After the Usability Study:
Making Website Changes Based upon Results

2016 VLACRL Conference Within-A-Conference
2016 VLA Conference
October 28, 2016
The Omni Homestead Resort
Hot Springs, VA

Terry W. Brandsma
Information Technology Librarian
University Libraries, UNC Greensboro

University Libraries, UNCG

- 2.8M+ items
- 42K+ print & e-journals
- 400+ electronic databases
- 30 librarians, 60 library professionals
- Branches (2)
  - Walter Clinton Jackson Library
  - Harold Schiffman Music Library
- Affiliate Libraries (5)

University Libraries Website

- http://library.uncg.edu
- Hosted by the Libraries (not Campus IT)
- Thousands of pages (at one point 8000+)
- Centrally managed
- Internal web developers
- Last major redesign in 2008 (!)
- Oversight by the “Library Website Advisory Committee”

Website Evaluation Project

Task:

- Evaluate and analyze the primary Libraries website

Goal:

- Determine if changes are needed to the design, content, and/or functionality of the website

Timeline:

- September 2014 - April 2015 (8 months)

Deliverable:

- Written report to Libraries Website Advisory Committee

Original Website Homepage

Project Leaders

Terry Brandsma

- Information Technology Librarian

Ingrid Ann Johnston

- Real Learning Connections LIS Graduate Student
- 8 Month Paid Postion: 20 Hours per Week

Library Website Advisory Committee

Project Tasks & Usability Tests

- Focus groups
- Card sorts
- Task-based usability test
- Logfile data analysis

- Synthesize and analyze results
- Communicate findings

Preliminary Work

- Determine the Population to Contact
- Advertising & Recruiting
- Incentives
- Insitutional Review Board Clearance

Focus Groups - Method

- Schedule session
- Standard questions
  - Library Depts
  - Students
- Audio recording and notes
- Collect responses for later analysis

Focus Groups - Findings

- Wide mixture of views and suggestions
- Opinions varied and not often cohesive
- Primary uses of the website
  - library catalog
  - renewing materials
  - viewing hours
  - research/databases
  - reserve a room
  - staff directory

Focus Group - Recommendations

- Easier access to
  - Hours
  - Staff Directory
  - Library Account Login
- Consistency in navigation tools
- Increase visual appeal

Card Sorts

- **Optimal Workshop** (was ConceptCodify)
  Free (limited), customizable online card sorting tool

- Card Sort #1 — **Homepage Link Priorities**
  23 cards to sort into 4 categories

- Card Sort #2 — **Website Link Groupings**
  32 cards to sort into 6 categories

Card Sort 1
- Homepage Link Priorities

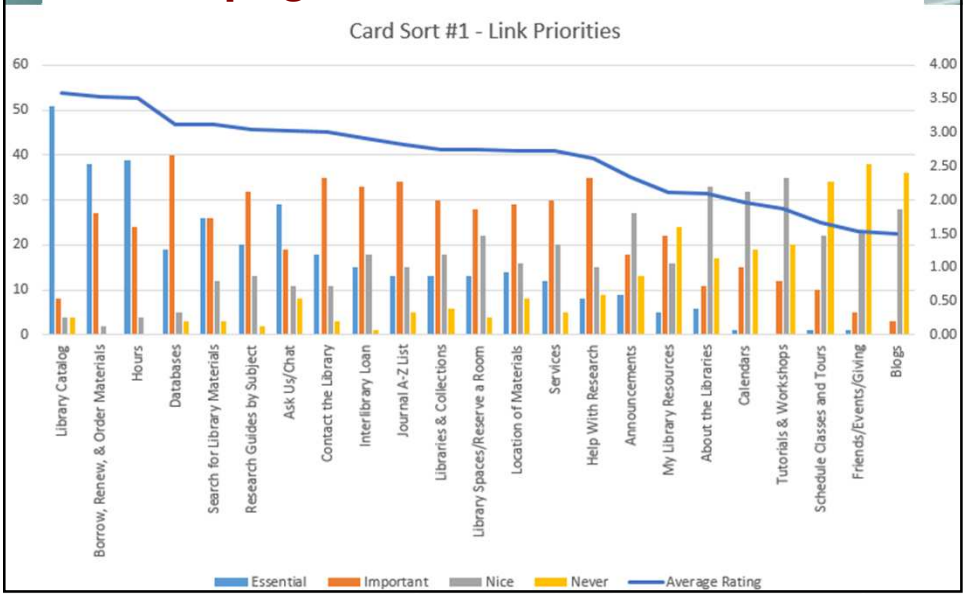
23 cards to sort into 4 categories:

- Essential (top 5)
- Important
- Nice to Have
- I Never Use

Survey

"... organize the cards as you think best by placing the cards (drag and drop) into the groups provided and sorting them within each group based upon priority. The groups are already created, but you have the option to create more. You cannot, however, create additional cards."

Card Sort 1
- Homepage Link Priorities



Card Sort 2
- Website Link Groupings

32 cards to sort into 6 categories:

- Services
- About/Contact
- Research
- Collections
- Library Spaces
- Calendar/Events

Survey

"... organize the cards as you think best by placing the cards (drag and drop) into the groups provided and sorting them within each group based upon priority."

