
 - Example: The *Search* button on top black menu bar has too many choices

Hierarchy / Architecture

Problems:

- Navigation pathways are not intuitive or consistent
 - Participants stated that they couldn’t remember the pathway from the main page to resources that they used quite regularly like journals, citation guides, renew books, HKN, and the Prairie Regional Data Centre
 - Comment: “I start by trying to look around for the information, but always ends up using the *Search* page.” [on the black menu bar]
 - Comment: “It’s easy to get down one path, and difficult to recover once down the wrong path.”

Participant Comments/Recommendations:

- Reduce the number of clicks
 - Example: On an *Article Index* page, want to click on the name of the database to connect, not on the Connect button on the *Action To Take* column on the right

- Example: After clicking on *Quick Links > Renew Books*, want to be connected to *Renew Books* page, without have to click more links
- Example: Like a “quick links” or “hotlist” feature of most frequently used links, resources and services on the first page, so that these are just one click away
- Reduce the amount of scrolling
 - E-journal pages, complete and subject-specific database lists are too long
 - Have a search box at the top of these long pages
 - Put the most heavily used databases on the first page, or near the top of a list
 - Have shortcuts that take a user quickly to a section of the site
 - Example: Clicking on C takes you to C section
 - Note: Some participants misread the shortcut letters. Example: On the *Article Indexes* page, some participants clicked on the letter beside *alphabetic list of indexes and abstracts for all subjects*, thinking they were getting a subject category eg. M for Management
- Remove the frames menus in the centre and right columns of the home page
 - Example: When click on *Journal Article Indexes* in centre column, want the whole page to change – don’t like the new menu that appears on the right side of screen – too many words on the right menu, and have to click more.
- Make navigation pathways consistent
 - Comment: “Sometimes a click brings up another menu, other times it does not”
 - Comment: “If I click on the *What’s Happening* link in top centre column, nothing happens” (not an active link)

Ordering of Lists

Problems:

- Nothing on the page stands out as more important than anything else
 - Comment: “*Quick Links* isn’t in any kind of order that’s logical to me”
 - Comment: “Interlibrary loans is not instantly visible or easy to find”
 - Comment: “I can’t tell [on *Article Indexes* list] which databases are better and which are not – I’d like to know which are peer reviewed”

Participant Comments/Recommendations:

- Want a “Quick Links” or “Hotlist” feature of most frequently used links, resources and services on the first page, preferably customized to their subject area needs
 - Example: Want Medline and PubMed, the most commonly used medical databases, to be near the top of the *Medicine Index & Abstract* list – not near the bottom

Contextual Navigation (“bread crumbs”)

Problem:

- Too many choices on site, users sometimes get lost – would like to know where they’ve been to that point; difficult to remember their route

Participant Comments/Recommendations:

- Comment: “When I follow a link from a list, then go back to the list, I’d like to be returned to the same point in the list in order to avoid scrolling down to that point again”
- Example: Want to be able to back out of a link pathway if it’s not going where participant wants

Seamless Access

Participant Comments/Recommendations:

- Want seamless access – do not want to authenticate multiple times during a session
 - Comment: “When I’m booking a workroom – if want to make a change, I’m often put right back to the beginning where I have to re-enter my ID and PIN numbers.”
- Want more intuitive ID and PIN for authenticating
 - Example: Have difficulty remembering the numbers from photoID card – not intuitive – would like to be able to use U of C email ID or another ID that’s easier to remember
- Want consistency in links to full-text documents, particularly e-journals
 - Comment: “Clicking on the SFX icon does not always bring up the full-text of a journal—I would like it to”
 - Comment: I don’t like it when I expect to find full-text e-journals, but when I try to connect, find that we do not have it
- Want printable / PDF format for full-text documents
- Want to download files quickly from the website – speed is important

b) Terminology

Consistency

- Different terms are used for links with the same function
 - Full-text versus SFX

Ambiguous

Problems:

- Both in their navigation pathways while performing the task questions, and in their comments, study participants demonstrated and expressed confusion about the meaning of the following terms. They were not sure what kinds of resources are found in these links, or why they would use one finding tool over another
 - Electronic Resources
 - Article Indexes
 - Library Catalogue
 - Campus Databases
 - Search link on the top black menu bar
 - Search the Internet
 - Data Resources (confused with journal article indexes)
 - E-Journals list
 - Comment: “Most of the resources on this page are electronic, so what does the term Electronic Resources mean?”
 - Comment: “There is nothing on the page that says ‘find something’, something in the U of C collection versus another library collection, or ‘find journal articles’.”
 - Comment: “I would like examples next to terms so that I’d know, ‘yes, that is where I want to go’.”
 - Comment: “I have a hard time deciding which option in the left menu [on the home page] I need to get into.”
- Other confusing terms:
 - Document Delivery Services (just for journal articles, not books)
 - Subject Resources
 - Collaborative workroom (versus meeting room)

