

THE IMPORTANCE OF USABILITY FOR A WEBSITE

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ABSTRACT: This article describes the importance of usability on a website showing that it is not only important to develop specific websites, but also to develop it with quality so that in this way, better results are achieved in their purpose. We opted for literature review grounded on the internet research, online books in indexed journals, citing the latest articles on the subject. In this article evaluation techniques are shown, they are used to measure the usability of a website detailing some of these techniques to compare them. Thus, need has been detected for more than one technique to obtain results with greater percentage of the usability problems found. Furthermore, it was noticed that it is necessary to use different techniques such as a technique based on methods for inspection and another based on empirical methods. However, to know the most appropriate techniques for a particular website, one should know and consider the needs of the users.

Keywords: Usability, Website, Quality

1 INTRODUCTION

Over the years, it can be noticed that the development of the Web has only increased due to easy access to the internet, therefore, usability has become a key requirement in order to obtain user satisfaction. It is known that usability is very important on Websites, as their combined techniques can provide the site greater performance avoiding errors or unauthorized access messages. This makes these websites access to increase, demonstrating that the Website is easy for their understanding.

In this sense, usability tests exhibit extreme importance for websites because through them it is known whether the system or Website serves and supports the user in all the tasks that will be performed. A web page that has usability performs tests to investigate the ease of

learning, efficiency, ease of recall, errors and perception of the subjective satisfaction that occur by the user after using the Website.

This article aims to show that a website should have a high usability level if you want to conquer space among netizens, causing it to have a higher acceptance rate and its goals are achieved more successfully.

2 USABILITY

Usability can be defined as a set of software attributes related to the efforts required for their use and for individual judgment of such use for a certain set of users (FERREIRA; DRUMOND, 2002).

Nielsen (1993) addresses that usability is divided into five attributes, namely: Ease of learning, efficiency, ease of recall, errors and subjective satisfaction. The Ease of learning is linked to the ease the user has to interact with any physical or logical object. Efficiency is related to the usage and, as you use the physical or logical object, efficiency is necessary in processes being used, thus generating higher productivity in their usage. The ease to remember is linked to the user, who must be aware of the running, so they can find what was executed easier to remember, if they need to use the object again. The error occurs when the user runs the object the wrong way, thus losing any work done. In the case of usability, these errors with losses are not allowed, for this reason, with the help of usability work will not be lost in cases of error emergence while using the logical or physical object. Subjective Satisfaction comes when the user feels satisfaction in using the logical or physical object, which generated no trouble along the way.

3 METHODS AND TECHNIQUES FOR USABILITY ASSESSMENT

Next we explain about some methods and techniques used to evaluate the usability of a software or a website.

3.1 Heuristic evaluation

Heuristics is a usability evaluation method developed by Nielsen and Molich (1993) and Consists of systematic verification of the user interface with respect to its usability. Such

method was first used in the Web interface in 1994 in a study Aimed at the website of Sun Microsystems (Nielsen and Sano 1995). Its basic procedure was as follows: an evaluator Interacts with the Desired interface and judge its adaptation comparing its easiness with Recognized usability principles, heuristics.

3.2 Cognitive Route

Cognitive route is another usability inspection method, unlike the heuristic evaluation that is geared to the product, cognitive route is oriented to the task. The analyst (evaluator of cognitive route) analyzes the interface elements to simulate, step by step, the final user's process to perform a certain task (MULLER et al., 1995 cited in TANAKA, 2010). The main objective of this inspection method is to evaluate the ease of learning of a particular interface using the concept of learning by exploration. This process of learning happens naturally with the user learning by trial and error during system operation (ALMEIDA, 2005 cited in DIAS; FILHO, 2009).

According to Rocha and Baranauskas (2003 cited in DIAS; FILHO, 2009), this method investigates communication between the concept of a job for part of users and developers, used vocabulary and feedback (response) suitable to user actions. The path of the cognitive process is divided into two basic phases: a preparatory phase and the analysis phase. In the preparatory stage the tasks are divided, the action sequences for each task, who the users will be and what interface will be analyzed. In the analysis phase each task is examined and requires user actions to perform them. At this stage a story is told about the interactions of users with the interface for each action held. These are the characteristics of each stage:

Preparatory phase: 1. Who will the users of the system be? 2. What task (or tasks) should be analyzed? 3. What is the correct sequence of actions for each task and how it can be described? 4. How is the interface defined?