Links	About/Contact	Calendar/Events	Collections	Library Spaces	Research	Services
NC DOCKS	1	0	15	1	10	0
Policies	25	0	0	0	0	1
e-Books	0	0	20	0	4	3
Staff Directory	26	0	0	0	0	1
Streaming Films & Music	0	1	16	0	4	6
Searching Guide/WorldCat Local	2	0	3	0	19	2
Reserves	0	0	8	1	2	15
Publications	4	1	14	1	6	0
Research Guides by Subject	0	0	1	0	25	1
Request Missing Materials	1	0	1	0	0	24
Ask Us!	17	0	0	0	1	9
Printing in the Libraries	4	0	0	2	0	21
Online Exhibits	1	10	14	1	1	0
My Library Account	6	0	0	1	0	19
Location of Materials	5	0	6	8	3	4
Interlibrary Loan	0	0	0	1	2	24
Library Catalog	1	0	6	0	16	3
Library Hours/Schedule	20	4	0	1	0	2
Journal A-Z List	0	0	7	0	20	0
Borrowing from Other Libraries	0	0	0	0	1	25
Fines & Fees	19	0	1	0	0	5
Employment Opportunities	24	0	0	0	0	3
Departmental Listing	24	0	1	1	0	1
Digital Media Commons	1	0	2	21	1	2
Databases	0	0	5	0	22	0
Copyright Information	9	0	1	0	12	5
Citation Guides	0	0	0	0	27	0
Borrowing	2	0	1	1	0	22
Acquisitions & Serials	9	0	10	2	2	3
Affiliated and Branch Libraries at UNCG	12	0	2	13	0	0
Digital Projects	1	2	17	1	4	2
Book Drop Locations	13	0	0	5	0	9

Logfile Analysis

- Primary webserver logfiles only
- Aug 1 - Dec 31, 2014
  - One full semester
  - Highest activity level
- Total PageViews vs. Referrer PageViews
- Issues with straight numerical rankings
- Most viewed pages of website

Homepage Link Name	Total PageViews	Rank	Referrer PageViews	Rank
Reserve a Room	82,997	1	---	---
My Library Resources	8,648	11	---	---
Databases	73,542	2	41,539	1
Research Guides by Subject	29,110	3	18,893	2
Borrow, Renew, & Order Materials	17,775	5	5,278	3
Library Catalog	20,180	4	4,615	4
Hours	16,889	6	3,895	5
How Do I ...	9,783	9	3,206	6
Library Spaces	8,665	10	2,867	7
Libraries & Collections	6,946	13	1,852	8
Help with Research	7,169	12	1,765	9
Services	6,360	14	1,613	10
About the Libraries	4,697	16	1,100	11
Contact the Libraries / Contact the Webmaster	4,910	15	1,027	12
Site Index	2,283	19	483	13
More Blogs	1,199	21	479	14
Tutorials	2,826	17	367	15
Ask Us! (in red search box)	10,835	8	337	16
Spotlight	679	22	279	17
Friends/Events/Giving	2,529	18	248	18
Schedule Classes and Tours	1,538	20	217	19
Upcoming Events	12,126	7	199	20
Current Exhibits	472	23	63	21
Online Exhibits	249	24	31	22

Page Name	Total PageViews	Under Homepage Link
PATH Tutorial	53215	Tutorials
Campus Map	45161	
Harold Schiffman Music Library	34461	Libraries & Collections
Digital Library on American Slavery	24064	
Race & Slavery Petitions Project	21593	
Women Veterans Historical Project	20267	
Mobile Website	16657	
UNCG Web Site Index	13572	
My UNCG Library Account	12584	Library Catalog
Textiles, Teachers, and Troops	9786	
UNCG Web Site-Suggest a Site/Correction	7457	
Information Literacy Game	5296	
Employment Opportunities	4961	About the Libraries
Staff Directory	4098	About the Libraries/Contact the Library
Digital Projects	4035	
Special Collections & University Archives	2981	
North Carolina Literary Map	2866	
Civil Rights Greensboro	2747	
Digital Media Commons	2181	Library Spaces
Ask Us!	1856	Contact the Library
Online Collections	1471	Libraries & Collections
Carolina Consortium	1173	

Task-Based Usability Studies

Background research on conducting sessions
Determining and narrowing task list
Scheduling participants
Use of the EES form
(Effectiveness, Efficiency, Satisfaction)
Analysis

Usability Study Tasks

1. Your history professor asked you to watch the library **tutorial** on “Primary and Secondary Sources in World History.” Where is that located?
2. Where can you find information on the many library resources available for doing research in **Nursing**?
3. Where can you find information about using **e-books**?
4. You need to **chat** with a librarian about an assignment. How could you do that?
5. Where can you find information about Library **Reserves**?

Usability Study Tasks

6. You need to log into your **library account** to renew your books. How do you do that?
7. How would you **reserve a room** in Jackson Library for a group study session for tomorrow at 1:00 p.m.?
8. Using the **Staff Directory** for the Research, Outreach, and Instruction Department, who is the Science Liaison Librarian?
9. Find a way to **suggest materials** that the Library should buy.
10. You need to borrow an item from the Harold Schiffman **Music Library**. Where is the library located?
11. What are the standard Spring Semester open **hours** for Jackson Library?

EES Form - Evaluation Criteria for Each Task

Effectiveness:

1. Record if user was able to complete task. Scale: 1 (no) - 5 (yes)
2. **Ask**: On a scale of 1-5, with 1 being lowest and 5 being highest, how closely did the information you found match what you were looking for?

EES Form - Evaluation Criteria for Each Task

Efficiency:

3. Deviation from the Critical Path: 1 (many deviations) - 5 (no deviations)
4. Error Rate: 1 (many errors) - 5 (no errors)
5. Time on task: 1 (slow) - 5 (fast)
6. **Ask**: On a scale of 1-5, with 1 being difficult and 5 being easy, how would you rate the mental workload it took to find the answer?

