One Change @ a Time: Pop Up Usability Testing

University of Minnesota Libraries:
Sunshine Carter
Brian Conn
Cody Hanson
Wanda Marsolek
Jen Tantzen

Library Technology Conference 2016
Today’s Agenda

- Background of Usability Testing @ U of M
- Process
- Examples of Usability Testing
- Implementation/Results
- Lessons Learned
About us

- University of Minnesota Libraries
- Sub group of Web Presence Management Group (WPMG)
  - this group before you plus Danika Stegeman and Phil Dudas
- The book that started it all *Rocket Surgery Made Easy*
- What is usability testing?
- We use this stuff all day everyday, we need input from our users
- Usability Testing every month
- More home grown and not lab testing
70,963 Twin Cities Students, Faculty, and Staff

Professional
3,761

Undergraduate
28,638

Graduate
12,046

Faculty
3,709

Non-Degree
3,365

Staff (all types)
19,444
Our Process
Our process is…….

- Monthly usability testing (goal) on the calendar
- Hours of planning & follow up for primary testing plus backup options
- Two rooms booked
- Recruit evaluators (with a cushion for no-shows)
- 3 X 1-hour time slots = 3 hours of usability testing
- Evaluators mostly undergraduates

……..a lot of work
Planning: Recruiting & Incentives

- **Recruitment**
  - Quarter-sheet flyers distributed at testing site
  - Google Form signup
  - Double book to account for no-shows; excess evaluators participate in our back-up tests
  - Obtained contact info of interested future evaluators for direct inquiries

- **Incentives**
  - $15 gift card to University Bookstore
  - Only UM Students can receive
Planning: Scenario building

- Stakeholders of area/site being tested invited to planning, testing and follow-up sessions (as necessary)
- Group meets at least two weeks prior to testing to build scenarios
- Fine tuning done via collaborative documents up to day before.
- Scenario building is not as easy as it looks
  - Edit, edit, edit to fine-tune for clarity, specificity, intent
  - Even with fine-tuning, scenarios can fall flat with evaluators
  - Always opportunity to try again
Scenario sheets...

- **Scenario:** Finals are approaching and you need several hours away from your roommates to prepare for your exams.

- **Request:** Find the hours for Walter Library this coming weekend.

- **Difficulty rating:** Very Easy (1) to Very Difficult (7)
Usability Testing: The Evaluators

● Prep
  ○ Forms filled out by Evaluator
  ○ Small, private office for Evaluator and Facilitator (member of Usability subgroup)
  ○ Skype session established to share screen and audio with observers (USB Microphone needed)
● Facilitator reads introductory script
● Evaluator asked to read scenarios and think aloud throughout testing
● Evaluator fills out survey asking for demographics and overall experience
Usability Testing: The Observers

- Private room, nearby testing room
  - Observers only see the screen and hear the evaluator and facilitator via Skype
- Stakeholders and interested users invited as Observers
- Confidentiality forms completed by Observers
- Track observations in collaborative document
  - Lead notetaker (timestamped entries), along with other observer notes
  - Short notes, one observation at a time
  - Highlight confusion, frustration, comments or other issues
## Observation Notes for Session

*Take observation notes alongside your colleagues, keeping an eye on what’s already been recorded. Keep cells fairly short, one observation at a time, and skip a few cells occasionally to keep up with the lead notetaker. Highlight key points of confusion, moments of frustration, comments or other issues. We'll discuss your observations as a group after the session.*

