

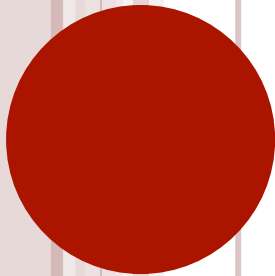


NCSU LIBRARIES USABILITY TESTING

April, 2010

Angie Ballard & Susan Teague Rector

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NAVIGATION TESTING

RESEARCH QUESTION

- Do users navigate using the expected menu items?

BACKGROUND

- Users were recruited in situ in the D.H. Hill Library lobby and asked to complete 4 of 15 tasks using a working prototype of navigation menus only.
- Each task required the user to open a navigation menu and indicate which menu item they would select to look for the specified information.
- Facilitators recorded up to 4 of each user's menu selections, in order of selection.
- A facilitator assessment of task difficulty was also recorded.

WHO WERE THE PARTICIPANTS?

- 24 Undergraduates
- 3 Graduates
- 2 Staff
- 1 Visitor
- 2 Library Staff Members

Humanities/Social Sciences

- International Studies
- Anthropology
- Creative Writing
- History Education
- Library Science
- 1st Year College

Business

- Management
- Agri-Business

Science & Engineering

- Biology
- Textiles
- Computer Networking
- Environmental Engineering
- Environmental Technology
- Biochemistry

USE OF THE WEB SITE

- Nearly all participants described themselves as “pretty comfortable” or “very comfortable” with the current site.
- Users reported that they used the current site most frequently for:
 - Research (finding articles/books)
 - Reserving Rooms
 - Reserving/Renewing laptops
 - Course Reserves

The screenshot shows the NCSU Libraries website homepage. At the top left is the NCSU Libraries logo. A navigation menu includes links for 'SEARCH THE COLLECTION', 'BROWSE SUBJECTS', 'SERVICES', 'LIBRARY INFORMATION', 'COMMUNITY', and 'NEWS & EVENTS'. A main banner features a photograph of a colorful wall and the text 'Art Sale to Help Bring Color Wall Back to Life'. Below the banner is a search bar with a 'Go' button and links for 'FAQ' and 'Site Index'. The main content area is divided into several sections: 'Search the Collection' (with links to Catalog, Find Articles, Journals, Databases, Reference Tools, Special Collections, NCSU Scholarly Publications, and more...), 'Browse Subjects' (with links to Agriculture, Design, Education, Engineering, Humanities, Life Sciences, Management, Mathematics, Natural Resources, Physical Sciences, Social Sciences, Textiles, and Veterinary Science), 'Services' (with links to Technology Lending, Reserves, Tripsaver, Borrow | Renew, Computing, For Faculty, Copyright Guidance, Citation Builder LOBO, and more...), 'Library Information' (with links to Hours, Directions, Library Locations, Quick Guide (pdf), Directories, Visitors, Jobs, and more...), 'Community' (with links to Learning Commons, Giving to the Libraries, Friends of the Libraries, Exhibits, Calendar, WolfBlogs | WolfWikis, and more...), and 'News & Events' (with links to WolfWalk Turns Mobile Devices into NC State Time Machines, Historical State Web Site Provides Easy Time Travel into NC State's Past, Student Workshops, and more...). The footer contains the NCSU Libraries address and phone number, a copyright notice, and the NCSU University logo.

IF YOU COULD IMPROVE ONE THING...

- Most users expressed general satisfaction with the current site or described positive experiences.
- Three users said the current site seems cluttered.



