

A Journey into Web Usability

What an Information Architect Learned on His Summer Vacation

Steve Toub

Introduction

I'm a librarian who provides information architecture consulting on Web projects. As an information architect, my role is to organize content (grouping, labeling) and design navigation systems (indexing, searching) that help users find the information they need.¹

At Argus Associates (<http://argus-inc.com>) we use various tools and techniques to learn about the goals and scope of a Web site and the information needs of the various audiences. Although our designs have been well-received by our clients, I've always felt a little uncomfortable knowing that we didn't formally incorporate real-world users into our design process, nor did we test our designs formally with users. We practiced art but didn't apply any empirical evidence to back it up.

The question continued to nag at me: "What empirical evidence do you have that your design works well for users?" This self-doubt cut at the heart of my identity as an information architect – if users or usability experts could improve upon my work, what good was being an information architect at all?

After contemplating the death of my profession and running through the five stages of grief (denial, anger, bargaining,

depression and acceptance)², I decided, with the support of my colleagues, to embark upon a small usability test. We just wanted to get our feet wet, not necessarily to undergo a rigorous methodology and to learn statistics. The goals of the project were largely to build our organizational knowledge and experience with usability testing, but if we could actually back up some of our claims about information architecture through empirical testing of end-users, we wouldn't complain.

The Usability Test

A colleague, Chris Farnum, and I designed a test that aimed to learn more about the usability of a Web Table of Contents. We developed five different versions of a table of contents for an existing hierarchy, the Argus Clearinghouse (<http://www.clearinghouse.net/>):

Version A. Headings, plus 1-2 descriptive sentences, and subheadings, plus a descriptive phrase

Version B. Headings and subheadings

Version C. Headings and 2-3 representative subheadings

Version D. Headings, plus 1-2 descriptive sentences

Version E. Headings

¹ For more information about information architecture, see *Information Architecture for the World Wide Web* (O'Reilly, 1998), written by Argus Associates principals Lou Rosenfeld and Peter Morville and the "Web Architect" column, available at: <http://argus-inc.com/design/webarch.html>

² The acceptance stage, where I realized how information architects can still provide value in a world of usability specialists, was made possible in part by the "information architecture/usability engineering" and "IA/UE: Practical problems" threads that took place on the CHI-WEB mailing list (<http://www.acm.org/archives/chi-web.html>) in August 1998, weeks 3 and 4.

We found six infrequent Web users, ranging in age from 13 to 60 years, and gave them a \$20 gift certificate in exchange for spending an hour with us in our conference room, completing tasks with the different versions of the table of contents. We asked participants to use the Clearinghouse to complete six different tasks. Some were very specific and others were more open-ended. We considered two of the task questions to be unanswerable using the Clearinghouse. We did not allow them to use a search engine.

Findings

Our major findings are as follows:

- Users spent the least time completing tasks when they started with version C, the Yahoo-like approach, and the most time completing tasks when they started with version D, the version with headings, plus 1-2 descriptive sentences.
- Users scanned for exact keywords as they were listed in the tasks. Most did not try to generate broader terms or synonyms. Looking for a detailed item (e.g., hand-blown glass, whale-watching) in a broad subject tree was hard, no matter which version of the table of contents they used. This means that making sure your content uses the right labels and groupings is much more important than what type of table of contents you choose.
- All six users preferred either version B (four users) or version C (two users) over all other versions. Five users out of six users strongly disliked version A, the most detailed version, even though they had reasonable success with it.
- Most users reported that they would have preferred to skip browsing and go straight to searching. They reported that they had the idea that searching would be quicker and easier even though none said they were satisfied with the results they generally got from search engines.

What I Really Learned

I'm not going to argue that our test was methodologically sound or that these findings are statistically meaningful. While I probably will tuck away a few nuggets about information architecture usability (e.g., "show users exactly what's beyond a heading rather than describe what's beyond it", "users really do need to get an overview first and then be able to drill down", "build thesauri into search engines so they can translate users' language into the system's language"), I learned a whole lot more about usability than I learned about information architecture on the Web. Some of the things I learned were:

Usability testing is easy to learn and relatively cheap

Chris and I spent less than a total of 80 hours, from planning the test to synthesizing results, in our very first usability test.

The testing revealed many things that weren't part of the test objectives

For example:

- People seemed to look at the centers of pages, not the margins.
- Short-term memory is very poor.
- Most users tend not to question, they keep default settings, etc.

The experience was frustrating and energizing.

We made some pretty big mistakes (like not tracking relevant measurements such as the time they spent on the starting page or whether they viewed the entire starting page before selecting a link, and allowing participants to wander around the site when we really wanted to test the table of contents) and were frustrated by our lack of equipment (no video camera; no way to capture eye movements). However, the entire experience was refreshing and energizing. I came away with more well-defined research topics than I came in with. I was also energized by the first-hand evidence that the work I do really can serve users.

Next Steps

So after my nice jaunt into usability testing, am I going to drop my life as an information architect like a bad habit? Of course not. Usability testing does not replace information architecture. Rather, it enhances and complements it. Information architecture should be evaluated and measured. The way that the information architecture methodology learns about users and tasks works well, but it can and should borrow tools and techniques from human-computer interaction to improve the design of grouping, labeling, indexing and searching systems.

Folks in the CHI community continually remind me that usability is a whole lot more than testing. It involves the entire life cycle of the design process. Though I only have one usability test under my belt, I'm already eager to jump into user-centered design and participatory design and ethnographic research and... well, maybe on my next summer vacation.

About the Author

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