

# Chapter 11

## Socio–Cultural Dimensions of E–Learning Systems

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### ABSTRACT

*As students develop critical and reflective thinking skills and are encouraged to care about the world around them, they may realize that some degrees of personal or social transformations are required. Considering this, it is important to note that transformational process can be enhanced with online learning (especially e-learning). Therefore, knowledge about the relationship between culture and online education is very relevant. The purpose of this study was to explore the relationship between national culture and the usability of an e-learning system. Hofstede's cultural dimensions were used to guide the cultural aspects of this study while Nielsen's four usability attributes were also used to support the usability aspect of the study. It was concluded that individual cultural backgrounds contribute substantially to the usability of most online learning systems. Teachers and designers can talk about crafting or designing the learner experience, but the level of control over learner experience is quite indirect and mediated by several factors not under teacher control. With respect to transformative learning, some learners may be ready for deeper change while others are not.*

### INTRODUCTION

Transformative Learning has largely been the province of adult learning theory. There are several reasons to consider transformative learning theory and practice for older adolescents in schools and colleges. Mezirow (2000) pointed out three of them

as follows: (1) That the transition to adult life often involves personal transformation as students move from a safe school environment to take on complex work, study and social responsibilities. (2) That when students are led to a deeper understanding of concepts and issues their fundamental beliefs and assumptions may be challenged leading to a transformation of perspective or worldview. (3) As students develop critical and reflective thinking

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skills and are encouraged to care about the world around them, they may realize that some degrees of personal or social transformation are required. Transformative learning experience in this study is considered as the learner's construction of learning events that were particularly meaningful and transforming their lives. This experience is being investigated by looking at the relationship between national culture and usability of an e-learning system. Considering this digital age, it is important to note that transformational process can be enhanced with online learning (especially e-learning). Online learning has significant implications for transformative learning and can contribute to the expansion and understanding of the transformative learning theory. However, for learning to be effective it must be adapted to the cultural context of the learners (Dunn & Marinetti, 2009, Swierczek & Bechter, 2008).

In this study, the relationship between national culture and the usability of an e-learning system (nine usability variables were investigated) where relationships were established by investigating how individuals from different cultural backgrounds respond to the use of an e-learning system. The participants were observed while performing tasks and were given a questionnaire at the completion of the tasks. The results of this study suggest the following:

- That none of the correlations between Power Distance and the nine usability variables were significantly different from zero at the  $p = .05$  level
- That none of the correlations between Individualism/Collectivism and the nine usability variables were significantly different from zero at the  $p = .05$  level
- That none of the correlations between Masculine/Feminine and the nine usability variables were significantly different from zero at the  $p = .05$  level.
- That these cultural variables were not systematically related to any of the nine

usability attributes in his study. Although, the strength of the relationship between national culture and most usability variables were not shown to be significant, higher Individualism scores were correlated with greater levels of satisfaction with language.

- Also, Uncertainty Avoidance was correlated with Learnability Time. The overall frequency analysis among cultural dimensions and usability attributes shows that the majority of the participants (92%) were satisfied with the e-learning system.

## **BACKGROUND**

The study cited above (Adeoye, 2004) demonstrates the importance of embedding cultural awareness within the design of user interfaces for online education and the need for adjusting online learning features for different users to enhance users' performance and support transformative learning. The findings in the study signify that not everyone in a society fits the same cultural dimensions precisely, but there is enough statistical regularity to identify trends and tendencies. These trends and tendencies should be recognized as different patterns of values and thought. In a multi-cultural world, it is necessary to cooperate to achieve practical goals without requiring everyone to think, act, and believe identically.

Hofstede cultural model (Hofstede, 1980) was used as a guide for his study. Socio-cultural values influence the acceptance and use of e-learning systems because instructional approaches are entrenched in a context of beliefs and values within the context of its application. Cultural factors also play a significant role in adoption and integration of technology within the community. Cultural difference has been deeply researched. The Dutch anthropologist Geert Hofstede defines culture as consisting of patterns of "thinking, feeling, and potential acting" that all people carry within themselves, and which he terms "mental

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