USABILITY TESTING ISSUES OF SOCIAL NETWORKING SITES

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Abstract

Usability lab testing does not produce usable applications any more than functional testing produces quality code. Building successful user-centered applications requires attention throughout the development cycle to users and their tasks.

In the user-centered approach to software design and development, end-users act as evaluators in usability tests at various points during the development life-cycle. Some usability professionals argue that these usability tests simply reflect the preferences of the participants and should not be used in place of objective performance measures. In an attempt to strengthen the validity of the user-centered approach, the present study examined the association between subjective preference measures and objective performance measures in relation to the user's hardware and software use and familiarity. The results suggest that not only do the subjective ratings of end-user evaluators often differ from objective performance measures, but also that this relationship is dependent on the user's past computer experience.

Introduction

Usability testing is a means for measuring how well people can use some human-made object (such as a web page, a computer interface, a document, or a device) for its intended purpose, i.e. usability testing measures the usability of the object. Usability testing focuses on a particular object or a small set of objects, whereas general human-computer interaction studies attempt to formulate universal principles.

If usability testing uncovers difficulties, such as people having difficulty understanding instructions, manipulating parts, or interpreting feedback, then developers should improve the design and test it again. During usability testing, the aim is to observe people using the product in as realistic a situation as possible, to discover errors and areas of improvement. Designers commonly focus excessively on creating designs that look "cool", compromising usability and functionality. This is often caused by pressure from the people in charge, forcing designers to develop systems based on management expectations instead of people's needs. A designer's primary function should be more than appearance, including making things work with people.

What to measure

Usability testing generally involves measuring how well test subjects respond in four areas: time, accuracy, recall, and emotional response. The results of the first test can be treated as a baseline or control measurement; all subsequent tests can then be compared to the baseline to indicate improvement.

- Time on Task -- How long does it take people to complete basic tasks? (For example, find something to buy, create a new account, and order the item.)

- Accuracy -- How many mistakes did people make? (And were they fatal or recoverable with the right information?)
- Recall -- How much does the person remember afterwards or after periods of non-use?
- Emotional Response -- How does the person feel about the tasks completed? (Confident? Stressed? Would the user recommend this system to a friend?)

Social Networking Sites

A social network is a social structure made of nodes (which are generally individuals or organizations) that are tied by one or more specific types of relations, such as financial exchange, friends, kinship, dislike, trade and web links.

Social network analysis views social relationships in terms of nodes and ties. Nodes are the individual actors within the networks, and ties are the relationships between the actors. There can be many kinds of ties between the nodes. Research in a number of academic fields has shown that social networks operate on many levels, from families up to the level of nations, and play a critical role in determining the way problems are solved, organizations are run, and the degree to which individuals succeed in achieving their goals.

In its simplest form, a social network is a map of all of the relevant ties between the nodes being studied. The network can also be used to determine the social capital of individual actors. These concepts are often displayed in a social network diagram, where nodes are the points and ties are the lines.

Popular Examples of Social Networking Sites

The first social networking website was Classmates.com, which began in 1995. Other sites followed, including SixDegrees.com, which began in 1997 using the Web of Contacts model. The year 1999 saw the development of two competing models of social networking, the Circle of Trust developed by Epinions and utilised by Ciao.com, Dooyoo and ToLuna and the Circle of Friends developed by Jonathan Bishop, which was utilised on a number of regional UK sites between 1999 and 2001 and flourished with the advent of a website called Friendster in 2002. This is now one of the most dominant methods of social networking in virtual communities, perhaps for the reason that it gives the user control rather than being computer controlled. There were over 50 social networking sites using the Circle of Friends in 2005 when one such online community, MySpace, was getting more page views than Google. Google has a social network called Orkut, launched in 2004. Social networking began to be seen as a component of internet strategy at around the same time: in March 2005 Yahoo launched Yahoo! 360°, their entry into the field, and in July 2005 News Corporation bought Circle of Friends-based MySpace, followed by ITV buying Old Boy Network-based Friends Reunited in December that year. It is estimated that combined there are now over 200 social networking sites using these existing and emerging social networking models.

Our focus in this paper is mainly on the following 3 sites which will be analysed for Usability testing: **Hi5, Orkut and MySpace**.

Typical Structure of Social Networking Sites

Basics

In general, social networking services, such as **MySpace** and **Orkut**, allow users to create a profile for themselves. Users can upload a picture of themselves and can often be "friends" with other users. In most social networking services, both users must confirm that they are friends before they are linked. For example, if Alice lists Bob as a friend, then Bob would have to approve Alice's friend request before they are listed as friends. Some social networking sites have a "favorites" feature that do not need approval from the other user. Social networks usually have privacy controls that allows the user to choose who can view their profile or contact them, etc.