<table>
<thead>
<tr>
<th>Lead Notetaker Timestamp</th>
<th>Lead Notetaker</th>
<th>Supporting Observer</th>
<th>Supporting Observer</th>
<th>Supporting Observer</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 16, 2015 2:15:56 PM CDT</td>
<td>S1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16, 2015 2:18:05 PM CDT</td>
<td>(still AW)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16, 2015 2:16:42 PM CDT</td>
<td>enters title in MD box, sidetracked by not being sure about author</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16, 2015 2:17:23 PM CDT</td>
<td>but ends up in ebook screen, scrolls down TOC to find module C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16, 2015 2:17:34 PM CDT</td>
<td>&quot;I like the org of this TOC; real clear&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16, 2015 2:17:49 PM CDT</td>
<td>EW prompts to download</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16, 2015 2:18:00 PM CDT</td>
<td>goes to Print, selects &quot;print to pdf&quot;; downloads scrolls around while waiting for download</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16, 2015 2:18:35 PM CDT</td>
<td>then clicks on download</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16, 2015 2:19:22 PM CDT</td>
<td>SUCCESS comments: &quot;having 2 download buttons is confusing&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April 16, 2015 2:19:53 PM CDT</td>
<td>#2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All other observers try to keep up with lead notetaker.
Usability Testing: Backup Plans

● How do you plan for no-shows?
  ○ Double-book testing time slots
  ○ Have a backup test when both show up

● Alternate usability testing we’ve planned for:
  ○ Physical space usability testing
  ○ Cloze test (aka Madlibs for your content)
  ○ Sorting of topics into categories (aka cardsorting)
Follow Up: Wrap Up & Recommendations

- Wrap up scheduled for following day (or same day)
- Discuss observations as a group
- Recommendations document created, which includes
  - Scenario
  - General observations
  - Recommendations
    - Assigned to individual for followup
Examples
Usability testing archive

- Library department websites
- MNCAT Discovery (online catalog)
  - Primo and Alma
- Card sort activity
- Physical space (geography of the library building)
Department websites and services
Specific departments and projects
Library Home Page

https://www.lib.umn.edu/
MNCAT Discovery/Primo

- UMN Libraries online catalog
  - Facets example
  - Before Usability testing
MNCAT Discovery/Primo

- UMN Libraries online catalog
  - Facets example
  - After Usability testing
MNCAT Discovery/Primo

Before

After

- Border
- Shading/bold font
- Accordian (collapsed)
- Accordian (expanded)
Results & Implementation
First things first:

We need to turn this:

SCENARIO 6

Last week, you found a great page on the Libraries’ website that told you how to save money by using library services, but you forgot to bookmark it. Find a way to search for this page.

Observations
- 2 out of 3 expected this function to be located in the top right

Recommendations
- Consider adding site search link to search box
- Consider restoring regular header
- Consider adding terminology “Libraries Site Search”
BENCHMARKING, SUPR-Q, & YOU

SUPR-Q:

1. Usability
2. Trust/Credibility
3. Loyalty
4. Appearance

<table>
<thead>
<tr>
<th>Date</th>
<th>Project</th>
<th>Usability</th>
<th>Credibility</th>
<th>Loyalty</th>
<th>Appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/16/2014</td>
<td>Homepage</td>
<td>70%</td>
<td>81%</td>
<td>85%</td>
<td>76%</td>
</tr>
<tr>
<td>12/16/2014</td>
<td>Homepage</td>
<td>77%</td>
<td>84%</td>
<td>82%</td>
<td>67%</td>
</tr>
<tr>
<td>2/19/2015</td>
<td>Homepage</td>
<td>87%</td>
<td>91%</td>
<td>73%</td>
<td>87%</td>
</tr>
<tr>
<td>3/26/2015</td>
<td>Homepage</td>
<td>92%</td>
<td>95%</td>
<td>97%</td>
<td>87%</td>
</tr>
</tbody>
</table>
Now what?
“I don’t think this is what I want. This looks like an old book and the article I’m looking for is recent.”

A shift to a generic image for journals as a material type rather than cover images was an easy win.
Help!
“What’s a subject librarian? Do I have one of those?”

Solution: monthly featured librarian on the homepage...

... and a publicity push in the form of physical trading cards.
Cardsort
How would you organize the below items into groups that make sense to you? Drag and drop the items below to create groups. You do not have to use all the groups. Groups may be as large or small as you like. Use the last group for items you are not sure where to place. Items may be moved around until you click the yellow ">>" submit button.