- General Reference
- Word “key” beside subject area on Index & Abstract page – Example: Business key | additional
- Getting Started

c) Searching

Problems:

- Both in their navigation pathways while performing the task questions, and in their comments, study participants demonstrated and expressed lack of clarity about the kinds of resources various search tools retrieve, or which search tools are the most appropriate for the task they wanted to accomplish (see Terminology section).
- Participants also expressed confusion about where on the website they should enter their search terms
- Example: Used the Catalogue to try to locate individual journal articles on SARS
 - Example: Many study participants did not use the Search link on top black bar– want a search box
 - Comment: “It’s hard to find things on the Library website – I had to know to go to a particular location to initiate a particular kind of search – but, it’s better than the University website – it’s all alphabetic, and if you don’t know what it is called, you can’t find it.”
 - Comment: “It says *Electronic Journal and Abstracts*, but there doesn’t seem to be much of a search capability here – although it did say search. Isn’t there a little window you can type in what you want?”
 - Comment: “It says *Complete List of Indexes and Abstracts* – I don’t want a list – I want a search.”
 - Comment: “I do not like using Boolean AND, OR.”

Participant Comments/Recommendations:

- Broadcast / Federated Searching
 - Want to search across a range of library resources at once (e.g. e-journals, journal article databases, print resources), preferably directly from the first page of the library website – want this search engine to be “robust” – want a search box prominent on first page
 - Want search boxes at the top of lengthy lists (Example: E-journal pages) so do not have to scroll
 - Want a search engine that uses natural language

d) Customization

Portal – Chosen by Client

Participant Comments/Recommendation:

- Comment: “I would like to have my folders, “My Medline”, e-journals that I use frequently on the first page – so that these would just be one click away.”

Portal – Chosen by Librarian

Participant Comments/Recommendation:

- Use only a branch / subject-specific web site
 - Example: Links to most frequently used databases are on the first page Example: PubMed, HKN

e) Design

Participant Comments/Recommendations:

- Not the most attractive site – would like it to be a bit more aesthetically appealing, without distracting from its functionality
- Make the IR logo and banner smaller – it takes up about 20% of the page

Aesthetic - Text

- Too much text on pages – don’t like large blocks of text

- A lot of the text is the same size, so does not direct the eye
- Nothing stands out as more important than other information on the page
- Tend to ignore a lot of information on web pages
 - Example: Ignore the *What's Happening* column in centre – do not like the large block of text and the length of the text links in this section; have never read anything in *What's Happening*
 - Example: Ignore the *Action to Take* column on right side of the *Indexes & Abstracts* page
 - Example: Ignore the *Our Future, Our Past* logo
- Too much clutter on the Library Hours pages – do not like day by day listing
- Font often too small for visually impaired student to read

Aesthetic - Photos

- Younger participants want more photos, want photos changed on a regular basis
- Older participants said photo are extraneous, and distract from the work they are trying to do

Aesthetic - Colour

- Younger participants want more colour – too much black & white
- Don't like red font
 - Visually impaired student found red font difficult to read

f) Orientation Within the Site

Participant Comments/Recommendations:

- Want a site map, not a site list – want a visual representation of the library website

Icons

- Want more icons instead of some text links – realize may not work well for novice users
- Many participants did not use *Search*, *Catalogue*, or *Article Indexes* on black menu bar
- Many participants had difficulty interpreting the icons on the *Book a Workroom* page – determining whether rooms were available or already booked

Drop-down menus

- Want pop-up/drop down menus (particularly on first page) to indicate what options are available below a given link before clicking on it

Colour

- Use colour to differentiate specific areas of a page / organize a page – highlight more important functions/info
- Use colour coding on the Workroom booking page to indicate availability of rooms
Example: red for booked, green for unbooked.

g) Service

Lack of awareness of service:

Participant Comments/Recommendations:

- Document delivery services – participants stated they would go to Google, Calgary Public Library, Chapters/Amazon, or ask a librarian to find a book that the U of C Library did not have – (see Terminology).
- Those participants that were aware of DDS services did not appear to be aware of what they needed to do to access the service:
 - Example: Would search individual library catalogues from COPPUL pages and then ask a librarian
 - Example: For task question attempted to locate DDS book in *Other Libraries* catalogues
- Existence of subject liaison librarians

