On-The-Fly Usability Testing:
From once a semester to once a month

Emily Daly
Duke University Libraries
March 30, 2016
Plan and goal for session

• My role at Duke
• Usability in a nutshell
• Approaches
• Sample projects
• What we’ve learned
• Q&A and sharing

GOAL: Identify one way you can collect or respond to user feedback about your website.
Assessment & User Experience

- Department formed in January 2013
- Three full-time staff + students

Charged to “work with all library departments to improve users’ experience of library services and spaces, both physical and virtual.”
Vision and Values

The organizational priorities and design principles listed below describe the vision and values followed by Duke University Libraries in maintaining our web presence.

Organizational Priorities

Goals and values for the website to ensure that it aligns with the library’s strategic objectives. Derived from the library’s vision statement, strategic plan, and related planning documents.

1. Strengthen our role as essential partners in research, teaching, and scholarly communication: be a center of intellectual life at Duke.
2. Reflect and advance the distinctive character of learning and research at Duke University.
3. Bring together our world-class content, services, people and technology in a manner harmonious with the way that our user community actually works.
4. Facilitate efficient, productive, and high-quality research.
5. Foster discovery, serendipity, and interdisciplinary collaboration.
6. Highlight our beautiful, inspiring physical spaces that encourage reflection, intellectual exploration and academic interaction.
7. Maintain flexibility in the site to foster experimentation, risk-taking, and future innovation.

Design Principles

Core design priorities to ensure that the site is developed in a way that provides an optimal user experience.

1. Put users first.
   Understand our users’ needs thoroughly, then provide the best possible user experience by focusing on those needs. Acknowledge that we are different from our users and that we have multiple categories of users whose needs vary.

2. Be credible & trustworthy.
   Verify data and information, perpetually remove outdated or inaccurate data and content, & present relevant content at the point of need. Maintain accountability for content ownership, and develop mechanisms to ensure data quality across systems.

3. Keep it simple and clear.
   Make things intuitive. Eliminate superfluous information and other distractions to allow users to complete tasks easily. Use concise, consistent language.

4. Provide clear hierarchy & visual cues.
   Give the most crucial elements the greatest prominence. Optimize pages to support the most frequent or important tasks. Group related content together and provide signposts or cues for wayfinding.

5. Avoid library jargon.
   Use language that is natural and clear to our users. Don’t force users to decipher obscure library terminology (e.g., department names and vendor system titles).

6. Design for a diverse audience using a wide range of devices.
   Ensure that content is readable by as large an audience as possible on as many devices as possible. Adhere to section 508 and WCAG accessibility guidelines. Embrace responsive design and use progressive enhancement.

7. Innovate & evolve.
   Continuously explore new ways to meet users’ current needs and anticipate future needs. Take risks and assess the outcomes.

The Duke University Libraries’ User Service Philosophy is a document that is closely related to our Vision and Values.
You are not your user

WE INTERVIEWED HUNDREDS OF USERS AND TURNED ALL OF THEIR SUGGESTIONS INTO FEATURES.

AS IT TURNS OUT, EVERY USER WE TALKED TO WAS AN IDIOT, AND THEIR DUMB SUGGESTIONS RUINED OUR PRODUCT.

IN HINDSIGHT, WE PROBABLY SHOULD HAVE TALKED TO PEOPLE WHO WORK OUTSIDE THIS BUILDING.

https://mrwweb.com/dilberts-thoughts-on-user-testing/
Get out of your bubble

• Analytics and log analysis
• Click heat maps
• Surveys and feedback forms
• Interviews
• Focus groups
• **Usability testing**
A quick overview (or review)

The effectiveness, efficiency and satisfaction with which specified users achieve specified goals in particular environments.
- ISO 9241

• Effective
• Efficient
• Engaging
• Error tolerant
• Easy to learn
Learn from the best

Jakob Nielsen, Nielsen Norman Group

Steve Krug, Advanced Common Sense

Jared Spool, User Interface Engineering
The manuals

Steve Krug

DON'T MAKE ME THINK
Revised Edition
A Common Sense Approach to Web Usability

Steve Krug

ROCKET SURGERY MADE EASY
The Do-It-Yourself Guide to Finding and Fixing Usability Problems
Getting started
So, what would you do next?

I think I'd click here...

So, what would you do next?

I didn't see that coming.

a Computer  b External monitor and keyboard  c Mouse  d Microphone  e Speakerphone

a Computer  b Projector  c Speakers  d Snacks  e Speakerphone
“The small, non-honkin’ report”

“After the debriefing, it’s a good idea to summarize [the] testing in a short email. By short, I mean it should take no more than two minutes to read—and no more than 30 minutes to write. Think bullet points, not paragraphs.”

