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Library Terms That Users Understand

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Library Terms
That Users Understand

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SUMMARY

This document is intended to help library web developers decide how to label key resources and services in such a way that most users can understand them well enough to make productive choices. It compiles data from usability studies evaluating terminology on library websites, and suggests test methods and best practices for reducing cognitive barriers caused by terminology.

Key findings from the **51 usability studies** examined:

- The average user success rate for finding journal articles or article databases is **52%** (in 20 tests at 14 libraries reporting this information). Narrative descriptions suggest that terminology is a major factor.

- Terms most often cited as being misunderstood or not understood by users:

Acronyms & brand names	*Periodical or Serial*
Database	*Reference*
Library Catalog	*Resource*
E-journals	Subject categories
Index	such as *Humanities*
Interlibrary Loan	or *Social Sciences*

- Terms most often cited as being understood well enough to foster correct choices by users:

  Find books, *Find articles*, and other combinations using natural language "target words"

  Terms accompanied by additional words or mouseovers that expand on their meaning.

BEST PRACTICES

The data revealed by usability studies show some definite patterns. While these don't resolve all ambiguities, they do point to some best practices in this area:

1. **Test** to see what users do and don't understand, and what terms they most strongly relate to. Use test data from other libraries whose user populations resemble your own. Share your own data with others.

2. **Avoid - or use with caution - terms that users often misunderstand.** If you must use terms frequently cited as problematic in usability studies, such as acronyms, brand names, *Catalog*, or *Database*, expect that significant number of users will not interpret them correctly.

3. **Use natural language equivalents on top-level pages**, such as *Borrowing from Other Libraries* instead of *Interlibrary Loan*, or a *Find Books* option in addition to the library catalog name. Whenever possible, include "target words", such as *Book* or *Article*, that correspond to the end product the user is seeking. When needed, introduce more precise technical terms on lower-level pages.

4. **Enhance or explain potentially confusing terms.** Use additional words and/or graphics to provide a meaningful context. Where appropriate, use [mouseovers](#) or [tooltips](#) -- but don't count on users pausing to read them. Provide glossaries of library terms, or "What's this?" explanations of individual terms.

5. **Provide intermediate pages** when a top-level menu choice presents ambiguities that can't be resolved in the space available. For example, have your *Find Books* link lead to a page offering the local catalog, system or consortium catalog, e-books, WorldCat, etc.

6. **Provide alternative paths** where users are likely to make predictable "wrong" choices. For example, put links to article databases in your online catalog and on your "Find Journals" page.

7. **Be consistent** to reduce cognitive dissonance and encourage learning through repetition. Use terms consistently throughout your website, and if possible in printed materials, signage, and the actual names of facilities and services.

TEST METHODS

Capturing terminology-related comments from focus groups
ADVANTAGES: Doesn't require a separate activity; may generate group consensus or differing opinions.
ISSUES: Not systematic; captures opinions not behavior.

Capturing terminology-related behavior and comments from user observation tests
ADVANTAGES: Doesn't require a separate activity; captures actual user behavior.

ISSUES: May be difficult to separate terminology-related problems from other design issues.

Capturing terminology from web site search logs

ADVANTAGES: Captures actual terms users have in mind when using a site.
ISSUES: Many such terms may reflect searches intended for the library catalog, article databases, etc. (which in itself tells us something significant).

Link choice survey (preference test)

Participants are given a series of task scenarios and asked which of several possible, approximately synonymous links they would choose to accomplish each task. Options include asking for their first and second choices, and asking them what they think the link names mean.

» Online survey example from West Texas A&M University
» Online survey form and results from UC Berkeley
» Results of a paper survey from UC Berkeley

ADVANTAGES: Directly addresses issues about alternative names for any given link.
ISSUES: Presents link alternatives without web page context; subject to bias based on the scenario wording and the link names currently in use.

Link choice test (in web page context)

Participants are given a set of task scenarios and a list or mockup showing all the links they would see on the page in question.

» Example using a mockup from UC Berkeley

ADVANTAGES: Yields data on participants' likely link choices given the full array of options on the web page.
ISSUES: Results may be affected by whether participant is looking at a list or a mockup.

Link naming test

Participants are given a list of current or proposed link names, and asked to state their expectation for what each link would lead to. If the test is done with participants viewing the web page, they are then asked to follow the link, comment on what they find there, and suggest alternative names.
ADVANTAGES: Yields more in-depth data on participants' understanding of terminology.
ISSUES: Users may simply paraphrase or embellish the link name in question. Results may be affected by whether participant is looking at links with or without web page context.

Card sorting test

Participants are given cards representing all items on the page/site and asked to sort them and name the categories.

» Example from MIT

ADVANTAGES: Minimum constraints; participants can choose their own categories and labels; yields data on site structure.
ISSUES: Card set must represent all items; participants must understand the items as named/described the cards; may be difficult to get high degree of consensus; time-consuming to process results.

Category membership test

Participants are given a list of all items on the page/site and a list of the categories to be used, and asked to indicate which items should be in each category.
ADVANTAGES: More focused than the card sorting test.
ISSUES: May miss some possibilities that would surface in an unconstrained card sort; participants must understand the items as named/described the cards.

DATA

Library terms evaluated in usability tests and other studies

For more, see Resources below.

Source For more complete information, see the published studies listed below	What didn't work: Terms reported as being misunderstood, not understood, or not preferred	What did work: Terms reported as being understood or preferred; Successful strategies for presenting or explaining terms
Appalachian State University Library and **Georgia Southern University Library** This test compared the sites of these two libraries and that of the University of Arizona Library. Test method: user observation. Test participants: 32 freshmen See: W. Bede Mitchell et al., "Testing the Design of a Library Information Gateway" (PDF), ACRL Tenth National Conference (Denver, 2001); also published in *Southeastern Librarian* 49 (2001), 4-10.	*Periodical Databases* ('without referring to magazines, periodicals, or articles") *Databases and Periodical Article Indexes* [for finding a newspaper article]; "If the precise term, such as *Newspaper* … did not appear in the description of an option, many students thought it was probably not to be found there." ------ *Special Collections* "did not convey to the freshmen anything other than … catalogs of materials besides books. … [It] was also chosen in desperation for other searches as well, indicating that this is not a	"The Arizona site's icon clearly represented magazines and newspapers with the word *articles* prominently displayed, making it easy for students to find the best search option." ------ *Library Catalog* "led to more correct responses [on finding a book] than … a prominent icon which featured a book [or] … *Books and more*"

	good term to use on an opening library Web site screen if it is not further defined."	
Bucknell University Information Services & Resources Pathfinders Usability Study (2000) Test method: Questionnaire. Test participants: 21 Information provided by Isabella O'Neill, Bucknell University.	*Pathfinders* [as a generic term for subject guides]	*Research by Subject* [now used on production site] Other terms suggested by participants: *ResearchFinder* *Research Home* *Research Source* *Getting Started* *Research Pathfinders* *Beginning Research Page* *Where to Start* *Researching? Start Here*
California State University, Long Beach Library Test method: user observation. Test participants: 9 students at the University of Arizona. See: Tiffini Anne Travis and Elaina Norlin, "Testing the Competition: Usability of Commercial Information Sites Compared with Academic Library Web Sites," *College & Research Libraries* 63 (2002), 433-448.	*COAST* [library catalog] " … the annotation beneath the link to COAST did not mention the word 'books'. In fact, nothing on the home page or the secondary electronic resources page ever said the word 'book.' Instead, ambiguous terms such as 'items' and 'resources' were used."	"By contrast, students did read the descriptions under the *Research Databases* link. They noticed the words 'articles' and 'research.' As a result, students did not encounter the same difficulties finding articles as they did finding books …" [Since this test, this section of the home page now reads as follows: *Electronic Resources* Find books (COAST), articles (Research Databases), Course Reserves, Research Guides to help you with your research, links to other libraries, & more!]
College of Charleston Libraries Test method: user observation. Test participants: 15	*Databases* "Several participants experienced difficulty when asked to find a magazine or journal article about *The Great Gatsby*. Eight of the	

