

Chapter 5.6

Cultural Barriers of Human–Computer Interaction

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INTRODUCTION

Information and Communication Technology (ICT) researchers and practitioners are well aware of the cultural challenges brought on by a global market (Smith, 2004; Smith, Dunckley, French, Minocha, & Chang, 2004). However, there are many unresolved problems concerning the extent to which culture influences ICT usability. Businesses use ICT in the form of databases to house customer information, Web sites enabling customers to place orders, information systems for management or suppliers, training systems, and as products sold to customers. Internet growth enables businesses to expand their customer base to international markets. Thus, businesses benefit from the explosion of Internet usage but may be challenged by how to best meet the needs of their multi-cultural customers, suppliers, and employees. There is a need to develop a model of cultural barriers to human-computer interaction (HCI). With all of the technology in use today, along with the different cultures that interact with ICT, it is important to identify a model of

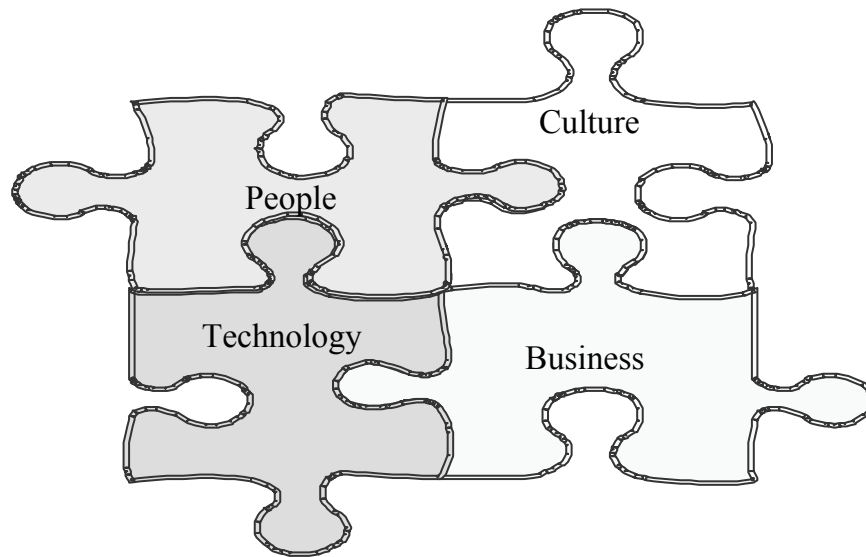
ICT and the HCI barriers produced by it to better help designers of ICT avoid these technology pitfalls. Figure 1 displays how the incorporation of technology, people, and culture into businesses must be carefully positioned together to optimize the success of all involved.

This article examines cultural barriers to HCI and outlines a model to help designers of ICT avoid these barriers so as to enhance a company's ability to conduct business internally and with international businesses and customers. The article addresses topics of interest to ICT practitioners and researchers alike. Current services available to businesses that support effective international HCI are discussed. Current research and future research opportunities in the field of international HCI in ICT are also examined.

BACKGROUND

It is important to define HCI as the study of human behavior in interacting with any computer-based device such as a Web page, information system,

Figure 1. Core components for international businesses



or other technology. Through the study of HCI, researchers optimize interactions between the human and technology through better design of the ICT. Traditional ways of conducting business seldom exist in a society experiencing growth in the Internet, globalization of trade, and digital integration internal and external to a company. The role of ICT including e-commerce and information systems has become more complex as businesses continue expansions into global markets (Laudon & Laudon, 2004). With businesses having multi-cultural customers, suppliers, and employers, there are demands for businesses to utilize ICT that adequately meets the needs of cultural groups that interact with the technology. This section discusses how international HCI is an important aspect of ICT. In fact, there are businesses that specialize only in servicing other businesses in providing multi-cultural aspects to ICT. Furthermore, current research in the field of HCI is addressed to uncover cultural barriers to

HCI that potentially produce ineffective ICT for specific user communities.

Today, HCI is in the spotlight as companies outsource software development or Web sites, operate e-commerce businesses, and extend their services to international customers. The globalization of business has pushed industry into finding ways to incorporate international HCI. Usability is a topic under the umbrella of HCI that is important to design into any ICT, especially systems utilized by a multitude of international users. Zwick and Dholakia (2004) suggest that adoption of any ICT brings about multiple issues to consider regarding social, political, economic, and cultural implications. ICT such as Web sites are generally adopted to solve a business need, but this article also suggests that with the introduction of technology, businesses may inherit new challenges before achieving full resolution of their business need. With the globalization of businesses, cultural barriers must be identified and

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