EES Form - Evaluation Criteria for Each Task

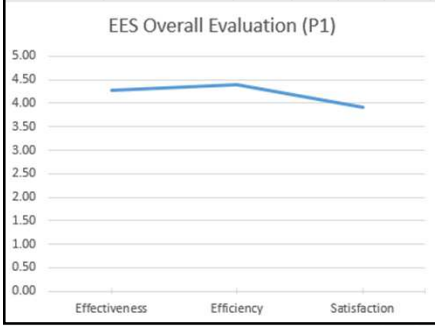
Satisfaction:

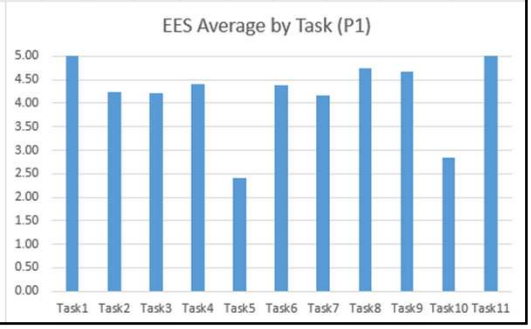
7. **Ask**: On a scale of 1-5, with 1 being lowest and 5 being highest, what was your level of satisfaction with finding the answer?
8. **Ask**: Why did you rate it that way? (open ended)

All recorded on a form for later data analysis.

Participant 1

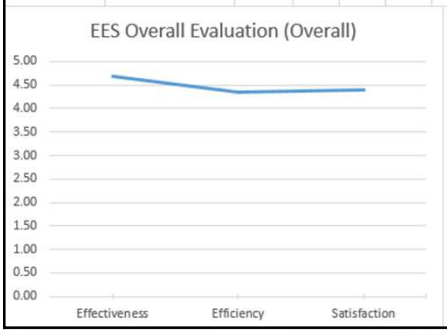
		EES	Task1	Task2	Task3	Task4	Task5	Task6	Task7	Task8	Task9	Task10	Task11	Ave	CombAve
Effectiveness	Task Completion	1	5	5	5	5	2	5	5	5	5	3	5	4.55	4.27
	Quality of Output	2	5	4	3	4	3	4	4	4	5	3	5	4.00	
Efficiency	Deviation from th	3	5	4	5	5	2	5	5	5	5	3	5	4.45	4.39
	# errors	4a	0	0	0	0	1	0	1	0	0	1	0		
	Error Rate	4	5	5	5	5	4	5	4	5	5	4	5	4.73	
	time in seconds	5a	25	56	31	33	50	16	62	28	19	41	22	34.82	
	Time on Task	5	5	4	5	5	4	5	3	5	5	5	5	4.64	
	Mental Workload	6	5	4	3.5	4	1	3.5	4	4	5	2	5	3.73	
Satisfaction	Satisfaction	7	5	4	4	4	2	4	4	5	4	2	5	3.91	3.91
		Ave	5.00	4.25	4.21	4.42	2.42	4.38	4.17	4.75	4.67	2.83	5.00	4.19	4.19

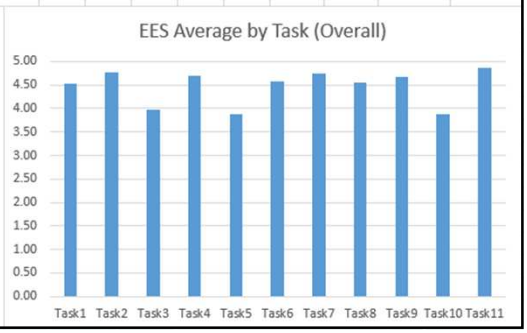




Overall EES Results

		EES	Task1	Task2	Task3	Task4	Task5	Task6	Task7	Task8	Task9	Task10	Task11	Ave	CombAve
Effectiveness	Task Completion	1	4.33	5.00	4.67	5.00	3.83	4.33	4.67	5.00	5.00	4.33	4.83	4.64	4.67
	Quality of Output	2	5.00	4.83	4.67	4.83	4.33	4.83	4.83	4.83	5.00	3.67	5.00	4.71	
Efficiency	Deviation from th	3	4.33	4.83	3.67	4.83	3.67	4.50	4.50	4.17	4.67	4.33	4.83	4.39	4.35
	# errors	4a	0.50	0.00	1.50	0.17	0.83	0.17	0.17	0.50	0.33	0.50	0.00		
	Error Rate	4	4.50	5.00	3.50	4.83	4.17	4.83	4.83	4.50	4.67	4.50	5.00	4.58	
	time in seconds	5a	41.50	38.33	92.00	24.00	54.00	27.83	32.17	57.83	34.50	38.17	20.67	41.91	
	Time on Task	5	4.17	4.33	2.83	4.83	3.67	4.67	4.50	3.67	4.33	4.50	4.83	4.21	
	Mental Workload	6	5.00	4.67	3.17	4.33	3.17	4.33	4.67	3.67	4.50	4.08	4.83	4.22	
Satisfaction	Satisfaction	7	4.40	4.67	4.00	4.50	3.92	4.58	4.83	4.75	4.50	3.25	4.83	4.38	4.38
		Ave	4.52	4.76	3.99	4.71	3.89	4.58	4.74	4.56	4.68	3.87	4.88	4.47	4.47





Usability Study Findings

In general:
- High competency with completing tasks

Challenges finding:
- e-books
- reserves
- location of Music Library

Project Conclusions

- No major foundational changes needed.
- Structure and content OK.
- High level of effectiveness, efficiency, and satisfaction with predetermined tasks.
- **Overall, users are able to find what they need and are generally satisfied with the information provided on the homepage and its direct links.**

Report the Findings

- Present finding to Library Website Advisory Committee.
- Present findings to Libraries staff.
- Meet with website developers.
- Be available as developers work through prototypes.

