Chapter IV

Using Usability Factors to Predict the E-Commerce User Experience

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ABSTRACT

This chapter introduces the use of usability factors as a means of predicting the e-commerce user experience. It argues objectively measurable usability factors, such as page layout, navigation techniques, privacy statements and color can be used to predict how a user of an e-commerce Website will experience the interaction with the site. In support for this argument, it reports on the results of a small pilot study that was done to determine the feasibility of a more extensive study aimed at building a model for the prediction of the user experience. The authors hope a better understanding of the intricate relationship between usability factors and the subjective user experience will lead to the design of more successful e-commerce Websites.

INTRODUCTION

A large base of research on the usability of computer systems exists. Traditionally this was aimed at optimizing the task performance of expert users (D'Hertfelt, 2000), but the introduction of e-commerce has caused a widening of the focus of human computer interaction (HCI) to include aspects typically found in marketing and sociology. New fields such as user experience strategy, the design of consumer trust and captology, the design, theory and analysis of persuasive technologies, are emerging (de Groot, Eikelboom & Egger, 2001), with the actual interaction with the customer becoming of paramount importance.

To date there has been a lack of genuine knowledge about what contributes to effective interactions with online customers, although intuition and previous research (Dholakia & Bagozzi, 1999), suggest that creating a compelling online environment for Web consumers will have numerous positive consequences for commercial Web providers.

Usability techniques can be used to reduce software and e-commerce costs and improve marketability (Gilb, 1988). Websites that are hard to use frustrate customers, forfeit revenue, and erode brands (Forrester, 1998). Lohse and Spiller (1999) found that poor interfaces and store navigation negatively influence online sales, while Li, Kuo and Russel (1999) found significant positive relationships between online buying behavior and online channel characteristics such as interactivity. The intention to revisit a Website is in part a function of Website characteristics (Hoffman, Novak & Chattejee, 1995), and empirical support for usefulness and enjoyment as drivers of Website usage exist (Atkinson & Kydd, 1997). This suggests that Website characteristics at least partly determine the frequency and duration of a Website visit.

Hurst (2000) predicted that e-commerce sites in the USA would lose several billion dollars in sales during the 2000 Christmas season due to difficulties with the checkout process of these sites, while Gartner (1999) points out studies in the United Kingdom and Europe have shown many users are put off by the failure of Websites to provide a satisfactory buying process.

CONCEPTS

User satisfaction is seen as the user's perception that Website has met or exceeded their expectations and is created through the careful design of information content, site usability, security and privacy, while also taking the characteristics of the intended users into account (Hill, 1997). User satisfaction is used to measure the subjective quality of the user experience.

The user experience encompasses all aspects of the end-user's interaction with the site. The most important requirement for the user experience is to meet the exact needs of the customer with simplicity and elegance in order to produce e-commerce

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