Usability Testing Tools

ID 405 Human-Computer Interaction
Is Usability Testing Still Useful?

- Usability testing has its background in HCI, whose practitioners remain its most ardent supporters.

- This approach – a researcher, a participant, a list of tasks, and sometimes even a stopwatch – was developed for mainframe and then shrink-wrapped software as an evolution from even earlier task-based analysis techniques.

- It involves rigorous procedures that result in statistically oriented results.

- When used to analyze Web or mobile based user behavior, for a range of Web and mobile-based products, and for a range of audience however, this approach has its limitations.
Is Usability Testing Still Useful?

10 to 15 years ago the usability laboratory was the must-have for vetting and testing your design ideas. But more nimble development processes and new tools have superseded the usability lab. Some of these are:

- remote screen sharing and screen recording tools and services
- voice of the customer (VoC) feedback systems,
- A/B testing and multi-variant testing
- remote co-design tools like online card sorting
- survey tools for straight-up surveys and concept evaluations
- public betas, previews, and opt-ins
- “Analytics!”
Recap: Usability Evaluation

- Expert Reviews
- Heuristic evaluation
- User Testing

- Thinking Aloud Protocol
- Card sort
- Feedback from real life usage
  - Observational field studies
  - Logging actual use
  - User Feedback
  - Questionnaires and Interviews
  - Focus groups
1. User Task Analysis

- The most important and obvious thing to test for is whether users are able to accomplish their tasks and goals. Not only that, you have to ensure they're able to do so in the best and most efficient way possible.

- The first thing that must be done is determine what the core user tasks are. For example, in a shopping list app, what are some critical user tasks?

- Perform a task analysis for each task. Evaluate task performance under the following considerations:
1. User Task Analysis

**Learnability**: How easy is it for new users to learn to perform the task? For more complicated tasks, are there sufficient help features such as in-line help and hints, tool tips, etc.?

**Intuitiveness**: How obvious and easy is the task to accomplish?

**Efficiency**: Are users performing tasks optimally? Are there ways to streamline and reduce the time it takes to complete the task?

**Preciseness**: How prone to errors is the task? What are the reasons for any errors? How can we improve the interface to lower errors and unneeded repetition?

**Fault Tolerance**: If a user makes a mistake while performing the task, how fast can he recover?

**Memorability**: How easy is the task to repeat?

**Affordance**: Are interactive elements (such as buttons, links and input text boxes) related to the accomplishment of a task obviously interactive and within convenient reach? Is it evident what the results of a user action will be when the user decides to interact with it by clicking, mouse hovering, etc.?
Get exclusive discounts and offers sent via SMS to your mobile phone. Receive up to 2 msg/month. Msg & Data rates may apply.

By selecting this you agree to the Terms of Use.

Enter information as it appears on your credit card or billing statement. At this time we cannot accept European billing addresses.
Extreme lack of page overview – Fields are out of context

- Touch keyboard take up close to 50% of the available screen space in portrait mode and 70-80% of the screen in landscape mode

- This has severe implications on the user experience, especially when user is filling out a form

- For example, a label shouldn’t simply read “Phone”, even if placed within a “Billing Info” section header, but should instead be completely context-independent and read “Billing Phone”

- This of course goes for any type of field, so it should similarly be “Gift Certificate Pin” instead of just “Enter Pin”, and so on
**Intuition HQ** (http://www.intuitionhq.com/)

IntuitionHQ allows you to see how users interact with your website and records the duration in which a task is completed.
Usabilla (http://usabilla.com/)
Usabilla allows you to perform micro-usability tests, including the measurement of task performance. You give participants a task, such as “Click on the link that takes you to the home page of the site,” and it records data related to task accomplishment success and duration, thereby giving you information on learnability and efficiency.
Loop11 (http://www.loop11.com/)
Loop11 tests remotely by allowing creation of tasks and questions to explore the user experience, determine satisfaction and validate task completion on websites. It provides real-time clickstream report in graphical representation of participants’ navigation through the website.
2. Readability

Content is at the heart of any type of website. For example, even in web apps — which aren't typically as content-centric as, say, a blog or web magazine — not being able to read and understand the user interface is a hindrance to one's ability to perform tasks efficiently and accurately.

Readability hinges on these considerations:

**Ease of Comprehension**: Is the content easy to understand and internalize? Are the words being used familiar to the average Internet user or are they too complex and uncommon? Are sentences and paragraphs as concise as possible?

**Legibility**: Are fonts big enough? Is there enough contrast between the text and its background?

**Reading Enjoyment**: Would users appreciate and enjoy the content? Is the information accurate, of high quality and well-written? Do font characteristics such as size, spacing and color make reading longer passages easy or do they strain the eyes?
Test the Readability of a Website

Website address

URI http://sixrevisions.com/

Calculate Readability

The following table contains the readability results for http://sixrevisions.com/:

<table>
<thead>
<tr>
<th>Summary</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sentences</td>
<td>253</td>
</tr>
<tr>
<td>Total words</td>
<td>963</td>
</tr>
<tr>
<td>Average words per Sentence</td>
<td>3.81</td>
</tr>
<tr>
<td>Words with 1 Syllable</td>
<td>540</td>
</tr>
<tr>
<td>Words with 2 Syllables</td>
<td>197</td>
</tr>
</tbody>
</table>

**Juicy Studio: Readability Test** (http://juicystudio.com/services/readability.php)

This free tool allows you to input your website’s URL and then subsequently provides you readability scores based on some popular readability evaluation algorithms.
WordsCount (http://www.wordscount.info/wc/jsp/clear/analyze_readability.jsp)
This tool is useful when you’re evaluating readability of website copy before it’s made public on your site. With WordsCount, you can copy and paste your text, and the app will output readability scores.
Check My Colours (http://www.checkmycolours.com/)
To evaluate legibility, you can test the contrast of your foreground (text) against its background. Check My Colours tests page elements against optimal W3C color contrast algorithms. The higher the contrast, the more likely your text is legible and pleasant to read.
3. Site Navigability

For most sites, it's imperative that the user be able to move through multiple webpages as easily as possible. Navigability consists of numerous user interface components, such as navigation menus, search boxes, links within the copy of a webpage, sidebar widgets that display recent or top content and so on.

