

Library Website Development & Maintenance

PRESENTER:

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Usability 101

INTRODUCTION TO USABILITY

SOURCE:

[HTTP://WWW.NNGROUP.COM/ARTICLES/USABILITY-101-INTRODUCTION-TO-USABILITY/](http://www.nngroup.com/articles/usability-101-introduction-to-usability/)

What is Usability?

Usability is a **quality attribute** that assesses how easy user interfaces are to use.

The word "usability" also refers to methods for improving ease-of-use during the design process.

5 Components of Usability

Learnability:

- How easy is it for users to accomplish basic tasks the first time they encounter the design?

Efficiency:

- Once users have learned the design, how quickly can they perform tasks?

Memorability:

- When users return to the design after a period of not using it, how easily can they re-establish proficiency?

Errors:

- How many errors do users make, how severe are these errors, and how easily can they recover from the errors?

Satisfaction:

- How pleasant is it to use the design?

Utility

Utility refers to the design's functionality: Does it do what users need?

Usability and utility are equally important and together determine whether something is useful: It matters little that something is easy if it's not what you want. It's also no good if the system can hypothetically do what you want, but you can't make it happen because the user interface is too difficult. To study a design's utility, you can use the same user research methods that improve usability.

Definition of **Utility** = whether it provides the **features you need**.

Definition of **Usability** = how **easy & pleasant** these features are to use.

Definition of **Useful** = **usability + utility**.

Why is Usability Important?

On the Web, usability is a necessary condition for survival.

If a website is difficult to use, people **leave**.

If the homepage fails to clearly state what a company offers and what users can do on the site, people **leave**.

If users get lost on a website, they **leave**.

If a website's information is hard to read or doesn't answer users' key questions, they **leave**.

Note a pattern here?

There's no such thing as a user reading a website manual or otherwise spending much time trying to figure out an interface.

There are plenty of other websites available; leaving is the first line of defense when users encounter a difficulty.

How to Improve Usability

There are many methods for studying usability, but the most basic and useful is **user testing**, which has 3 components:

- Get hold of some **representative users**, such as customers for an e-commerce site or employees for an intranet (in the latter case, they should work outside your department).
- Ask the users to perform **representative tasks** with the design.
- **Observe** what the users do, where they succeed, and where they have difficulties with the user interface. Shut up and let the users do the talking.

How to test your design

It's important to test users individually and let them solve any problems on their own.

If you help them or direct their attention to any particular part of the screen, you have contaminated the test results.

To identify a design's most important usability problems, testing 5 users is typically enough.

Rather than run a big, expensive study, it's a better use of resources to run many small tests and revise the design between each one so you can fix the usability flaws as you identify them.

Iterative design is the best way to increase the quality of user experience.

The more versions and interface ideas you test with users, the better.

User Testing vs Focus Group

User testing is different from focus groups, which are a poor way of evaluating design usability

Focus groups have a place in market research, but to evaluate interaction designs you must closely observe individual users as they perform tasks with the user interface.

Listening to what people say is misleading: you have to watch what they actually do.

When to Work on Usability

- Before starting the new design, **test the old design** to identify the good parts that you should keep or emphasize, and the bad parts that give users trouble.
- **Test other library's designs** to get cheap data on a range of alternative interfaces that have similar features to your own.
- Conduct a **field study** to see how users behave in their natural habitat.
- Make **paper prototypes** of one or more new design ideas and test them. The less time you invest in these design ideas the better, because you'll need to change them all based on the test results.
- Refine the design ideas that test best through **multiple iterations**, gradually moving from low-fidelity prototyping to high-fidelity representations that run on the computer. Test each iteration.
- Inspect the design relative to **established usability guidelines** whether from your own earlier studies or published research.
- Once you decide on and implement the **final design**, test it again. Subtle usability problems always creep in during implementation.

Usability Examples

<http://www.csfieldguide.org.nz/HumanComputerInteraction.html>

10 Usability Heuristics for User Interface Design

SOURCE: [HTTP://WWW.NNGROUP.COM/ARTICLES/TEN-USABILITY-HEURISTICS/](http://www.nngroup.com/articles/ten-usability-heuristics/)

Visibility of system status

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

Match between system and the real world

The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

User control and freedom

Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

Error prevention

Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

Recognition rather than recall

Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

Flexibility and efficiency of use

Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

Aesthetic and minimalist design

Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

Help users recognize, diagnose, and recover from errors

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

Help and documentation

Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Visibility of system status

The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

Examples of the 10 heuristics in Web Applications

SOURCE: [HTTP://DESIGNINGWEBINTERFACES.COM/6-TIPS-FOR-A-GREAT-FLEX-UX-PART-5](http://designingwebinterfaces.com/6-tips-for-a-great-flex-ux-part-5)



