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WEB SITE USABILITY: A CULTURAL PERSPECTIVE

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Abstract

The objective of this “research-in-progress” paper is to examine the relationship between national culture and Web site usability. It is hoped that the present study contributes to the growing literature on Web site usability through identifying cross-cultural differences in Western European and Middle Eastern users' interaction with Web sites and through delineating the implications of these possible variations for managerial practice and future research.

Keywords: Human-computer interaction, Web site usability, cultural perspective, Western Europe, Middle East

Introduction

More and more organizations are becoming aware that the financial performance of their Web-based business is becoming dependent on improving the usability of their Web sites. In spite of the fact that achieving Web site usability is highly appealing for many organizations, it is not an easy task to accomplish; especially as the diversity in the customer base of Web sites is expanding and extending over several countries with different national cultures and value systems. What makes the problem even worse is the fact that the literature is currently very thin when it comes to providing suggestions on how to improve Web site usability in a cross-cultural context. The lack of such suggestions will leave organizations with only the hope to meet the cultural challenges of the Internet age.

In the present investigation, the role national culture is playing in shaping Kuwaiti and Western European users' reactions to Web site usability will be examined. The author hopes that the findings of this investigation will contribute to the Web site usability literature by assessing the extent to which some of the guidelines, which have been proposed by similar research conducted in developed countries, can be applied in developing nations.

Background

Web Site Usability

What do we mean by Web site usability? There are as many definitions of Web site usability as there are researchers interested in this topic. The literature is replete with personal judgments and subjective checklists of Web site usability (see Aladwani and Palvia (2002) for a review). Only a handful of empirically tested Web site usability instruments exist such as the metrics developed by Aladwani and Palvia (2002), Loiacono (Loiacono 2000), and by Zhang et al. (1999) and (2000). For several objective reasons, this study adopts Aladwani and Palvia's (2002) definition of Web site usability. In their study, Aladwani and Palvia highlighted a few shortcomings in past Web site usability research and proposed an integrated Web site usability model consisting of four dimensions. Three more generic usability dimensions that the author will use in this study include Technical Quality (Web site technical usability), General Content Quality (Web site content usability), and Appearance Quality (Web site appearance usability).

National Culture

In his widely celebrated books on cross-cultural management, Hofstede (1997; 1980) identifies four dimensions of national culture along which societal differences could be explained and understood: power distance (PD), uncertainty avoidance (UA), individualism (IND), and masculinity (MAS). Moreover, his research suggests that there are differences between the consumers of developed and developing countries along these cultural aspects. National culture may provide the knowledge necessary for understanding how to manage users' reactions to Web site usability in an effective manner.

Web Site Usability and National Culture

Unfortunately, the *empirical* research focusing on Web site usability in a cross-cultural context is missing. There has been only a few attempts, however, focusing on Human-Computer Interaction in a cross-cultural context, e.g., Krauss et al. (2001); Onibere et al. (2001); Bourges-Waldegg and Scrivener (2000). None of past empirical studies, however, has examined cultural Web site usability using data from developing as well as developed countries.

Moreover, there are several *theoretical* discussions focusing on Web site usability in a cross-cultural context. The most notable contribution is that of Marcus and Gould (2000). For example, the authors suggest that the access to information in Web sites located in a high power distance country is expected to be highly structured. Appearance wise, they suggest that the emphasis of Web sites in a high power distance country like Kuwait is expected to be more on the moral order (e.g., nationalism) and its symbols; and on authority and logos, more than anything else.

The previous discussion and the examples suggested by Marcus and Gould indicate that the Web users in developed and developing countries may perceive the importance of the various Web site usability features differently. Thus, the author proposes the following hypotheses:

- H1: Users' perceived importance of the Web site technical usability features (security, ease of navigation, search facilities, availability, valid links, personalization or customization, speed of page loading, interactivity, and ease of accessing the site) will be different in developing and developed countries.
- H2: Users' perceived importance of the Web site content usability features (usefulness, completeness, clarity, currency, conciseness, and accuracy) will be different in developing and developed countries.
- H3: Users' perceived importance of the Web site appearance usability features (attractiveness, organization, proper use of fonts, proper use of colors, and proper use of multimedia) will be different in developing and developed countries.

A Qualitative Study

To illustrate the differences between Web site usability in Kuwait, a country with a PD score of 80 (as an Arab country), and England, a Western European country with a PD score of 35), two Web sites from the two countries were selected, Kuwait University (<http://www5.kuniv.edu.kw>, the "old" Web site of Kuwait University, last accessed: May 19, 2003; and <http://www.kuniv.edu>, the "new" Web site of Kuwait University, last accessed: May 19, 2003) and University of Cambridge (<http://www.cam.ac.uk>, last accessed: May 19, 2003).

The analysis shows that there are some basic differences between the two. For example, unlike the UK Web site, the new Kuwaiti Web site shows that it will only be accessible to users who accept a security certificate. Again unlike in the University of Cambridge Web site, in the Kuwaiti Web sites prominence is given to the institution and buildings rather than to the people. Also, the navigation facility within the Kuwaiti Web site is highly structured and that the search function is missing.