Here are the major considerations for when you're testing your site's navigability:

**Information Architecture (IA):** How well are webpages categorized and organized? How well are navigational features constructed?

**Findability:** Are there sufficient site features such as search boxes, archive pages, links and navigation features that aid in finding relevant webpages?

**Efficiency of Navigation:** How fast and in how many actions (number of clicks, how much text, etc.) does it take to get to page of interest?
OptimalSort helps you find out, remotely, how people think your content should be organised. It is useful for designing information architecture, workflows, menu structure or website navigation paths.

[OptimalSort](http://www.optimalworkshop.com/optimalsort.htm/)
WriteMaps (http://writemaps.com//)
Creating a site map — a list of webpages that a website has or will have — can greatly aid navigability analysis. WriteMaps is a tool that you can use to generate, manage and share your site maps.
NaviFlow (http://writemaps.com/)
NaviFlow provides path and conversion analysis for your mockups and wireframes. It helps you find out how users navigate around your websites and applications and identify which page is causing your users difficulty when completing multi-step processes.
4. Accessibility

A website should be accessible to everyone, including those of us with disabilities that affect how we experience the web.

People often mistake web accessibility as being only for those with barriers like blindness or mobility issues. However, we should broaden our view to include anything that might hinder a user accessing your site from a number of browsing situations.

This is especially critical with the rapid adoption of mobile devices, tablets, netbooks and web-enabled TVs and gaming consoles. Internet users also have a much wider array of web browsers than ever before: IE, Chrome, Firefox, Safari, Opera and so forth.

All of these options render our work in different ways and present interaction challenges. For example, selecting a link on a touchscreen tablet is completely different from clicking it on a desktop computer.
4. Accessibility

Here are considerations to take into account when performing web accessibility analysis:

**Cross-Browser/Cross-Platform Compatibility:** Does the site work in as many browsing situations as possible? Is the site responsive, flexibly changing the layout depending on how the user views it?

**Semantic HTML Markup:** Especially for those who use assistive technologies like a screen reader, the quality and accuracy of the webpage's structure is important. Are HTML tags being used correctly?

**Color Choice:** Are the colors used high contrast? Do the colors create a hindrance to people with colorblindness or poor vision?

**Use of HTML Accessibility Features:** There are HTML features and techniques that aid users with visual impairments. Are these features and techniques being used?
Juicy Studio: Local Tools (http://juicystudio.com/services.php#localtools)
This is a suite of tools for evaluating website accessibility. The CSS checker identifies accessibility issues related to the visual layer of a website, an image analyzer for checking your image elements and more.
VisCheck (http://www.vischeck.com/vischeck/vischeckURL.php)
Vischeck simulates how images and webpages would look to a person who’s colorblind. This can help you identify weaknesses in color selection.
Browsershots (http://browsershots.org/)
Browsershots shows you how your website looks in different browsers. This is helpful in seeing whether your site renders correctly in each of them.
5. Website Speedy

One factor of usability that's not completely evident is the need for a website to be speedy and responsive. In fact, web users deeply care about how fast they're able to get the information they need. The better performing a website is, the more efficient a user will be when completing his desired tasks.

Here are considerations for evaluating the speed of a website:

**Webpage Response Time:** How fast (in units of time, such as milliseconds) does it take to load an entire webpage?

**Webpage Size:** How big is the webpage, in terms of file size?

**Code Quality:** Does the website use web development best practices for website performance?
Pingdom Tools (http://tools.pingdom.com/fpt/)
This free, web-based tool reports your website’s response time and webpage size.
Page Speed Insights (http://developers.google.com/speed/pagespeed/insights/)
This tool from Google evaluates your site based on its best practices for web performance.
6. User Experience

User experience (UX), at its core, tries to study and evaluate how pleasant a website is to use. This factor is largely subjective because it deals with user perception, which can be vastly different from one user to the next.

The way UX can be evaluated is through user feedback. By asking questions of users, you can gain a better understanding of how they feel about the site.

Some considerations when evaluating UX:

**Fulfillment**: Do users feel satisfied after interacting with the website?

**Usefulness**: Does the user feel like he's obtained value from using the website?

**Enjoyment**: Is the experience of being on the website fun and not burdensome?

**Positive Emotions**: Do users feel happy, excited, pleased, etc. when they interact with the site?
Feedback Army (http://www.feedbackarmy.com/)
Feedback Army gives you the ability to pose open-ended questions to website reviewers. You get 10 responses for $20.
UserVoice (https://www.uservoice.com/)
UserVoice gives you facilities for obtaining and managing feedback from your users. If you choose to, you can make feedback public and allow other users to vote. This can let you see popular opinions and shared thoughts among your user base.