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Web Development over the Past 10 Years

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The ubiquity of the Internet has profoundly changed the way that most of the world's citizens publish, look for, and access information. It's hard to imagine that just over 10 years ago, information professionals were explaining what the Internet was and why a library should build a Web site.

In 1993 and 1994, Web development was the province of the technologically daring and adventurous among us. The first Web sites were simple pages filled with text and hyperlinks on a grey background. A library Web site usually consisted of two to three pages listing contact information, services, and hours. When image elements were added to HTML language, Web sites sprouted menu bars filled with clipart, animated GIFs, and graphical bullets. The Web was a visual medium.

By 1997, Web development was moving from the dominion of the techies to the reign of the creative designers. Design guru David Siegel, author of *Creating Killer Web Sites,* became the *de facto* champion of the concept of Web site as experience. He believed a Web site should act as a place with an entry and exit point and offer several paths through the site. Splash pages proliferated. From this point to the present, it was like riding a tidal wave of more online content, tools, and services.

Library Web sites changed with the times, evolving from online brochures to sites that offered direct service and content delivery. These sites were designed and redesigned to accommodate longer and longer lists of resources. When the lists became too hard to maintain, Web developers harnessed the power of databases to create dynamic pages listing resources by department, subject areas, audience, and format in order to facilitate exploration and browsing by Web site visitors. During this time of rapid growth, many of us became library Webmasters and/or intranet managers and learned the tools of the trade on-the-fly.

In looking back over my experience building library Web sites, intranets, and digital library sites, I have realized certain truths. Many of my lessons learned have to do with how people actually interact with Web sites, rather than with preconceived notions about how they do so. In 1994, when people thought about human-computer interaction and usability—if they thought about it all—it was in terms of software applications. Even though there was a growing body of knowledge about human-computer interaction, only a few people recognized its relevance for the Web. Jakob Nielsen was a champion for designing usable Web sites and started publishing his Alertbox column [www.useit.com/alertbox] in June 1995. Some of the insights I'll share below relate directly to Web site usability while others focus on false assumptions about Web site development.

Users are not designers. They can offer ideas and reactions that can help inform designs, but the tough job of designing the site rests with the Web team.

USERS READ LESS THAN YOU THINK

Visitors scan pages rapidly looking for words or phrases that match their goals. In just a few seconds, they zero in on a headline to read or they click on a link. The Poynter eyetrack studies [www.poynterextra.org/eyetrack2004/] show that even when reading headlines people don't read the whole line but scan the first two to three words.

We need to design our pages so that visitors who are scanning rapidly can successfully navigate to the content deep in our sites. Less is more. Chunk it. Dice it. Use short, pithy headings and bite-sized pieces.

When visitors have to read a whole paragraph of text on one of these pages, *most won't*. Even pages that I considered to be short and sweet have felt the fatal click of the "Back" button. Many times when observing a usability test, an inner voice is silently saying, "Wait, read just a little bit more—the answer is right there on the page!" Unfortunately, the test participant didn't pause and has already clicked the "Back" button.

DESIGNERS MUST MAKE TOUGH CHOICES

According to Nielsen ("Prioritize: Good Content Bubbles to the Top," Alertbox, Oct. 17, 1999, www.useit.com/alertbox991017.htm), "It is the job of the designer to *advise the user* and guide them to the *most important or most promising choices*."

Users are not designers. They can offer ideas and reactions that can help inform designs, but the tough job of designing the site rests with the Web team. One of the most important tools that Web teams have in their arsenal is the ability to position key items prominently. The screen is like a newspaper—the important headlines or features that compel you to open the newspaper, or purchase one, have to be placed first. If you place the most important information in the upper-left-hand area of the content region of the page, almost everyone will scan that area. There are lots of ways to decide what gets prominence on a Web page. Make sure you're making the tough choices about what to place first on your home page. Be sure to pick something that matters to your users. Then test your designs to make sure they work. When visitors can achieve their goals on your site, you achieve your goals.

NO HELP WANTED

Web surfers expect to "walk up and use" your site. If they have to read a manual or "help" pages, most won't. The majority of people perceive themselves as capable, even above-average, Internet users. They don't expect to have to read directions or online help. They like to figure it out as they go along—they'll try it and see what happens. They want to learn as they go. They expect your site to be intuitive and "make sense." This is harder to do than it is to say. Adopting conventions used on other sites can help your site be more intuitive for your visitors.

IGNORE WEB SITE CONVENTIONS AT YOUR PERIL

Watch and learn what conventions popular sites are adopting for layout, labeling, and interaction behavior on Web forms. Your visitors use these sites hundreds of times per year. Your visitors have internalized how these sites work and expect to interact with your site in a similar way. Stand on the shoulders of the giants, even if you don't think they're right when you design your site. Leverage what is familiar to your visitors. Don't rearrange Web furniture just because you can.

For example, if the search box is typically in the upper-right-hand side or a login access to a site is labeled "My Account," adopt these conventions.

Sometimes, you do have to go it alone. When you're breaking new ground and launching something completely novel, or if there's no consensus on how to design this element on major sites, test your new designs with many users to ensure usability.

