

# ***Sinking or Swimming?:***

**The State of Web Sites  
In  
Ohio's Public Libraries**

*By*

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## **Introduction: Why should we care?**

***“Homepages are the most valuable real estate in the world. Millions of dollars are funneled through a space that’s not even a square foot in size. The homepage’s impact is far greater than simple measures of e-commerce revenues; the homepage is also your company’s face to the world. Increasingly, potential customers will look at your company’s online presence before doing any business with you...”***

*--From Homepage Usability: 50 Websites Deconstructed by Jakob Nielsen and Marie Tahir*

Libraries are not commercial entities, yet we are increasingly in competition with commercial businesses for the time and attention of customers. It is important that we, as libraries, realize that we are not immune from the standards that not only rule the business world, but understand why those strategies are successful and how we should be applying them to the way that we do our own business.

Jakob Nielsen, who is often called the “Father of Web Usability<sup>1</sup>,” has referred to the way people spend time on the Web as the “attention economy<sup>2</sup>.” A true measure of how successful a site is can be seen by its stickiness—how much time a user spends there. Although the Web is certainly a funnel for billions of dollars, the true currency of the Web is the user’s time. If a user doesn’t spend time on a website, then the site will not create profit. In the case of libraries, a low stickiness factor often means that our patrons are not using our resources.

### **Why do a study?**

Surfing other Ohio library websites, I noticed that there seemed to be huge discrepancies in how libraries handled the look and feel of their respective websites. It was relatively easy to tell which libraries viewed their websites as an important component of their overall business and which had a site because they thought it was something they were just supposed to have.

I’ve been talking about website design and development around the state for several years, and I noticed that I would often get the same questions or, more often, the same reactions from people attending my sessions. For example, there have been a large number of people who have been surprised when they learn that there shouldn’t be a large .jpeg of the physical library building taking up

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<sup>1</sup> Kevin, Yank. “Interview - Jakob Nielsen, Ph.D.” Sitepoint. June 6, 2005.  
<<http://www.sitepoint.com/article/interview-jakob-nielsen-ph-d>>

<sup>2</sup> Nielsen, Jakob and Tahir, Marie. Homepage Usability: 50 Websites Deconstructed. Indianapolis: New Riders, 2002.

prime real estate on a site's front page. I started to realize that a lot of basic business and design concepts were not filtering their way down to the people who really needed to know. That continued to increase my own curiosity about how libraries in Ohio were handling their online image.

I wanted to have some statistical proof of my perceptions and some useful data that could be shared in the Ohio library community to help remedy some of the problems with library websites that I commonly ran across. This data was first shared as a live presentation at several 2005 Ohio Library Council Chapter conferences and has been adapted to be shared as a stand-alone report.

This study is the result of my own curiosity, but it is my hope that the data will inspire many of Ohio's public libraries to rethink 1) *why* they have websites; 2) *who* they are really for and 3) *how* they can improve their current sites to better meet the needs of today's online patrons.

## **What is usability?**

***"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."***

*--From Jakob Nielsen's Alertbox<sup>3</sup>*

Usability refers to those aspects of a site's design that enable it to be user-friendly. This includes navigation, text, images, scripts and essentially any item affecting the visual aspect of the site. If an element presents an obstacle to the visitor (e.g., a Flash movie the user cannot bypass without watching), the usability decreases.

Functionality is key; effectiveness is everything. If a user cannot find what they need, the user leaves disappointed. It is unlikely that the user will come back the next time he/she has a need that the library's site might fill. Think of it this way: would you keep going back to a store that never carried the products you need? In this time-pressed era, people want their needs not only filled, but filled quickly. A Web site that is difficult to navigate or takes too long to download will only drive users away.

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<sup>3</sup> Nielsen, Jakob. "Usability 101: Introduction to Usability." Jakob Nielsen's Alertbox. June 6, 2005. <<http://www.useit.com/alertbox/20030825.html>>

## **Methodology**

To create an evaluation tool for the purposes of this study, I primarily used that provided by Jakob Nielsen and Marie Tahir.<sup>4</sup> In their book *Homepage Usability: 50 Websites Deconstructed*, 113 criteria in 26 categories for site usability are laid out. However, a good many of these criteria were only applicable to commercial sites (such as those for online shopping) or would have applied to only a very small percentage of Ohio public library sites with specific features. Those were discarded, leaving 53 broad criteria in 11 categories. In addition to these, I added 8 criteria that were primarily design-related (but affected usability) that were problems I commonly ran across while browsing sites. A total of 61 criteria were used to evaluate each site in the study.

211 websites were evaluated and the listing of these was provided by the State Library of Ohio.<sup>5</sup>

Since the bulk of the evaluative tool came from Nielsen and Tahir, I used their scoring system. Each item evaluated was scored as either pass, fail, or not applicable. The total score for a library only took those items into account that scored either pass or fail (items designated as not applicable did not affect the final score).

As specified by Nielsen and Tahir, a passing percentage score was 80%, with 95% or higher being ideal. On initial inspection that might seem very high; however, would someone want to drive a car that only worked 80% of the time? Own a house couldn't be lived in 20% of the time? Anything less than 100% means that there are usability issues. So if a site has an 80% usability score that means 20%, a fifth of it, is still ineffective and/or unusable.

## **When were the sites evaluated?**

All of sites were evaluated between January and May, 2004. As can be seen from the graph below, I had a lot of initial momentum at the beginning of the project, slowed down in the middle and then, in

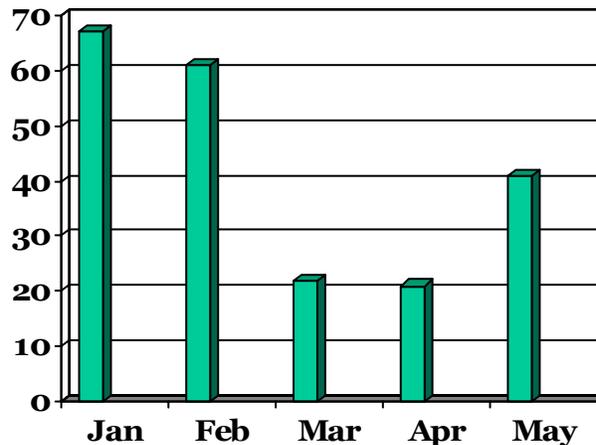
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<sup>4</sup> Nielsen, Jakob and Tahir, Marie. *Homepage Usability: 50 Websites Deconstructed*. Indianapolis: New Riders, 2002.