Website Changes – Where to Begin?

What is important to users?
- Focus Groups
- Homepage Link Priorities
- Logfile Analysis

Relationships between information?
- Website Link Groupings

What is difficult to find?
- Focus Groups
- Task-Based Usability Sessions

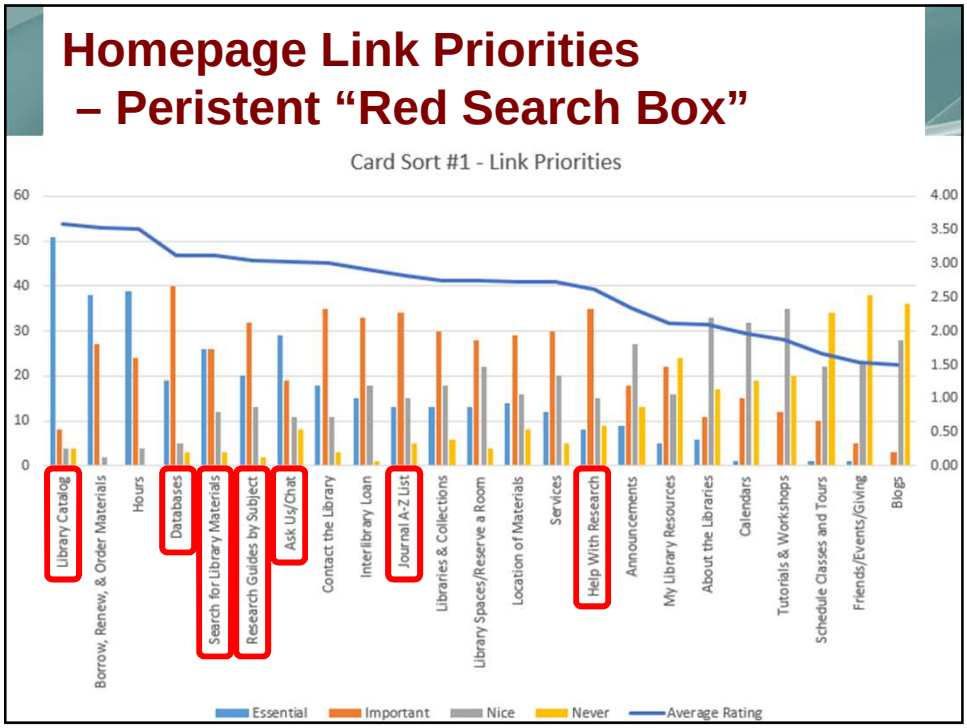
Other factors?
- Library Administration & Departmental Priorities
- Currently Accepted Website Design
- Benchmarking Against Other Websites
- Experience

Focus Groups - Findings

Primary uses of the website
- Library catalog
- Renewing materials
- Viewing hours
- Research/databases
- Reserve a room
- Staff directory

Need easier access to
- Hours
- Staff Directory
- Library Account Login

Homepage Link Priorities – Peristent "Red Search Box"



