A guide to usability tools and techniques

✔ **This checklist is designed to demystify the jargon that exists around usability tools and techniques. It will help those who wish to understand what certain terminology means and what they will be getting for their money if they engage a consultant to perform usability techniques. It assumes a basic knowledge of the Internet (World Wide Web) and Web Browsers.**

The Internet is a powerful medium for business and the main factor that encourages people to return to a site is the 'ease-of-use' or 'usability' of a given website. There are tools and techniques in existence that can be freely adopted and used by companies with websites. There are many ways of measuring and testing usability either in-house or by 'expert' consultants.

MCI Standards

This checklist has relevance to the MSC National Occupational Standards for Management: Key Roles A and B - Manage Activities and Manage Resources.

Definition

A website is a collection of web pages in a specific location indicated by the uniform URL on the Internet. People navigate web pages in order to find information or a service. Usability tools and techniques exist in order to measure the usability of a website. That is the *effectiveness, efficiency, satisfaction* with which people find what they are looking for.

Companies have realised that it is not enough to have website. It needs to be usable. There are many techniques touted by consultants offering their services. These services can be expensive and moreover performed in-house. It just takes some planning.

The advantages and disadvantages of usability tools and techniques

The advantages of usability tools and techniques

▼ Usability tools and techniques are based on common sense not rocket science
▼ There are lots of them and they can be easily applied to your website
▼ Lots of them can be performed 'in-house' and cheaply
▼ Knowing the rules of usability tools and techniques before deciding to break them will enable you to approximate which types of customers may no longer visit your site

The disadvantages of usability tools and techniques

▼ Consultants can charge you a fortune for something you could have done yourself. Be wary
▼ For the most effective use they should be applied regularly, even built into your daily routine

Usability tools and techniques checklist

1. Methodologies

▼ Usability: the goals of designing an interface (or website) to be effective, efficient and satisfying from the user's point of view

▼ Accessibility: is the above as well as taking into consideration that users may 'read' web pages with other types of technology that do not handle graphics or plug-ins (screen readers, old browsers, WAP enabled telephones)

▼ User-centred design: the process of involving your users in the design of anything you are going to produce i.e. a website

▼ Usability engineering: the process of using specific usability guidelines (e.g. WC3) to be made as explicit requirements and then measuring their implementation

▼ Human-computer interaction: the discipline concerned with the design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them

▼ Interaction design: the design of everyday products to support people in their lives

▼ Usability metrics: guidelines to measure your return on investment

▼ Web metrics: the process of taking data from your web log files and using it to benchmark how many visitors you are getting on your sites

2. Planning, feasibility, and requirements

▼ User and Stakeholder Needs Analysis: Consultants analyse user and stake holder's (people within your company) needs often by collecting information using questionnaires, interviews, and then they present the answers in the shape of a report. It can be expensive and time consuming.

▼ Techniques used for the above may include:

   ▼ Task analysis: where a user performs a specific task (e.g. find some information on your website) and the 'expert' analyses and records what they do in order to complete the task

   ▼ Icon intuitiveness testing: users are asked to identify what an icon means

   ▼ Card sorting: 3 x 5" cards with various proposed website page headings are placed in front of users who are asked to sort them into related piles so that a generic navigation system can be identified

3. Design

▼ 'Cognitive Walkthroughs' are when users talk aloud as they use your website and explain their actions. This information is captured by the 'expert' to enable them to build up a picture of how your website is navigated

▼ Prototyping is the process of mocking up a proposed website and then showing it to people in order to get their opinion

   ▼ Low fidelity prototyping is a paper mock up of the proposed website
   ▼ Medium fidelity has the top level implemented and one or two levels down to test certain aspects the proposed site
   ▼ 'Wizard of Oz' is a method of testing a system that does not exist, normally using some form of prototyping

4. Evaluation

▼ Usability testing may take place in purpose built usability laboratories where the users are recorded and watched through a two-way mirror. Alternatively testing make take place 'field-study' or 'ethnographic' style, these terms just mean in typical working conditions i.e. your office