students. See: Debbie Vaughn and Burton Callicott, "Broccoli Librarianship and Google-Bred Patrons, or What's Wrong with Usability Testing?", *College & Undergraduate Libraries* 10 (2003), 1-18. DISCLAIMER: The fact that I am quoting data from this article does not imply agreement with the authors' expressed views on library terminology, web site usability, or test methods. In this case, the characterization of *Databases* as an unsuccessful link label is my interpretation only.	15 participants were unable to complete the task and many who eventually completed the task indicated that they were not confident that they had been successful. … By watching and listening to the participants, it was clear that when the terms *magazine, journal,* or *article* did not appear on the libraries' home page, their confidence and success in their ability to complete this task was lowered."	
Hunter College Libraries Test method: user observation. Test participants: 24 undergraduates, 2 graduate students, 2 others. See: Laura Cobus, Valeda Frances Dent, and Anita Ondrusek, "How Twenty-Eight Users Helped Redesign an Academic Library Web Site", *Reference & User Services Quarterly* 44 (Spring 2005), 232-46.	*Databases* (described by one student as "the base that holds the data") *Electronic Journals* ("I would go to [that link] just because it says 'journals.") *Reference Shelf* " … very general. You don't know what to expect as it could be anything.") *Web Guides* *Archives* *FAQs*	*Finding an Article* *Finding a Book* *Library Instruction* *Tutorials* *Subject Directories (Websites reviewed by librarians)*
MIT Libraries "Big Test" usability test, November 2002 Test method: user observation.	*Database* *Serial* *Copy Options* **vs.** *Copy Services* *BookPage* (delivery service) *Retrospective Collection*	

Test participants: 21 students (9 undergrads + 12 graduate students) For detailed reports on these and other tests, plus useful guidelines and policies, see the [MIT Web Advisory Group](#) site.	(storage facility) *MIT research: Dspace* (repository)	
[MIT Libraries](#) Usability test results, March-April 2001 Test method: user observation. Test participants: 3 undergrad students, 4 grad students, 1 faculty member.		Accompanying the name *Barton* with *MIT Libraries' online catalog* Accompanying the name *VERA* with *A listing of our databases and e-journals* In the [VERA](#) electronic resources system, use *Display List* instead of *Search* to show a list of resources whose titles contain certain words. *For MIT users only* (to replace *MIT only*)
[MIT Libraries](#) Barton catalog test, February 2001 Test method: user observation. Test participants:7 undergrad students, 3 library staff	*Browse* **vs.** *Keyword* *No of recs* (for "number of records) *Words adjacent* *Subject - Cutter* *Library holdings*	Label browse searches as: 　*title begins with …* 　*subject begins with …* 　[etc.] *Journal title* (to distinguish from article titles) *# of titles* (to replace *no of recs*) *Phrase* (to replace *Words adjacent*)
[MIT Libraries](#) Card-sorting exercise, Summer 1999 Test method: manual card sorting Test participants: 9 volunteers [Card sorting exercise](#)	*Databases* "people used this word to mean many different things, a much broader definition of it than we usually think of (no clear trend other than this)" *Resources* "No one used the term, *resources*, to describe	Major categories created by more than one participant: *Thesis information* *Information by Course* *New materials & library news* *Ordering materials* *Access policies for our library and other libraries* *About the MIT Libraries* *Services*

[results](#)	anything."	*Reference Materials/Content/Collections*
[MIT Libraries](#) Category Identification Test, Fall 1999 Test method: survey Test participants: 21 library users [Category identification results](#)		Particpants associated: *New Books* **with** *Library News & Updates* *Electronic Journals* **with** *Searchable Resources* *Hours* **with** *About the Libraries* *Barton: Online Catalog of the MIT Libraries* **with** *Searchable Resources* *Locations of MIT Libraries* **with** *About the Libraries* *Specifications for Thesis Preparation* **with** *Subject/Course-related Information* *Databases on the Web* **with** *Searchable Resources* *Interlibrary Borrowing* **with** *Services* *Library Course Page for 6.763* **with** *Subject/Course-related Information* *Research Assistance* **with** *Services*
[MIT Libraries](#) Web Site Usability Test, March 1999	Top 5 observed problems included: 1. Unclear link names: *Barton*, *RSC*, *ILB*, *virtual reference* 2. Vague and unclear category names: *resources*, *services*, *subjects*	
[Memorial University of Newfoundland Libraries](#) Test methods: user task performance with some automated data collection; questionnaire.	*Journal article* *Internet Resources* **vs.** *Databases* *Internet Resources by Subject* **vs.** *Internet Search*	Brief descriptions under main menu items on the home page. "[T]hese annotations … were the most effective aid in assisting participants to havigate the menus because they provided hints about what

Test participants: 17 undergraduates, 2 graduate students, 14 faculty members. See: Louise McGillis and Elaine G. Toms, "Usability of the Academic Library Web Site: Implications for Design," College & Research Libraries (July 2001), 355-367.	*Engines* **vs.** *Electronic Books* **vs.** *Internet Reference Sites* *Research Help* **vs.** *Request Forms* Local terms: *Webcat* (library catalog) *Unicorn* (library catalog) *Do-it-Yourself in Unicorn*	might be found on the next menu level. These were much more specific than the menu choice and able to add discriminating power". "Some participants suggested it would be more helpful if each category's annotation contained all subsequent choices".
Library Website Terminology; Interim Minnesota Guidelines Minitex/Minnesota State Library Standards Review Task Force, [2006] Test method: Online survey on more than 50 library websites. Test participants (by type of library): Public 5021 Academic 2196 K-12 232 Other 202 Total 7651	See posted report for terms with low preference scores	Recommended terms: *Library Catalog* * *Find a magazine or newspaper article* * *eBooks* * *Online Reference Tools* *Library Favorites* *Ask a Librarian* * *Interlibrary Loan* * *Using the Library from Your Home or Office* *My Account* * *Request an Item* * indicates strong pattern in responses
Minnesota Library Information Network (MnLINK) Test method: Task-based questionnaire using paper prototypes. Test participants: 101 students enrolled in writing courses at Minnesota State University, Mankato. See:	*Library Catalogs* *Databases* *Basic search* *Advanced search* *Help* "More than 90 per cent of the subjects identified the *help* button and its purpose; however … only 1 per cent of the subjects stated that they would use the *help* button."	