Steve Krug, *Rocket Surgery Made Easy*
Pros & Cons

• Good for building a culture of usability
• More eyes and minds on the problems
• Investment of staff time
• Longer tests, likely fewer users
• Risk of scheduling issues
• Risk of tech glitches
“In the beginning, though, usability testing was a very expensive proposition. You had to have a usability lab with an observation room behind a one-way mirror, and at least two video cameras so you could record the users’ reactions and the thing they were using. You had to recruit a lot of people so you could get results that were statistically significant. It was Science. It cost $20,000 to $50,000 a shot. It didn’t happen very often.”

- Steve Krug, *Don’t Make Me Think*
Planning what to test

- Libraries’ website team provides direction
- Work with staff throughout the library to determine interfaces and services to test
- Focus on tasks rather than test process!
Developing scripts

• Consider the critical things users need to do
• Turn those into scenarios
• Two – four tasks tops
• Demographics questions
• Wrap up with users’ general reactions and feedback (“What two things about this site do you like most? Least?”)
• ALWAYS pilot!
Sample scenarios

“Think of a topic you’re currently interested in or researching for a class, project, or personal interest. Use this page to search for books, articles, or other resources on your topic.”

“You’ve heard Duke Libraries provides access to RefWorks, and you’d like to learn more about this tool. Show me how you’d locate info about RefWorks using this site.”
Recruiting participants

- Aim for primary target audience if possible
- But don’t worry too much about “representative sample”
- Five - eight participants is typically sufficient

Recruit loosely and grade on a curve.
— Steve Krug, *Don’t Make Me Think*
Usability test report: Booking project rooms in The Edge

Recommendations to consider

1. Make Project Spaces webpage less text-heavy, and draw attention to key information and links related to reserving spaces.
2. Include link to book project rooms for one-time use on Project Spaces webpage.
3. Add information about individual Project Rooms to reservation system (e.g., photo, room size; see http://library.duke.edu/using/room-reservations/perkins-bostock). 
4. Increase size of dates and timeslots on iPad, or make it more obvious that it is possible to zoom in on calendar.
5. Change colors in reservation system from blue and green to gray and green (Note: Most students understood that green squares indicated available spaces, but two hesitated when completing their reservations).
6. Ensure ipads in The Edge are checked frequently and well maintained; we discovered 5 broken styluses and 3 iPads without internet connections during this study.
7. Add “sign out” function to touchscreen kiosk to assure students that their information is secure.
8. Optimize the room reservation pages and reservation system for iPads and phones.
9. Market room reservation system to students through DSG email blast; indicate that all students are eligible to reserve library spaces for one-time use (Note: One student mentioned this explicitly; another told us he did not know students could reserve spaces in the Libraries).

Background

Emily Daly and Emma Boettcher conducted usability testing on The Edge project room reservation system (for short-term use) in the Perkins lobby on September 2, 2015 from 12:30 pm to 1:30 pm. The test consisted of a short set of background questions, one task, and five post-test questions. The test lasted approximately 5-10 minutes.

A very similar version of this test was conducted in March 2015; this follow-up study tested changes made as a result of the March study. See Appendix for full test script.
Questions we hoped to answer through the test included the following:

- What assumptions do people make about how to reserve rooms in the Edge?
- If they attempt this process online, are they able to find the information they need easily? Is the Project Spaces webpage about how to reserve rooms clear and informative? Is the DUL room reservation webpage clear and informative?
- Is the process of using the iPads or kiosk user-friendly and easy?
- What do people find difficult about the process?
- What would they change?
- Is the process of using the iPads or kiosk user-friendly and easy?

The two students who used the iPads had issues with broken styluses - one student tried two different iPads until he found a stylus that worked, and the other used his finger. One student commented that the timeslots and calendar dates were too small, and he also had to lean down to see the screen. The student who used the kiosk found it easy to use. Most students skimmed or skipped over the policies.

What do people find difficult about the process?

- Finding an available time
- Long-term reservations are available on The Edge project spaces page, but short-term aren’t
- Broken styluses for the iPads
- Leaning down to use the iPad
- Deciphering details in the small calendar on the iPad

What would they change?

One student wanted an app; another wasn’t aware that they could be reserved online and wanted an online reservation system. One student commented that the Project Spaces page had too much text.
WebX-Usability Studies

To-do lists

Add a to-do list

Collection Guides

1. Make the “Request for Onsite Use” option more prominent. 1 comment
2. Explore additional ways of making it clear that users can access a collection in person by placing a request online. 2 comments
3. Have Subject Headings collapsed by default so they do not come up during an initial Ctrl-F search of the page. 1 comment
4. Explain the purpose of the Subject Headings. Open the resulting catalog search in a new tab/page. 2 comments
5. Make the “Ask a Librarian” link easier to find. 1 comment
6. Streamline the “Ask Us” page. Clarify that users will receive a response in a reasonable amount of time. 1 comment
7. Explore feasibility of implementing a chat service 2 comments
8. Rename “Series Quick Links” to something more meaningful to new users. 1 comment
9. Move “Descriptive Summary” below “Contents of the Collection” section and consider renaming “Descriptive Summary.” 2 comments
10. Provide resources to help novice users make sense of collection guides and archival collections, such as an FAQ. 2 comments

