Chapter 76
Promoting Human–Computer Interaction and Usability Guidelines and Principles through Reflective Journal Assessment

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ABSTRACT

This chapter aims to examine the challenges to, and opportunities for, promoting Human Computer Interaction (HCI) and usability guidelines and principles through reflective journal assessment by information systems students from the Australian and Portuguese higher education sectors. In order to raise students' awareness of HCI and aspects of usability, especially in the Web development process, a new unit was developed by the first researcher called Information Systems 650 (IS650) in Australia. From this unit was derived the Web Site Planning and Development (WSPD) course introduced in Portugal. The reflective journal assessment approach was employed to enhance students' learning and knowledge of HCI and its usability aspects. This study provides empirical evidence from 64 students from Australia and Portugal, based on quantitative and qualitative data derived from three sources: students' formal and informal feedback and an online survey. Students confirmed that the use of reflective journal assessment consolidated their understanding of HCI and usability guidelines and principles and improved their reading, searching, researching, and writing skills, and their proficiency with the endnote software.

INTRODUCTION

The Internet (Cyberspace or Information Super-highway) is a network of thousands of computer systems utilizing a common set of technical protocols to create a worldwide communication medium. These massive groups of users reach the Internet through their computers and terminals via educational institutions, commercial Internet access providers and other organizations. The Internet provides numerous benefits to consumers regarding access to information, entertainment, research, business and marketing. The Internet allows users to educate themselves and acquire knowledge at their own pace, and website information can be easily accessed by consumers who can readily obtain only the information which is relevant to their needs (Cappel & Huang, 2007; Issa, 1999; Issa & Turk, 2012; Y. Lee & Kozar, 2012).

Although the Internet offers huge opportunities, there are also many potential problems. A website must meet the users' expectations in terms of content and ease of use. Websites which meet users' expectations will enjoy many advantages as a result of their effective design. According to Donahue (cited in McCracken and Wolfe, 2004) the four most important advantages are: 'Gaining a competitive edge; reducing development and maintenance costs; improving productivity; lowering support costs' (McCracken & Wolfe, 2004, p. 1). Other advantages of good website design are that they allow the users to enjoy working with websites with minimal frustration and aggravation. Studies and research have indicated that usable websites consistently have the highest conversion rates (completion of sales and repeat visits). If users have a gratifying and enjoyable experience, this will encourage them to visit the website more frequently.

In contrast, some users search websites for an item or ways to buy it, quickly become frustrated and leave a website and most probably will never return to it, if the site is not user-friendly and easy to navigate. Website designers should anticipate their target users' needs in order to prevent the frustrations which often occur. Frustration can result from failure to complete a task when working with a website or a system, or when goals are not achieved. This failure can be take place if the users: 'spend a lot of time hitting the wrong buttons; get error messages; feel confused; curse at the screen; and need to ask customer support for help' (McCracken et al. 2004, p. xii). Website design should be driven by two key intentions: to assist people to locate information quickly, and to provide information that is well presented, readable and readily available by adopting the usability and HCI principles and guidelines (Issa & Turk, 2012; Leung & Law, 2012; Sørum, Andersen, & Vatrapu, 2011). Moreover, designers should provide clear instructions to the users concerning the purpose and limitations of the site.

However, if a website has poor usability and its design is not according to HCI principles and guidelines, the users might well ask how the creators of the website could possibly think that it would be acceptable (McCracken et al. 2004, p. xii). Often this happens because the designers are inexperienced or they disregard the users' needs. Perhaps the designer focused on the technical aspects of the project and did not pay any attention to the users' expectations and requirements. Some designers try to mimic successful sites by copying attractive images from the Internet and create their home page without a basic knowledge of design principles. Hence, the website will lack cohesion since the graphics and the texts were written and created by different writers and designers, and it will 'stay a jumble of loose parts.' However, 'If you make your own site, it is your work. It will radiate something of your personality, your preferences and your taste' (Hoekstra, 2000). For these reasons, the first researcher developed a new unit IS650 to raise awareness of usability and HCI principles and guidelines among the Information Systems students, especially in higher education sectors in Australia and Portugal. For the same

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