Additional features

Some major social networks have additional features, such as the ability to create groups that share common interests or affiliations, upload videos, and hold discussions in forums.

User behavior

Users often try to "collect friends", or try to be linked to as many friends as possible. Therefore, it is not uncommon for users to receive friend requests from people that they do not know. Some users will create additional profiles that assume the identity of someone else, such as celebrities, politicians, or even their pets. Some will create profiles for fictional characters, such as those from video games or Disney films (not dissimilar to role-playing), and some will even create profiles for inanimate objects, such as the Sun or the dwarf planet Pluto.

The following table shows different Techniques for Usability Testing:

Usability Techniques		
Method	**Focus**	**Notes**
Laboratory Testing	Use to verify unique features of all types of Online Help. If performance isn't an issue, participants are generally ask to "think aloud"	Finding participants is the biggest issue. Can be used for performance testing (how fast, how many errors)
Documentation Survey (Mail Questionnaire)	A good questionnaire requires design and testing; focus on key questions;	Some incentive is needed here or dedicated customers.
Email Questionnaire	Put out a survey through an email list. Problem here is that the sample may be biased somewhat.	Get names of potential recipients from support, marketing, or user group lists.
Web Survey	Put out a survey on the web or send the survey to selected users. Problem here is that the sample may be biased somewhat.	Get names of potential recipients from support.
User Group Feedback	Meet with user groups during conferences, shows, etc. Prepare a list of questions to ask	General feedback, but good way to make contact for more detailed information.

Table 1: Usability Techniques

Usability Testing Technique Chosen
We have chosen the email questionnaire technique due to time factor and the fact that users are geographically dispersed.

Questionnaire for User Interaction Satisfaction
In addition to evaluating 'hard' measures like task speed and error rates, it is extremely useful to investigate the less quantifiable aspects of interface design that cumulatively (and often subtly) contribute to users' subjective feelings of satisfaction or frustration. The cleverest system in the world does no good if users avoid it because they find it annoying.

To this end the authors have employed the Questionnaire for User Interaction Satisfaction (QUIS), developed by the Human-Computer Interaction Laboratory at the University of Maryland. The QUIS is not a perfect survey instrument, but it is as close to an industry standard as exists in the discipline of Human Computer Interaction. Designed to provide reliable and consistent cross-platform and cross-application satisfaction measures, the QUIS does not specifically address Web technology.

The current instrument asks participants about:
· Their demographic background
· Their overall reactions
· The features of individual screens (characters, layout, sequences and moving between screens
· Terminology and system information (system status, instructions, error messages, etc.)
· Learning to use the system
· System capabilities (speed, reliability, and error correction facilities).

Measures of Usability Testing
The Usability measures you choose should be derived from the product goals and objectives. There are usually two types of measures in a usability test:

- Performance measures: include counts of actions, task completion, task time, errors, and assists. These are also called quantitative measures.

- Subjective measures: include oral and written data collected from users regarding their perceptions, opinions, judgments, preferences, and satisfaction regarding the system and their own performance. These are also called as qualitative measures.

Appendix 1: Refers to a questionnaire which we are using to gather user feedback for usability testing of Social Networking Sites.

Analysis of Survey Outcome

One activity in a user-centered approach to software usability testing involves the evaluation of the product software by end-users. However, the testing methods used in this approach vary. Some usability professionals use subjective ratings, while others use objective measures, and still others use a combination. Several studies have examined the extent of agreement between both types of measures. The results of these studies have been mixed suggesting the influence of other factors.

Conclusion

A comprehensive World Wide Web site may well become one of the major points of contact between a given organization and its user base. For many users this system will be the only grounds on which they can judge the organization. Thousands, or even hundreds of thousands, of users may be obtaining mission-critical data from this source. Ease of learning, ease of use, and general user satisfaction, along with quality and comprehensiveness of content and functional capabilities, will determine the success or failure of the effort.

There are myriad methods for usability testing. We have hardly exhausted the list of possible methods, and continue to research and experiment with new techniques. Our experience to date has been extremely positive. We have, in fact, identified ways of examining and improving the usability of our Web sites before releasing them. The methods we have employed are reasonably easy, reasonably fast, and reasonably cheap. Best of all, they are un-intimidating for both participants and testers.

There is no question in our minds that our systems are better because of the usability testing we have performed, and that the end users have benefited in direct, measurable ways.