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CHECKING

BY JACQUI OLKIN

HOW AND WHY TO INVEST IN USABILITY TESTING OF YOUR ONLINE OFFERINGS

Usability is one of those buzz words you're probably hearing more frequently, as the discipline has spread from the software and manufacturing industries into commercial and nonprofit Web design. *Web usability* refers to both the user-friendliness of a Web site or software application and the discipline that helps engender user-friendliness.

One tenet of usability is that the best way to meet the needs of Web users is to involve them in the process of requirements definition, design, and testing. That means researching how people typically interact with computers and understanding what they are

conditioned to seeing on the Web. Web usability acknowledges that we can never know for sure how people will interact with a particular Web site or application unless we *have them try*.

"Usability studies get technology out of the lab. They're the gut check that asks, 'Is this really going to work, and if not, how can we do it better?'" explains Bill Oldham, chairman and chief executive officer of Evolvent Technologies, a technology services firm based in Falls Church, VA.

As the Internet has matured, we have learned more about what people want and expect to see on the Web. This learning has fostered more stability in Web sites. In 1994, when the Internet was new, the average Web site underwent an annual redesign; now, the average Web site is redesigned every two to three years.

WHAT YOU'LL GAIN

If you are redesigning or refining your association's Web site, it's the perfect time to embrace usability. Here's why:

Savings in time and money. Getting it right the first time—by producing Web interfaces that fit the needs, expectations, and conceptual models of the intended users—can help avoid project delays and the redundant work of fixing design, features, or functionality that users reject or can't use successfully.

Not fixing usability problems can be costly. Users who cannot successfully figure out and use a Web interface may give up on it. This will cost you revenue if the interface is your e-commerce store, and you may miss other opportunities to communicate and promote your organization's goals.

Some frustrated users will not give up but rather will contact your staff for help, which costs staff time and resources. Others will complain—not only to you, but to others, and in public forums where one unsatisfied customer can do damage to your image.

If the disgruntled users are on the payroll, you are paying for the time they spend attempting to figure out the interface (or devise work-arounds). Often, this scenario plays out when an organization launches a new association management or enterprise planning package that doesn't suit the needs of staff members, or one that staff members are not trained to use properly.

WHAT TO ASSESS

Usability involves many aspects and attributes of Web sites and applications. The following are some of the most important to consider:

- **Taxonomy:** Do structure, naming convention, and relationships among information fit the way users think about and use information and tools?
- **Task paths:** How easily can users locate the content they seek? Do process flows make sense intuitively? Do they include all necessary steps and ways to backtrack?
- **Information design/page layout:** Does the most important information stand out? Is navigation clear and simple to use? Are there directional cues throughout the site to orient users? Does the interface comply with usability and accessibility guidelines?
- **Content:** Is content consistently voiced, well-written, well-structured, and presented in a Web-friendly format? Is it appropriately titled, tagged, and described?
- **Search:** Are results reliable and readable?—J.O.

THE TEST OF TIME

Some of the usability measures derived in the early days of computers still hold true today. For instance, the optimal response times for various computer operations have not changed since 1968.

See if you can guess how long the average user expects the following actions to take. (The answers appear below.)

- A. Clicking, dragging, scrolling, selecting an object, or typing a character.
- B. Going to the next page; running a simple command.
- C. Starting a new transaction, running a complex operation, moving to a new mode.

Answers: A.) .1 seconds; B.) 1 second; C.) 10 seconds (longer wait times for complex operations should be accompanied by a progress indicator, such as an egg timer).

SOURCE: R. B. MILLER, *RESPONSE TIME IN MAN-COMPUTER CONVERSATIONAL TRANSACTIONS* (AFIPS PRESS, 1968).

Greater likelihood of a smooth launch.

Usability is the "reality check" that tells you whether you are on the right track. It can help you avoid some of the most common project risks: out-of-scope, over-budget, or late delivery, as well as unsuccessful organizational adoption of the new interface.

For instance, the American Diabetes Association (ADA), Alexandria, VA, recently launched MyADA, a collaborative portal that replaced its intranet. A smooth launch was one benefit of paying attention to usability throughout the two-year project.

"It was so smooth, my wife called the roll-out a 'non-event,'" says Business Systems Manager Rob Cork, who managed the project and now oversees the resulting MyADA portal.

Under the direction of Cork, the association took a phased approach to the implementation of MyADA. Faced with the

challenge of introducing new terminology and navigational concepts resident in the portal software, the project team decided to give users of the existing ADA intranet early exposure to the new portal.