Joan Roca and Roland Nord, "Usability Study of the MnLINK Gateway," *OCLC Systems & Services* 17 (2001), 26-33.		
North Carolina State University Libraries Test method: user observation. Test participants: 6 undergraduates in each of 3 trials. See: Find Articles Usability Tests, 2005. This report includes videos, viewable by special arrangement. Thanks to Amanda French for posting this information.	"Many of the users are choosing *E-journal Finder* when they should be choosing *Database Finder* … This indicates that neither page is clearly titled. The term *database* is often unfamiliar, so that users who are looking for a journal article tend to click on *E-journal Finder* rather than on *Database Finder*." "The term *journal*, used to refer to periodicals in general, is not sufficiently explained nor exemplified in the text on the site. The term's use in the brand *E-journal Finder* obscures the fact that this collection of tools encompasses other kinds of periodicals, most especially newspapers and magazines. The term *articles*, which usefully applies to items in most kinds of periodicals, appears only in underemphasized, unhyperlinked descriptive text on the home page. Users don't see it, especially if they're in the catalog, where there is nothing to point them to *articles*."	" … the *Find Articles* term and structure is indeed successful." User success rate went from 53% on the original site to 61% and 89% on two different redesigns. The report cited at left includes screenshots of all three. Terminology, graphic design, and information architecture may all contribute to the varying rates.
Norwich University Library Test method: user observation.	Looking for journal articles on a specific subject, most participants did not first choose the correct link, *Databases and Indexes*.	*Internet Resources* to find websites on a specific subject. Student suggestion: "To make the site better, you can perhaps

Test participants: 7 undergraduates (freshmen and sophomores). Data provided by Meredith Farkas; selected results are posted on her blog as "[Website redesign at MPOW: What I'm Learning](#)," 2005.	Unsuccessful choices included *Periodicals*, *Library Catalog*, *Internet Resources*, and *Special Collections*. "No student knew what a *Reference Desk* was." "Only one of them knew what [*Interlibrary Loan*] was called." "Only one person knew that *Circulation* had anything to do with borrowing." Student comment: "I couldn't find a few sites due to the fact that they were under different names, or I was never taught how to find them."	give examples of what each category deals with."
Pennsylvania State University Libraries Test method: user observation in "focus groups"; participants were asked to complete tasks using the Penn State website and those of 20 other academic libraries. Test participants: "Freshmen with limited experience in library use" (number unknown). See: Lesley Moyo and Ashley Robinson, "Library Jargon as a Factor in Information Design for Web Usability: Survey Report (Summary)," 16th Annual Computers in Libraries 2001 (Medford, NJ: Information Today, Inc., 2001), pp.157-165.	"professional terms"	"natural terms" "Pages that worked best were those with explanatory notes below each library term used and those sites which popped up explanatory information on mouseover."

Pennsylvania State University Libraries Usability study for website redesign (2004) Test method: user observation. Test participants: Not specified.	*The CAT* *ILLIAD* *database* *E-resources* *research guide* *location* General subject terms, e.g., *Life sciences*	Specific subject terms, e.g., *Biology* Recommendations on terminology: "Short term - use patron-friendly terminology in place of library or vendor specific terminology when possible. When this isn't possible, provide a brief explanation of the terms in-place. "Long term - determine a way to address the needs of the novice user and experienced user while providing learning opportunities for the novice user. This could include creating multiple sites or allowing patrons to set preferences."
Roger Williams University Library Test method: user observation. Test participants: 19 students in two rounds of testing. See: Susan McMullen, "Usability Testing in a Library Web Site Redesign Project", *Reference Services Review* 29 (2001), 7-22.	"… users do not perceive the link, *Online Databases and Indexes*, as the resource choice to make [for] periodical articles." "Students do not understand basic library terms, such as *database* or *index*." "… one remarked that she thought of *databases* as spreadsheets."	"Users can quickly identify the online library catalog." "Placement of links, color, and size does make a difference. Links should be easy to identify. It is easier to spot links when they are not embedded in text." "Built-in redundancy works."
Texas A&M University Libraries Test method: focus groups. Test participants: 26 people, including	*Find titles by keyword* - participants thought this meant article titles rather than e-journal or database titles. *Information*	Participants suggested: Using ALT text for mouseover explanations of graphical buttons. FAQ page. Glossary of terms.

undergraduates, graduate students, faculty, librarians, and university staff. See: Gwyneth H. Crowley et al., "User Perceptions of the Library's Web Pages: A Focus Group Study at Texas A&M University," *Journal of Academic Librarianship* 28 (July 2002), 205-210.	*Reserves* *Reference* *Database* *Remote Access* *Forms* *Online Help* *TN3270* *VT100* Database subject categories: *Humanities* *Social Sciences* *Science & Engineering* Local or vendor terms: *PAM* (Public Access Menu system for electronic resources) *Citrix*	
University at Buffalo Libraries Test method: user observation. Test participants: 11 undergraduates See: Brenda Battleson, Austin Booth, and Jane Weintrop, "Usability Testing of an Academic Library Web Site: A Case Study," *Journal of Academic Librarianship* 27 (May 2001), 188-198.	*Web Search* ("students erroneously assumed [this] led only to Web search engines and the Internet, when, in fact, it included links to site-specific search features …"). *Need Help* (participants were not satisfied with help pages provided). *Online Resources* (most chose "*Libraries Catalog*" for non-catalog research tasks such as finding articles). *Databases by Title* *Reference Resources* *Quick Start*	*Libraries Catalog* (most chose this correctly for normal catalog functions) "Although not always appropriate, *Databases by Subject* was selected most often, while virtually every other link on the 'Online Resources' screen was ignored."
University at Buffalo Libraries Test method: manual card sorting	*Catalog* *Course Reserve* *Reference* *Electronic Resources*	*Find* *Search[ing]* *Internet* *Professor* *Class[es]*

Test participants: 9, including 2 graduate students and 6 undergraduates See: Website Nomenclature Test [RTF] Posted by permission of the authors, Brenda Battleson and Jane Weintrop.	" … there was little or no consensus when it came to terminology related to library tasks. Subjects could find few terms that could easily be linked to tasks. They really had no idea what to 'call things.' … Surprisingly, what librarians considered to be the most basic of terms … were not identified by the subjects as such. They seemed to grasp the concepts, but were 'hung up' on the terminology."	
University of Arizona Library, SABIO Information Gateway Test methods: heuristic evaluation, design walk-through, card sorting, user observation. Test participants: 8-12 students per round of tests. See: Ruth Dickstein and Vicki Mills, "Usability Testing at the University of Arizona Library: How to Let the Users in on the Design", *Information Technology and Libraries* 19 (September 2000).	*Catalog* *Index* *Resources* *Databases* *Reference* "We learned that if students have no idea why or when they should use an index, they will not choose a link labeled *Index*, no matter how well designed the Web page is." "… an Indexes page with twelve broad categories, such as s*ocial science, humanities, life sciences*, etc. -- words supplied by librarians rather than students".	(1) Graphical buttons incorporating additional wording: *CATALOGS of Books & More/What We Own* *Indexes to ARTICLES & More/Electronic Journals* *Web SEARCH* *Online REFERENCE/Ency/Dictionary* *Multi-SEARCH* *Research by SUBJECT* (2) "How to Find" pop-up menu. Items include: *How to find MAGAZINES owned by the library* *How to find MAGAZINE articles* (3) "*Tips* pages located at the point of need" (4) "*Research by Subject*" page (5) Subject menu using "a scroll box that allowed as many specific subjects to be listed as needed. … The scroll box also enabled synonyms to be included for some subjects, such as both *Health* and *Medicine*."