Analysis phase 1. Will the users make the correct action to achieve the desired result? 2. Will users find that the correct action is available? 3. Will users associate the correct action with the desired effect? 4. If the correct action is taken will users notice that progress was made in relation to the desired task?

This method focus on only one attribute of usability and ease of learning and, therefore, its use as the sole evaluation method can impair characteristics aimed at increasing productivity. Thus, there is a need to apply a combination of methods to take advantage of the strengths of each one of them (DIAS; FILHO, 2009).

3.3 Usability Testing

According to Silva (2003), empirical usability tests also known as interaction tests emerged in experimental psychology and are able to collect data based on the observation of human-computer interaction. These usability testing and interaction assays can be considered synonymous, and the first is an empirical method for assessing the usability and can be performed in laboratories or prepared in a real environment where the system will be applied (DIAS; FILHO, 2009).

According to Nielsen (1993), usability testing with real users are fundamental methods and even irreplaceable to generate direct information on how people enjoy computers and what problems faced by them are with regard to the system interface test. In the course of the test, users will have to perform certain tasks or answer certain questions forming the test scenarios. Evaluators should encourage users to enter what they are doing and they are thinking, known as Thinking Aloud Protocol. Maximum, minimum and desired limits can be determined for various usability criteria, and directly observing the user, it becomes possible to quantify these criteria (DIAS; FILHO, 2009).

With usability testing the greatest problems are found, thus it becomes the most effective way to improve usability. By contrast, it becomes the most expensive form too, with a cost that can reach up to 50 times more than one inspection method, but with the application of remote testing this scenario is changing (ROCHA; BARANAUSKAS, 2003 cited in DIAS; FILHO, 2009).

3.4 Questionnaire

According to Winckler and Pimenta (2014), this method is a very useful tool in the interaction evaluation between user and interface and is applied to gather information on the profile of users, the interface quality and what problems are encountered in its usage. Such information is as important as performance in using the system and can only be acquired by asking the users. The use of questionnaires to the evaluator provides an advantage that is able to implement various tests at the same time in different places. There are several ways to questionnaires are useful in the middle of development as web interfaces, e.g.:

- Identify the user's profile. This type of questionnaire has aimed to collect information about users and this information can be of functional origin, personal, on preferences or on the use of computers and systems.
- Determine the degree of user satisfaction with respect to the interface. These are specific questionnaires to ascertain the satisfaction of users and some have been studied since the 80's, and a specific version for web sites has been developed under the name of WAMMI.
- Structure information about usability problems found by users in the form of questionnaires for description of critical incidents.

According to Winckler and Pimenta (2014), by applying questionnaires to get benefits like the ability to use them in large numbers of users while enjoying their own web environment through electronic forms. However, it should be noted that the results require great effort of interpretation to find usability problems. Questionnaires to assess their satisfaction are important for marketing, but in almost all cases do not explain the results. Therefore, the questionnaires should be accompanied by some other method of evaluation that can explain subjective responses of users.

3.5 Interview

An interview can be considered an interactive questionnaire where it allows the evaluator to have further exploration of their interests. There is an analogy between evaluative strategy and the use of questionnaires, the automatic capture directly from the application and direct observations (COX, 1993 cited in Harvey, 1998).

According to McAteer (1998 cited in Harvey, 1998), interviews are divided into three categories: open standardized interviews, that cause the formulation of questions to be the same way for a considered show even when you have different interviewers; Structured interviews or guided, by means of which the interviewer takes a more formal questioning of participants according to a well-focused topic; and informal or colloquial interviews, that during the questioning the interviewer adapts quickly to respect individual differences and monitor behavioral changes. The open interviews take the risk of omitting important information, the structured ones can be tiring and the informal require an excessive expenditure of time before they become sources of systematic information.

Having a vision of usability, there is another aspect of similarity between questionnaires and interviews. The two evaluation methods are indirect, because they do not study the product itself, but only opinions about it transmitted by a sample of the target users. However, it is understood that when the thing to be measured is the subjective user satisfaction, both questionnaires and interviews henceforth are regarded as direct assessment tools (Nielsen, 1993 cited in Harvey, 1998).