"We put a preview up on our intranet where users could navigate screen shots of how the new site was going to look," explains Cork. "When they log in, they already have some familiarity with how to find things."

ADA also allowed staff members to use a pilot version of the new portal for collaborative project work, positioning roughly 100 early users as potential resources for the hundreds of other staff members, volunteers, and vendors who would be introduced to the portal in successive phases. These "early adopters" provided useful real-world examples and insights during portal development and roll-out. They also

became effective evangelists, spreading news of the portal's benefits and encouraging others to use it.

"People hear about the portal through word of mouth, and they want to learn how they can use it for their projects," reports Cork. "Most technology initiatives are top-down. This one has been grassroots and bottom-up."

Quicker, cheaper training and support.

Associations sometimes think they are saving money by ignoring usability when introducing new Web functionality, such as online conference registration or e-learning modules. But they often end up investing in unbudgeted training sessions, training materials, and in-person or online training and support. Interfaces that are designed with users in mind can ease the burden of training and support.

Effective user support has been another usability-related win for the American Diabetes Association. Staff members from different departments were consulted early on and kept apprised of developments throughout the project. Training focused on what specific user groups would need to know to manage and access their information in the portal. Tailored training materials were limited to two sides of an 8½ x 11" page—just the most vital information.

When MyADA launched, the e-mail box devoted to user questions was busy, but the questions were very specific and could be answered quickly and easily. The types of queries showed that users understood the "big picture" concepts just fine.

USERS WHO CANNOT
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COST YOU REVENUE.



"At first, I got a lot of questions like, 'Where do I find this piece of information?'" says Cork. But the e-mails soon tapered off. "Things are very quiet now," he notes. "We're planning the next phase of development, which will integrate financial systems and new reports."

Solid decision making. The various stakeholders who will use the system you

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are building or redesigning may have very different ideas about everything from how content should be organized to what the graphic user interface should look like. User input can help guide decision making and break stalemates between stakeholders with opposing views.

When the American Gas Association (AGA), Washington, DC, embarked on a Web site redesign earlier this year, it tested HTML wireframes of two proposed information architectures. The testing helped the project team decide on the best reorganization of content, refine the labeling of main navigation areas to better fit users' conceptual models, and support their recommendations in a presentation to senior management.

"We had been looking at the same Web metrics for years," says Director of Internet Services Craig Cussimano. "With usability,

we were finally able to see what users' intentions were—not just where they went [on the Web site], but where they were *trying* to go."

The new insights into users' thinking empowered Cussimano to change the main navigational structure of the Web site and suggest ideas for presenting content in a way that mirrored users' interests and expectations.

"It made my job so much easier, to be able to walk into a meeting and say, 'Here's what we recommend, and this is why,'" observes Cussimano. "It's not me—it's based on data."

Usability not only drove creative development but also helped AGA senior staff members and the project team bond around common concern for users.

"Everything was transparent. [Senior managers] could see the questions we

asked users, what [users] did, and where the sticking points were," says Cussimano. "We are so member-centric, there started to be this sense of collaboration that we didn't have before. People were becoming more team players."

Brand building. Demonstrating a commitment to usability can show your target audiences that you care about their needs. It can also generate buzz and provide early marketing opportunities.

Associations can elicit user feedback and meet marketing and communications objectives by staging focus groups at conferences, hosting online discussions or meetings, and posting online surveys and calls for feedback. Constituents are more likely to support and promote projects in which they are given a voice.

AN ARRAY OF APPROACHES

You can apply usability techniques at every stage of a Web project, from definition of requirements to post-launch maintenance. In a Web site redesign, for example, usability can help assess the shortcomings of an existing Web site and plan the goals of the new site; reorganize content; find functional problems; and gauge user response to design compositions, functional prototypes, and live interfaces.

Think of the goals of your project, the questions you want to answer (for example, "Will board members be able to find the information they need if we reorganize the content on our Web site?"), and the risks you want to mitigate. Prioritize these needs, and then work with your project team or consultant to decide which of the following techniques to use.

Heuristic evaluations/guidelines inspections. In these assessments, trained usability professionals evaluate an existing interface and suggest improvements. They may assess the ease of accomplishing specific tasks or judge the interface's compliance with research-based standards or accessibility guidelines. For sites that must meet industry standards, heuristic evaluations and inspections are a must.

User testing of existing interfaces. Having users attempt various critical tasks often reveals difficulties and misconceptions that pose significant barriers to successful use of a site or application. Even tests that reveal the success of existing interfaces are wise investments. It is

QUANTIFIABLE SUCCESS

Before embarking on usability testing, be sure to set measurable project goals and success metrics and record "before" data as a basis of comparison. You might want to include these measures:

E-commerce stores: sales figures, time saved by establishing better business processes (by converting offline processes to automated processes).

