

SIGCHI Book Review

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Web Site Usability: A Designer's Guide

Authors: Jared M. Spool, Tara Scanlon, Will Schroeder, Carolyn Snyder, Terri DeAngelo
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When I first skimmed this book, I must admit that I didn't want to believe it. My eye had caught a conclusion titled "Graphic Design Neither Hurts or Helps." Having worked in user interface engineering for over a decade, I was sure this had to be a faulty implication. Only my desire for ongoing learning forced me to read the book. I began reading as a skeptic.

The authors lured me with a discussion of what really makes web sites "usable." They contend that a site is usable if we are successful in getting the information we need to make decisions. Failing to find much published data about the usability of web sites (but many web design books nonetheless), the authors undertook an experimental research project. Over 50 tests were conducted, using 11 internet sites, which were designed to sell products to users or provide useful information. Thus, users were acting as customers when interacting with each site. Tests were termed "scavenger hunts" because they consisted of asking users 4 categories of questions about sites: simple fact, comparison of facts, judgment, and comparison of judgment. All users were familiar with web browsers, but no users were employees (or domain experts) for any of the selected sites.

After the fifty tests were conducted, the authors compared the usability of each web site against the others, and

against a "gold standard" (i.e., the highest possible score a site could receive). The authors also used a statistical model to discover which factors were most correlated with user success. Results indicated that Web site designers have considerable room for improvement, and still much to learn. Some of the more interesting implications of their findings include the following:

1. Graphic design was unrelated to success at finding information on a web site. In fact, several of the graphically intense sites scored lower in the ratings. The site rated the most easy to use actually had few graphics.
2. Text links were the preferred navigation mechanism, and were examined before users even considered image links. Perhaps this was because the authors found that navigation and content were inseparable in information-based sites. In fact, shell sites (where more than half of the content could be removed without having to update the home page) did poorly in tests because the links were so generic users rarely got what they wanted, or expected.
3. The task of retrieving information, rather than just surfing, requires that content be the driving force in design. "Cool" sites with distractions and visual 'noise' such as huge graphics, ads, and animation weren't the most usable.

Oh What a Tangled Web We Weave...

By now, I was compelled to read on, and the content of the rest of the book was worth it. Subsequent chapters presented research results and a discussion of user problems, organized by

design topic area. One of the main problems revealed is that users do not typically have the domain or business area knowledge to navigate a site successfully, or even to understand its structure. If site structure didn't meet users' expectations, they did not appear to be able to form a successful mental model of the site. When they got lost, they often could not say what the problem was, or where they had gone wrong. They did not appear to think about site structure at all.

Not surprisingly, the quality of links was a key to site usability. Successful links depended on how well the users could predict where a link would lead, and how well they could differentiate one link from another nearby link. The links that did best were those that explicitly described the content one could expect if the link was selected (i.e., "how to do..."). Links surrounded by text were negatively correlated with user success in finding information, as were multi-line or wrapped links.

Successful searching was also another determinant of usability. However, many users experienced difficulty with this function. Users often didn't understand the scope of their search. They assumed that the search would cover the entire site, not one area, for example. Once a search was complete, they had trouble interpreting search results. Search result lists were not organized in a way that users (who had little domain knowledge related to the site) could understand. In many cases, the information returned was not enough to help users know whether to pursue the link or not.

Readability and page layout issues provided some surprises. The authors note that “the rules have changed somewhat because scanning is the mechanism people use to search for information.” Page layout that made skimming easier fared better in the tests. The less “readable” a site was, as determined by readability indices (e.g., Fog, etc.), the more successful users were in finding the content they needed. In addition, the more “white space” there was on a site, the less successful users were in finding information.

Graphic design also yielded some interesting results. Users were more tolerant of the download time associated with heavier design elements than had been expected. However, users were not at all tolerant of animation, which impeded their ability to concentrate. Some went as far as holding their hand over the animation to block it from their vision. Other than that, no graphic element seemed either to add or detract from users’ ability to find information.

Conclusions

Web Site Usability is definitely *not* one of those design books that has

taken well-established design principles and simply repositioned and reformatted them for web design. In fact, some of its findings are contrary to established thinking that is based on design of application software or print matter. However, this is *exactly* the type of research that we must do more of if we are to move beyond established, accepted standards toward new standards and issues relevant to the usability of information-based web sites. Web site designers (both those who think they already have the answers on web site usability and “seekers”) are advised to examine this very readable book.