<sup>5</sup> "Ohio Public Library Web Sites and/or Internet-Accessible Catalogs." State Library of Ohio. June 6, 2005. < <http://winslo.state.oh.us/publib/libtable.html> >

May, realized that I was running out of time before my maternity leave and my productivity spiked.

Sites are always changing. So if your library's site would have failed a criterion in March last year, it may not fail that same thing now. But this will give you a better idea of when most of the evaluations were happening.



## **The Results**

The results of the study are divided into twelve categories. Eleven of those categories were taken directly from those specified by Nielsen and Tahir's 113 usability criteria. The twelfth, "Library-Specific Issues," was a category I added to designate those items which I commonly ran across as design problems. I relied primarily on Vincent Flanders' two books: *Web Pages That Suck*<sup>6</sup> and *Son of Web Pages That Suck*<sup>7</sup> as a resource to explain why these particular items were problematic.

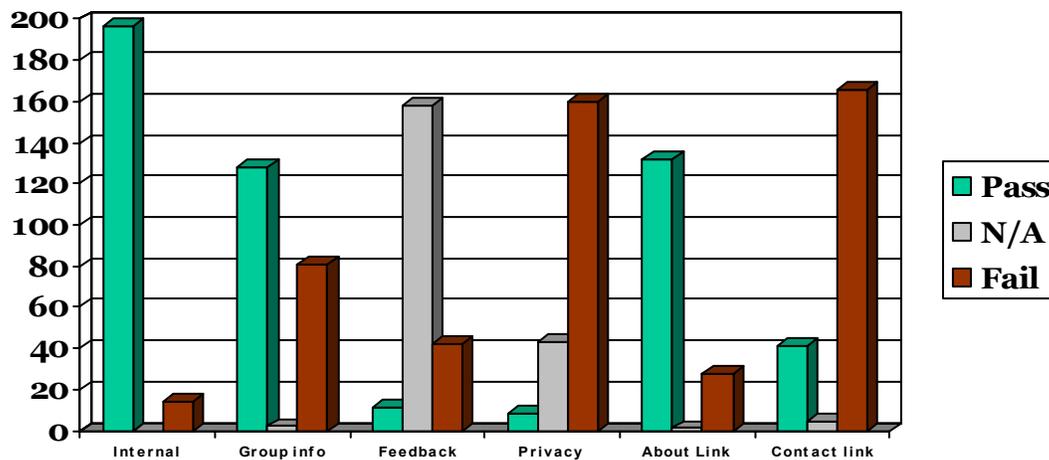
In each category, a bar chart will show the pass/fail/NA statistics for each criterion.

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<sup>6</sup> Flanders, Vincent. *Web Pages That Suck.: Learn good design by looking at bad design.* San Francisco : Sybex, 1998.

<sup>7</sup> Flanders, Vincent. *Son of Web Pages That Suck.: Learn good design by looking at bad design.* San Francisco, Sybex, 2002.

## Communicating Information About the Library: Are we communicating?



**1) Don't include internal information on the public website.** When sites did fail this, it was usually because they had a link to their intranet directly from their public site. Even if it was password-protected, it doesn't belong where the public can see it. Not only can this clutter the public site, but it can be misleading to the public who wonders why they can't get in or might be confused by the information they find that is only applicable to employees.

**2) Group information such as About Us, Employment, etc. in one distinct area.** This gives people a clear and standardized place to go. It also helps users who don't care about this information by separating it out from other content. Many libraries did not have an "About Us" type of section and had such information scattered about, sometimes in seemingly random fashion.

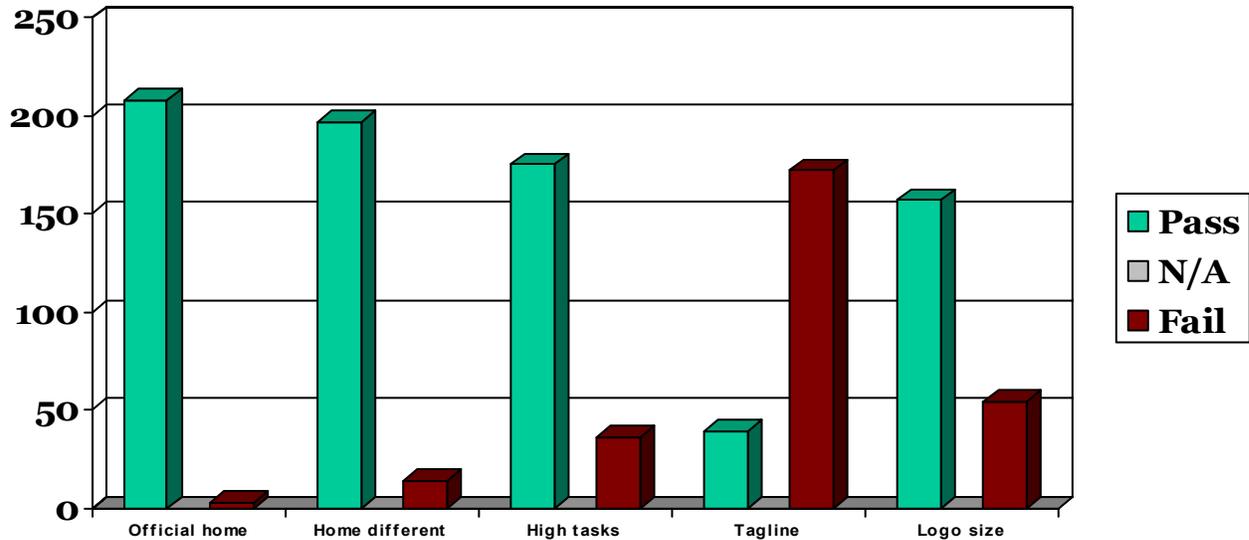
**3) If you provide a "feedback" mechanism, specify who will read the feedback.** People want to know what's going to happen to things that get sent via your site. Most sites that had such a mechanism did not specify who would be reading it, yet encouraged people to send their messages into the void. What is perhaps more disturbing is that the vast majority of libraries did not even have such a mechanism to begin with.