An Empirical Study

To empirically examine the differences in Web site usability perceptions in Kuwait and some Western European countries, a questionnaire based on Aladwani and Palvia's (2002) was used. The questionnaire consists of two sections. The first section collects information on the respondents' background such as gender, age, etc. The second section requires the respondents to rate

the perceived importance of the different Web site usability dimensions. All questions were anchored around a seven-point scale ranging from (1) “Extremely Not Important” to (7) “Extremely Important.” The instrument was administered to 40 Kuwaiti Web users and 40 Web users from several Western European countries studying in Kuwait. The Kuwaiti and Western European students had been given the chance to navigate through the two Web sites for sometime before they have been asked to indicate the perceived importance of the different usability features for educational Web sites. Usable responses were collected from all the participants. All of the students in the two samples were from 17 to 22 years of age. Approximately, 54% of the respondents are females, and 46% are males. Tables 1-3 summarize respondents' perceptions in the two samples.

Table 1. Preliminary Results of Cultural Web Site Technical Usability

	Average -Kuwaiti Sample	Average - European Sample	t-Test Prob.
Security	4.75	4.20	.02
Ease of navigation	4.11	4.78	.00
Search facilities	4.10	4.73	.01
Availability	4.68	4.41	.27
Valid links	4.40	4.48	.77
Personalization	4.55	4.35	.42
Speed of page loading	4.63	4.43	.43
Interactivity	4.50	4.58	.76
Ease of accessing the site	4.73	4.53	.43

It is evident from Table 1 that the two groups of respondents disagree with regard to the importance of the different dimensions of Web site technical usability. Several significant differences, assuming a level of significance of .05, could be found for three of the nine dimensions of Web site technical usability. The most notable dissimilarity in the assessment of Web site technical usability was identified for the “Ease of Navigation,” “Security,” and “Search Facility” items. While Kuwaiti users perceive “Security” as more important usability attributes than European users do, Kuwaiti users perceive “Ease of Navigation” and “Search Facility” as less important a design feature than European users do.

Table 2. Preliminary Results of Cultural Web Site Content Usability

	Average -Kuwaiti Sample	Average - European Sample	t-Test Prob.
Usefulness of content	4.40	4.20	.46
Completeness of content	4.63	4.08	.03
Clarity of content	4.65	3.98	.01
Currency of content	4.50	4.28	.41
Conciseness of content	3.98	4.60	.02
Accuracy of content	4.28	4.35	.79

Table 2 shows that the two groups of respondents disagree with regard to the importance of the different dimensions of Web site content usability. Several significant differences, assuming a level of significance of .05, could be found for all six dimensions of Web site content usability. The most notable dissimilarity in the assessment of Web site content usability was identified for the “Completeness,” “Clarity,” and “Conciseness” items. While Kuwaiti users perceive design attributes contributing to content “Completeness” and “Clarity” as more important usability attributes than European users do, Kuwaiti users perceive content “Conciseness” as less important a Web site design feature than Western European users do.

It is evident from Table 3 that the two groups of respondents disagree with regard to the importance of the different dimensions of Web site appearance usability. Several significant differences, assuming a level of significance of .05, could be found for all five dimensions of Web site appearance usability. The most notable dissimilarity in the assessment of Web site appearance usability was identified for the “Organization” item. While Kuwaiti users perceive design attributes contributing to the site attractiveness, and proper use of fonts, colors, and multimedia as less important usability attributes than European users do, Kuwaiti users perceive the organization of the Web site as more important a design feature than European users do.

Table 3. Preliminary Results of Cultural Web Site Appearance Usability

	Average -Kuwaiti Sample	Average - European Sample	t-Test Prob.
Web site attractiveness	4.35	5.03	.009
Web site organization	5.25	4.63	.034
Proper use of fonts	4.03	4.98	.001
Proper use of colors	4.13	5.18	.000
Proper use of multimedia	4.38	5.28	.002

Conclusions and Future Research

The differences this preliminary investigation found in the perception of Web site usability between the Kuwaiti and Western European participants are interesting. These usability variations could be more due to cultural reasons. In trying to implement a profitable Web site, it could be crucial to understand the key role of national culture in the design process. An organization could see its online business suffer because of the inadequacy of its Web site to take into account culturally based preferences of Web site users.

The present investigation could be extended in a number of ways. The relationship between culture and Web site usability was explored using educational Web sites. This relationship should be examined with multiple and randomly selected Web site types to increase the reliability of the results and external validity of the findings. In addition, there is a need for further research to examine the propositions reported in this study using a larger and more representative sample of Web users. Finally, a more formal, explicit, and elaborate model could be developed to explicate the relationships among Web site usability, national culture, and other variables such as consumers' satisfaction, purchasing behavior, and loyalty.

References

Available upon request from the author.