According to Dix (1998 cited in Harvey, 1998), in general, interviews are appropriate for exploratory studies for which the appraiser has not yet set the focus, because there is possibility of an easy redirection of the questionnaire done by the interviewer as well as a deepening issues arising in the context of the survey process. Direct contact with the user results in the acquisition of specific constructive suggestions. In fact, well planned interviews are great auxiliary tool in establishing work processes in project-centered approaches user, thereby obtaining primary or secondary information (HARVEY, 1998).

According to Nielsen (1993 cited in Harvey, 1998), the evaluation method interviews with open questions are very important when you want to take notice of incidents or critical situations where the system is particularly weak or surprisingly effective as they allow the usability team to acquire knowledge about the detailed circumstances of such incidents and lead to other similar product suppression incidents framed in the worst case, and the expansion of benefits associated with incidents framed in the best case context.

4 CONCLUDING REMARKS

Today, due to the considerable increase in the use of technology in the world, the usability of websites is very important. And with the incredible expansion of the Internet, accessible to a wide variety of user profiles, it is virtually impossible to define who has access to a particular website. Based on these data, we understand that the importance of usability evaluation methods for these websites is fundamental.

The usability and the evaluation methods are not so new, but unfortunately are still very unknown, especially by the websites of developers. This creates the appearance of difficult learning and little intuitive websites, resulting in user dissatisfaction because the environment is not up to expectations. This is because the developers end up worrying much about the appearance and functionality of the website and somehow ignore the user during the development process.

Usability evaluation methods are techniques to make the most intuitive websites and try to get the total user satisfaction. It is wise to apply the evaluation of usability throughout the website development process and not to apply it as an isolated step, causing them to avoid waste of time and money. One should also point out that the main purpose of an assessment is to find usability problems so that we can improve the website and not only evaluate whether it has a good usability or not.

In this article various usability evaluation methods were described, both methods performed by inspection, as empirical methods and also some methods performed by interaction. As said before, this study was not designed to demonstrate that one method is better than another, or vice versa, but to show the importance of usability in websites. However, it should be noted that there are advantages in using a specific evaluation method depending on the need of each one.

In the case of an evaluation method for inspecting, for instance, we can say that it is advantageous to be a fast and economical method, this method should be done by specialists, thus, the solution for the problem may be taken immediately. On the other hand, this kind of

method also has its disadvantages as it can only be done by specialists, thus it can not meet some requirements of target users, as an expert has a different view of inexperienced people and can not see certain difficulties that they have . This ends up causing the expert not to solve some usability problems leaving the website still having defects. Some inspection by methods described herein are heuristic evaluation and cognitive route.

The empirical assessment of usability methods are methods performed by experts as well, but with the difference of having user participation in assessing the application. Users are subjected to various tests as they are observed by the evaluators. By having user participation in this type of method, it is advantageous to find a higher percentage in the number of website usability problems, but this method turns out to be very costly, which is a considerable disadvantage. Another disadvantage is that users are subjected to predetermined tests by experts, and can therefore be said that these evaluation methods has the same problem of inspection by methods, which is that they are skilled and can not see the same difficulties the target users may have. An empirical evaluation method described in this work is the usability test.

As for the methods performed through interaction are fully geared for users, thus we can say that one of the main advantages of these kinds of methods would be the location of a higher percentage in the number of usability problems. After being defined and identified the specific target website users questions are carried out according to the need and difficulty of each one. However, since all the methods have advantages and disadvantages, this type of method is not different. One of its drawbacks may be the misinterpretation of responses causing the evaluator not to improve the website where it really needed. Interviews and questionnaires are the methods for interaction described in this paper.

With all this information about the types of assessment methods and their advantages and disadvantages, we can state that the application of more than one type of assessment method in order to have the greatest possible percentage of found usability problems is required. The ideal would be to use at least two methods of assessing, using different types, that is, for example, a method for inspection and the other for interaction. But it needed to know the actual needs of each case, because then you can make a combination of more efficient and effective methods. Many factors account for the success of an assessment, the main ones include: the choice of methods suitable for each evaluation situation, the application of the method in precise stages of development, documentation of such an assessment and especially the training of evaluators.

We conclude that real usability is very important for the development of websites and hope that this article will inspire others to gain more knowledge on the subject, who can continue the research and also that they can apply such valuation methods, showing again the importance of usability.

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