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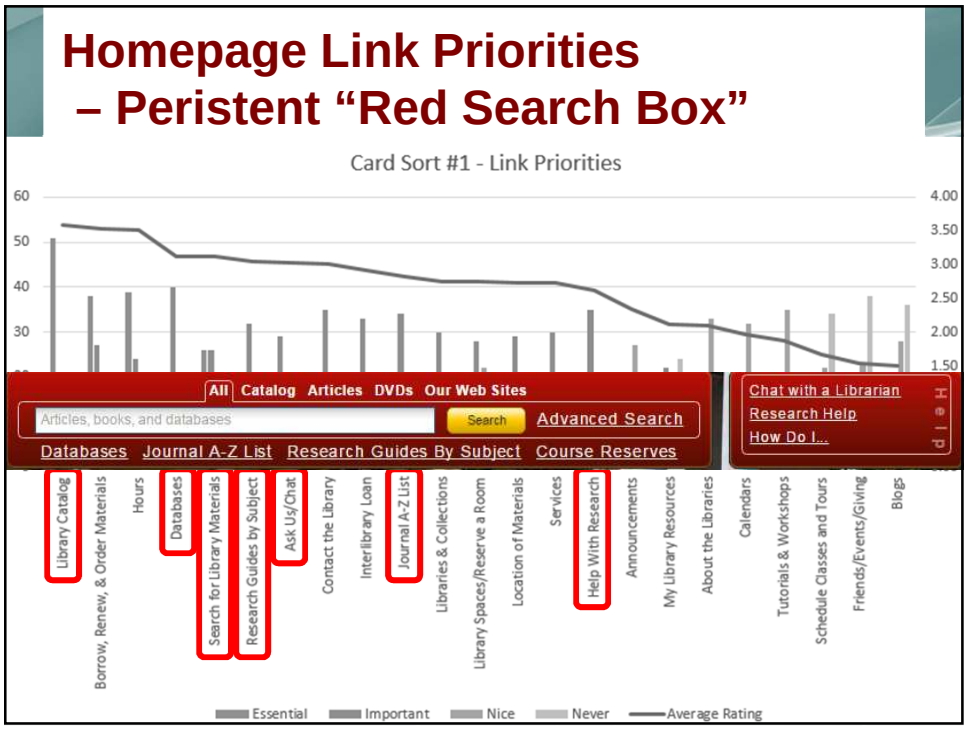
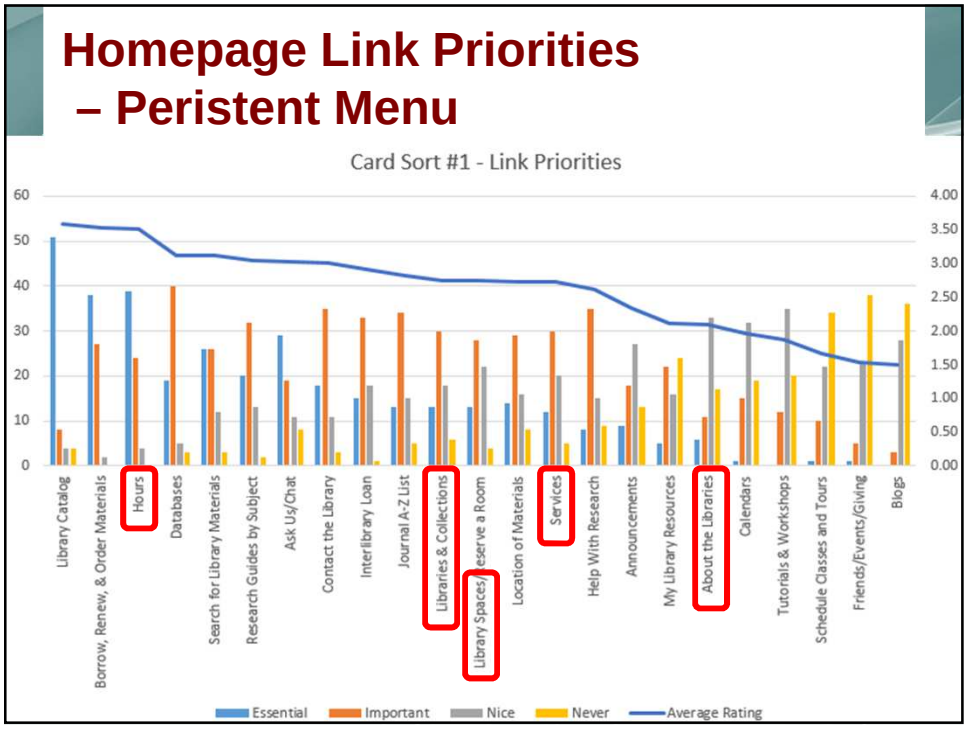
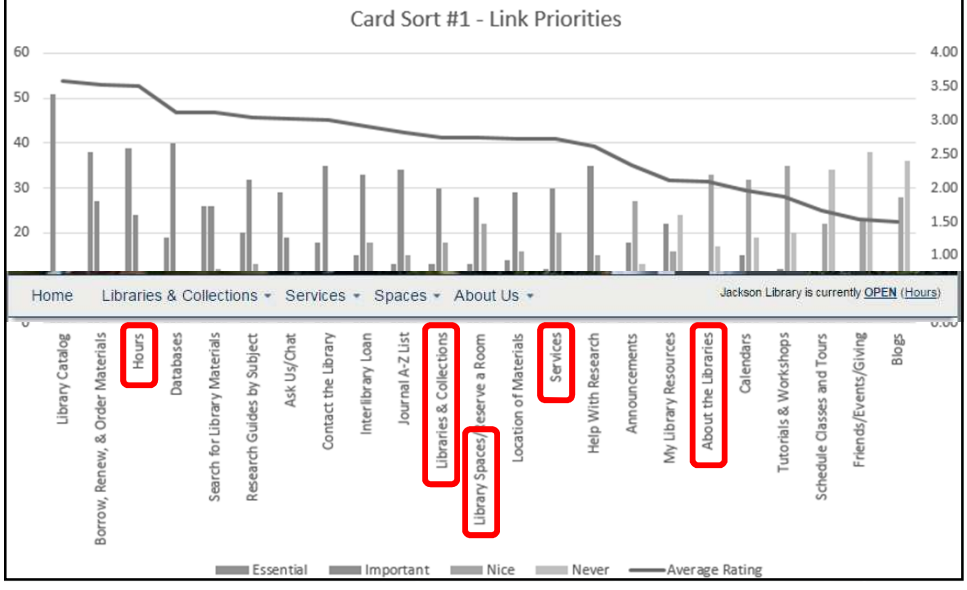


