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Exploring the Total Customer Experience: Usability Evaluations of (B2C) E-Commerce Environments

Shailey Minocha and Liisa Dawson

Department of Computing, Open University, Milton Keynes, MK7 6AA, UK

S.Minocha@open.ac.uk; L.H.Dawson@open.ac.uk

Abstract: The term Total Customer Experience (TCE) encapsulates the customer's experience of interacting with an E-Commerce environment. With increasing competition in the E-Marketplace, creating value and generating a positive TCE is important for E-Commerce environments in order to attract and retain customers. Traditional usability evaluation techniques in HCI such as heuristic evaluations and controlled user-observations yield usability problems with the E-Commerce Web site but are unable to uncover factors that mar a customer's TCE. In this workshop, our aim is to assess the current state of usability evaluation techniques and propose a toolbox of evaluation techniques adapted from HCI and other domains such as social psychology, consumer behavioural analysis and marketing that can be used to promote a positive TCE and foster customer retention.

Keywords: E-Business, E-Commerce, Customer Loyalty, Total Customer Experience, Usability Evaluations.

1 Introduction

An *E-Commerce* environment implies not only the front-end of the E-Commerce, which is the Web-based retail site, but also the back-office systems such as the security of credit card handling, delivery of products / services, post-sales support and contact with staff. In the HCI literature, research into the success or failure of E-Commerce environments has primarily focused on the usability of the core Web site. Central to this has been how design criteria or heuristics such as ease of navigation and optimal response time can be managed to create usable customer-focused E-Commerce sites.

It is evident from the relationship marketing literature that such a uni-dimensional focus ignores the *total customer experience* (TCE) within which the virtual customer-organisation interaction occurs. The term TCE encapsulates the customer's experience with an E-Commerce environment that occurs beyond the placement of an order on the Web site, such as: pre-shopping searching, interactions with customer services, and the delivery of products.

With an increasing competition in the E-Markets, E-Businesses are finding it difficult to retain customers. Customer retention requires that the customer perceives value in his exchange with the E-Business and that the value is maintained across all

aspects of the TCE. Therefore, generating a positive TCE and then to continuously provide one, is important for E-Businesses in order to first acquire customers and then to retain them.

Application of HCI evaluation techniques such as heuristic evaluations and controlled user-observations yield usability problems with the E-Commerce Web site but are unable to uncover other factors that mar the customer's TCE. Examples of such factors are: applying existing mental models of shopping, personal and cultural preferences of on-line interactions, etc. Consequently, we suggest that the traditional notions of usability (and usability problems) tend to be inherently limiting.

Whilst it is obvious that a range of complementary techniques should be employed to evaluate the TCE, the question arises: which techniques can be applied to evaluate the TCE in order to design and evaluate (B2C) E-Commerce environments that foster customer retention?

In this one-day workshop we intend to explore the different methodologies that would support the evaluation of the TCE of E-Commerce environments. We will invite researchers and practitioners who have been involved in the usability evaluations of E-Commerce environments. We aim to assess the current state of theory, methods and research in the usability evaluations of E-Commerce environments. Furthermore we aim to examine how traditional

techniques such as heuristic evaluations, guideline inspections and user-observations can be adapted to capture and rectify situations where customers' experiences with an E-Commerce environment fall below their expectations.

The goals of the workshop are:

- to debate and share experiences in usability techniques of E-Commerce environments;
- to discuss the limitations of techniques such as heuristic evaluations and controlled user-observations in capturing the TCE;
- to discuss how existing usability techniques need to be modified or new techniques need to be developed to evaluate the TCE;
- to engender collaboration between practitioners and academics, and to plan for future activities and methods of communication within the HCI community.

2 The Workshop Proposal

The theme of INTERACT 2003 is 'bringing the bits together'. This workshop proposes to bring together the current methodologies for evaluating E-Commerce environments with the aim of exploring how they can be applied or adapted for evaluating the TCE.

Traditional evaluation methodologies such as heuristic evaluations and controlled user- observations (observing users performing 'set' tasks on 'pre-set' sites) are primarily concerned with examining the front-end of the E-Commerce environment. These techniques fail to identify many of the factors within the E-Commerce environment that may lead to a diminished perception of value by the customer.

For example, in the methodology described by Nielsen and his team in their E-Commerce report (<http://www.nngroup.com/reports/ecommerce/>, 2001) the users are asked to stop the shopping tasks prior to entering their credit card details. As a result, such a method cannot be used for evaluating the post-transaction stage of the TCE.

Jared Spool (<http://www.uie.com/csa.htm>, 2002) has proposed the *compelled-shopping analysis* method. This involves giving the users financial incentives to purchase products on pre-selected E-Commerce sites. However, even this method is not 'naturalistic': first, the users can not select their preferred sites; and second, such studies do not involve user's own money or credit cards, and hence, will not reveal issues such as apprehensions about the security of the site or credit card handling.

Therefore, this one-day workshop proposes to discuss and review the current state of theory, meth-

ods and research in the usability evaluation of E-Commerce environments and then to propose a toolbox of techniques or methods that can be used to assess and promote a positive TCE.

This workshop will allow those working in the area of (B2C) E-Commerce environments (either as Web designers, usability engineers, or academics) to meet, engage in a practically oriented environment and address a range of issues determining effective design of E-Commerce environments. Participants will share their experiences of applying different techniques from HCI and other related domains such as social psychology, consumer behavioural analysis, and marketing for evaluating E-Commerce environments.

3 The Organisers

Dr. Shailey Minocha is a Lecturer in Computing in the Faculty of Maths & Computing at the Open University (OU), UK. She is currently leading a Research programme in the area of CRM and Service Quality of E-Commerce Environments at the OU. This research programme was initiated in 2001 as a part of Dr. Minocha's BT Research Fellowship, and was supported by BTextact Technologies (2001-2002). It is currently being supported by EPSRC Research Grant No. GR/R60867/01.

Dr. Minocha's other research interests are in the areas of Internationalisation of products and systems, and Evaluation of E-Learning and E-Commerce environments by eye-tracking analysis.

Ms. Liisa Dawson is a Research Fellow in the Department of Computing at the Open University (OU), UK. She is currently working on the Research programme alongside Dr Minocha.

Liisa is in the final stages of writing her Ph.D. thesis, which is entitled "Articulating Activities: Getting to the Root of the Problem". Her Ph.D. research has investigated how Developmental Work Research (developed by Engeström 1987, 2000) can be practically applied in the initial stages of a soft systems development process. She aims to have her Ph.D. written and submitted by summer 2003.