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Usability Lab

PLEASE FORM GROUPS OF 2-3 PEOPLE

TIME: ~20 MINUTES

Usability Lab Websites

1. University of Idaho Libraries
 - <http://www.lib.uidaho.edu/index.html>
2. Memorial University Libraries
 - <http://www.library.mun.ca/>
3. Queens University Libraries
 - <http://library.queensu.ca/>
4. Saint Mary's University Library
 - <http://www.smu.ca/academics/the-patrick-power-library.html>
5. Dalhousie University Libraries
 - <http://libraries.dal.ca>
6. Jimma University Libraries
 - <http://www.ju.edu.et/library/>

University of Idaho Libraries

The screenshot shows the University of Idaho Library website. At the top, there is a navigation bar with links for "University of Idaho", "Undergraduates", "Graduate Students", "Faculty", "Help", "Hours", and "Account". Below this is the main header with the "University of Idaho Library" logo and the text "Hours: Open today 7:30am - 9:00pm". A secondary navigation bar includes "Find", "Services", "Collections", "About", and "Quick Links". The main content area features a large banner image of a library building with a search bar overlaid. The search bar contains the text "Search the catalog" and a "Go" button. Below the search bar, there are links for "Popular: Academic Search Premier • JSTOR • Lexis-Nexis • Web of Science" and "Find: Articles & Databases • Journals • Research Guides • Reserves". A "Go to a specific database" dropdown menu is also visible. Below the banner, there is a "Need Help?" section with buttons for "Call", "Email", "Text", "Meet", and "Chat is online". The footer contains "Recent Tumblr Posts" with two entries from "Uldaho Library @uidlibrary" dated 14 May and 8 May. To the right of the Tumblr posts is a "Library News" section with a list of news items: "Logging Day in the UI Library Features Artifacts, Lectures, Readings, and Film", "Digital Initiatives Announces Online Access to Latah County Oral History Collection", and "University of Idaho Contributes to National Study of Academic Libraries". At the bottom right, there is a "Search the library website" search bar with a "Search" button. The footer also includes contact information for the University of Idaho Library: "875 Perimeter Drive MS 2350, Moscow, ID 83844-2350, (208) 885-6559".

Memorial University Libraries

The screenshot shows the Memorial University Libraries website. At the top is the Memorial University logo and the text "Memorial University Libraries". Below this is a navigation menu with links for "Research Tools", "Using the Libraries", "Our Libraries", "About Us", "My Stuff", and "Ask Us". A search bar is prominently displayed with the placeholder text "Find Articles, Books, & More in Summon" and a "Search" button. Below the search bar are links for "Catalogue", "Articles", and "Reserves".

The main content area is divided into several sections:

- Popular:** Style Guides: MLA, APA; Access from Home; Renew my Books; Annotated Bibliographies.
- Help:** Chat with Us; Subject Guides; What's My PIN?; Contact Us.
- Research Tools:** Articles; Catalogue; Ebooks; More.
- NL Resources:** Digital Archives; Research Repository; Archives/Special Collections; Centre for Newfoundland Studies.

There are also sections for "News and Events" and "Hours".

News and Events: A blue box contains the text "Update (June 16th, 2015): Memorial University Libraries Collections Review 2015-16".

Hours: A table lists the hours for various departments. For unplanned closures, users are directed to "MUN Cancellations".

Department	Hours	More
QEII	Mon-Thu 8:00am - 9:45pm	More
Health Sciences	Mon-Thu 8:00am - 11:30pm	More
Grenfell	Mon-Fri 8:00am - 5:00pm	More
Marine Institute	Mon-Thu 8:00am - 6:45pm	More
Music	Mon-Thu 10:00am - 1:00pm	More
Education	Mon-Thu 8:00am - 7:00pm	More
CNS	Mon-Thu 8:30am - 5:45pm	More

At the bottom of the page, there is a "Contact Us" link and social media icons for YouTube, Twitter, and Facebook.

Queens University Libraries

The screenshot shows the Queens University Libraries website homepage. At the top, there is a navigation bar with the library logo and tagline "charting paths to discovery". Below this is a search bar with a "Search" button and links for "Advanced Search", "What is Summon?", and "Send Feedback". The main content area is divided into several sections: "Research by Subject" with a grid of subject categories, "Library Building Hours Today" with a table of hours for various libraries, and "Library News" with a list of recent news items. A red banner at the bottom promotes the "Queen's Learning Commons".

Library
charting paths to discovery

Connected from Off-Campus | Contact Us | Site Search

Find Information - How-to & Help - Services - Locations & Hours - Giving - About Us - My Account -

Summon QCAT Catalogue Databases Journals A-Z Library Website

Search Summon for articles, books, media and more:

Advanced Search » What is Summon? | Send Feedback

Course Reserves & Exams RefWorks RACER (Interlibrary Loan)

Research by Subject
Specialized and recommended research tools.

