

## **Towards localizing eLearning websites**

ABDALGHANI MUSHTAHA  
WISE, Department of Computer Science,  
Vrije Universiteit Brussel,  
Pleinlaan 2,  
1050 Brussel, Belgium  
[abdalghani.mushtaha@vub.ac.be](mailto:abdalghani.mushtaha@vub.ac.be)  
Tel. +32-2-629 3713  
Fax: +32-2-629 3525

Olga De Troyer  
WISE, Department of Computer Science,  
Vrije Universiteit Brussel,  
Pleinlaan 2,  
1050 Brussel, Belgium  
[Olga.DeTroyer@vub.ac.be](mailto:Olga.DeTroyer@vub.ac.be)  
Tel. +32-2-629 3504  
Fax: +32-2-629 3525

### **Abstract**

The majority of (eLearning) websites are produced in English. Websites, in general, are increasingly being marketed globally. The evaluation of international or intercultural usability issues will offer valuable information for future efforts to develop websites for the international market. But what will happen in non-English speaking countries (Belgium, German, Egypt, Spain, etc)? Some of these countries proudly insist on their own cultural identity and simplified English. It is obvious that then content and interface localization for (learning) web systems is becoming more necessary. Localization of e-learning content is not only about translation or adaptation of graphical elements, it is deeper. It is the process of adapting the learning material to a form that is linguistically, functionally and culturally acceptable in order to meet the language and cultural needs of the target audience(s).

The proposed research is about evaluating the influence of the users' cultural background on content and interface understanding in the context of e-learning, and to develop a design methodology for learning environments that take into account social, religion and cultural factors.

The target websites are the distance learning websites, because distance education in particular is a good candidate for localization. As the students' background and expectations about education and universities may differ from country to country, as well as the study methods.

*The research work is divided into two parts:*

**First part:** Investigate to what extent the users' cultural background made up of real world experiences also influences the understanding of the virtual world on the screen.

In a pilot study we will investigate groups of users using a multi-method approach involving questionnaires, icon recognition exercises, etc., to study the differences between users from different cultural backgrounds concerning their understanding (of text, graphical elements, navigation, etc) and attitudes towards websites.

When studying the culture aspects, we will rely on the theory of Geert Hofstede, Fons Trompenaars and Edward Hall.<sup>1</sup>

This part consists of two steps; first, we will perform the study on three different sites that provide eLearning; in the second step, we will design and develop a website keeping cultural differences into consideration and subsequently perform the study on this website. The results of the different studies will be analyzed and compared.

**Second part:** Using the outcomes of the first part, we will develop a methodology for designing localized e-learning web systems:

- Based on the findings, we will further investigate the cultural differences in interface understanding and content representation.
- We will identify the different things that need to be localized in eLearning websites.
- Finally, we will propose (or extend an existing) design methodology to take localization/Internationalization into consideration during the development of a website. The methodology may include a sequence of steps to be followed by the web designer as well as patterns and/or guidelines for localization or globalization of e-learning websites.

---

<sup>1</sup> Geert Hofstede in Culture's consequences (1980) and Cultures and organisations (1991); Fons Trompenaars in Riding the waves of culture (1993); and Edward Hall in Beyond Culture (1976).