**4) Provide a Privacy Policy if any customer info collected.** When a site asks for ANY kind of info, including library card numbers or email addresses, this needs to be in place. In this day and age, people are very security conscious and want to know what is going to happen to their private information. While you and I know that a library probably is not going to sell email addresses to spammers, our public does not know that and we should never assume that they should know that.

**5) Include home page link to "About Us" page.** This is related to #2, but is important because some libraries had an "About Us" section yet did not include a link directly from the homepage, making it easy to find.

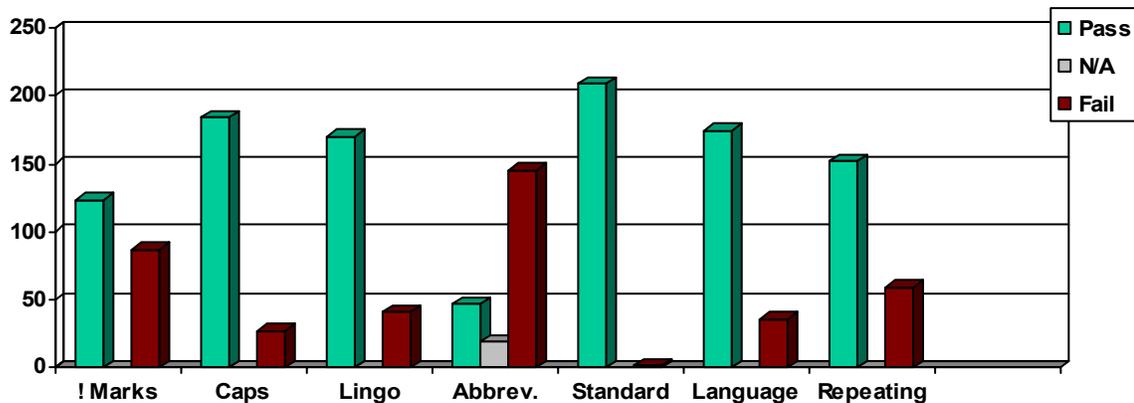
**6) Include home page link to a "Contact Us" page.** This page should include the phone number, snail mail and email address and the feedback form. Again, this information was rarely aggregated into one convenient place for visitors and as a result the vast majority of library sites failed.

## Communicating the Purpose of the Site: Does the site *have* a purpose?



- 1) Clearly designate one page as official homepage.** This was not a problem for virtually any library; with some commercial sites, sometimes they have different homepages for people coming from different referral sites. Sometimes it is just hard to tell what the official homepage of a site really is.
- 2) Design homepage to be clearly different from other pages.** Sometimes it was hard to tell which page was the homepage, simply because there was no difference in design of the homepage from any other. It is important that visitors always know not only how to *get* to "home base," but what it *looks* like.
- 3) Emphasize highest priority tasks for a clear starting point.** This area was somewhat weak for many libraries. Navigation was spread all over the page sometimes—some on the top, some on the bottom, some on the sides, some in the middle! Some sites had buttons scattered everywhere and user confusion was inevitable.
- 4) Include a tag line.** A tagline acts as a brief, straightforward summary of what the site offers or what the entity does or is. The majority of libraries don't have one on their site. This is poor PR practice and does not address the needs of those users who come to the site from other sources, not knowing what they are looking at.
- 5) Show library's name & logo in reasonable size & location.** I was surprised at how large some libraries' logos are. I really felt sorry for people who were on 56K modems who had to wait for some of these graphics to download. I'm sure that all but the most persistent abandoned ship when it took over a minute just for the name of the library to display. Libraries are in the business of providing service, but it is not good customer service to make patrons wait unnecessarily just to see a graphic.

## Content Writing: Do we know how to write for the Web?



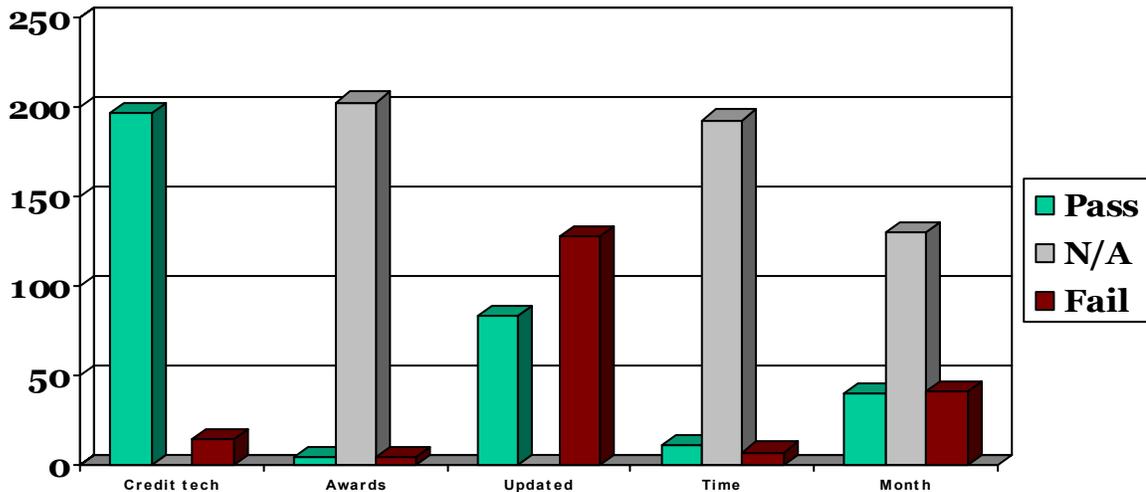
- 1) Avoid exclamation marks.** Exclamation marks don't belong in professional writing. They look chaotic and loud—don't yell at your users. "If you break this guideline once, you're likely to start breaking it all over the homepage, because all items on the homepage should be of high importance."—Jakob Nielsen<sup>8</sup>
- 2) Avoid using all uppercase letters.** Again, it isn't polite to yell at visitors, which is what uppercase letters indicate on the Web.
- 3) Don't use clever phrases or marketing lingo.** Don't make people figure out what you're saying. Phrases like "Book It" and "Come Read with Us" may sound really clever, but with no other explanation, that's all they are—people don't know what they \*really\* mean.
- 4) Spell out abbreviations & acronyms.** Again, this goes back to libraries making assumptions about what patrons know. It seems that we often assume our patrons know all of our acronyms (and you know how many there are in libraries). Can anyone guess what acronym failed most of these libraries? OPLIN!
- 5) Use consistent capitalization and other style standards.** Thankfully, almost no library failed this criterion. Libraries are good at using proper spelling and grammar.
- 6) Use patron-focused language.** The example I always like to use for this is actually not web-related: circulation desks. Until I worked in a library, I had no clue what this was. Why wasn't it called "Check Out" like at the supermarket? Phrases on websites that failed were often things like "EBSCO Databases," "Electronic Databases," "Virtual Library," "OPLIN databases" and "Circulation Policies."
- 7) Avoid repeating links on the homepage.** Repeating items actually reduces their impact and increases confusion. In order to feature something prominently, feature it in one place. This also makes your navigation more consistent and easier to find and use. For those libraries that failed, it was

