Social Research Methods Used in Moving the Traditional Usability Approach Towards a User-Centered Design Approach

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ABSTRACT

The present article focuses on the idea of rethinking the concept of usability moving from the traditional view of usability expressed in the internal characteristics of the product towards usability understood as deriving from the quality of interactions between humans, their work and the web design product. Usability is not only an add-on or a final result in the design process but it is embedded as a main concern within the design process itself. Related to this perspective on usability, the authors discussed the design models which can support it and argued on the importance of using social research tools for a better understanding of the people and their needs starting with the very first stage of design. Further on the authors have provided a brief description of the most frequently used research methods in user needs analysis (interviews, focus groups and surveys) together with short guidelines in preparing and using these methods. The last part is dedicated to the illustration of user needs analysis taken from two of their research projects.

Key Words: Pervasive Usability, Usability, User-Centered Design, User Need Analysis, User Research

INTRODUCTION

Usability has become a topic of great interest to researchers in the field of human computer interaction and interaction design due to an increasingly strong connection between usability and the overall success of a given product, be it an object, software or a website (Kuniavsky, 2003; Nielsen, 1993; Norman, 2002). Although researchers agree that usability does not, in itself guarantee the success of such a product (Kuniavsky, 2003; Norman, 2002), they also underline the fact that the lack of usability and a low quality user experience may contribute substantially to the failure of a product or design (Kuniavsky, 2003; Norman, 2002). Together with a substantially grown interest in usability, even though the subject did not represent the

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focus of design process in its starting years (Norman, 2002, Jordan, 2002) a certain trend in the conceptualization of usability can be observed as the traditionally accepted view of usability is moving towards an integrated perspective in which usability is not just an end goal or attribute of the final product but is also represented by the quality of user experience it enables. Moreover, the maturation of this concept is seen in terms of quality in software, quality in interaction and quality in value (Law, Hvannberg, & Cockton, 2008) a perspective which clearly passes over the traditional view of usability as a validating measure for the design product (Dumas & Redish, 1999).

Taking into account this shift in conceptualization, this article is organized around the idea of rethinking the concept of usability. This means moving from the traditional view of usability expressed in the internal characteristics of the product towards usability understood as deriving from the quality of interactions between humans, their work and the web design product (van Welie, 2001) or, in other words, from the better understanding of the user experience (Kuniavsky, 2003). More and more researchers argue that a user-centered approach or interactive design is the kind of approach that can support this conceptualization of usability (Benyon, Turner & Turner, 2005; Kuniavsky, 2003; van Welie, 2001; Brink, Gergle & Wood, 2002). As a result, usability becomes a permanent concern for researchers and designers. Moreover, designing for usability starts precisely from the first stage of web design: user needs analysis.

In the first part of the article we will provide a short background on the trends and movements in research and design practices that have an impact on the way usability is defined and measured. We will also indicate that these trends influence the design stage when usability is taken into consideration. Aligned to these research trends, this article argues that instead of usability testing, which has been the focus of the majority of the publications in this field, researchers and designers should be primarily interested in usability building even from the beginning of the process by assuring the fact that their design will address the real and important needs and problems of future users. This goal cannot be achieved without a deep and accurate understanding of people, their world and their activities, their needs, problems or aspirations. This may appear very daunting to a web developer who has no training in research and with people but can be very natural to a social scientist who has been trained in using all social research methods. We will argue that both in the traditional perspective on usability but even more now social research techniques are becoming indispensable for insuring a good design (and therefore usable products) and all known techniques become tools that can help us in attaining this goal (Dumas & Redish, 1999).

As a result, in this article we are going to talk about the social research tools (or methods) that can be used during the first step of user-centered design in order to provide a deep and thorough understanding of the users, their needs, desires or problems, an understanding that will constitute the basis for usability building throughout the design process (Brink, Gergle & Wood, 2002). Some of the most popular methods are presented together with their relevance and applicability into this field. The final part of this article will be dedicated to the illustration of the way in which these methods have been used in our research and the benefits they generated for the further stages of the design process.

**BACKGROUND**

The history of usability research in the field of interactive systems design is rich and very interesting ranging from a point when it was barely acknowledged as relevant (Kuniavsky, 2003; Norman, 2002) to a stage when usability became a business in itself (Rubin, 1994) and finally to the present day when even the term usability seems unable to encompass the developments regarding this concept and new concepts like user experience are taking over (Law et al., 2008). The transformations in the concerns for usability followed an ascending pattern but there are still authors arguing that we
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