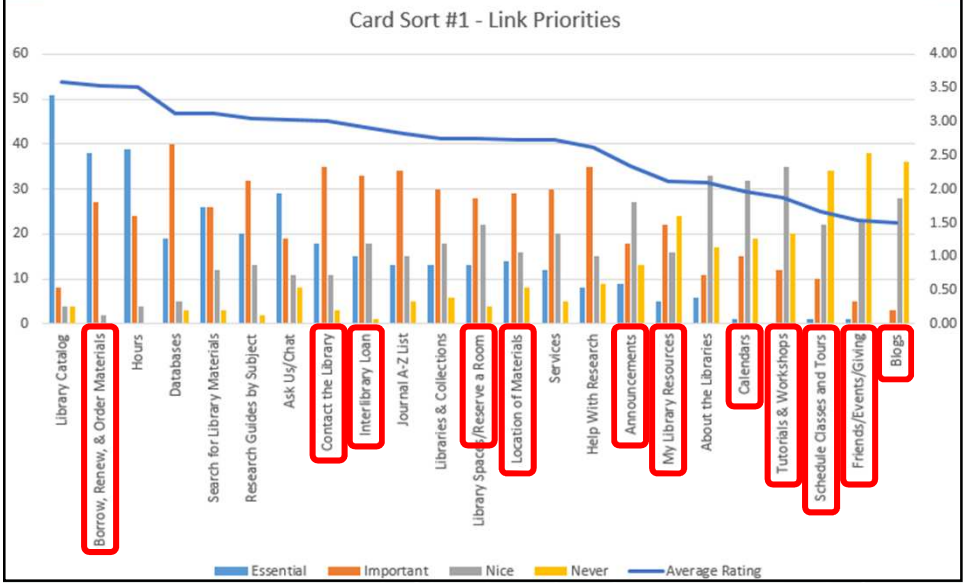
Homepage Link Priorities – Peristent Menu



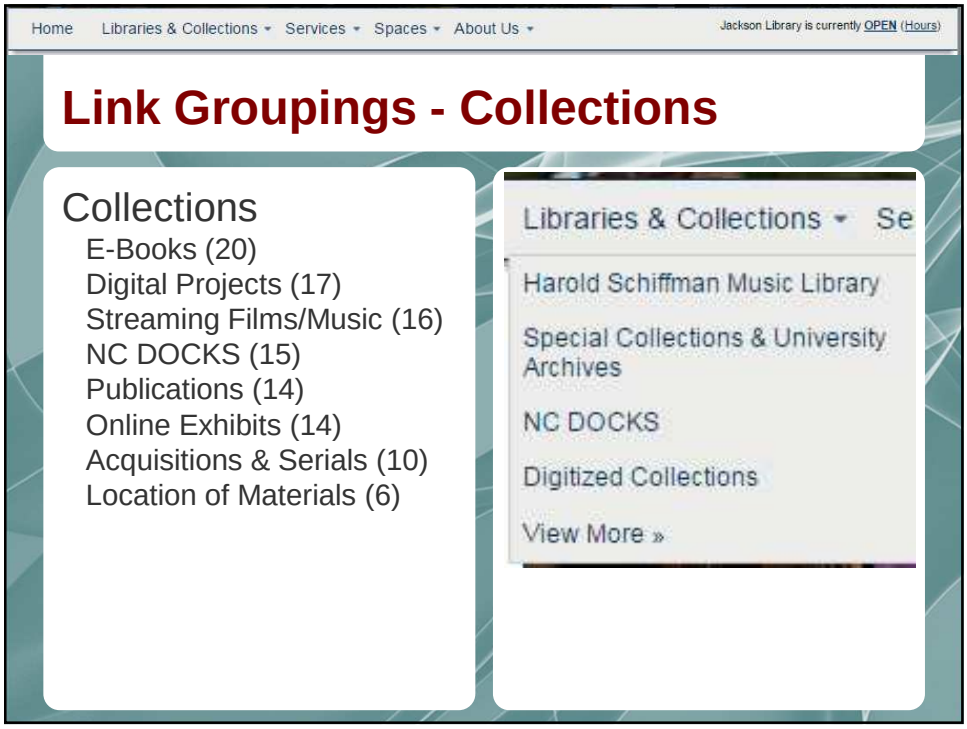
Homepage Link Priorities – Peristent Menu



Homepage Link Priorities – Not Persistent



Links	About/Contact	Calendar/Events	Collections	Library Spaces	Research	Services
NC DOCKS	1	0	15	1	10	0
Policies	25	0	0	0	0	1
e-Books	0	0	20	0	4	3
Staff Directory	26	0	0	0	0	1
Streaming Films & Music	0	1	16	0	4	6
Searching Guide/WorldCat Local	2	0	3	0	19	2
Reserves	0	0	8	1	2	15
Publications	4	1	14	1	6	0
Research Guides by Subject	0	0	1	0	25	1
Request Missing Materials	1	0	1	0	0	24
Ask Us!	17	0	0	0	1	9
Printing in the Libraries	4	0	0	2	0	21
Online Exhibits	1	10	14	1	1	0
My Library Account	6	0	0	1	0	19
Location of Materials	5	0	6	8	3	4
Interlibrary Loan	0	0	0	1	2	24
Library Catalog	1	0	6	0	16	3
Library Hours/Schedule	20	4	0	1	0	2
Journal A-Z List	0	0	7	0	20	0
Borrowing from Other Libraries	0	0	0	0	1	25
Fines & Fees	19	0	1	0	0	5
Employment Opportunities	24	0	0	0	0	3
Departmental Listing	24	0	1	1	0	1
Digital Media Commons	1	0	2	21	1	2
Databases	0	0	5	0	22	0
Copyright Information	9	0	1	0	12	5
Citation Guides	0	0	0	0	27	0
Borrowing	2	0	1	1	0	22
Acquisitions & Serials	9	0	10	2	2	3
Affiliated and Branch Libraries at UNCG	12	0	2	13	0	0
Digital Projects	1	2	17	1	4	2
Book Drop Locations	13	0	0	5	0	9


Home
Libraries & Collections
Services
Spaces
About Us
Jackson Library is currently OPEN (Hours)
Link Groupings - Collections
Collections
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View More »

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View More »

Home Libraries & Collections Services Spaces About Us Jackson Library is currently OPEN (Hours)