University of California, Berkeley Library Survey of users of Pathfinder online catalog, November 2004 Test method: online survey. Test participants: 254 responses, including 47 undergraduates, 119 graduate students, 22 faculty and 25 staff members. Margin of error: +/- 6% Survey form Survey report	*Title words* (28.3%) *Title* (6.3%) ------ *Title phrase* (15.7%) *Title (exact)* (9.1%) ------ *Text-only* *Text-based* (though most did not think these meant the system contained full text). *Terminal-style*	*Title keyword(s)* (62.2%) ------ *Title begins with …* (70.9%) ------ *Command-line* *Telnet* ------ "Both *Journal Title* and *Title of Journal* searches were understood correctly (as covering journal titles) by almost all respondents. About one quarter of respondents and slightly over one third of undergraduates incorrectly assumed these searches would cover article titles, and a smaller number thought they would include full text. Differences between the two alternative names were within the margin of error for this question."
University of California, Berkeley Library Usability test of library home page, April 2004. [PDF] Test method: user observation. Test participants: 4 undergraduates.	"No participant successfully found journal articles. … Participants were confused by the distinction between *journals* and *articles*, and they used the terms interchangeably. As in previous usability testing, some participants were drawn to the *Journals (by title)* link when searching for journal articles." "Participants were unclear on the differences between *GLADIS* and *Pathfinder* [and] between *Pathfinder* and *Melvyl*."	"All four participants … seemed to understand that they would find [online dictionaries, encyclopedias, atlases, statistics, etc.] through the *Electronic resources* link under the *Find Information* tab." Participants gravitated toward *Services* when looking for course reserves, library workshops, and privileges for undergraduates. Student comment: "I would try to have something that said *Employment Opportunities*." Each participant, though, mentioned a different term; the

	"Participants were confused by the distinction between *GLADIS* and *ERes* [the library's electronic reserves system]." "Participants were confused by the term *telnet*." "Half of the participants understood the *Search* function, while the other half thought it would retrieve library resources (books, articles and more)." "Participants seemed uncertain about the *More...* link, describing it as vague, unimportant and easy to miss."	others said they were looking for *Join Our Team*, *Apply Here*, and *Work For Us*.
University of California, Berkeley Library Link Choice Test on Prototype Home Page, November 2003 Test method: paper questionnaire. Test participants: 18 responses, including 9 undergraduates, 3 graduate students, 4 staff members, 2 visiting scholars.	*Indexes and Abstracts* (2 responses) ------ *Research Tools* (2 responses) *Reference Sources* (2 responses)	*Article Databases (12 responses)* 4 participants suggested terms including "Journal" (note that the question specifically referred to "journal articles"). ------ *Electronic Resources* (14 responses) A follow-up test, with 15 participants, showed *Electronic Resources* getting 6 responses and *Reference Tools* getting 5. The results in the first round may have been skewed by the test design.
University of California, Berkeley Library Unpublished usability study of prototype Electronic Resources Database	*Article Indexes* – some student participants didn't understand this term. One commented: "Article index doesn't mean 'journals' to me. Professors say 'journal	

interface, March 2002. Test method: user observation. Test participants: 3 undergraduates; 2 graduate students; 1 reference librarian.	articles'". *Library Catalogs* *Gateway site*	
[Doe/Moffitt Libraries](#), **University of California, Berkeley** Usability studies of draft Doe-Moffitt Libraries web page: [Round 1: August 2003](#) [Round 2: October 2003](#) [Round 3: November 2003](#) Test method: user observation. Test participants: 5 undergraduates; 3 graduate students; 1 visiting faculty member.	*Journals (by Title)* - most thought this "would lead [directly] to scholarly journal articles". *Articles* – most thought this "would lead … to a more global search of articles … in magazines, journals, newspapers and popular level materials". *Library Catalogs* *Instruction* *Liaison* *Telnet* *Proxy* *Reference* *Text only* *Contacts by subject* *Units* Local or vendor terms: *Pathfinder* (library catalog system) *CDL* (California Digital Library) *WorldCat*	*Find Books, Articles, Etc.* - participants chose this over *Library catalogs*. *Library Services* – most gravitated to this term when given tasks requiring them to find: Loan periods, Renewing books online, Copiers, Tours, Reserves, Laptop, Word processing, Connecting from off campus, Ask a reference question online, Contacts by subject.
[University of California, San Diego Libraries](#) Test methods: link choice test using paper form. Test participants: 10 staff, 10 undergraduates and 8 graduate students These tests, done in 1999-	[To find a book] *Library Catalog* (preferred by 18.4%) [To find an article] *CDL/MELVYL* (preferred by 7.8%) *Browse by Subject/Type of Material* (7.8%)	[To find a book] *Find Books and more …* (preferred by 34.7%) *ROGER (Library catalog)* (30.6%) [To find an article] *Find Articles and more …* (preferred by 33.3%) *Choosing Article Databases*

2000, generated data on what terms were most successful as link names. The reports are no longer posted on the UCSD Libraries website, but are accessible through the Internet Archive's [Wayback Machine](#). See the script, instrument, and two reports labeled "terminology test." The examples at right show the "aggregate preference" as a percentage of respondents choosing each link option.		(27.5%)
[University of Illinois at Chicago Library](#) Test methods: user observation. Test participants: 12 students. See: Susan Augustine and Courtney Greene, "Discovering How Students Search a Library Web Site: a Usability Case Study," *College & Research Libraries* 63 (2002), 354-65.	*Article indexes* *Pathfinders* *Workshops*	" … all participants but one used the internal Web site search engine to complete tasks rather than navigating through the pages by following links. … These search habits … indicate that more attention should be paid to metadata and a strong internal search engine …"
[University of Illinois at Chicago Library](#) Test methods: card sorting. Test participants: 15, mostly graduate students. See:	Cards most often discarded as having no meaning to participants: *ERes@UIC* *InfoqUIC* *MyILL@UIC* *qUICsearch* *Resources*	"Use descriptive language. Use of generic terms and library jargon within brand names is not helpful. … Naming a service with explicit descriptive language that the user will also understand - even if brevity is lost - helps the user identify a library service."

Peter Hepburn and Krystal M. Lewis, "What's in a Name? Using Card Sorting to Evaluate Branding in an Academic Library's Web Site," *College & Research Libraries* 69 (2008), 242-250.	*UICCAT* * * "The 'CAT' part is not especially well understood either. Users do not necessarily make the link between the three letters and the word 'catalog.'"	"Use distinct names. Use of the same term ('UIC' in this case) within multiple brand names muddles the distinctions between the various resources and services." "Provide marketing and instruction" to increase awareness and understanding of brand names.
University of Mississippi Libraries Test method: "usability survey" (i.e., user observation). Test participants: 12 undergraduate students. See: Elizabeth Stephan, Daisy T. Cheng, and Lauren M. Young, "A Usability Survey at the University of Mississippi Libraries for the Improvement of the Library Home Page," *Journal of Academic Librarianship* 32 (2006), 35-51.	*Journal Finder*	*Catalog* *Library Search Engine* *Library Quick Links* *Subject Guide* *My Library Account* *Hours*
University of Rochester, River Campus Libraries Test method: not specified. Test participants: not specified. See: Jennifer Bowen et al., "Serial Failure," *The Charleston Advisor* 5 (2004)	*Databases*	*Find Articles* "On the new home page, the word *Databases* was replaced with *Find Articles*, which resulted in a dramatically reduced failure rate in getting to the list of databases. … From a serial failure rate of nearly 100 percent in 1997, we now can claim some success in actual task completion."
University of Rochester, River Campus Libraries	Subject discipline names	Course-specific guides are suggested as a solution.

Test method: not specified. Test participants: not specified. See: Brenda Reeb and Susan Gibbons, "Students, Librarians, and Subject Guides: Improving a Poor Rate of Return," *portal: Libraries and the Academy* 4 (2004), 123-130.	"At the University of Rochester, librarians repeatedly observed in usability testing that undergraduates lack an understanding of an academic discipline. … Some never grasp the concept of a 'discipline.' Others may gain an understanding in their majors, but do not transfer this comprehension to other academic domains. The concept of disciplines is not usually part of a student's mental model; therefore, the collocation of resources by discipline is not recognized."	