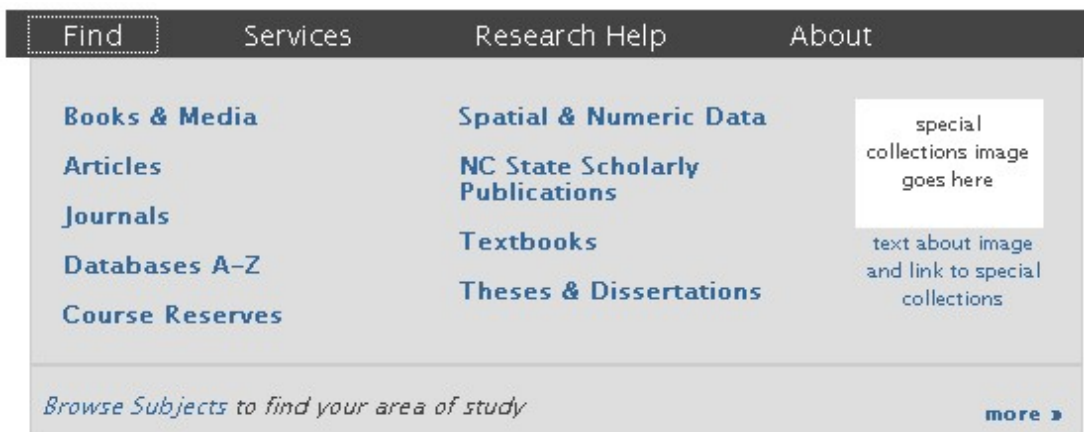
OBSERVATIONS

Find Services Research Help About

- Menus were learnable
- **Find** resonated as a broader term than Search
- **Services** menu worked well as a catch-all
- **Research Help** was the most ambiguous
- **About** was generally used as expected

WHAT WORKED WELL: FIND

- Find was very learnable
- Books & Media label
 - Users readily used this to search for DVDs



WHAT WORKED WELL: SERVICES

○ Scan/Copy/Print

- for locating photocopy pricing

○ Digital Media Lab

- DML had good name and function recognition.



WHAT WORKED WELL: RESEARCH HELP

○ Citation Tools label

- Users easily found the citation tools here, but few saw the Citation Builder sub-link.



WHAT WORKED WELL: ABOUT

○ Hours

- Users did not hesitate to look for hours information on the About menu.



PROBLEM AREAS

Task No.	Task	Selected menu items
8 <i>n=10</i> <i>About → View Library Maps</i>	You need to find out where the auditorium is in the library. How would you locate a map?	(1) About → View Library Maps (4) About → D.H. Hill Library (1) About → Directions & Parking (2) About → no item selection (1) Find → Databases (1) Find → Books & Media
10 <i>n=8</i> <i>Find → Databases</i>	Have you ever searched JSTOR, Academic Search Premier or Web of Science? a.Yes – Where would you look to locate these resources? b.No – These are databases. Where would you look to locate databases?	(4) Find → Databases (2) Find → Articles (1) Find → N.C. State Scholarly Publication (1) Research Help → Course Tools

PROBLEM AREAS

Task No.	Task	Selected menu items
11 n=9 <i>Services → Tripsaver</i>	You have heard that the library offers interlibrary loan. Where would you look to locate information about this?	(4) Services → Tripsaver (4) Services → Borrow, Renew, Request (1) Find → Course Reserves
13 n=8 <i>Find → Textbooks</i>	You have heard that the Libraries carries textbooks. Where would you look to locate information about this?	(2) Find → Textbooks (2) Find → Books & Media (1) Services → Borrow, Renew, Request (1) Research Help → Course Tools (1) Services → (1) Research Help →

PROBLEM AREAS

Task No.	Task	Selected menu items
14 <i>n=9</i> <i>Research Help →</i> <i>Course Tools</i>	The Libraries has created course pages unique to your courses at the university. Where would you look to locate information about your courses?	(2) Research Help → Course Tools (4) Find → Course Reserves (1) Services → Tripsaver (1) Find – Databases (1) Did not select

TASK DIFFICULTY

Task#	Task Description	"Correct" Menu	Average Task Difficulty	n=
1	Photocopy cost	Services	1.00	12
2	Book: The Tipping Point	Find	1.00	12
3	Global warming DVD	Find	1.67	12
4	Flash drive loans	Services	1.38	12
5	Hours	About	1.90	10
6	Ask a librarian	Research Help	2.00	10
7	Video editing (DML)	Services	1.33	10
8	Locate building map	About	3.80	10
9	Citation builder	Research	1.38	8
10	Locate database by name	Find	2.50	8
11	ILL / Tripsaver	Services	2.78	9
12	Reserve a room	Services	1.75	8
13	Textbooks info	Find	3.38	8
14	Library Tools for Courses	Research Help	3.33	9
15	Research Help expectations?	N/A	N/A	6

OTHER OBSERVATIONS

- Some users insisted that would not use the website to complete certain tasks.
 - Photocopy cost; flash drive loans; ask a librarian; info on video editing
- When asked what they would expect to see under a Research Help menu (n=6)
 - 4 mentioned chat, tutorials, citation help, and/or research guides
 - 2 expected to find links to resources or search tools.