<sup>8</sup> Nielsen, Jakob and Tahir, Marie. Homepage Usability: 50 Websites Deconstructed. Indianapolis: New Riders, 2002.

common to find navigation buttons along one side of the page and then additional text links at the bottom.

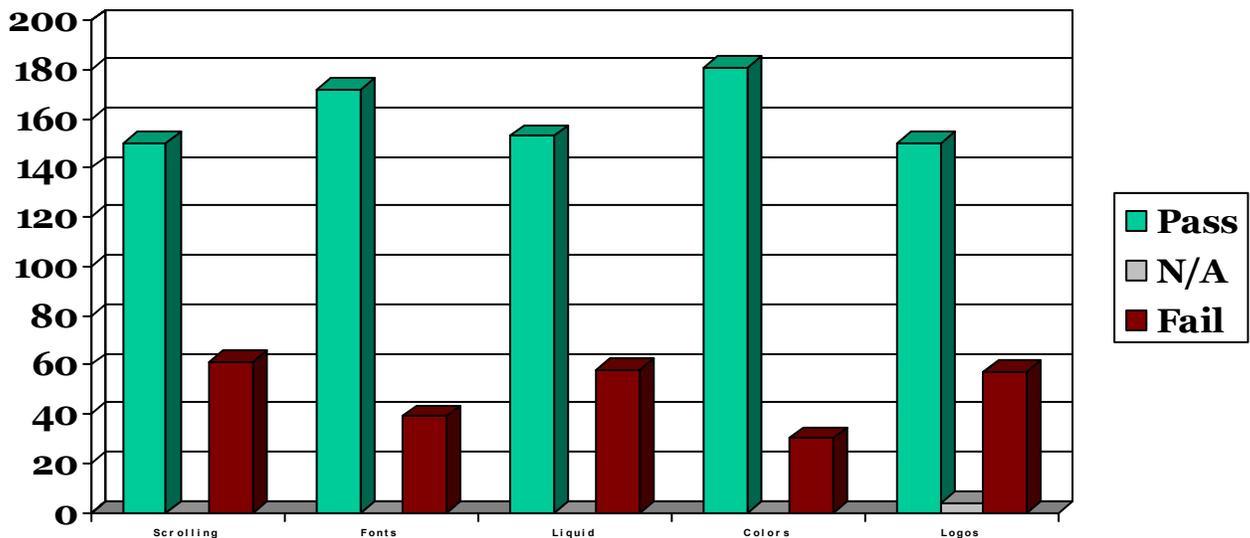
## **Credits and Dates:**

### **Small but important**



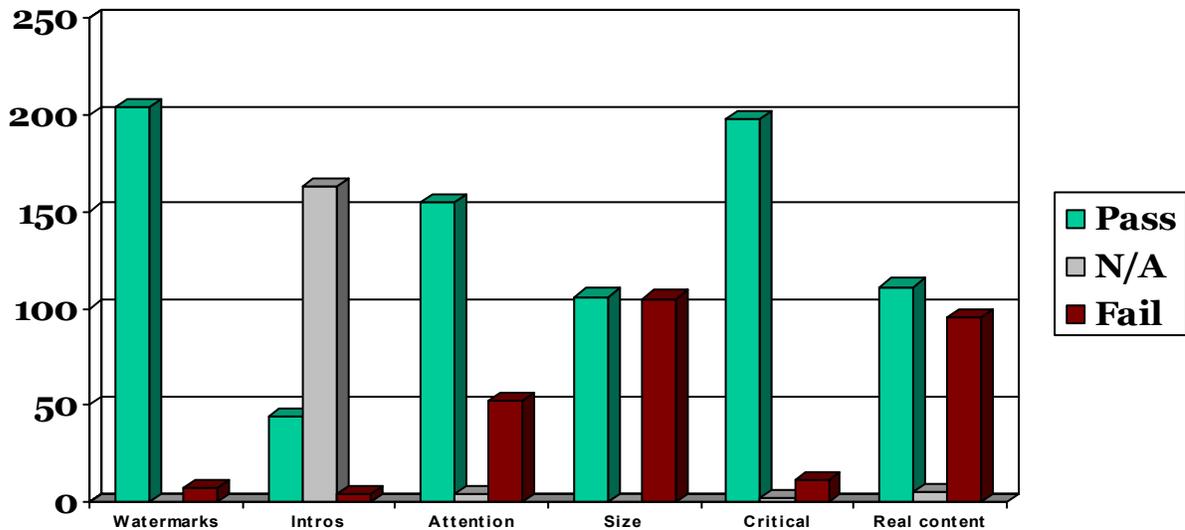
- 1) Don't waste space crediting search engine, design firm, etc.** Users don't care about the technology behind the scenes and every item you add to the page adds complexity and takes away from something else that is there. Each item needs to be evaluated carefully for how it takes up valuable real estate and how it serves the visitor.
- 2) Exercise restraint in displaying awards.** We're all proud when we win something. But, again, our users often don't care. If they do, they'll come looking for it. Put up the announcement briefly and then relegate it to the "About Us" section.
- 3) Show date last updated.** The fail rate here was surprising, since librarians are very passionate about the currency of the information they manage. But the majority of sites did not include a "Last modified" date. We need to let our visitors know that we are paying attention to our web facilities just like we do to our physical ones, especially nowadays where our customers are more likely to see the web one first.
- 4) Show users time content last updated, not computer time.** Just showing the current time is not the same as showing the time/date the site was last modified. Only a few libraries had this problem.
- 5) Spell out months, not numbers.** Many countries mention the date, not the month, first, when using numbers, so spelling out the date is less ambiguous than 01/03/05.