University of Saskatchewan, Health Sciences Library
 	
Test methods: "preference test" using paper questionnaire (20 participants); user observation (5 participants).
 	
See:
Vicky Duncan and Darlene Fichter, "What words and where? Applying usability testing techniques to name a new live reference service," JMLA: Journal of the Medical Library Assocation 92 (2004), 218?225.
	Invitations to chat:
	
	  Don't give up!
	  Ask us and we'll help!
	
	Invitations to click:
	
	  LiveHelp
	
	  Ask me!
	
	  Questions Online
	
	  Answers Online
	
	Combined phrases:
	
	  Questions Online Click Here
	
	  Answers Online Click Here
	
	Other terms found to be problematic in usability testing:
	
	  Database
	  Interlibrary Loan
	  E-journals
		Invitations to chat:
		
		  Need help finding information?
		  Chat online with a librarian
		
		  Got a question?
		  Chat with a librarian NOW!
		
		Invitations to click:
		
		  Ask a Librarian
		
		  Click Here
		
		Combined phrases:
		
		  LiveHelp
		  Ask a Librarian
		
		Term adopted for production site:
		
		  Ask a Librarian

[University of South Florida](#) Virtual Library Test methods: user task performance and survey with automated data collection. Test participants: 32 undergraduates. See: Maryellen Allen, "A Case Study of the Usability Testing of the University of South Florida's Virtual Library Design," *Online Information Review* 26 (2002), 40-53.	*E-Journals* *Databases* 100% of participants chose *E-Journals* instead of *Databases* in order to "research journal or magazine articles". " … few users were familiar with the term '*interlibrary loan*' request, even though they were familiar with the service itself." Local terms: *WebLUIS* (library catalog)	*Online renewal* (92.3% chose this correctly). *How do I find an article?* (76.9% chose this correctly in the second round of testing. This link combined *E*-Journals and Databases, and led to an "intermediate page where the option for choosing direct subscriptions to e-journals and those articles found in databases were offered and explained"). "… the simple, straightforward approach as seen in the *'how do I'* questions invariably produced more successful participant behaviours than those using jargon."
[University of Southern California, Norris Medical Library](#) Test method: user observation. Test #1 participants: 5 medical school faculty, 1 student, 1 staff member (medical library) Teat #2 participants: 2 faculty, 4 staff members. See: Candice Benjes and Janis F. Brown, "Test, Revise, Retest: Usability Testing and Library Web Sites," *Internet Reference Services Quarterly* 5 (2001), 37-54.	*HELIX* [name of online catalog] *Call number* Some users thought *Journals* and *Books* [under *Electronic Resources*] "encompassed all our holdings, print and otherwise. We modified the titles to *Electronic Journals* and *Electronic Books* and added a link to HELIX [catalog] for print resources." *Coverage* ["they thought about it in insurance and HMO terms"] *More info* [as a way to find access information for databases] "When attempting to find the date of the next MEDLINE class, users did not recognize a link entitled	"For the redesign, the text was rewritten in a more colloquial style, replacing "library speak" such as *document delivery* with the more commonly known phrase *interlibrary loan*." After a "successful publicity campaign … students, staff, and faculty began asking for *Ovid* - not MEDLINE, CINAHL, [etc.]. In our setting, *Ovid* is shorthand for 'I want to find articles' … "

	class schedules as a possible answer; they wanted to find a link with the word MEDLINE."	
University of Tennessee, Knoxville Libraries Test method: user observation. Test participants: 13 graduate students and faculty, most having experience with both the library web site and research in their subject areas. See: Thura Mack et al., "Designing for Experts: How Scholars Approach an Academic Library Web Site," *Information Technology and Libraries* (2004), 16-22.	*Databases* "Five participants went to *Databases* on their first click, and three more eventually discovered the correct path to an article, for a success rate of 62 percent." *Subject Guides* [as a way to find a word definition] "Only one of the participants went first to *Subject Guides*, and seven went to *Internet Search Engines*." *Kudzu* [local brand name for OPAC] *AskUs.Now* [local brand name for electronic reference service]	"The authors discovered that most participants were not confused by terms used on the library Web pages, with a few notable exceptions."
University of Virginia Libraries Article Finder/OpenURL Resolver Usability Test September-October, 2004 Test method: user observation Test participants: 3 undergraduates; 2 Library staff; 2 faculty Data provided by Leslie Johnston, 2/3/05	86% did not initially use the *Find at UVa* button in Web of Science to invoke the Resolver. In a following question, 71% successfully used it. "The label *Find@UVa* on our Resolver button that appears in vendor databases fails to communicate anything meaningful to the uninitiated, or may even be misleading. Alternatives were suggested, however each had problems of its own. Given the constraints on the size of the button, and the difficulty of clearly explaining its function in 10	

	characters or fewer, this is a problem that cannot be effectively addressed by button design or labeling; if users don't know what a button does, they still won't click it." The eventual success of most testers suggests that once a user perceives and understands the function of the "Find@UVa" button, s/he will use it, regardless of the labeling.	
University of Virginia Libraries VIRGO OPAC Usability Test May-October, 2002 Test method: user observation Test participants: 3 faculty, 2 graduate students, 4 undergraduates, 4 library staff Data provided by Leslie Johnston, 2/3/05	*Serials* *Periodicals* ------ *Ask VIRGO* (inquire about services or ask for help) ------ 31% were unsure what about the difference between *Ejournals* and *Journal and Newspaper Articles* as navigation options. ------ "There was much confusion and a good deal of incomprehension about the difference between a journal and an index to a journal."	Navigation now consistently uses *Journals* (although the others terms do additionally appear in some page content). ------ *Contact Us* instead of *Ask VIRGO* ------ Navigation now reads: *Ejournal lists* *Journal articles* *Newspaper articles*
University of Washington Libraries Website redesign (2004) Test methods: online survey, focus groups, prototyping, card sorting, user observation Test participants: 238	*UWorld Express* (brand name for interlibrary loan services) ------ *Contact Us* ------ *Browse by Subject* ------	*Interlibrary Loan* ------ *Ask Us*

survey responses; 11 user observation subjects. See: Jennifer L. Ward, "Web Site Redesign: The University of Washington Libraries' Experience", *OCLC Systems & Services* 22 (2006), 207-216. For more information on UW's test results, see their [Usability Reports](#)	*Information Gateway* (website name)	
University of Washington Libraries Usability Study of the Subject Pages (2004) Test method: user observation Test participants: 8 undergraduates, 2 graduate students, 1 faculty	*Core Resources* to designate recommended databases. ------ *By Subject*	"Users are more likely to use *Best Bets* than *Core Resources*". ------ "Users slightly preferred *Browse Subjects* to *By Subject*"
University of Washington Libraries Card Sorting Usability Study (2001) Test method: card sorting Test participants: 1 undergraduate, 1 graduate student, 1 faculty member, 2 staff members	*Starting Points* (users didn't know what to expect) *Connecting* (unclear that this referred to a proxy server) *Cascade* (brand name of a service).	Users suggested *FAQ's* instead of *Starting Points*
University of Washington Libraries Willow (text-based interface, no longer in use) Test method: link choice	*UW Libraries Catalog* ------ *Databases … Arts & Humanities* [and other similar subject	*Books, Periodicals, & Other Resources at the UW Libraries* ------ *Arts & Humanities: Indexes of Articles & Other Sources*