Link Groupings - Spaces

Library Spaces
- Digital Media Commons (21)
- Affiliated Libraries (13)
- Location of Materials (8)

Home Libraries & Collections Services Spaces About Us Jackson Library is currently OPEN (Hours)

Link Groupings - About

About/Contact
- Staff Directory (26)
- Policies (25)
- Departmental Listing (24)
- Employment (24)
- Hours/Schedule (20)
- Fines & Fees (19)
- Ask Us! (17)
- Book Drop Locations (13)
- Affiliated Libraries (12)
- Acquisitions & Serials (9)

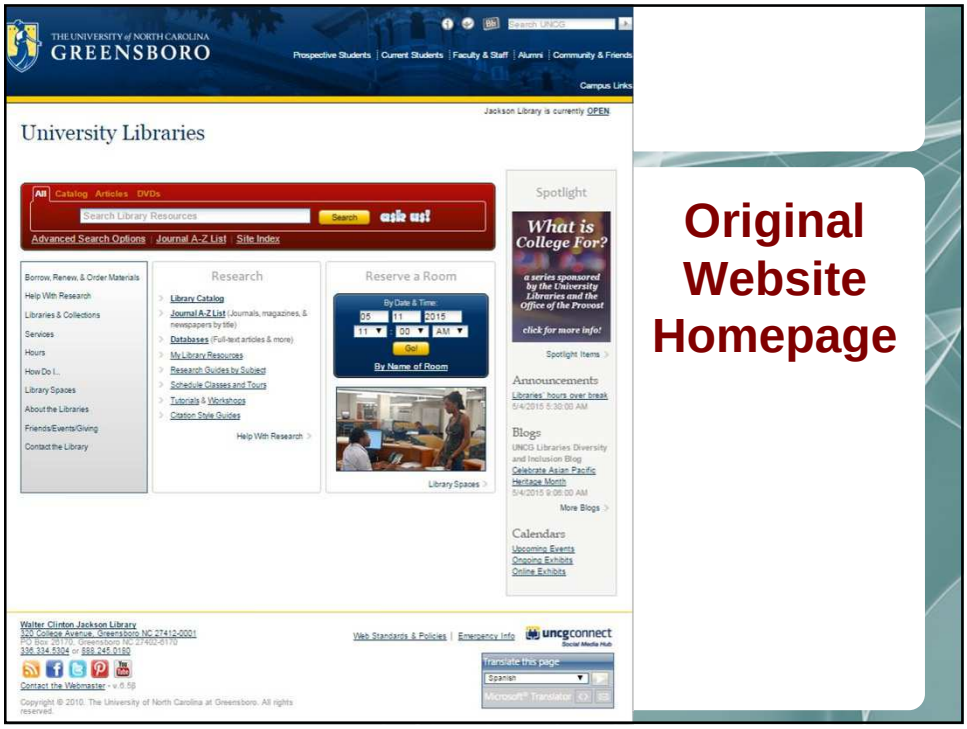
Link Groupings - Research

Research
- Citation Guides (27)
- Research Guides (25)
- Databases (22)
- Journal A-Z List (20)
- Searching Guide (19)
- Library Catalog (16)
- Copyright Info (12)

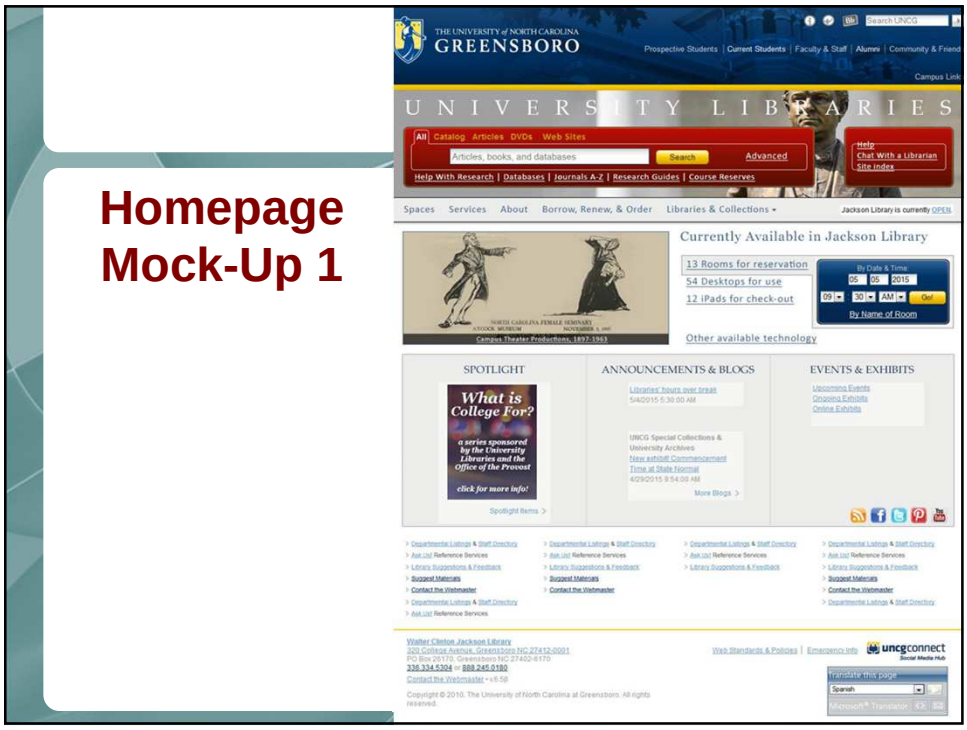
Logfile Analysis – Page Views

From Homepage
- Databases
- Research Guides
- Borrow, Renew & Order
- Library Catalog
- Hours
- How Do I …
- Spaces
- Libraries & Collections
- Help with Research
- Services
- About the Libraries
- Contact the Libraries