Add a to-do

Show to-dos assigned to
Anyone

Show to-dos that are due
Anytime

See completed to-dos

Current to-do lists
- Booking project rooms in The Edge
- Collection Guides
- Digital Collections
- LibGuides 2.0
- The Edge (Sept 2, 2015)
- WorldCat Discovery

Duke University
Lessons learned

1. Write authentic test scenarios
2. Pilot!
3. Make changes to tasks and the site you’re testing BEFORE you test
4. Document recommendations
5. Engage as many staff as possible
6. Focus efforts on tasks and recommendations – NOT the testing process
7. Make changes and test again
Vision and Values

The organizational priorities and design principles listed below describe the vision and values followed by Duke University Libraries in maintaining our web presence.

Organizational Priorities

*Goals and values for the website to ensure that it aligns with the library's strategic objectives. Derived from the library's vision statement, strategic plan, and related planning documents.*

1. Strengthen our role as essential partners in **research, teaching, and scholarly communication**: be a center of intellectual life at Duke.
2. Reflect and advance the **distinctive character** of learning and research at Duke University.
3. **Bring together** our world-class content, services, people and technology in a manner harmonious with the way that our user community actually works.
4. Facilitate efficient, productive, and **high-quality research**.
5. Foster **discovery, serendipity, and interdisciplinary collaboration**.
6. Highlight our **beautiful, inspiring physical spaces** that encourage reflection, intellectual exploration and academic interaction.
7. Maintain **flexibility** in the site to foster experimentation, risk-taking, and future innovation.

Design Principles

*Core design priorities to ensure that the site is developed in a way that provides an optimal user experience.*

1. **Put users first.**
   - Understand our users’ needs thoroughly, then provide the best possible user experience by focusing on those needs. Acknowledge that we are different from our users and that we have multiple categories of users whose needs vary.

2. **Be credible & trustworthy.**
   - Verify data and information, perpetually remove outdated or inaccurate data and content, & present relevant content at the point of need. Maintain accountability for content ownership, and develop mechanisms to ensure data quality across systems.

3. **Keep it simple and clear.**
   - Make things intuitive. Eliminate superfluous information and other distractions to allow users to complete tasks easily. Use concise, consistent language.

4. **Provide clear hierarchy & visual cues.**
   - Give the most crucial elements the greatest prominence. Optimize pages to support the most frequent or important tasks. Group related content together and provide signposts or cues for wayfinding.

5. **Avoid library jargon.**
   - Use language that is natural and clear to our users. Don’t force users to decipher obscure library terminology (e.g., department names and vendor system titles).

6. **Design for a diverse audience using a wide range of devices.**
   - Ensure that content is readable by as large an audience as possible on as many devices as possible. Adhere to section 508 and WCAG accessibility guidelines. Embrace responsive design and use progressive enhancement.

7. **Innovate & evolve.**
   - Continually explore new ways to meet users' current needs and anticipate future needs. Take risks and assess the outcomes.

The Duke University Libraries’ **User Service Philosophy** is a document that is closely related to our Vision and Values.
Assessment & User Experience

Mission
The Assessment & User Experience (AUX) Department works with all library departments to improve users' experience of library services and spaces, both physical and virtual. AUX staff engage in the following:

- Provide leadership for addressing user needs across Duke University Libraries
- Evaluate and improve the content, design, and organization of the Libraries' online presence
- Study library users' needs and priorities
- Proactively identify and relieve "pain" points users may encounter in their work in the libraries
- Collect and analyze data to evaluate Duke University Libraries operations and understand user needs

Usability Studies
Observational and Wayfinding Studies
Surveys
Other Studies

Departmental Initiatives
- Make iterative, assessment-driven improvements to the libraries' website and discovery interfaces
- Perform observational studies to better understand how patrons use library spaces and services
- Improve wayfinding through library spaces
- Coordinate the libraries' student advisory boards and responding to students' suggestions
- Lead the team (WebX) that manages web interfaces and implements changes to the Libraries' web presence
- Maintain a user-centered vision for the Libraries' web sites
- Lead the Assessment Core Team (ACT), charged with building a culture of assessment in the Libraries
- Report statistics on library collections, expenditures, facilities, and services to external organizations (e.g., ARL, ACRL, IPEDS, ASERL)

Find reports and scripts at library.duke.edu/about/depts/assessment-user-experience
Questions and sharing

• Questions about our work at Duke?
• What works well at your institutions?
• What do you hope to refine or put into practice after today’s session?
Interested in learning more?

Consider signing up for an LJA Course:

• Do-it-yourself usability testing, http://libraryjuiceacademy.com/001-usability-testing.php (**starts Monday!**)  

• Learn about related courses at http://libraryjuiceacademy.com/certificate-ux.php
Thanks for listening!

Contact me with questions or to talk about UX:
Emily Daly, emily.daly@duke.edu