Formats	Articles	Music
Social Sciences	Books & E-Books	Newspapers
Arts & Humanities	Book Reviews	Online Dictionaries & Encyclopedias
Engineering & Science	Data & Statistics	Patents
Health Sciences	Dictionaries & Thesauri	Primary Sources
Education	Government Information	Rare Books
Law	Images	Standards & Codes
Other	Journals	Technical Reports
All Subjects A-Z	Legal Information	Theses & Dissertations
	Maps & Geospatial Data	Video Collections
	Microfilm	

Library Building Hours Today

Bracken Health Sciences Library:	8:30 am - 4:30 pm
Education Library:	8:15 am - 6:30 pm
Engineering & Science Library:	8:30 am - 4:30 pm
Jordan Special Collections and Music Library:	8:30 am - 4:30 pm
Lederman Law Library:	8:30 am - 4:30 pm
Queen's University Archives:	8:30 am - 4:30 pm
Stauffer Library:	8:00 am - 8:00 pm

[Hours / Location details](#)

Library News

- Queen's Library Services Represented at SOAR
- Web Redesign - Environmental Scans
- New local momentum for data analytics

[New Databases](#) | [New Books](#) | [Trial Databases](#)

Queen's Learning Commons

Queen's University Library is committed to an inclusive library community with accessible goods, services, and facilities that respect the dignity and independence of persons with disabilities.

Library Home | Mobile Site | Library Locations | Contact Us | Website Feedback | About Us | Site Search

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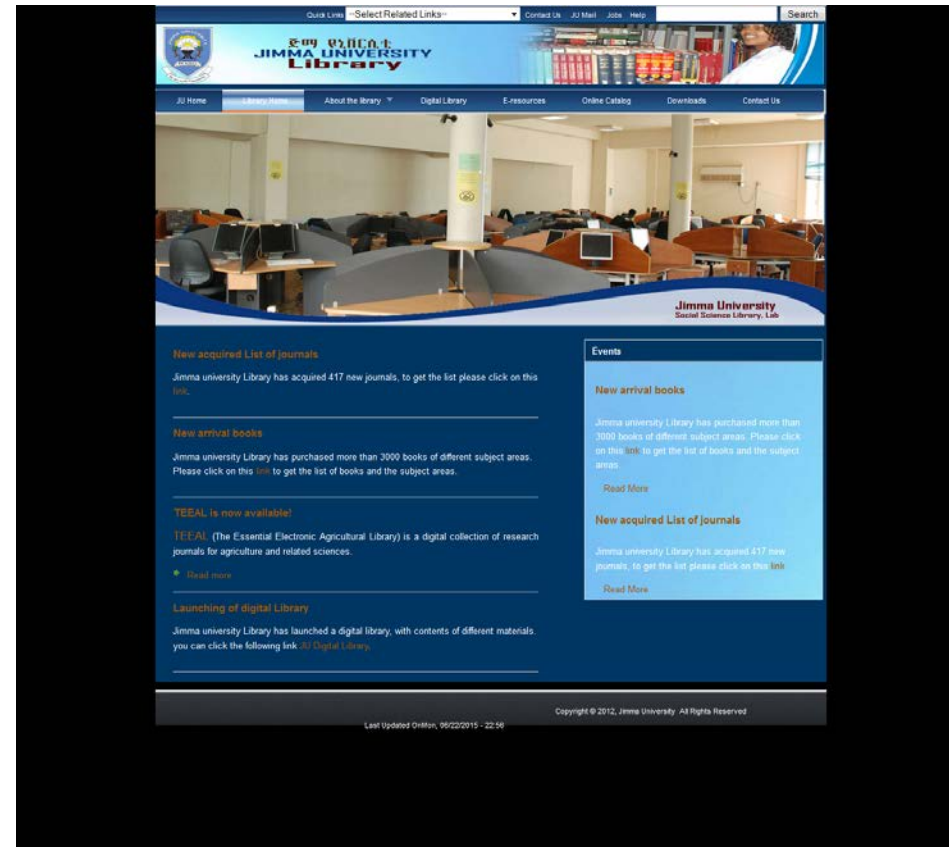
Saint Mary's University Library

The screenshot displays the Patrick Power Library website. At the top, a navigation bar includes links for Future Students, Academics, Campus Life, International, Research, Alumni, About SMU, and Giving. The main header features the library's name and a search bar. Below this, a section titled "Start your Research here." offers options to view "All", "Articles", or "Books" and provides a "Browse our Subject Guides" dropdown menu. A secondary navigation bar lists categories such as "Newest Classics", "E-books", "Databases A-Z", "Journals A-Z", and "Statistics". The central area is divided into four panels: "Live Help" (with a chat icon), "Ask Us!" (with a question mark icon), "Current Hours" (listing dates from June 22 to August 20), and "What's New" (listing events like "Confession or Board of Censors" and "Extended Hours Begin"). A right-hand sidebar contains a list of "Academic Programs" and "Research Resources". The footer includes the university's motto "One University. One World. Yours.", social media icons, and contact information for the library's location at Saint Mary's University in Halifax, Nova Scotia.

Dalhousie University Libraries



Jimma University Libraries



Information Architecture

SOURCE: [HTTP://WWW.PRINCETON.EDU/COMMUNICATIONS/SERVICES/DOCS/IAGUIDE2.PDF](http://www.princeton.edu/communications/services/docs/iaguide2.pdf)



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