- Weblibliographies / guides developed by liaison librarians for specific subject areas
- Existence of databases that index journal articles
- Electronic journals in library catalogue
- Electronic journals page
- Workrooms in the MacKimmie Information Commons can be booked online
- University Library as a whole has a web site – uses only Business Library site
- Online sign-up for bibliographic software courses

Context-sensitive help

Participant Comments/Recommendations:

- Would like online help in one concise place for how to search the most frequently searched databases, and for ordering documents in CISTI
- From office or home, would like to be able to speak directly with a librarian to get help in using the site (virtual reference)

h) Library Catalogue

Participant Comments/Recommendations:

- Several participants indicated that the Library catalogue was not intuitive
 - Example: Difficulty interpreting catalogue record i.e. where an item is located
 - Example: Not know why more than one URL for an e-journal is sometimes present in a library catalogue record
 - Example: Find the various choices of databases that are provided in order to access an electronic journal confusing – why such lengthy URLs are displayed
- Terminology in Catalogue is not intuitive
 - Example: Do not understand difference between keyword vs. browse in Catalogue
- Not sure what kinds of resources the Catalogue indexes / contains
- Would like Power Search tab (with multiple search boxes) in the Library Catalogue to be the default search option
- Would like to have a link for DDS services in the Catalogue, so can place a DDS request
- Would like to place holds online
- Confused by, don't like, two different front end pages for the Library Catalogue (i.e. the <http://seter.lib.ualgary.ca/> page one is returned to when one clicks Exit in the Catalogue)
- Like the icons in Catalogue (disabled participant)
- Like that results can be printed

3.5 Comments and Recommendations from Disabled Student:

- Would like the Disability Center to be notified of changes to the site (contact: Merlin Keilor), so that all disabled students can be notified and trained by him – disabled students get used to certain pathways, and find it confusing when these change
- Font size on many pages is too small for me to read
 - Example: Font on center and right menus on home page is too small
 - Example: *Book a Workroom* page
- Colour contrast on home page for most part is good – black font easy to read, red font is not easy to read
- Hard to see radio buttons – whether they are filled in or not
- Too much text on some pages
- Need more spacing between text
- Too many links on pages -- would like a maximum of 7-8 links per page
- Indifferent to photos

- Would like graphical and non-graphical versions of the website (for JAWS users)
- Keep it simple
- Likes one letter shortcuts that take user to a specific section of a page – avoids scrolling
- Does not like the University web page
 - Faculties “piano keys” at the bottom of the page are difficult to use
 - Colour contrast and spacing make it very hard to read

3.5 Results from Task Oriented Questions

Table 1 presents the percentage of participants who successfully completed each task. Although 16 individuals participated in the study, results from two individuals were not usable for the navigation/task portion of the interview.

Task Question	% Successful Completing Task	# Successful Completing Task	% Unsuccessful Completing Task	# Unsuccessful Completing Task
Task 1: Find a book title	100%	14	-	0
Task 2: Find 2 business databases	79%	11	21%	3
Task 3: Find specific e-journal	86%	12	14%	2
Task 4: Order non UofC book	43%	6	57%	8
Task 5: Book workroom	93%	13	7%	1
Task 6: Find recent articles on SARS	79%	11	21%	3
Task 7: Renew books online	100%	14	-	0
Task 8: Info Commons open 24 hrs	57%	8	43%	6
Task 9: Pathfinder in computing	64%	9	36%	5
Task 10: Find history librarian	100%	14	0	0

The following discussion focuses on the success/nonsuccess for each task in light of the navigation paths chosen by participants. Tasks are presented in order of participant success rate with the most successful discussed first.

As can be seen from Table 1, all 14 participants successfully completed three task questions (T1; T7; T10). These three questions involved the least amount of menu clicking and choices. For the most part, participants chose paths as presented from the left navigation menu on the Library homepage.

Task 1: Find a Book Title

Half of the participants chose *Library Catalogues* from the left menu bar, and half chose an option from the top black menu bar. Some participants who selected the black bar chose the *Search* option rather than *Library Catalogue*. This option involved an extra step to get to the Library Catalogue; however participants did not seem confused by the “search” option as they realized that they needed to search the Library Catalogue to find a book from the collection.

Task 7: Renew Books Online

All participants used the left menu bar as their prime navigation for this question. For example, either *Quick Links* or *Services* from the left menu bar were the starting points for renewing books. No participant chose to renew books through the Library Catalogue directly.

Task 10: Find History Librarian

Again all students but one, choose the left menu bar as their starting point. Choices included: *Subject Resources*, *Quick Links*, *Services*, and *About the Library*. The middle menu then offered choices including: *Contact my Librarian*, *Asking for Help*, and *Library Staff*.