## Graphic Design: How do we look?



- 1) Avoid horizontal scrolling at 800x600.** This lower screen resolution is fast becoming obsolete as monitors become capable of very high resolutions. A higher resolution of 1024x768 is now more standard and many users will have their monitors even higher than that. But your site should never scroll sideways at this lower size. Many people with older monitors still use this and we cannot assume that everyone is up to date, just like we cannot assume that all of our visitors use Internet Explorer and have broadband connections to the Internet.
- 2) Limit font styles & text formatting.** I saw a fair number of sites that had more than 2 or three text styles, colors and fonts ; very cluttered and unprofessional-looking. If text looks too much like graphics, users tend to overlook it, mistaking it for ads.
- 3) Use a liquid layout.** Layout should resize for different screen resolutions. A site should never need a statement that says "Best seen at 1024x768 screen resolutions."
- 4) Use high contrast colors.** Type needs to be as legible as possible. Some sites had blue text on green backgrounds, or black text on brown textured backgrounds. Remember, no one cares about how the site looks until how it looks gets in the way of finding what the person came for.
- 5) Use logos judiciously.** This one had a higher fail rate because many libraries used logos to create buttons for every research database. This adds to the clutter and confusion, not to mention the download time for the end user. By the time all of those logos completely download, the user is probably long gone.

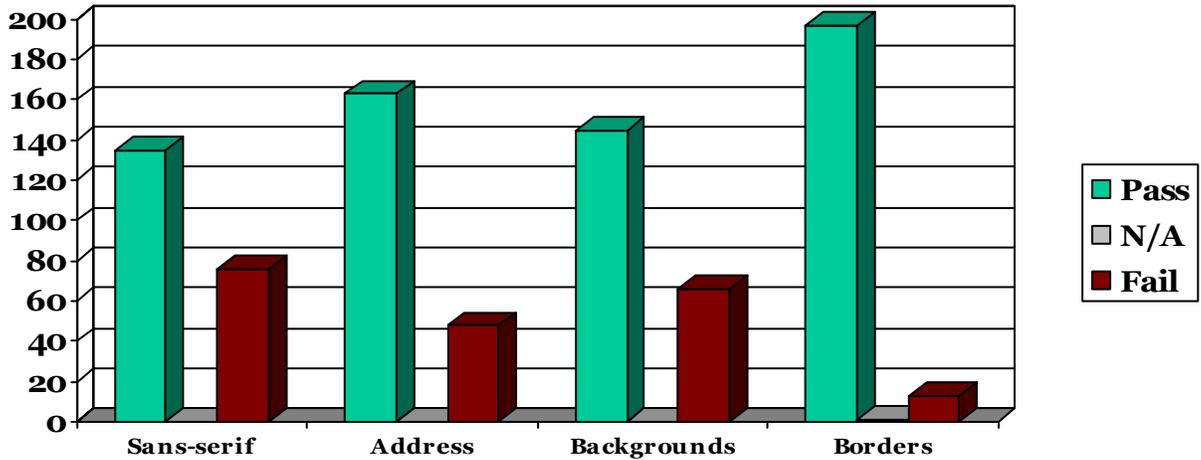
## Graphics & Animation: Are we using these wisely?



- 1) Avoid watermark graphics.** (Background images with text on top of them). These often decrease visibility. If the image is interesting and relevant, the user won't be able to see it clearly; if it's not, then it's not needed. Watermark graphics rarely add any value.
- 2) Don't make animated intros the default.** This is usually a problem where a site has a Flash introduction. This is just making visitors climb over a hurdle before they can get to the "real" content. Remember how much you enjoy those long, maze-like lines at the movie theater to buy a ticket or at a bank to get to a teller? Don't make your online customer wait in line when they don't have to just so you can show off Flash MX know-how.
- 3) Don't use animation just to attract attention.** This goes back to being judicious. Animation rarely has a place on the homepage because it detracts from everything else. Unfortunately, a fair number of sites used it just because they must have thought it was cute, not because it really served a useful purpose. Or they used it to illustrate an upcoming program, meaning that everything else around it was less meaningful.
- 4) Edit photos & images for appropriate display size.** Remember those people coming in via dial-up! The recommended size of graphics, total, is 30K. Many sites had huge photos that measured that much all by themselves. Even those folks on broadband will notice that the huge .jpg is slowing down their display.
- 5) Never animate critical elements of the page.** This would include the tagline, the logo or the library name. Not only do users tend to ignore these areas because they look like ads, but they tend to be difficult to read.
- 6) Use graphics to show real content.** Similar to the animation problem, graphics were often used just to decorate and not to show any real content. People are drawn to pictures, so using them gratuitously distracts them from critical content.