questionnaire Test participants: 145 undergraduates See: Karen Eliasen et al., "Navigating Online Menus: A Quantitative Experiment", *College & Research Libraries* (1997), 509-517.	categories]	[etc.]
Washington State University Libraries Test methods: user observation. OPAC test participants: 3 undergraduates, 3 graduate students, 1 "other". Web site test participants: 6 students. See: Janet Chisman, Karen Diller, and Sharon Walbridge, "Usability Testing: A Case Study," *College & Research Libraries* 60 (November 1999), 552-69.	*WebPac* "MARC format terminology in drop-down lists", e.g., *Proj medium* *Other Library Catalogs* [many thought this could be any library on campus other than the one they normally use] *Dates of coverage* [of article databases]	4 of 6 participants correctly chose *Article Indexes, Full Text, and More* to "find information … in periodicals (also known as serials or journals)"
Western Michigan University Libraries Test method: user observation Test participants: 29 undergraduates, 10 graduate students, 10 faculty. See: Barbara J. Cockrell and Elaine Anderson Jayne, "How Do I Find an Article? Insights from a Web	*Electronic Journals* **vs.** *Databases and Indexes* "At least one participant, who chose *Electronic Journals* rather than a database when looking for a journal article … indicated he made this choice because the associated annotation included both of the words 'journals' and 'articles'." "Several participants said they did not understand the	Changes made as a result of the study: Placed links on the home page leading to "mini-tutorials" for: *Find an Article* *Find a Book* Placed a "Find Articles" link in the online catalog, leading to a page providing more guidance and links to databases. "… links were made more descriptive and readily distinguishable, specialized

Usability Study," *Journal of Academic Librarianship* 28 (May 2002), 122-132. This article contains an excellent discussion of terminology issues.	term *database* [which] was coupled with indexes … because some of these databases were not only indexes. Unfortunately, this may be a case where an attempt to give precise and complete information actually confuses users trying to distinguish among options." *Serials* **vs.** *Periodicals* **vs.** *Magazines* **vs.** *Journals* ”Almost half the participants thought the OPAC was *the* source to use for magazine and journal articles.” ”Users were not very discriminating in their choice of indexes. … [they often] selected the first item on any given list ..”	terminology was simplified as much as possible, and a glossary of library terms … is being developed.”
[Western Wyoming Community College Library](#) Test method: user observation Unpublished study, 2003 (per Usability4Lib listserv posting, "how do we measure success?" by Robert Kalabus, 1/27/2005, quoted by permission)	*Interlibrary Loan* *Periodical* *New Acquisitions* *Database* *Webliography* *Search Engine*	
Other Studies		
Joseph Barker, "'Now Which Buttons Do I Press to Make These Articles Appear on the Screen?", *Serials Review* 25 (November 1999), 49-54.	“Most undergraduates do not come to Cal knowing what a journal article is, what a journal is, what an index is, or what is scholarly and reputable.”	“If we seriously expect undergraduates to find e-journals, we must unify bibliographic control and make links to them stand out like giant billboards along the

	"Only about 25 percent understand journal index citations and the difference between a journal title and an article title."	research paths undergraduates routinely travel."
Abdus Sattar Chaudhry and Meng Choo, "Understanding of Library Jargon in the Information Seeking Process," *Journal of Information Science* 27 (2001), 343-349. Test method: Questionnaire given to 40 clients of the National Reference Library of Singapore and "acquaintances of the staff" of the Library Support Services, National Library Board of Singapore, to test their understanding of "technical terms commonly used by librarians during reference interviews." Overall correct answer rate: 76.9% Note: Division into "what didn't work" and "what did work" is my own, based on an arbitary cutoff point of 66%.	*Resource file* (45% correct) *Holdings* (47.5%) *Citation* (55%) *ILL (interlibrary loan)* (55%)	*Book drop* (97.5% correct) *OPAC (Online Public Access Catalogue)* (95%) *Self-check terminal* (95%) *User education* (90%) *Call number* (85%) *Keyword* (85%) *Title/subject search* (85%) *Free text* (85%) *Bibliographical list/bibliography* (85%) *Author catalogue* (85%) *Full text* (75%) *Bibliographic/catalogue record* (75%) *Search term* (72.5%) *DDC (Dewey Decimal Classification* (72.5%) *Document delivery service* (70%) *Microfilm* (67.5%)
Norman B. Hutcherson, "Library Jargon: Student Recognition of Terms and Concepts Commonly Used by Librarians in the Classroom," *College & Research Libraries* 65 (2004), 349-354. Test method:	*Boolean logic* (8.1% correct) *Bibliography* (14.9%) *Controlled vocabulary* (18.1%) *Truncation* (27.7%) *Precision* (31.8%) *Information need* (34.9%) *Descriptors* (35.8%) *Abstract* (36.2%)	*Plagiarism* (100% correct) *Reference services* (94.6%) *Research* (94%) *Copyright* (91.58%) *Table of contents* (90.5%) *Synonym* (89.9%) *Audiovisual materials* (89.2%) *Editor* (86.5%) *Call number* (81.48%) *Reference books* (75%)

Questionnaire given to 297 first- and second-year undergraduates at California State University, Bakersfield who had completed a "seven-week library skills lab," to test their understanding of "terms derived from library literature, reference desk experience, and classroom observation." Overall correct answer rate: 62.31% Note: Division into "what didn't work" and "what did work" is my own, based on an arbitary cutoff point of 66%.	*Article* (47%) *Citation* (51.7%) *Bibliographic information* (54.73%) *Authority* (57.7%) *Collection* (59.7%) *Catalog* (61.62%) *Search statement* (63.8%)	*Journal* (74.5%) *Edition* (72.3%) *Fair use* (67.6%)
Rachael Naismith and Joan Stein, "Library Jargon: Student Comprehension of Technical Language Used by Librarians," *College & Research Libraries* 50 (Sept. 1989), 545. Test method: Questionnaire given to 100 freshman English students at Carnegie Mellon University, to test their understanding of terms "derived from actual reference interviews and library handouts." Overall correct answer rate: 51.3% Note: Division into "what didn't work" and "what did work" is my own, based on an arbitary cutoff point of 66%.	*Multi-volume set* (11% correct) *Proceedings* (20%) *Command search* (25%) *Citation* (35%) *Clearinghouse* (38%) *Nonprint materials* (40%) *University archives* (41%) *Viewing carrel area* (45%) *Primary source* (45%) *Library rep* (47%) *Pre-search* (52%) *Online database searches* (53%) *Search statement* (53%)	*Call number* (83% correct) *Bound journals* (82%) *Interlibrary loan* (75%) *Microform* (74%) *Search terms* (71%) *Catalog screen* (68%) *Online catalog* (68%)

Mark A. Spivey, "The Vocabulary of Library Home Pages: An Influence on Diverse and Remote End-Users," *Information Technology and Libraries* 19 (September 2000), 152-156. Test methods: Evaluations of terms appear to result from the author's experience in public service work. Article also reports a year-long survey of terminology used on 60 library home pages.	*Reference* *Reserves* *Periodicals* *Periodical indexes* *Indexes* *Special collections* *Citation* Library acronyms: *BI, ILL, OPAC* etc. Vendor acronyms: *CINAHL, CARL, JSTOR* etc.	Author advises using: (1) "Embedded explanations [such as] appositives, prepositional phrases, parenthetical examples or descriptions, and categorical headers." Examples: *BI (library instruction)* *ILL (interlibrary loan of books not held [here]* *Reference for information assistance* *Reserves for checking out class material* *Special Collections for local material* *Archives (university records)* *WildCat, Lagoon University's catalog* (2) "glossary of library idioms and examples of local use, available as links from the home page."