RECOMMENDATIONS

- Feature a Tripsaver link on the Borrow, Renew, Request target page.
- Make access to Databases prominent on the homepage for those users who identify the term.
- Change Research Help label to Get Help to better reflect the intent of the menu.

Test to see if Citation Tools & Course Tools still work

RECOMMENDATIONS

- Promote link to Library Tools for Courses on Course Reserves target page.

Continue to evaluate placement and labeling for Library Tools for Courses

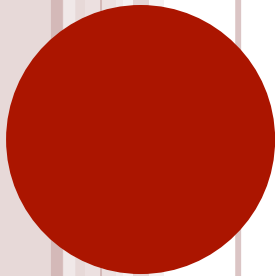
- Organize maps/wayfinding information by location.

Include maps links on target pages for specific libraries/locations.

RECOMMENDATIONS

Make links to these top tasks easy to find on the homepage:

- Reserve a Study Room
- Renew laptop
- Course Reserves



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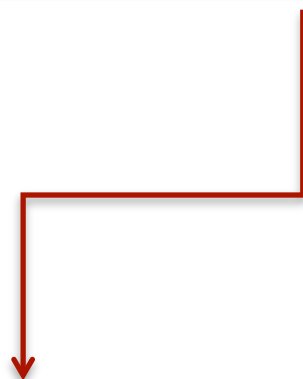
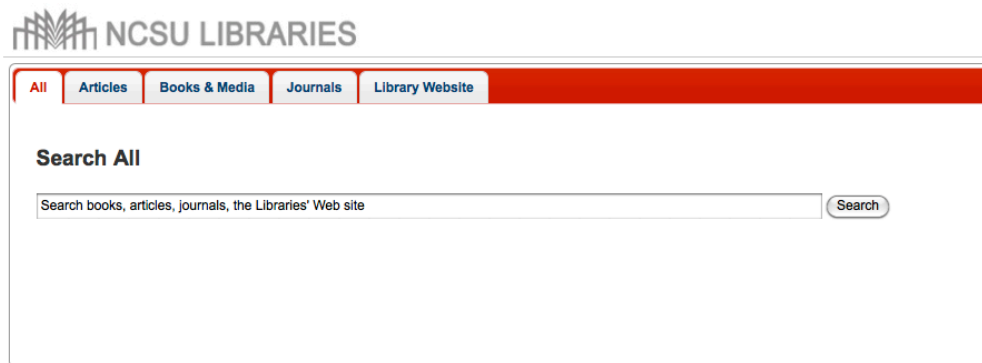
SEARCH TESTING



RESEARCH QUESTIONS

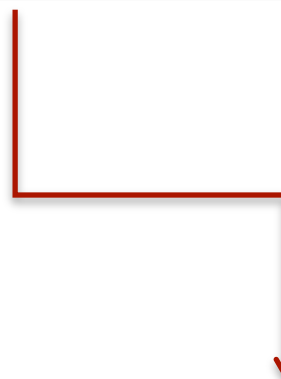
- Do users pre-select tabs in a tabbed search box before entering search terms?
- How do users interact with tabbed or non-tabbed search results?

SEARCH MODELS



Model 1

Tabbed Search Results



Model 3

Non-Tabbed Search Results

BACKGROUND

- 28 undergraduates, graduates and library staff, participated in a round of guerrilla usability testing for 2 proposed search models
- Participants were recruited from the pool of patrons that walked into the lobby of DH Hill
- Each participant was asked to complete 2 tasks using one of the search models; many participants volunteered to answer more than 2 questions
- **14 participants performed 46 tasks using Model 1**
- **14 participants performed 38 tasks using Model 3**

WHO WERE THE PARTICIPANTS?