▼ Usability testing is when a group of users or 'experts' test your site according to specific guidelines. These may be based on several sorts of guidelines:
   ▼ Scenarios: a user given a specific scenario e.g. go to this site and buy a downloadable e-book

> ▼ Heuristic: experts have a list of guidelines (or heuristics) and they evaluate whether the site meets these guidelines. This type of testing can be biased and is sometimes called subjective evaluation

▼ Usability reviews are the same as heuristic evaluations

▼ Usability inspection (same as above)

5. Competitive analysis and benchmarking

Competitive benchmarking is the process of analysing competing websites and deriving some statistical information from the analysis and then using that information to try and recommend improvements to your website. The disadvantages of this approach is that getting hold of the competitors statistics can be difficult and the statistics that companies who offer these sorts of services can be inaccurate by a large margin.

6. Do-it-yourself usability tools and techniques

Any of the above techniques can be performed by you. You do not need to go to a specialist. Decide what it is you need to know about your website and then think practically how you can implement these tests and what you hope to achieve by them. Testing your site using such techniques should be something you do regularly in order to constantly strive to improve your websites.

7. Software

There are many types of software that you can buy to test usability in a more sophisticated manner. These softwares can be expensive and overkill for a small website:

▼ Click capture: Software that records where your user clicked so you can build up a pictures of how users surf your website

▼ Visitor timing software: During user interaction with the pages, the selected events types are captured, time-stamped, and recorded in session-specific log files.

▼ Eye tracking software: Software to capture what your users look at when they scan the pages of your website

Before embarking upon such software, make sure your website doesn't have any errors in it such as HTML or style sheet errors and that it is clean and tidy:

▼ http://validator.w3.org/ is a free validator which will check your HTML code

▼ http://jigsaw.w3.org/css-validator/ is another free validator which will check your style sheets

▼ http://zing.ncsl.nist.gov/WebTools/ has visualisation software you can download to see how users surf round your site and which pages they go to

8. Simple Testing

Testing is a must for a good website and can be done remotely (e.g. email your friends and say "Can you look at my website and tell me what you think honestly?"). Or locally (e.g. borrow a video camera and get your tester to sit in front of the camera and click through the pages whilst you say absolutely nothing and see what they do). Recording it helps you play it back and think about the design and how obvious it is.

▼ Testing with one user distinct from yourself or company is much better than not testing at all. Four people is the right size for testing and getting feedback about your website

▼ Testing early versions of your website is much better than waiting until the end. In this way you can fix what is not right before building on it

▼ It doesn't matter who you test with. It can be your family, you friends, etc., just as long as you are getting some sort of feedback

▼ Testing is there not to see what is wrong or right it is a tool for informing your decision making and design process. Designing and developing sites can make you become so involved you can no longer see the site objectively and make good decisions about it

▼   Testing is iterative.

Dos and don'ts for effective use of usability tools and techniques

Do

▼   Shop around
▼   Consider why and what you want to get out of testing usability

Don't

▼   Don't be fooled by jargon or promises or involved techniques

How to assess usability tools and techniques effectiveness

▼   Is this tool/technique working for me? All tools and techniques are there to help you measure how useable a website is. Having a usable website will enable you to be more successful with your on-line customers. This is the business goal of usability. If the tools are not directly helping you to be more successful with your customers then look at another way of achieving your goals

Related checklist

▼   Guidelines to ensure website accessibility
▼   Defining and supporting usability and accessibility objectives with software
▼   Guidelines for designing website usability

Useful reading

'Don't make me think', Steven Krug, New Riders, Indianapolis, 2000

http://www.w3.org, World Wide Web Consortium

http://www.useit.com/alertbox , Columns discussing various elements of usability

For a list of usability methods see http://www.usabilitynet.org/tools/list.htm

Useful addresses

Management Information Centre, Institute of Management, Management House, Cottingham Road, Corby, Northants, NN17 1TT
Tel: 01536 204222

Thought starters

▼   What would you like to know about your site?

▼   What software or tools or techniques would help you find out what you want to know?

▼   How much money and time do you have to spend on tools and techniques?

▼   What can you do 'in-house'?

Further information

To be added by editor.