Participants picked appropriate links from the left menu bar to quickly and easily complete the three tasks. Tasks 1 and 7 represent very common interactions with the library website, specifically, using the library catalogue to find books and then to renew books that one has taken out. All participants were comfortable with these tasks, and had used the library website in the past for such tasks.

Task 5: Book a Workroom

Only one participant failed to book a workroom successfully. This person suggested that s/he would contact the Manager of Information Commons directly to book a room, even when prompted to complete the task online. Again the left menu bar was the route chosen to begin searching for booking a workroom. *Quick Links* and *Services* were the usual choices from this menu. The corresponding middle menu provided a clear and non-ambiguous link *Book a Workroom*. One student had difficulty authenticating. Several students, prior to choosing from the left menu, scanned and scrolled through *What's Happening*.

Task 3: Find specific e-journal

Twelve of the participants successfully completed the task of finding a specific electronic journal. Five of these individuals quickly searched the library catalogue for the journal title, either choosing the library catalogue from the left menu or the black bar menu. One participant first choose *Search* then *Search for Article Indexes* and another chose *Article Indexes* from the black menu bar, only to determine that they required the library catalogue. The remaining successful task completions involved clicking *Electronic Resources* from the left menu, then *electronic journals* from the middle menu, and using the alphabetical listing to find the appropriate journal title. The two participants who were unsuccessful in this task did not know the difference between journal article indexes and electronic journals. The two subjects attempted to find the journal through the key databases for *Sociology*.

Task 2: Find 2 business databases

This task question proved somewhat difficult, with only 11 participants (79%) completing the exercise successfully. Four participants achieved almost immediate success by choosing either *Subject Resources* (left menu) or *Article Indexes* (black bar menu) and then choose the appropriate link. Another subject to quickly succeed in this task choose *Search* from the black bar, then *Search for Journal Articles* and linked to business resources. The other successful participants required more time to complete the task. *Campus databases* was chosen, indicating that students were following the instructions of finding databases not article indexes or journal articles, as provided by some menu options. Confusion among terms (database, index) and concepts (using article index to find journal articles) abounded in this task. The unsuccessful participants floundered and were unable to determine a path to find the appropriate databases.

Task 6: Find recent articles on SARS

Seventy-nine percent, or 11 participants, were successful in finding recent articles on AIDS. Participants who succeeded in finding SARS articles, used either the left menu *Electronic Resources* option, or used the *Article Indexes* from the black bar. One subject who was unsuccessful attempted to find articles in the library catalogue. This person does not realize that the library catalogue does not index specific journal articles. Another unsuccessful participant was confused, although she chose appropriate paths (i.e. *electronic resources*, *search for journal articles*, etc.) she was not familiar enough with databases to realize to choose an interdisciplinary index or medical one. She was looking for a database that indicated SARS in the title.

Task 9: Pathfinder in computing

The majority of participants (9 or 64%) found the web guide/pathfinder to computing science. Several different navigational paths were used to find the computing science guide. It seemed that, although successful, this

question was difficult for the participants as they were not familiar with pathfinders. Novel ways were used, including searching the library webpages for *computer science* (four subjects), and using the *Site Map* link. Three participants realized that *Subject Resources* was the appropriate choice and they quickly found the Computer Science pathfinder. *Getting Started* was an option from the left menu that did not lead the participant to appropriate links. It does provide *Library Guides* but these are not connected with the pathfinders for different subjects resources.

Task 8: Info Commons open 24 hrs

Only fifty-seven percent of the participants (8) were successful in determining if the Information Commons was open 24 hours the day of their interview. However, it must be noted that ½ of the participants mentioned that the middle menu *What's Happening* clearly indicated that the Information Commons was indeed open. One refused to venture further than that menu; the rest were encouraged to find the answer in another way. All participants successfully found *Library Hours*, using *Quick Links* or *About the Library* from the left menu as starting points. Those who were unsuccessful found the hours of operation for MacKimmie Library, not the Information Commons specifically. Participants did not see a difference between MacKimmie Library and the Information Commons. Most felt that they had successfully completed the task.

Task 4: Order non UofC book

The majority of participants were unsuccessful in this task. Subjects choose many different paths, although the paths initially chosen were either *Quick Links* or *Services* from the left menu bar. *Use Other Libraries* was a common choice from the middle menu. This choice does not provide document delivery services, rather focuses on obtaining borrowing privileges from different libraries. Two participants suggested searching the Calgary Public Library website or conducting a Google search. Participants were unfamiliar with the terminology and services offered for document delivery/interlibrary loan. One student choose the *Search Library Web Pages* from the middle menu (off of *Quick Links*) and conducted a google search of the library web pages for “interlibrary loan”. Those who were successful (besides the one just mentioned) realized that *Order Documents* included ordering books and journal articles not owned by the Library.

