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Designing useful (as well as usable) websites

An approach to user needs analysis to maximise website user engagement.

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1. Abstract

Many of NetReturn's commercial and government clients are now firmly focused on ensuring their websites and intranets achieve high-levels of ease-of-use, and are insisting that user-testing activities be included in website information architecture projects.

This focus on usability is good (after many years of it being neglected in commercial and government websites). However, the problem with this emphasis on usability is that many clients seem to believe that their website's ease-of-use is the quality that will contribute most to the website's success.

What they seem to overlook is that a website that is not useful to their customers, that does not engage them, or meet their expectations, will fail regardless of how usable it is.

NetReturn's approach to designing websites is to use techniques that uncover what will be most useful and engaging for the website visitors, and then ensuring that the information architecture, visual design and content are guided by these user needs. Our analysis aims to determine not only the type and structure of information visitors want on the website, but also how they expect that information to be presented (as a summary, in a table, downloadable, etc), how they prefer to find it (by browsing, searching, subscribing, etc) and other motivational drivers that may engage or repel them.

Our approach employs a user-modelling technique that is more efficient and more effective than other user needs analysis approaches. At the same time, we don't neglect usability, and also achieve this through a more efficient approach than iterative user testing.

2. Presentation address

I am a user experience specialist at NetReturn, a company that specialises in developing websites and web applications. As a user experience practitioner my job is to make a website work from the end-users' perspective. That, of course, requires that the website be easy to use, but there are also other aspects of the user experience that need to be right; the website needs to engage its users through the value it offers them and by meeting their expectations and preferences at every point of interaction.

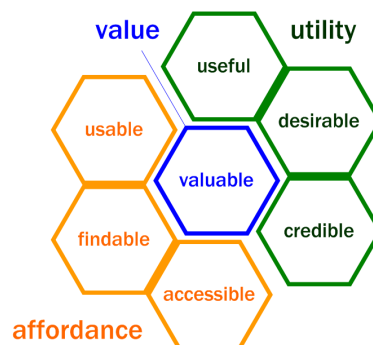
Many of our commercial and government clients are now firmly focused on ensuring their websites and intranets achieve high-levels of ease-of-use and accessibility. Many clients are insisting that user-testing activities be included in website information architecture projects.

This emphasis on usability is good; it is an important aspect of the website's user experience. However, the problem with this focus on usability is that many clients seem to believe that ease-of-use is the quality that will contribute most to their website's success.

What they seem to overlook is that a website that is not useful to their customers, that does not engage them, or meet their expectations, will fail regardless of how usable it is.

Using terminology from motivational theory, we would categorise usability aspects as merely hygiene factors and whereas attributes that are useful, desirable or valuable are the motivational factors for users. And we believe that it's the motivational factors that will mostly determine the success and uptake of a website.

This concept of distinguishing between the usability of a website and the value it delivers to its users has recently begun to be discussed amongst user experience practitioners. For example, James Melzer in the US has come up with the following diagram¹, based on the User Experience Honeycomb (Morville, 2004) by Peter Morville (who authored the O'Reilly-series information architecture book with the polar bear on the cover).



¹ Morville's Facets of User Experience Refined? James Melzer, June 7, 2005, http://www.jamesmelzer.com/bearings/archives/2005/06/morvilles_facet.html

The 'affordance' factors are usually what are tested for in user testing. The 'utility' factors typically derive from user needs analysis, and are often also tested or validated during user testing or through focus groups (in a moment, I'll look at how valid user testing or focus groups are for this purpose).

Another way of looking at the differences between the usability factors and 'useful' factors is to consider that usability factors are most likely to be similar across all websites, whereas the 'useful' factors will tend to be specific to the content and audience of a particular website.

This is especially so for the government and corporate websites or intranets that we are mostly involved in designing. These sites typically target the widest possible audience and do not need cutting-edge design or functionality.

To ensure the ease-of-use (usability) of the website, our user experience specialists draw on their expertise and the current usability patterns or conventions on the web, and optionally make use of user testing to further refine their designs.

But, on the other hand, how do you ensure a website is useful, that users find it engaging, desirable or valuable, when this requires an understanding of motivational factors that are website specific? The user experience team will not necessarily have this knowledge, and while you could imitate other websites with similar offerings, how can you tell if they've got it right?

Typically, you would expect that a user requirements specification would tell you what users want and therefore what is valuable to them. But when it comes to designing the detail of a user experience, more detail is needed about user needs.