Intranets: productivity (time it takes to find information), time spent on training and support for new applications and new employees.

Web sites and software applications: user satisfaction, number of requests for help, whether constituents are well informed about the organization's most important issues, Web traffic, increased sales (or registrations, orders, log-ins, opt-ins).—J.O.

ANSWERS TO COMMON QUESTIONS

Why is usability essential for my project's success? User testing can reveal difficulties in completing tasks, misconceptions regarding labeling, and failure to notice certain elements of the interface. Test sessions—conducted either in person or online—are also opportunities to gather information about your users' behavior, needs, opinions, and impressions.

How many test participants are necessary? You don't need a cast of thousands to get valid test results: Three to five users will reveal 80 percent of the problems in an interface.

For tests involving multiple audiences (such as staff, members, and the media), recruit a minimum of three users per audience for the most balanced results. For a formal study, 20 users will give you the highest confidence level.

No time to recruit users for testing? Pull in someone from another department who has not been involved in the project. Invite a friend or relative to test the interface. Having one person test the interface yields exponentially better usability results than having no one test it.

How much will it cost? Having analyzed 15 years' worth of data from hundreds of companies, the Nielsen Norman Group (www.nngroup.com) recommends allocating 10 percent of your total Web project budget to usability.—J.O.

equally valuable to know what is working as to know what must be fixed.

Focus groups. Convene small group meetings of a site's or application's intended user community to solicit infor-

IN A WEB SITE REDESIGN, USABILITY CAN HELP ASSESS SHORTCOMINGS OF THE EXISTING SITE, REORGANIZE CONTENT, AND GAUGE USERS' RESPONSE TO PROTOTYPES.

mation on what functionality users need to accomplish the tasks most important to them. Ask what they think of proposed features, functionality, or design.

To get the most useful information for your project, manage the expectations of your focus group participants. In other words, don't lead them to believe that whatever they say they want from the new online database is exactly what they'll get.

Card sorts. These information-sorting exercises ("Where does it go?") help determine the information architecture of a Web site by asking users to group like topics of information. The exercise can be done with multiple groups or just one group.

Paper prototyping. This technique tests user responses to drawings or diagrams of proposed user interfaces. The prototypes can show information architecture, task paths in applications and Web sites, and Web design elements such as the placement of navigation and links. Testing your interface on paper is an inexpensive way to obtain feedback and address any problems before development begins.

Content usability assessment. Content is often neglected in Web projects—even by usability professionals—but it accounts for a significant number of failed tasks and aborted Web sessions. If users get to the information they seek and find it unhelpful, poorly presented, or just plain unreadable, no amount of usability in other aspects of the site or application will mitigate the problem.

Through comprehension tests and user

surveys, you can judge the effectiveness of existing content and understand what information users need most and how they think about and use that information.

"Five second" impressions. These quick user assessments of a new or redesigned interface gauge how well the new design meets the project's branding objectives. They also determine its effectiveness at showcasing the most important information and functionality.

To conduct these tests, the facilitator asks users to examine a design composition for five seconds and then asks such follow-up questions as, "What personality does this [site] convey?" and "What features or information do you remember seeing?" The earlier in the design process this type of test is conducted, the more beneficial it is in guiding design without adding cost.

Functional prototype testing, phased roll outs. Testing functional prototypes provides valuable insights about users' interaction with an interface. Prototypes may be HTML mock-ups of a new information architecture or process flow (for example, clickable wireframes) or a pre-launch configuration of an intranet or Web site.

Some organizations, such as ADA, institute phased launches. The usability feedback they gather helps refine new

interfaces and provides a head start on training and user adoption.

Timed tests. These give concrete measures of users' success in accomplishing specific tasks. For the best results, tasks should be authentic to the audience and attempted by enough users in each group to give reliable average response times.

IT MAKES A DIFFERENCE

Usability can be low-cost or high-end, small in scope or ambitious. It can be applied at any point in your project or—for best results—integrated throughout. Some is always better than none.

You can calculate the value of usability in project success metrics, revenue, Web traffic, and increased productivity. You can also gauge it in less tangible ways—such as user satisfaction, positive feedback, better collaboration among colleagues, brand building, and a renewed focus on the people your organization serves.

Whether you are embarking on a complete redesign, a revamping, or just a "house cleaning" of your Web site, try it. Usability helps everyone. ■

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