RESOURCES

Click on 🖼 **to see data in the table above.**

🆕 **indicates recent items of unusual interest, not included in the table.**

🖼 Maryellen Allen, "A Case Study of the Usability Testing of the University of South Florida's Virtual Library Design," *Online Information Review* 26 (2002), 40-53.

🖼 Susan Augustine and Courtney Greene, "Discovering How Students Search a Library Web Site: a Usability Case Study", *College & Research Libraries* 63 (2002), 354-365.

🖼 Joseph Barker, "'Now Which Buttons Do I Press to Make These Articles Appear on the Screen?", *Serials Review* 25 (November 1999), 49-54.

🖼 Brenda Battleson, Austin Booth, and Jane Weintrop, "Usability Testing of an

Academic Library Web Site: A Case Study," *Journal of Academic Librarianship* 27 (May 2001), 188-198.

Candice Benjes and Janis F. Brown, "Test, Revise, Retest: Usability Testing and Library Web Sites," *Internet Reference Services Quarterly* 5 (2001), 37-54.

Jennifer Bowen et al., "Serial Failure," *The Charleston Advisor* 5 (2004)
" … serial failure is . …. the failure of academic libraries to facilitate students' access to articles, and it is without a doubt the most important access-related problem in academic librarianship."

Mercy B. Caña, Quiza Lynn Grace G. Cueto, Allan B. De Guzman, Kaori B. Fuchigami, Leona Rica T. Manalo, and Jake Cathleen U. Yu, "Clientele recognition of library terms and concepts used by librarians: A case of an academic library in the Philippines", *Journal of Librarianship and Information Science*, 37 (2005), 195-204.

Abdus Sattar Chaudhry and Meng Choo, "Understanding of Library Jargon in the Information Seeking Process," *Journal of Information Science* 27 (2001), 343-349.
This study, conducted in Singapore, used a survey method similar to that of Naismith and Stein (below), focused on technical terms used in e-mail reference interactions. Participants chose correct definitions 76.9% of the time.

Janet Chisman, Karen Diller, and Sharon Walbridge, "Usability Testing: A Case Study," *College & Research Libraries* 60 (November 1999), 552-69.

Laura Cobus, Valeda Frances Dent, and Anita Ondrusek, "How Twenty-Eight Users Helped Redesign an Academic Library Web Site", *Reference & User Services Quarterly* 44 (Spring 2005), 232-46.

Barbara J. Cockrell and Elaine Anderson Jayne, "How Do I Find an Article? Insights from a Web Usability Study," *Journal of Academic Librarianship* 28 (May 2002), 122-132.
Unusually detailed coverage of terminology issues.

Denise Troll Covey, Usage and Usability Assessment: Library Practices and Concerns (Digital Library Federation and Council on Library and Information Resources, 2002)

Gwyneth H. Crowley et al., "User Perceptions of the Library's Web Pages: A Focus Group Study at Texas A&M University," *Journal of Academic Librarianship* 28 (July 2002), 205-210.

Ruth Dickstein and Vicki Mills, "Usability Testing at the University of Arizona Library: How to Let the Users in on the Design," *Information Technology and Libraries* 19 (September 2000).

New! Kirstin Dougan and Camilla Fulton, "Side by Side: What a Comparative Usability Study Told Us about a Web Site Redesign," *Journal of Web Librarianship*, 3 (2009), 217-237.
Includes a list of terms test participants found confusing, and a thoughtful discussion of terminology and categorization on library websites.

Vicky Duncan and Darlene Fichter, "What words and where? Applying usability

[testing techniques to name a new live reference service](#)," JMLA: Journal of the Medical Library Assocation 92 (2004), 218-225.

New! Catherine Ebenezer, "Usability evaluation of an NHS library website," *Health Information and Libraries Journal* 20 (2003), 134–142.
Used focus groups, user observation, and a "label intuitiveness/category membership questionnaire" to evaluate usability of a National Health Service library in London.

Karen Eliasen et al., "Navigating Online Menus: A Quantitative Experiment," *College & Research Libraries* (1997), 509-517.
"The results of the study [showed] that grouping resources and assigning concrete, descriptive labels help undergraduates, especially those with basic library instruction, to make more efficient navigation decisions. Concretely, this means that … more descriptive text is necessary."

Pat Ensor, "Knowledge level of users and nonusers of keyword/Boolean searching on an online public access catalog," *RQ* 32 (Fall 1992), 60-75.

New! Deborah Jane Fitchett. *[Students' Natural Use of Language for Academic Library Concepts](#)*, MLIS project, School of Information Management, Victoria University of Wellington, 2006.
Surveyed university students in New Zealand, using an open-ended, sentence completion question format (e.g., "A computer system you can use to find articles about your area of study is a …"). "Concepts that were central to students' library experiences were labelled with as few as 4 different terms, while less central concepts were labelled with more than 30. Library jargon was an important influence on students' choice of terminology. For many concepts, however, students used terms that had not been found on library websites." Extensive literature review and discussion of students' preferred terms.

Jesse James Garrett, "[The Psychology of Navigation](#)," *DigitalWeb Magazine*, December 17, 2002.
"Every link makes a promise, but the creators of the link have little control over what that is. The promise exists entirely in the mind of the user. … The most important factor in evaluating the link is its language. First and foremost, users will look for specific words that they would use to describe what they're looking for. They aren't mulling over interpretation and connotation. They're looking for particular words, and finding those particular words will overwhelmingly cause them to click links. If they don't see their own words, they'll keep an eye out for words they would expect other people to use."

Abby A. Goodrum, "I can't tell you what I want, but I'll know it when I see it: terminological disconnects in digital image reference", *Reference & User Services Quarterly* 45 (Fall 2005).
"When users request an image, they tend to describe the image itself rather than the meaning or emotive content of the image; their indexing vocabulary largely reflects what they expect to see in the image. This is in contrast with image indexing vocabulary derived by a system where indexing terms are derived from text surrounding the image. … System vocabulary may describe higher-level concepts such as industrial pollution rather than smoke or smoke stacks."

Peter Hepburn and Krystal M. Lewis, "What's in a Name? Using Card Sorting to Evaluate Branding in an Academic Library's Web Site," *College & Research Libraries* 69 (2008), 242-250.
"The study found that users do not recognize or comprehend library brand names in the absence of a consistent approach to branding even if they do use the services that have been branded."

Norman B. Hutcherson, "Library Jargon: Student Recognition of Terms and Concepts Commonly Used by Librarians in the Classroom," *College & Research Libraries* 65 (2004), 349-354.

This study used a questionnaire to test students' understanding of "terms derived from library literature, reference desk experience, and classroom observation."

New! Judy Jeng, "Usability Assessment of Academic Digital Libraries: Effectiveness, Efficiency, Satisfaction, and Learnability", *Libri* 55 (2005), 96-121.
Surveyed students at Rutgers University and Queens College about several aspects of their libraries' websites, including terminology and labeling.

New! Odin Jurkowski, "School library website terminology", *Library Hi Tech* 25 (2007), 387-395.
Surveyed librarians and students in elementary, middle, and high schools. "There were three main findings from this research. The first is the wide variety of use and opinion. … Librarians used many different terms … Second, students disagreed with librarians. … students preferred 'books' 58 percent of the time compared to the top choice among librarians being 'OPAC' … Third, there was a lack of support for images, explanatory text, or the use of natural language descriptions."