For example, if it has been identified that users need certain information on a specific topic, to design the user experience in detail, we will need to understand much more about the users' expectations, preferences and context of use - what are users' expectations of language sophistication (will technical or layman terms be more useful), will users need summary or detailed information (or both), are there aspects of the information that have more importance and need to be prioritised, will users want to compare data, do they need to search or sort the information, do they need to print it or save it, is there prerequisite information or external dependencies that users need to know about, are there conditions under which users may push back on the information (needing to log in, too much marketing speak) - and so on.

These motivational aspects will drive the design of the user experience in multiple ways; not only in how the information is written, but also how it is formatted, the page layout, and even specific functionality to access or manipulate the information.

Clearly, for each user need, there may be many motivational aspects that need to be accounted for in designing the user experience. Furthermore, we also need to understand importance or relevance of each aspect to the target audience. A further

complication is that, if we are to optimise the user experience for the whole website, we need to identify these motivational aspects for every interaction on the website.

That is, for the whole group of target users we need to identify their expectations, preferences and contexts of use in detail for every interaction on the website.

This is an enormous task. One that I don't think is achievable through a limited set of user testing sessions or focus groups. Firstly because it is unlikely that enough time would be available in these sessions for extensive analysis of every website interaction. Secondly, there is risk that the participating users may not give an accurate representation of the motivations of the whole target audience.

The alternative of holding scores of focus groups to overcome bias and to achieve a comprehensive analysis is unlikely to be cost effective for any organisation. It is certainly not a viable option that a consulting firm can offer its clients. In any case, as usability expert Jakob Nielsen points out in his article "First Rule of Usability? Don't Listen to Users"², there remains the risk that focus group participants are not able to accurately articulate their own needs.

So what approach to take? NetReturn's approach to this analysis has two key features: firstly we work with a group of several user representatives who, through our facilitation process, are able to deeply identify the motivational aspects of users' interactions on the website. The user representatives are usually not target users themselves but know the end-user group well. This once-removed position brings an aggregated view (and possibly a more candid view) of the users' motivational drivers.

The second feature of our approach is that we analyse users' website interactions at a granular level and cover all the important tasks for a website. The rationale being that if every important website task provides an optimal user experience, the site as a whole will succeed.

This approach does demand more time and involvement of our user representatives than a focus group session would, but the depth and accuracy of the analysis delivers valuable insights. Insights that our user experience team can use to guide the design of all aspects of the site's user experience. In fact, the insights from the analysis provide such a detailed modelling of user behaviour that the user experience team can truly achieve user-centred design.

A short case study will illustrate the success of this approach.

NetReturn has developed and manages the Australian Development Gateway website for our client, AusAID. A section of the website is a knowledge base of information for aid and development practitioners. This knowledge base has 10 topic areas and in total

² *First Rule of Usability? Don't Listen to Users*, Jakob Nielsen, August 5, 2001, <http://www.useit.com/alertbox/20010805.html> – usability guru, Nielsen's observation is that users' self-reported claims are unreliable, as are their speculations about future behaviour.

links to over 2,000 information resources (the site primarily links to best-of-breed information on other websites, rather than holding the information on the site).

Each topic area was developed through a workshop process involving about ten aid and development professionals drawn from many different areas of the development industry. The workshop participants had expertise in the knowledge domain as well as a good understanding of the target user group. Some of the participants would have themselves been target end-users, but they were chosen because of their ability to represent a substantial segment of the wider end-user group.

Over the day-long workshop, around fifty information-seeking tasks were analysed, and this analysis was later used to guide the content selection for that topic area. Clearly, fifty tasks cannot completely include all the information-seeking tasks associated with a topic area. However, once the most important tasks have been analysed, the editorial team can identify general principles that can be used to guide the selection of the remainder of the content for the topic area.

This analysis process allows our content team to publish information resources chosen on very specific criteria that offer maximum value to the end-users. This means that the information is not only relevant, but also that the style, the format, the language and other attributes of the information support the end-users needs and expectations.

The patronage of the Australian Development Gateway website has grown, on average, at a rate of 300% per year over the last two years, confirming that its target audience finds it useful as well as usable.

A NetReturn colleague with our AusAID client are presenting a detailed case study on the Australian Development Gateway website later in this conference.

To summarise this presentation:

- A website's usability is important but more important to a successful user experience are how useful and valuable the website is to its users and how well it meets their expectations. A website that is not useful to its users, that does not engage them or meet their expectations, will fail regardless of how usable it is.
- This aspect of user experience has to do with users' motivations, expectations and preferences at a granular (task) level of interaction with the website. The design of the user experience then has to be based on detailed analysis of the motivational factors of user interactions.
- Usability testing or focus group sessions are not efficient tools for this kind of analysis. Our approach is to use user group representatives (who can synthesize the whole or sections of the end user group) to model the users' motivational aspects at the task level of interaction.