- **22 Undergraduates**
- **3 Graduates**
- **2 Library Staff Members**
- **1 Non-Traditional Student**

Represented:

- Humanities:
 - English/Creative Writing
 - History
 - Psychology
- Business:
 - Business
 - Business Administration
- Science/Engineering:
 - Aerospace Engineering
 - Animal Science/Biology
 - Biology
 - Biomedical Engineering
 - Chemistry
 - Civil Engineering
 - Computer Science
 - Electrical Engineering
 - Food Science
 - Human Biology/Nutritional Science
 - Integrated Management & Systems
 - Meteorology
 - Textiles Engineering

USE OF THE CURRENT WEB SITE

- Finding Journal Articles & Books
- Booking Study Rooms
- Laptop Borrowing & Renewal
- Course Reserves

The screenshot shows the NCSU Libraries website homepage. At the top, there is a navigation menu with links for 'SEARCH THE COLLECTION', 'BROWSE SUBJECTS', 'LIBRARY INFORMATION', 'COMMUNITY', and 'NEWS & EVENTS'. Below this is a search bar with a 'Go' button and links for 'FAQ', 'Site Index', and a dropdown menu for 'Most Used'. The main content area is divided into three columns: 'Search the Collection', 'Browse Subjects', and 'Services'. The 'Search the Collection' column lists various search options like Catalog, Find Articles, Journals, Databases, Reference Tools, Special Collections, NCSU Scholarly Publications, and more. The 'Browse Subjects' column lists various academic disciplines such as Agriculture, Design, Education, Engineering, Humanities, Life Sciences, Management, Mathematics, Natural Resources, Physical Sciences, Social Sciences, Textiles, and Veterinary Science. The 'Services' column includes Technology Lending, Reserves, Tripsaver, Borrow | Renew, Computing, For Faculty, Copyright Guidance, and Citation Builder LOBO. There are also icons for 'Library Tools' and 'Ask Us'. Below these sections, there are three columns: 'Library Information' (Hours, Directions, Library Locations, Quick Guide, Directories, Visitors, Jobs), 'Community' (Learning Commons, Giving to the Libraries, Friends of the Library, Exhibits, Calendar, WolfBlogs | WolfWikis), and 'News & Events' (WolfWalk Turns Mobile Devices into NC State Time Machines, Historical State Web Site, Provides Easy Time Travel into NC State's Past, Student Workshops). The footer contains contact information for NCSU Libraries and a copyright notice.

IF YOU COULD IMPROVE ONE THING...

- Highlight reservations (room, laptop) and renewal options
- Make the site less cluttered
- Provide advanced search



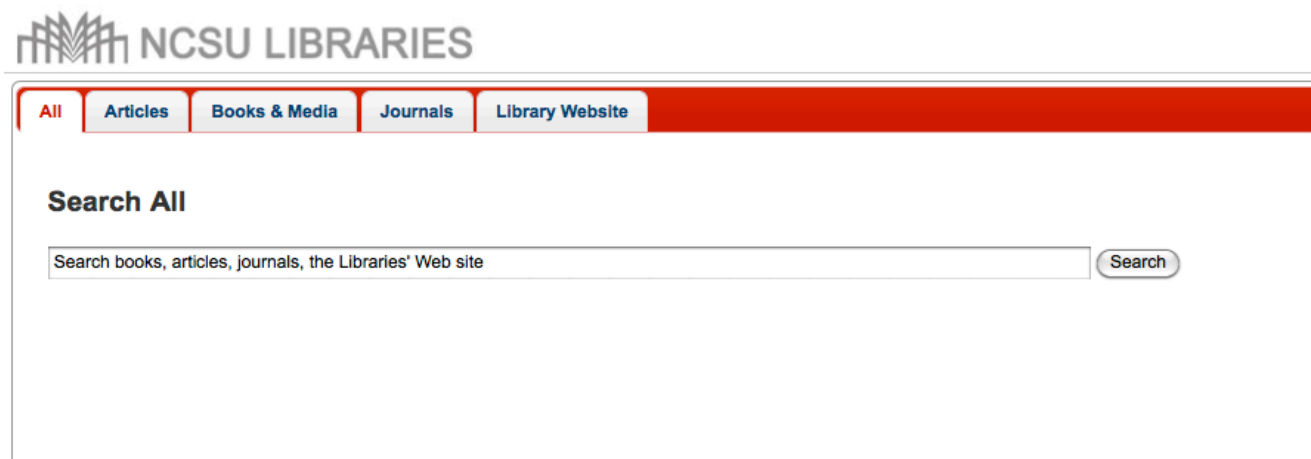
OBSERVATIONS

- In both search models, in well over half the tasks, participants pre-selected a search tab before beginning their search.