USABILITY TESTING TAKES LESS TIME THAN YOU THINK

How many visitors come to your library Web site each day? Just fixing usability problems on your home page can have a significant impact and save users time, reduce frustration, and increase success rates. Think about it. If 10,000 visitors use your site each month, a poor design could prevent 20 percent of them from finding what they need. This is a missed opportunity. Your library had the information that they needed. They are now asking their friends, Googling for it, or using another information provider. Even worse, they're purchasing the content a second time using your organization's funds.

Another 60 percent of your visitors may be spending an extra minute on average trying to find things on your site due the poor design. Some of these will seek out assistance from reference or support staff. Others will become more and more frustrated as they try different approaches to find the information. Frustrated visitors do not recommend your site and services to their friends.

Based on 10,000 visitors per month, if a poor design slows them down by 1 minute per visit, that's 6,000 minutes per month or 100 hours. If these are employees hunting for information, rather than putting information to good use, that's lost

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productivity. It's harder to measure the support costs but these are real.

The bottom line is that you really can't afford not to test your site. Even if you only spent one afternoon testing three people, you would discover ways to improve your site. If you allocated a week to usability testing once a year, you would reap the rewards and so would your users.

The ROI on usability testing has been proven many times over. Visitors who can successfully complete tasks on your site are more likely to return. They will put fewer demands on library reference and technical support staff for navigational type questions. The quality of the question will change from "Where is?" to "Do you have even more about X, Y, or Z?"

TEXT RULES

The best way to hide a new program or service on your Web site is to create a special graphic image to promote it. Post this image on your site without any supporting text and it's usually overlooked. If you are skeptical about this point, take time to read the Poynter eyetrack studies, and then look at the results of your own testing. Text rules. There are a few exceptions to this, of course. If you can afford to give up one-third to one-half of your home page real estate, convert your graphic to an interactive rich media advertisement produced with a sizable production budget; then, a rich media ad can outperform text.

E-commerce sites rapidly recognized that graphical images stored as top or side banners had very low click-through rates in comparison to text ads or headlines. Their bottom line depended on their advertising revenue and many switched to text ads. The bottom line for library Web sites is that if you want to promote a program or service, write a compelling headline and position the announcement in a spot that gets lots of exposure. Add an engaging graphic in the microcontent area if you wish.

As a consultant, I've tried to persuade Web teams that a text link will work better than a special graphical image to promote a program. This seems to go against the grain. In a usability debriefing session, we asked a participant if he had noticed a graphic image promoting a library program and he replied, "Oh, that graphic, I just ignored it. I never look at the pictures. They're usually ads." Sometimes users say it best.

FACTS ARE NOT ENOUGH

Seeing is believing. Championing usability testing and usable design of a library Web site isn't always enough. Even when you present the results of your studies, there can be skeptics within your Web team and your organization. In order for some people to accept that a site or page is not supportive for users, they have to see it with their own eyes. They need to observe participants struggle and feel their pain. Try to encourage widespread participation in usability testing, even if Web team members and library staff can only act as observers. If you can, make audio or video recording of test sessions provided participants give their permission. Then select small excerpts to share with your team and content providers.

AESTHETICS MATTER

We all know this, but the degree to which it matters may be more than you think. B. J. Fogg and his team at Stanford University ("Stanford Guidelines for Web Credibility," A Research Summary from the Stanford Persuasive Technology Lab. Stanford University, May 2002) have been researching how people assess and determine whether a site is credible [www.webcredibility.org/guidelines/].

They found that people quickly evaluate a site based on design alone. Fully 46 percent of 2,440 comments received in the study about credibility discussed the visual design, typography, and layout, while another 28 percent of the comments focused on the information design and structure. Design matters a great deal.

Participants in usability studies often talk about the design elements they prefer or don't prefer during test site debriefing. In their minds, their experience of the site's content and functionality is inseparable from the design.

Having a professional and aesthetically pleasing design that supports your library's brand makes a critical first impression on visitors to your site. Make sure you're creating the right first impression.

CONTENT IS KING OF THE MOUNTAIN

Despite the common misconception that the steepest hill to climb in developing a new Web site is the visual design or the programming under the hood, it's the content that's most likely to delay the project. Content was the culprit behind the delay in more than 80 percent of Web site projects we've worked on. In fact, two projects we worked on for years never went live because the content was never finished.

To avoid content pitfalls, spell out who is responsible for providing content from the very start of the project. Make sure that it is an assigned responsibility. Volunteers are wonderful but they often have so many competing demands on their time that Web site content or revisions fall off their plate. When it comes to content, short and sweet often works best anyway. Encourage your content providers to put up short summaries and expand them later as time permits.

The quality of library Web sites has improved dramatically from our first attempts in the mid-1990s. Many of the sites launched recently have visually appealing professional quality designs and offer a rich array of content and services. Library Webmasters have been learning by observing how library visitors use the sites and services and from usability studies. No matter how hard your team works on the design and testing of the Web site, there's always room for improvement. As the Web grows up and becomes a teenager, it's time to strap on our seatbelts and prepare for an increasingly interesting ride.

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