Building a Culturally-Competent Web Site: 
A Cross-Cultural Analysis of Web Site Structure

Tingru Cui, School of Computing and Information Technology, University of Wollongong, Wollongong, Australia
Xinwei Wang, Department of Information Systems and Operations Management, University of Auckland, Auckland, New Zealand
Hock-Hai Teo, National University of Singapore, Singapore, Singapore

ABSTRACT

The internationalization of Web sites requires Web designers to provide effective navigation experience for users from diverse cultural backgrounds. This research investigates the effect of cultural cognitive style on user perception of Web site structure characteristics and performance on the Web site, and the subsequent user satisfaction towards the Web site. More specifically, the authors focus on the breadth versus depth of a Web site’s structure. A laboratory experiment involving participants from China and the United States was conducted to test the hypotheses. The results showed that cultural cognitive style and Web site structure indeed interact to affect user perception and performance. People with holistic and analytic cultural cognitive styles displayed different perceived navigability and user performance on “broad” and “deep” Web sites. This study adds a cultural dimension to our knowledge on how Web site structure can affect users’ experience. It also suggests pragmatic strategies for Web site design practitioners to improve website design in order to produce compelling navigation experience for users from diverse cultures.

Keywords: Cross-Cultural Web Site Usability, Cultural Cognitive Perspective, Web Site Breadth, Web Site Depth, Web Site Structure

INTRODUCTION

In the context of globalization, the Internet has evolved into a platform for international communications and transactions. Statistics indicate that around 89 percent of Internet users live outside the United States by 2012 and more than 70 percent of Internet users are non-English speakers (Internet World Statistics, 2012). According to a Web site Globalization Report by International Data Corporation, more than 60 percent of all online spending is generated outside the United States (Bin, Chen, & Sun, 2003). In order to gain a competitive advantage by

DOI: 10.4018/JGIM.2015100101
reaching global markets, companies set up Web site for each country in which they have a local presence. These Web sites are built with local language and content, but typically with uniform designs across different national cultures. However, Web site localization requires more than simple translation (Cyr, 2008).

Web site localization on the cultural level (i.e., adjusting cultural markers, such as aesthetic appeal, colors, logic, and communication patterns, etc.) is critical for user acceptance and satisfaction of Web site. It is shown that a culturally-competent Web site can facilitate companies to lower the cost of entry to an international market, increase sales, meet global demands, and establish a trustworthy and professional image online (Lohse & Spiller, 1998; Szymanski & Hise, 2000). Prior cross-cultural psychology literature has discovered a large number of cultural differences. These cultural factors are major variables in determining the acceptability and usability of an information system such as Web sites. Thus, to launch a localized Web site successfully, these subtle cultural nuances must be attended to.

Among various Web site design characteristics, this study will focus on the Web site’s structure. Prior Web site structure literature has focused on the tradeoff between breadth and depth in relation to navigation (Galletta, Henry, McCoy, & Polak, 2006; Larson & Czerwinski, 1998; Parush & Yuvaler-Gavish, 2004). However, both depth and breadth have pros and cons, leading to the difficulty in determining an optimal level of depth or breadth of a Web site. Much of the extant literature on Web site structure has adopted a universalist approach by assuming that a Web site’s structure will uniformly produce similar user perception and performance across cultures. However, in practice, Web site structure is designed differently in North America and East Asia. For example, as one of the most popular electronic commerce Web sites in China, Taobao adopts a “broad” strategy by increasing the number of hyperlinks on its homepage. Users may only need to click once or twice to reach the end note. In contrast, a “deep” strategy is usually adopted by North American Web sites, such as, eBay and Amazon. On these sites, products are highly categorized and hierarchically displayed across various Web pages. Despite the phenomenon of different Web site structures between the West and the East, there has been no theoretical explanation for it. To fill this knowledge gap, our study employs a cultural cognitive perspective to theorize and validate Westerners’ and Easterners’ differential perception of Web site structure and performance on it.

Cultural cognitive perspective suggests that an individual’s particular way of processing information can be significantly shaped by the culture he/she lives in (Nisbett, Peng, Choi, & Norenzayan, 2001). This culturally marked information processing strategy is referred as cultural cognitive style (Goldstein & Blackman, 1978; Markus & Kitayama, 1991; Miyamoto, et al., 2005; Nisbett, 2003; Nisbett, et al., 2001). It is argued that East Asians reason in a holistic and relational way. On the contrary, analytic cognitive style is generally observed in Westerners (Chau, Boland, & Nisbett, 2005; Nisbett & Miyamoto, 2005; Nisbett, et al., 2001). This perspective has been employed extensively in the psychological literature to explain cross-cultural differences in information processing (Boduroglu, et al., 2009; Choi & Nisbett, 2000; Ford, Wilson, Foster, Ellis, & Spink, 2002; Ji, Peng, & Nisbett, 2000; Kitayama, Duffy, Kawamura, & Larsen, 2003; Nisbett, et al., 2001). Viewing a Web site as an environment consisting of various information stimuli, we posit that cultural cognitive style will affect an individual’s experience on the Web site.

Specifically, our research questions are:

1. How does a user’s cultural cognitive style affect his/her perception of Web site structure characteristics, and performance when searching for information on the Web site?
2. Will better user perception of navigability and performance result in higher user satisfaction?
Complex Network Perspective on Collaboration in ICT Standardization
www.igi-global.com/chapter/complex-network-perspective-on-collaboration-in-ict-standardization/197458?camid=4v1a

The Impact of National Culture on Information Systems Planning Autonomy
www.igi-global.com/article/impact-national-culture-information-systems/43737?camid=4v1a