Amy Kearns, "STEP ONE: STOP CALLING THEM DATABASES!!!", posted on LibraryGarden blog, July 13, 2007.
Recounts a Twitter conversation about alternative terms for "Database". This, plus the comments added to it, will seem strangely familiar to anyone who has discussed this topic in a design meeting. No silver bullet here, but plenty of options and insights.

Leo Robert Klein, "The Web Is Not Your Library," *Library Journal NetConnect* (Winter 2001), 36-37.
Draft version: "The Utilitarian Web"

- - - - - , "The Expert User Is Dead," *Library Journal NetConnect* (Fall 2003).

Steve Krug, *Don't Make Me Think! A Common Sense Approach to Web Usability*, Indianapolis: Que, 2000.

John Kupersmith, "Library Terms That Users Understand", presentation at Internet Librarian 2005.

- - - - - , "Terms actually used for "database" etc."" - Web4Lib post, 8/2/00

New! Krystal M. Lewis and Peter Hepburn, "Open card sorting and factor analysis: a usability case study", *The Electronic Library* 28 (2010), 401-416.
Detailed, thoughtful reporting and analysis of a card sorting project.

Thura Mack et al., "Designing for Experts: How Scholars Approach an Academic Library Web Site," *Information Technology and Libraries* (2004), 16-22.

Louise McGillis and Elaine G. Toms, "Usability of the Academic Library Web Site: Implications for Design," *College & Research Libraries* (July 2001), 355-367.

Susan McMullen, "Usability Testing in a Library Web Site Redesign Project," *Reference Services Review* 29 (2001), 7-22

Constance A. Mellon, "Library anxiety: a grounded theory and its development", *College & Research Libraries* 47 (1986), 160-165.
This classic study quotes a student: "When I first entered the library, I was terrified. … It was like being in a foreign country and unable to speak the language."

Minitex/Minnesota State Library Standards Review Task Force, "Library Website Terminology; Interim Minnesota Guidelines" [2006]
Extensive survey aimed at finding terms for major library website activities or services that were preferred by users of public, academic, and K-12 libraries, with an impressive total of 7651 responses. Worth noting that "In most cases, the two major response groups (academic and public library users) agreed on their preferred answer." The authors note that some of the results may have been influenced by question wording, but others evidently were not. Posted on the web as "a work in progress."

W. Bede Mitchell et al., "Testing the Design of a Library Information Gateway", ACRL Tenth National Conference (Denver, 2001); also published in *Southeastern Librarian* 49 (2001), 4-10.

Keith A. Morgan and Tripp Reade, "Competing Vocabularies and 'Research Stuff'", co-published simultaneously in *Journal of Internet Cataloging* 5 (2002), 81-95; and in Judith R. Ahronheim, ed., *High-Level Subject Access Tools and Techniques in Internet Cataloging*, Binghamton, NY: Haworth Information Press, 2002, pp. 81-95.

Lesley Moyo and Ashley Robinson, "Library Jargon as a Factor in Information Design for Web Usability: Survey Report (Summary)," 16th Annual Computers in Libraries 2001 (Medford, NJ: Information Today, Inc., 2001), pp.157-165.

Multilingual Glossary - "a professionally generated signage tool designed for libraries … common library phrases in 49 languages." From the State Library of New South Wales, Australia

Multilingual Glossary - library terms in 6 languages, compiled and tested by ACRL.

Rachael Naismith and Joan Stein, "Library Jargon: Student Comprehension of Technical Language Used by Librarians," *College & Research Libraries* 50 (Sept. 1989), 545.
This study, done several years before the advent of the web, found that "patrons only understand 50 percent of what librarians say or write." It includes a useful analysis of "how people arrive at a definition when they do not know the term," e.g. by breaking a word into segments, "unpacking" multiword phrases and analyzing them, or thinking of contexts for the term.

"Naming Conventions", article in LISWiki.

National Cancer Institute, Research-Based Web Design & Usability Guidelines

Jakob Nielsen, "Outliers and Luck in User Performance," Alertbox, March 6, 2006.
"Users can waste significant time scouring a site for a term that the site doesn't use and doesn't cross-reference to its own preferred term."

- - - - - , "Use Old Words When Writing for Findability," Alertbox, August 28, 2006.
"'Speak the user's language' has been a primary usability guideline for more than 20 years. The fact that the Web is a linguistic environment further increases the importance of using the right vocabulary. … Call a spade a spade, not a digging implement. Certainly not an excavation solution."

North Carolina State University Libraries, Recommended Resources

Kimberly Parker and Daniel Dollar, "E-Terminology: Why Do I Need to Know What You Mean?," *portal: Libraries and the Academy* 5 (2005), 421-426.

Deals mainly with librarians' need to communicate clearly among themselves about electronic subscriptions, aggregators, bundles, etc., noting that "Our profession needs to strike a balance between what we know versus what readers need to know -- the goal being to provide just what is absolutely necessary for readers to navigate successfully."

Pearce-Moses, Richard. *A Glossary of Archival and Records Terminology*, Chicago: Society of American Archivists, 2005.

Anne Pemberton and Peter Fritzler, "The language barrier: don't let library lingo get in the way of learning", *C&RL News*, 65 (2004), 154-155.

Plain Language Action & Information Network - U.S. government site with guidelines and examples for writing plain English prose.

New! Mark Aaron Polger, "Student Preferences in Library Website Vocabulary", *Library Philosophy and Practice*, June 2011.
Surveyed 300 students to determine their preferred terms for top-level links commonly found on library websites, and compared these to terms reported by librarians as actually used. "It is evident that Librarians prefer terms that contain 'databases' (68%) while students prefer terms that contain 'articles'. ... The data illustrates students' preference to natural language, like 'Find Books' (40%), 'Find Articles' (47%), and 'Research Guides' (36%). As presumed, library jargon such as Inter-library Loan was not popular among students (12%). 'Find/get materials' was preferred over the term Inter-library Loan (65% and 12% respectively)."

New! Victoria Redfern, "Natural language thesaurus: a survey of student research skills and research tool preferences", *Australian Academic and Research Libraries* 35 (2004), 137-150.
Surveyed students at the University of Canberra. focusing mainly on subject vocabulary issues but also asking participants to "identify the terms 'search term', 'subject heading', 'descriptor' and 'keyword'. … 52 per cent understood the terms and 48 per cent did not understand the terms."

Brenda Reeb and Susan Gibbons, "Students, Librarians, and Subject Guides: Improving a Poor Rate of Return," *portal: Libraries and the Academy* 4 (2004), 123-130.

New! Erica Reynolds, "The Secret to Patron-Centered Web Design: Cheap, Easy, and Powerful Usability Techniques", *Computers in Libraries* (June 2008), 6-8,44-47.
Describes the website redesign process at the Johnson County (Kansas) public library. Card sorting, paper prototyping, and user observation were used. One result was that "Readers' Corner" was changed to "Find a Good Book."

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ABOUT THIS DOCUMENT

This document originated in 2002, as a website intended to help librarians resolve disagreements over link labeling, using an evidence-based approach. Its initial statement of purpose described the context: *"The current and long-overdue wave of usability testing in libraries is confirming what we have known for years: our users frequently do not understand the terms we use to describe library resources, particularly those in electronic form. Librarians' discussions of potential labels frequently spiral into inconclusive sparring over minor points of definition; these are often technically valid but seldom lead to a design breakthrough."*

Since then, it has been used as a resource in website redesigns, usability projects, and library/information school courses, and selected by the Librarians' Internet Index (now ipl2), the UNESCO Libraries Portal, the Law Library Resource Xchange, and the BUBL Link Catalogue of Internet Resources.

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