

## Chapter 7.8

# Cross–Cultural Differences in Perceptions of E–Learning Usability: An Empirical Investigation

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### ABSTRACT

E-learning is gaining momentum in corporate settings as an alternative and supplementary solution to learning and performance problems. Users of e-learning applications and courses differ across regional, linguistic, and country boundaries and user requirements are strongly influenced by their local cultural perspective. Thus e-learning design needs to be sensitive to cultural parameters. Yet, there are very few empirical studies that investigate e-learning design and usability issues from a cultural perspective. This study: (a) discusses the cultural considerations in human computer interaction and information systems research and the specificities of usability in e-learning context, (b) focuses on the usability evaluation of e-learning courses within an international e-learning pilot initiative. Employees from four user organizations representing four countries in South Eastern Europe participated as users of the e-learning courses and evaluated their usability.

### INTRODUCTION

E-learning is a means for addressing learning and performance problems and has become an increasingly critical issue. The impact of e-learning has received extensive attention from practitioners and information system (IS) researchers. Nevertheless research in e-learning design for cross-cultural users remains minimal. New challenges in human computer interaction (HCI) are characterized by the increased focus on users, their idiosyncratic characteristics and reactions, and their changing needs (Hudlicka, 2003). This is also valid in e-learning developments; the problem is that people differ across regional, linguistic, and country boundaries and user requirements are strongly influenced by their local cultural perspective. The increasing use of e-learning systems in different cultural contexts and observations that different people think in different ways put forth the issue of the degree to which the use of such systems is really a matter of culture. Catering for cultural diversity seems imperative for the design of e-

learning courses or corporate technologies for international use. It has been claimed that Web site and e-commerce designs are western-culture and male biased. This is because the majority of the Web sites and e-commerce applications has been developed in western countries and has been used mainly by male users (Simon, 2001). The same can be asserted for e-learning designs. Gender and national cultures constitute a set of parameters that can influence in a great extent e-learning design and usability. This is the main aim of this study, which investigates the effects of gender and national cultures on e-learning usability perceptions.

## **BACKGROUND**

### **Specifying Usability in E-Learning Context**

In the e-learning context, the concept of usability in “traditional” terms is not enough (Notess, 2001; Silius, Tervakari, & Pohjolainen, 2003; Smulders, 2002; Tselios, Avouris, Dimitracopoulou, & Daskalaki, 2001; Zaharias, 2004). This is because usability of an e-learning environment is directly related to its pedagogical value. A creative integration of usability and instructional design is needed but the whole issue of integrating usability and learning is still in its infancy. E-learning usability can be seen as the dominant factor of an e-learning artefact’s ability to satisfy the needs and specification of the learners. Silius et al. (2003) use the term “pedagogical usability” to describe whether the content, interface, and tasks of an e-learning course support learners to learn, which is the main goal when using an e-learning course or technology.

In order to delineate e-learning usability, it is critical that parameters for the context of use are carefully identified. Such an effort requires the identification of the users of e-learning by acknowledging the double persona of the user-

learner and the clear definition of the learners’ main task (Zaharias, 2004). It is critical to look into special characteristics that differentiate users of e-learning from other Web users. Smulders (2002) points out clearly the issue of designing for learners by recognizing the “double persona” of the learner-user. He asserts that most of the problems in e-learning design that relate to poor usability come from the fact that most of the e-learning designers do not recognize the distinction between the roles of user and learner in the e-learning environment. Many e-learning courses are designed for learners without any thought to users while at the same time other e-learning courses just do the opposite. In other words the difference between users and learners can be boiled down to the issue of *form* (user interface) versus *content* (learning material). The user part of persona is concerned mainly with the form and the learner part is interested mainly in the (learning) content. Therefore the emphasis while designing must be put on the creation of interfaces that support “learning while doing tasks” rather than those interfaces that support “doing tasks” (Hsi & Soloway, 1998).

According to the previous analysis the tasks that an e-learner can perform can be seen along the two dimensions:

- a. The *user persona* of an e-learner interacts with the form of the e-learning course (i.e., interface, navigation, information architecture, visual design).
- b. The *learner persona* of an e-learner interacts with the content, communicates with their peers, instructors etc. Content is very important in this context. Learning is about making connections with real-life situations and problems, past experiences etc. Instructional designers are responsible for this to happen by selecting appropriate resources and activities that will engage learners and encourage them to make these connections.

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