Responses	Switched Tabs Before Searching		Searched In (across user interaction)		
	Yes	No	All	Silos	Both
Model 1 (46 from 14 ppts)	32	14	12	30	4
Model 3 (38 from 14 ppts)	28	10	8	24	6
	60	24	20	54	10

OBSERVATIONS

- Across both search models, in 45 of 60 tasks in which users selected a tab, they selected the appropriate tab for that task.



OBSERVATIONS

- In both models, users rarely switched silos in the search results once in a silo. Users tended to stay in the same silo and refine searches within those silos.

Responses	Switched Tabs Before Searching		Searched In (across user interaction)		
	Yes	No	All	Silos	Both
Model 1 (46 from 14 ppts)	32	14	12	30	4
Model 3 (38 from 14 ppts)	28	10	8	24	6
	60	24	20	54	10

WHAT WORKED

Task No.	Task	1 st Tab Searched (Across Models)
1 n=9	Please tell me if the library has a copy of the book titled 'The Tipping Point' by Malcolm Gladwell	All (4) Books (5)
3 n=9	Please locate information about how much it costs to make photocopies in the library	All (3) Web site (5) Books (1)
4 n=9	You are studying the effects of ADD in the classroom for your psychology class. Can you locate 2 books about helping students with ADD succeed in school?	All (4) Books (5)
8 n=8	You are in DH Hill Library and you would like to locate an illustrated encyclopedia about trees; where would you find such a book at Hill?	All (3) Books (4) Web site (1)
9 n=7	Please locate information on how to borrow a laptop from the library; how long is the loan period?	All (1) Web site (5) Books (1)
10 n=7	Please locate the most recent issue of the Journal of the American Medical Association.	Journals (6) All (1)