## **Library Specific Issues:**

### **Problems often seen on library web sites (Part I)**



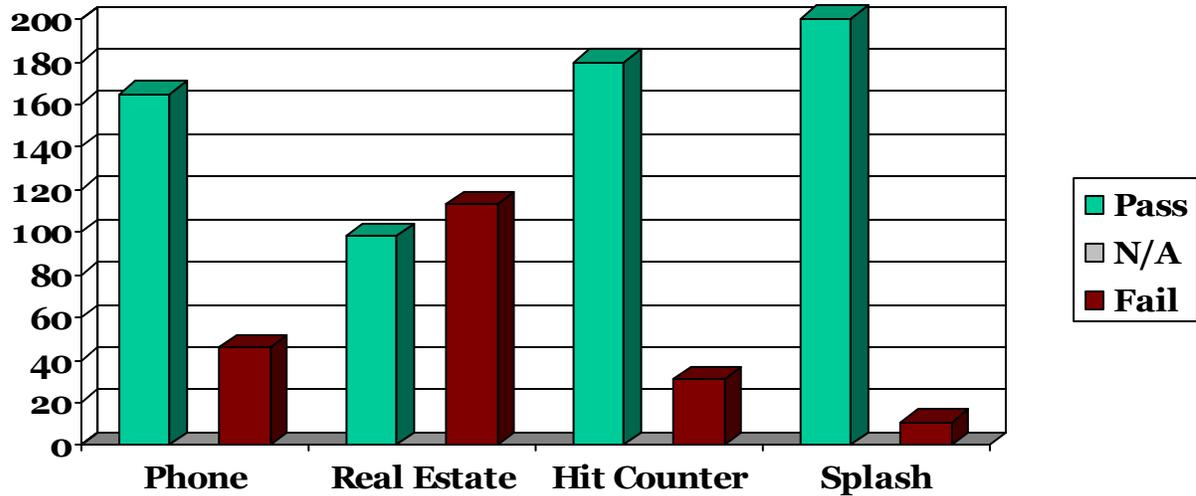
- 1) Use a sans-serif font for most text.** Sans-serif fonts have been shown to be easier to read on a computer screen<sup>9</sup>. Many library sites are still simply using the default Times New Roman, which is a serif font.
- 2) Address is clearly visible.** It was surprising how hard it was to find the library's physical address on some sites.
- 3) Avoid textured/tiled backgrounds.** If nothing else, these types of backgrounds date a site to circa 1998. They also make text nearly unreadable and just about scream "non-professional design."<sup>10</sup>
- 4) Images are free of blue borders.** When an image is clickable as a link, browsers put a blue border around it by default. These need to be removed in the code. When blue borders are visible, it makes the site look less professional.

<sup>9</sup> Will-Harris, Daniel. "Choosing the Best Faces for the Screen." *Typofile Magazine*. June 6, 2005. <<http://www.will-harris.com/typoscrn.htm>>

<sup>10</sup> <sup>10</sup> Flanders, Vincent. *Son of Web Pages That Suck.: Learn good design by looking at bad design.* San Francisco, Sybex, 2002.

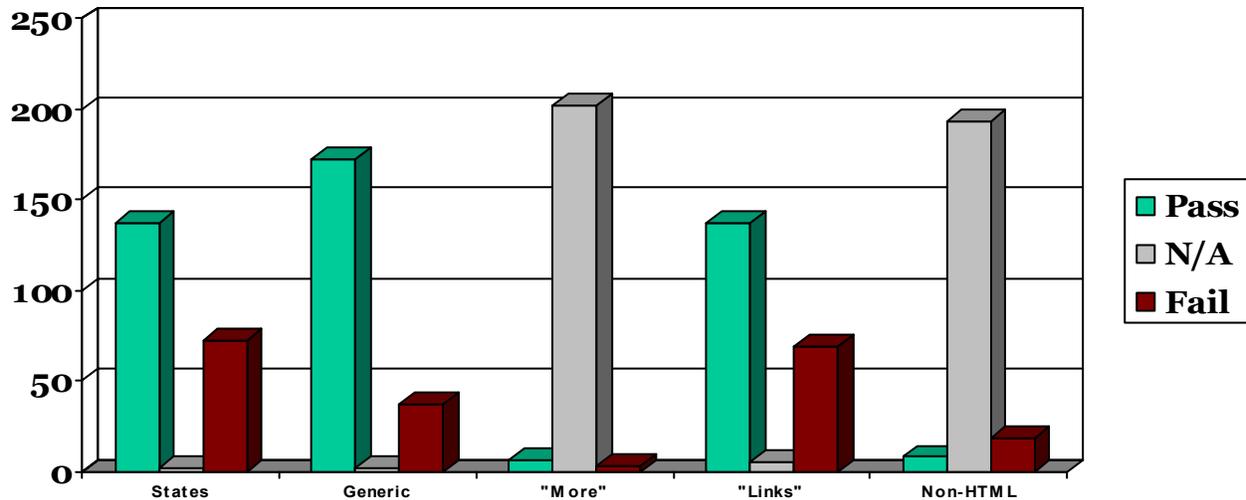
## Library Specific Issues:

### Problems often seen on library web sites (Part II)



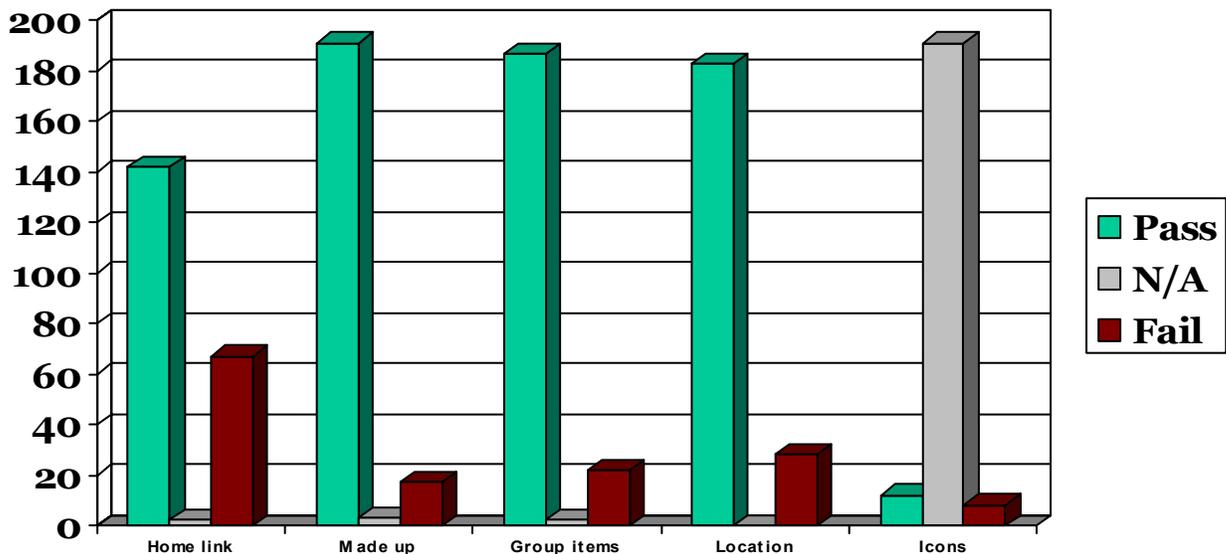
- 1) Phone number clearly visible.** On some sites I had to conduct hard-core scavenger hunts to find the phone number. If it was even there...
- 2) Prime real estate used properly.** Too many libraries are underestimating the value of the real estate that constitutes the homepage. They are filling it up with huge pictures of their physical buildings (in business this just isn't done—it's like advertising the front door rather than the products being sold), lists of board members and even mission statements. Users don't care and libraries need to get over thinking that the site is about the library—it's about serving the online patron.
- 3) No hit counter viewable.** Fortunately, not too many had these. This is another element that contributes to a site looking non-professional. Libraries aren't Yahoo and will never get as many hits as Yahoo. Do we want to advertise that? And, if we did get as many hits as Yahoo, we wouldn't need to advertise it.
- 4) Splash pages.** This is the obstacle course I mentioned earlier; Flash animations before one gets to the "real" content are typical of these. Don't make users jump through hoops or wait to see irrelevant content.