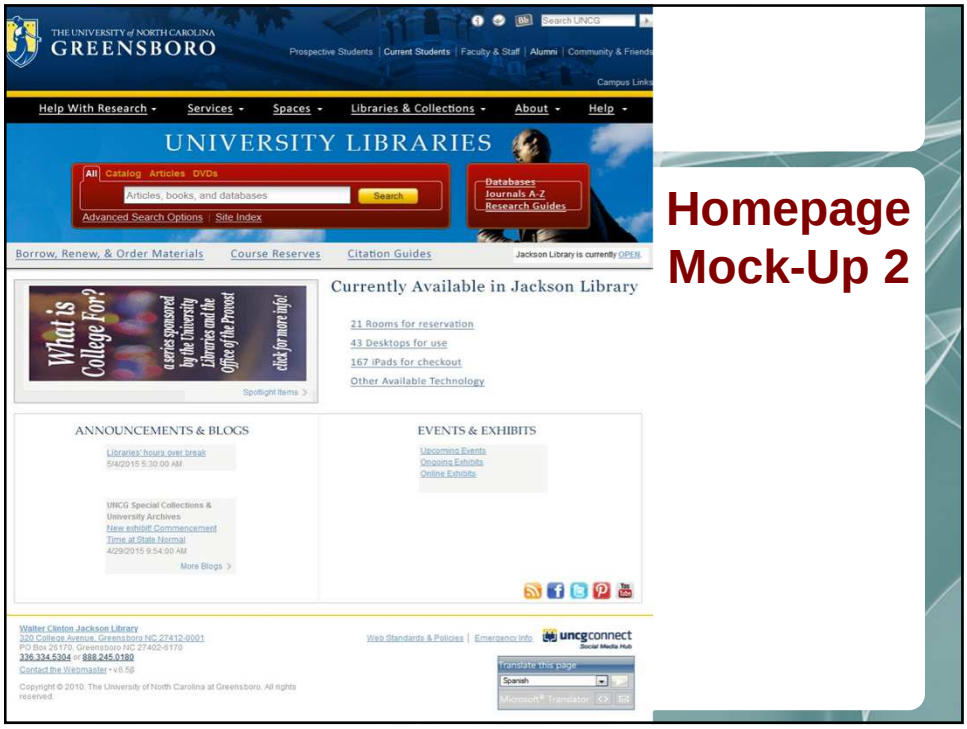
From Anywhere
- Music Library
- Web Site Index
- My Library Account
- Employment
- Staff Directory
- Digital Projects
- Special Collections/Archives
- Digital Media Commons
- Ask Us!
- Online Collections



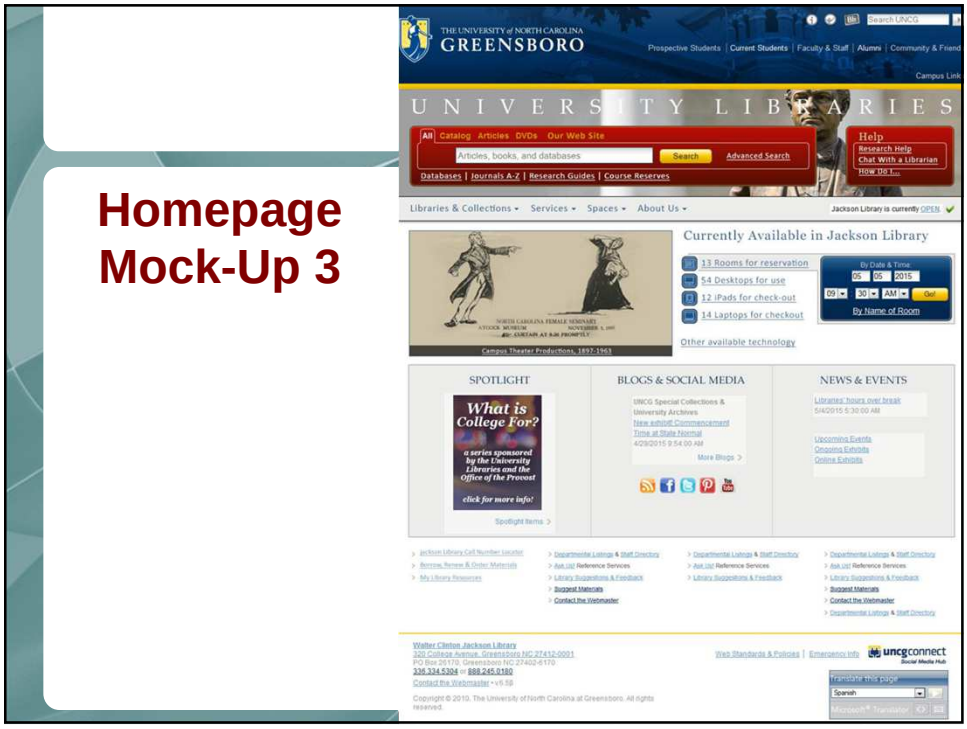
Original Website Homepage



Homepage Mock-Up 1



Homepage Mock-Up 2



Homepage Mock-Up 3

Homepage Mock-Up 4

Final Design

Old vs. New

Questions?

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