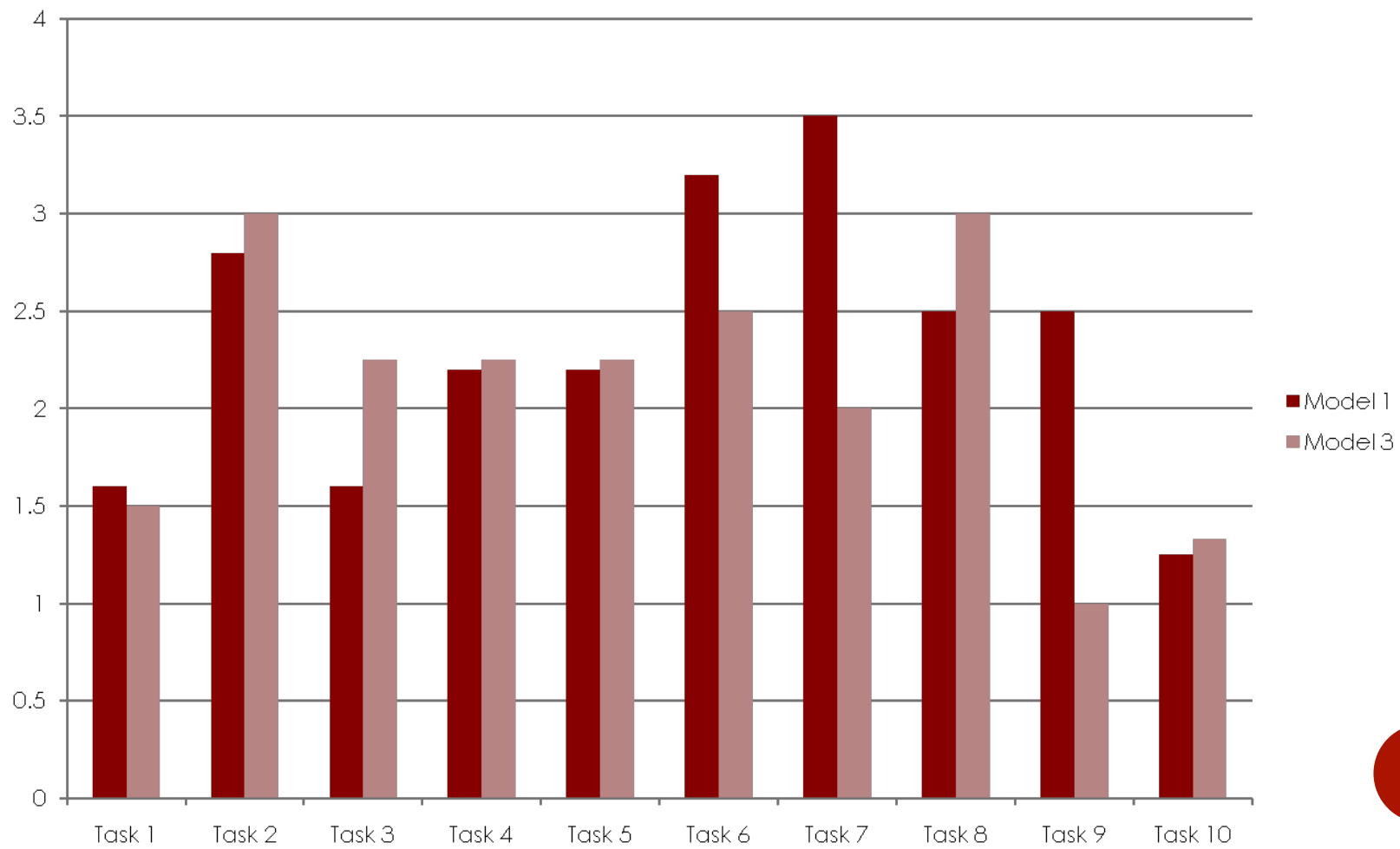
PROBLEM AREAS

Task No.	Task	1 st Tab Searched (Across Models)
2 n=9	Find 2 journal articles on how tropical forest fires impact the environment	Journals (4) Articles (4) All (1)
6 n=9	You are doing a lab on the reproductive habits of fish in your Bio class. Your professor has recommended that you use the Web of Science database to find relevant articles. How would you do that on this site?	Articles (3) Journals (1) Website (1) All (4)
7 n=8	You are writing a paper for a course in Computer Science. Find the 2001 article titled 'Internet Under Siege' by Lawrence Lessig in the journal called Foreign Policy.	Journals (3) Articles (4) All (1)

TASK DIFFICULTY

Task No.	Task	Our Rating	Average Difficulty	
			Model 1	Model 3
1	Gladwell book	Book, Easy	1.6 / n=5	1.5 / n=4
2	Journal articles	Article, Hard	2.8 / n=5	3.0 / n=4
3	Photocopies	Web site, Easy	1.6 / n=5	2.25 / n=4
4	ADD books	Book, Hard	2.2 / n=5	2.25 / n=4
5	DVD Global Warming	DVD, Easy	2.2 / n=5	2.25 / n=4
6	Web of Science	Database, Hard	3.2 / n=5	2.5 / n=4
7	Lessig article	Article, Easy	3.5 / n=4	2.0 / n=4
8	Encyclopedia	Book, Hard	2.5 / n=4	3.0 / n=4
9	Borrow a Laptop	Best Bet, Easy	2.5 / n=4	1.0 / n=3
10	JAMA latest issue	Journal, Hard	1.25 / n=4	1.33 n/=3
			2.33 / n= 46	2.16 / n=38

TASK DIFFICULTY



TASK DIFFICULTY BY STATUS

Status	Average Difficulty Across Models, Across Tasks	Count
Undergraduate	2.49	22
Graduate	1.66	3
Staff	1.76	2
Other	2.50	1
	2.10	28

OTHER ISSUES

- Almost all participants only scanned the first page of search results for a quick answer to the task
- Even if users executed a successful search, they often did not scroll down far enough in the search results to find the answer
- Spelling was problematic

RECOMMENDATIONS

- Although there was confusion with the Journals and Articles tabs, consider keeping both tabs to accommodate both novice and advanced users. Consider changing the 'Journals' tab label to 'Journal Titles.'
- Look to the redesign team to better highlight an option for databases on the homepage. Do not add a tab for databases as this could further highlight issues between databases, articles & journals.

RECOMMENDATIONS

- Consider implementing a tabbed search box in the new design.
- Conduct more usability testing in the context of the new site design.

NEXT STEPS

- Take recommendations from usability testing and incorporate into homepage wireframes
- Build 2 search prototypes in the context of the new Web site homepage – one with a tabbed interface and one with a single search box with links to silos.
- Conduct more usability testing on the working homepage prototypes.

THANK YOU!

QUESTIONS?

SUSAN_TEAGUE_RECTOR@NCSU.EDU

ANGIE_BALLARD@NCSU.EDU



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