## Links : Are we leading the way?



- 1. Allow links to show visited/unvisited states.** People need visual clues to know where they've been already. Don't handicap visitors by putting design aesthetics over usability.
- 2. Don't use generic instructions** such as "Click Here" as a link name. Links need to be meaningful text that tells users exactly what they will get when the link is clicked. This helps users to quickly differentiate between items. For example, instead of saying "Click here for book recommendations," just say "Book Recommendations." People already know how to click.
- 3. Don't use generic links such as "More" at the end of a list of items.** Instead, tell users specifically what they will get MORE of, such as "More New Fiction."
- 4. Don't use the word "links" to indicate a link page.** This is akin to labeling a category of information "words" in a print medium. Name the category after what the links are pointing to.
- 5. Indicate if link goes to non-HTML page.** There were a number of sites that had links to PDF documents (such as newsletters) that did not give the user any indication that they were going someplace that would require Adobe Acrobat reader. This is agonizing for users with slow connections, who often have to wait for the new application to load just so they can exit out of it. Worse, in a limited memory situation, launching a helper application or memory-intensive plug-in can crash the browser or the whole computer.

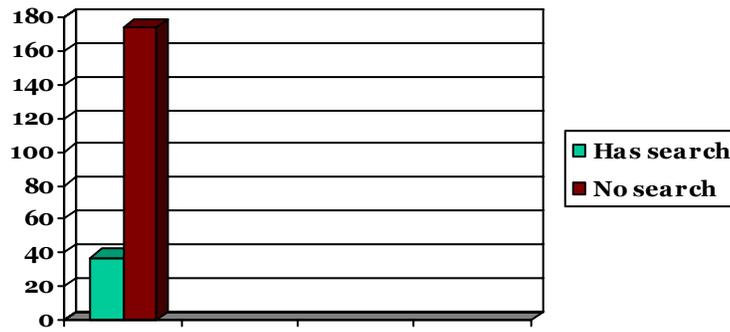
## Navigation: Are we making it easy?



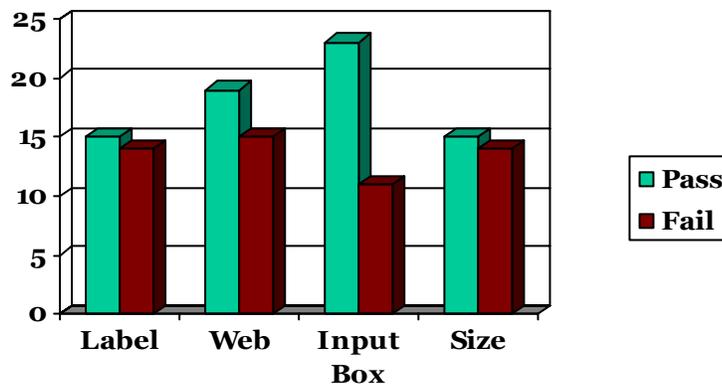
- 1. Don't include active link to homepage on homepage.** If a "home link" is included as part of the regular navigation bar, it should not be clickable from the homepage. If it is, some users will inevitably click it, wondering if they are REALLY on the homepage.
- 2. Don't use made-up words for navigation choices.** They need to be clear. Words such as "Hot Zone" or "Resources" don't say anything to help people decide where to go.
- 3. Group items in navigation together that are similar.** Group book-related links together, library information together, etc. I was really surprised when I saw sites that had navigation bits and pieces everywhere without any apparent rhyme or reason.
- 4. Locate primary navigation area in highly noticeable place.** In some cases it was hard to find the main navigation. Sometimes it was located at the bottom, or I had to scroll all around to find it scattered here and there.
- 5. Use icons in navigation only if they help users.** Don't use icons when simple text links are clearly different from one another such as in category names. I rarely saw this, fortunately. Sometimes bullet-type icons were used as decoration and they added nothing to usability and added more to the download time.

## Search: Who has it?

Before site search criteria can be discussed, it is necessary to look at how many sites actually \*had\* a site search. This statistic is pretty worrisome by itself—less than 40 of the libraries surveyed actually provided one.