Items
- Researcher Support
- About us
- Instructor Support
- Dictionaries & Encyclopedias
- Journals
- Media
- Copyright
- Holt Home
- Workshops, Tutorials, & Guides
- Email Us
- Borrowing Privileges
- Subject Librarians
- E-books
- Hours & Locations
- Visitor Access
- Live Chat
- Staff Directory
- Dissertations & Theses
- Newsroom
- Fines
- Tutorials
- Workshops
- Policies
- News Sources
- Archives

Group 1

Group 2

Group 3

Group 4

Not sure where to place this item
How would you organize the below terms into groups that make sense to you? Drag and drop the items below to create groups. You do not have to use all the groups. Groups may be as large or small as you like. Use the last group for items you are not sure where to place. Items may be moved around until you click the yellow ">>" submit button.

**Items**
- Researcher Support
- About us
- Instructor Support
- Dictionaries & Encyclopedias
- Journals
- Media
- Copyright
- Help Home
- Workshops, Tutorials, & Guides
- Email Us
- Borrowing Privileges
- Subject Librarians
- E-books
- Hours & Locations
- Visitor Access
- Live Chat
- Staff Directory
- Dissertations & Theses
- Newsroom
- Fines
- Tutorials
- Workshops
- Policies
- News Sources
- Archives

**Groups**
1. Group 1
2. Group 2
3. Group 3
4. Group 4

**Not sure where to place this item**
What would you name the group of items you selected for group 1 (See items listed below.)

- About us
- Help Home
- Staff Directory
How would you organize the below terms into groups that make sense to you? Drag and drop the items below to create groups. You do not have to use all the groups. Groups may be as large or small as you like. Use the last group for items you are not sure where to place. Items may be moved around until you click the yellow ">>" submit button.

**Items**
- Borrowing Privileges
- Computers, Printing, & Scanning
- Copyright
- Course Reserves
- Fines
- InfoNow (fee-based delivery)
- Instructor Support
- Interlibrary Loan (ILL)
- Renewing Materials
- Researcher Support
- Services for Alumni
- Visitor Access
- Workshops, Tutorials, & Guides
- Archives
- Articles
- Books
- Dictionaries & Encyclopedias
- Dissertations & Theses
- E-books
- Government Information
- Journals
- Maps
- Media
- Music
- News Sources
- Subject Librarians
- About us
What would you name the group of items you selected for group 3 (See items listed below.)

* Borrowing Privileges
* Course Reserves
* Copyright
* Fines
* Interlibrary Loan (ILL)
* Renewing Materials
* Researcher Support
* Services for Alumni
* Visitor Access
* Workshops, Tutorials, & Guides
* Articles
* Books
* Dictionaries & Encyclopedias
* Multimedia
* Government Information
* Journals
* Maps
* Matrix

**Display Logic** (What would you name the group of items you selected for group 3 (See items listed below.))

Display this Question only if the following condition is met:

- If [Embedded Data - Display] is Equal to - True
1. What is your University affiliation?

<table>
<thead>
<tr>
<th>Answer</th>
<th>Response</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate student</td>
<td>4</td>
<td>80%</td>
</tr>
<tr>
<td>Graduate student</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Doctoral student</td>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td>Postdoctoral student</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Faculty</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Staff</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Instructor</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Friend of the Library</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Alumni</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Public Patron (not affiliated in any other way)</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5</td>
<td>100%</td>
</tr>
</tbody>
</table>
items below to create groups. You do not have to use all the groups. Groups may be as large or small as you like. Use the last group for items you are not sure where to place. Items may be moved around until you click the yellow ">>" submit button.
Physical Usability Testing
Physical Usability Testing

- How did UMN Libraries get from testing Library websites and web based services to testing the physical library?
- What is physical usability testing?
  - Geography of the library building
  - How are the stacks accessed
  - Signage
  - And so much more!
Physical Usability - Find the book

SCENARIO 1
Physical Usability - Observation

Observations

● P1 – Walks into the Reference Room…..”most of the books are over here” ….. using the call number end caps…..”maybe it just isn’t here right now.”