4.0 Discussion of Results

Several key comments and recommendations were mentioned by more than one participant. All of the themes below were mentioned by five or more participants during the pre-test, post-test, and think aloud protocols.

- Would like proportionately less text on the website pages
- Find the number of access points, links and choices on many pages overwhelming
- Would like the information on the Library website quality filtered and prioritized, with the most important and most commonly used resources accessible with one click from the first page, ideally from a page that is tailored to their subject needs
- Would like understandable terminology that helps them know which search tool is the best for the task they want to accomplish
- Would like to search across a range of electronic and print resources (journal article indexes, catalogue, etc) at the same time. Want this search function / search box to be accessible from the first page

The navigation-oriented task questions indicated that, for the most part, students were able to successfully complete the assigned tasks. Order a book through document delivery proved to be the least successful. This may be attributed to the fact that students are not aware that the service document delivery includes both books and documents (articles). The unsuccessful participants scanned or scrolled over *Order Documents* but dismissed this link as not relevant. The next least successful task, T8: Information Commons open hours, caused difficulty for subjects as they did not view the Information Commons as a separate entity to MacKimmie Library. The

majority of participants who failed to successfully complete the task chose hours for MacKimmie Library. The calendar and presentation of information proved to be confusing.

Echoing the results from the pre-test and post-test questions, terminology often caused confusion. Although there are numerous paths to complete a given task, participants did not seem overwhelmed by the choices. They usually continued to choose their “preferred” path – either the left menu bar or the black menu bar at the top. Participants become comfortable with the familiar, but sometimes seem to flounder when encountering new concepts and choices.

Appendix A Usability Study Questions

Pre-Test Questions

1. Briefly tell me about your experience using the University Library's web site.

Prompting Questions:

- a) Do you use the Library website?
- b) What do you use the site for?
- c) What is your general impression of the website?
- d) What do you like best about it?
- e) What do you like least about it?
- f) What type of information do you expect from the Library website?
- g) What would you like to see changed on the website to make it better for your research purposes?

Task Questions

- T1. Find out if the Library has the book *How Canadians Communicate* in its collection.
Successful Performance: Type the book title in the Library Catalogue text entry box.
- T2. Explain to the participant: For the purposes of this question, a database is an online collection of references to articles in a particular subject area.
Find 2 business/management databases available at the University of Calgary that you can use to find articles on a business-related topic.
Successful Performance: Display the business/management Indexes & Abstracts page.
- T3. Does the Library have the *International Journal of Comparative Sociology* online?
Successful Performance: Display the journal title record in the Library Catalogue, or Display the journal title on the Electronic Journal list
- T4. If you wanted to obtain a book that the Library does not own, how would you get it?
Successful Performance: Display the page for the DDS Online Request Form. The participant does not need to complete the authentication form.
- T5. Book a workroom for group study in the MacKimmie Library Information Commons.
Successful Performance: Display the authentication page for booking MacKimmie Library Information Commons workroom. The participant must complete the authentication form, and make a booking.
- T6. Find recent journal articles on the topic of: Treatment of SARS.
Successful Performance: Display an online Indexes & Abstracts subject page – Example: complete list, medical, nursing, psychology
- T7. You currently have 3 books out. Renew them online.
Successful Performance: Display the authentication page for online renewal of books. Participant does not need to complete the authentication form.
- T8. Is the MacKimmie Library Information Commons open 24 hours today?
Successful Performance: Display the current month's MacKimmie Information Commons hours page.

- T9. Explain to the participant: Librarians develop web guides for the information resources in a particular subject or discipline. These guides contain information on print and online indexes, reference books, Internet sites and other resources.
Does the library's website have a guide to the computer science literature?
Successful Performance: Display the computing science information resources page.
- T10. Explain to the participant: Every major subject area / discipline at the University of Calgary has a librarian assigned to that area.
Who is the librarian for History?
Successful Performance: Display either the history information resources page, or the liaison librarian contact information page.

Post-Test Questions

1. Now that you've done some specific tasks on the website, we'd like any additional feedback you have on the website.

Post-Test Prompting Questions:

- a) How comfortable were you searching the website for our defined tasks?
- b) Did you discover anything new today?
- c) What worked well while searching the library website?
- d) What didn't work well?
- e) Would you recommend any changes to the Library's web site?