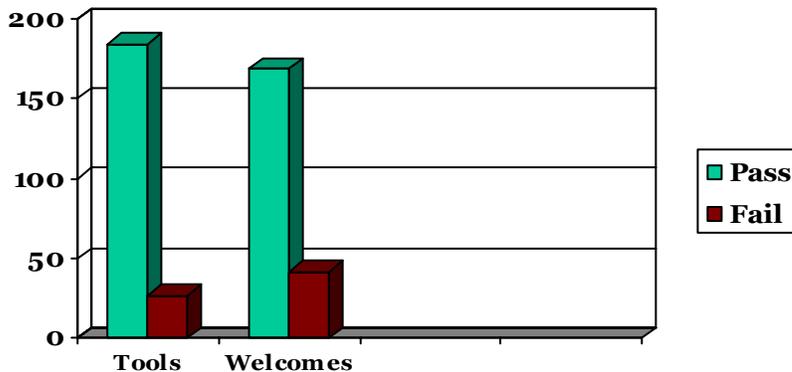


## Is it intuitive?



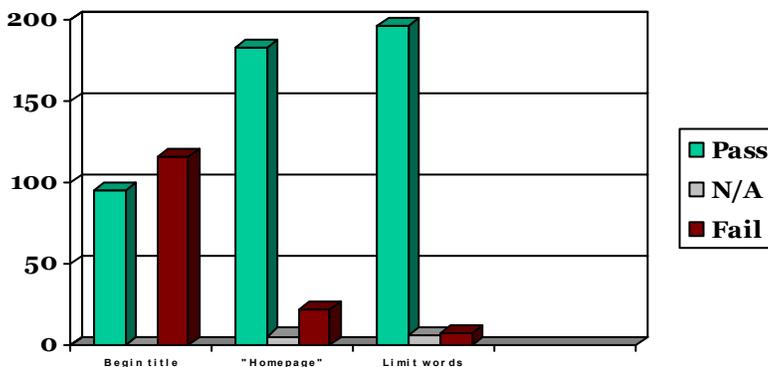
- 1) Don't label search area, use a button.** This design is preferred because it is the simplest and easiest to recognize by users. A label is redundant.
- 2) Don't allow web searches from site search.** Users know how to type "www.google.com."
- 3) Give users an input box on homepage.** Users now expect and look for an input box with a button next to it—if they don't see it, they often assume that the site does not have a search feature.
- 4) Input box should allow 25+ characters to show.** Shorter than this and people often assume they can't type in longer keywords.

## Tools & Welcomes: Things visitors DON'T want



- 1. Don't provide tools unrelated to tasks users come to your site to do.** Some sites seemed compelled to include weather and national news tickers right on the front page, simply because they could. But the reality is that people do not come to library sites for that information—they go to Weather.com and CNN.com. Libraries need to hoard that prime real estate for themselves and for library “stuff.” After all, the library pays for it.
- 2. Don't literally welcome users to your site.** Before you give up prime homepage space for a greeting, use it for a tagline instead. The best welcome you can give users is a concrete definition of what the site is and a clear way to get what they want.

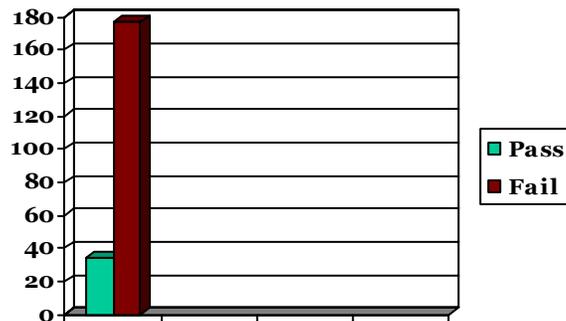
## Window Titles: They matter



- 1. Begin window title with library's name.** You don't know where people are coming from and if the page title is just “Home,” they have no clue where they are. Also, the page gets indexed by search engines by what it is called. So if the page is called “Library Homepage,” that's what will show in Google.
- 2. Don't include "homepage" in the title.** This adds verbiage without value.
- 3. Limit titles 7-8 words and fewer than 64 total characters.** Longer titles are less scannable, especially in bookmark lists.

## **Conclusions:**

### **Ohio's public library websites are *not* swimming**



**Poor pass rate.** Only 35 libraries out of 211 scored 80% or higher on the survey, resulting in only a 17% pass rate overall.

**Important features are missing.** Privacy policies, site searches and feedback mechanisms are missing outright. Not enough libraries are providing their online visitors with standard features.

**Overall image of public libraries is lacking.** Ohio's libraries are not providing enough usable, friendly or professional-looking interfaces. Websites are an extremely important public relations and service piece that many libraries are seemingly not paying enough attention to. With the severe budget cuts that have been made to library funding, Ohio's libraries are now often in the position of having to prove that they are still relevant. Unfortunately, many library websites are only serving to prove how out of touch libraries are with the needs and expectations of online patrons. Ohio's libraries may be losing credibility when they need it the most.

## **Recommendations**

**Ohio libraries need to re-think the purpose of their websites.** Just as a library has a mission statement, a library's website needs one, too. Is it to inform visitors? To provide online reference tools? Whatever the purpose, it needs to be concretely defined and used as the impetus for creating the site. For those libraries about to redesign their sites, it would be useful to create a business case-- a justification of why the project is required for the library and what the final product is going to be. To do otherwise is likely to result in a site that will be ineffective and whose success will be difficult to evaluate.

**Ohio libraries need to continually evaluate their sites for usability and design problems.** Usability testing and/or evaluation are a must. Jakob Nielsen recommends: "Current best practices call for spending about 10% of a design

project's budget on usability. On average, this will more than double a website's desired quality metrics..."<sup>11</sup> It is not good practice to create a site and then simply publish it for public use. Libraries must ensure that their sites are user-friendly and enable visitors to fulfill their needs without hindrance.

**Ohio libraries need to become more educated about best practices in web design and usability.** Many of Ohio's libraries have a staff member, who is not a professional web developer, who is responsible for the library website; while having a professional on staff or outsourcing the site to a professional company might be ideal, it is not always economically feasible. Thusly it is imperative that employees who are in charge of a library's website educate themselves on an ongoing basis about usability, web-related concepts and technologies. Administrators need to support these staff by providing resources for additional training and allowing them sufficient time to keep themselves updated. Both staff and administrators involved with the website should recognize that training opportunities for this field of expertise exist outside of library organizations and are often excellent, current resources.

## **Recommendations for Further Research:**

- A study showing how accessible Ohio library websites are (Section 508 compliant);
- A comparative study of features found (and not found) on Ohio library websites;
- A comparative usability of public library websites using professional developers versus those that use a non-professional;
- A qualitative usability study of sample sites. (The kind where users are sent out to perform particular tasks.);
- A usability evaluation of library service agency sites: OPLIN, OLC, State Library, etc.;
- Any research leading to the development of clear guidelines for labeling library services.

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<sup>11</sup> Nielsen, Jakob. "Usability 101: Introduction to Usability." Jakob Nielsen's Alertbox. June 6, 2005. <<http://www.useit.com/alertbox/20030825.html>>

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