● P5 – …. uses the black overhead call number signs hanging from the ceiling….at one point he was in the Dewey shelves and realized he was in the wrong spot….ends up in the folios….has the DG’s but is in the folios…..”it appears to be missing”
Physical Usability - Recommendations

Recommendations

- Continue to test this scenario to see how many students struggle with the Quartos/Folios issue as well as the Reference Room issue.
Physical Usability - Locate scanner

SCENARIO 2
You need to make a scan of the image opposite page 57 in the book you just found in Scenario 1, locate a scanner that you can use to accomplish this task.
Physical Usability - Observation

Observations

• P1 – “Scanners are typically found near computers”……takes me into the reference room where the computers are, ... realizes this isn’t what he is looking for….goes back out to the lobby take me to the photocopier behind reserves thinking it is a scanner

• P4 - While on 3rd floor...walks to cluster of computers....”I don’t know if this is a scanner or photo copier”..looking for a USB port
Physical Usability- Recommendations

Recommendations:

Only one student successfully completed this task despite several thinking they had. Continue to test scenario. The difference between printers, photocopiers and scanners is a major point of confusion.
Physical Usability -Course Reserve

SCENARIO 5

Your instructor has placed the book *Liquidated* by Karen Ho on course reserve....... **Please check the book out. When will you need to return the book and where should you do so?**
Physical Usability- Observation

Observations

- P1 – Uses a “library resources” computer to search the item and sees that the item is “available on shelf”….writes down the call number….goes into the reference room to look for the book….

- P4 – “I would just go to the desk and check it out”…. Knew that reserves were three hour loans….learned this in the Math library … avoided buying his Statistics and Math textbooks because they were on reserve…..said his instructor promoted this on the first day of class
Physical Usability- Recommendations

Recommendations

- Students ranked this task as tied for the most difficult to complete. Three out of the five students went to a library computer, looked the item up in the catalog, and then tried to locate the book on shelf before asking for help. Continue to test.
<table>
<thead>
<tr>
<th>S#</th>
<th>Description</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
<th>P5</th>
<th>Completion %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Find book on shelf</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>2</td>
<td>Scanning</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Research help</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>4</td>
<td>Group project space</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Course Reserve</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>East Asian Library</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

| TOTAL | 66% | 66% | 66% | 100% | 50% | 70% |
## User-Perceived Difficulty (Single Ease Question)

Overall, how difficult did you find this task? (please circle your answer)

<table>
<thead>
<tr>
<th>S#</th>
<th>Description</th>
<th>P1</th>
<th>P2</th>
<th>P3</th>
<th>P4</th>
<th>P5</th>
<th>Total</th>
<th>Mean</th>
<th>Ease Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Find book on shelf</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>13</td>
<td>2.6</td>
<td>3rd</td>
</tr>
<tr>
<td>2</td>
<td>Scanning</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>18</td>
<td>3.6</td>
<td>4th</td>
</tr>
<tr>
<td>3</td>
<td>Research help</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>2.4</td>
<td>2nd</td>
</tr>
<tr>
<td>4</td>
<td>Group project space</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>22</td>
<td>4.4</td>
<td>6th (tie)</td>
</tr>
<tr>
<td>5</td>
<td>Course Reserve</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td>2</td>
<td>22</td>
<td>4.4</td>
<td>6th (tie)</td>
</tr>
<tr>
<td>6</td>
<td>East Asian Library</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>9</td>
<td>1.8</td>
<td>1st</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td>17</td>
<td>22</td>
<td>22</td>
<td>12</td>
<td>23</td>
<td><strong>96</strong></td>
<td><strong>19.2</strong></td>
<td></td>
</tr>
</tbody>
</table>
Lessons Learned
Lessons Learned

This is a lot of work.
Lessons Learned

Really a lot of work.
Lessons Learned

But it is important and worthwhile.
Lessons Learned

Recruiting students was easy.
Lessons Learned

Recruiting staff is hard.
Lessons Learned

But it’s worth it.
Lessons Learned

This is not data.
Lessons Learned

But it’s still valuable.
Lessons Learned

Our systems are deeply interconnected.
Thanks!

Questions?
mars0215@umn.edu