

Intercultural User Evaluation of the Design of Arabic Websites: A Case Study

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Abstract

The cultural background of web users is argued to play a key role in the way they interact with and perceive the usability and usefulness of websites. The objective of this case study is to identify Arab users' preferences and expectations of the design of Arabic websites in order to examine whether these preferences are consistent with their cultural-specific attributes as described and predicted by Hofstede's model of cultural dimensions. Thirty three participants from two Arab countries evaluated and compared two websites, one from their own country and a second one from another Arab country within the same culture. The preliminary results suggest that they show an overall preference for a website developed for their country over another from other Arab countries, even if they share the same culture¹.

Keywords: web design, Arab countries, culture, Hofstede

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1 Introduction

One of the key objectives for any website is to enable its users to experience success and satisfaction (Fernandes, 1995; Nielsen, 2000). As such, it is argued that the accommodation of users' attributes into the design process is essential for the usability and usefulness of the web (O'Connell & Murphy, 2007). The cultural background of users is considered one of the attributes that might affect users' performance and satisfaction while interacting with websites (Shneiderman, 2000). The bulk of the research investigating this domain has employed Geert Hofstede's cultural model (Hofstede, 1980, 2001), based mainly on the interpretation of Marcus and Gould (2000). In his model, Hofstede assigned comparative scores for 50 individual countries and three regions on five cultural dimensions. These dimensions comprise: Power Distance-the extent to which the less powerful members of societies expect and accept that power is distributed unequally; Individualism-the extent to which individuals are integrated into groups; Masculinity/Femininity-assertiveness and competitiveness versus modesty and caring; Uncertainty Avoidance-intolerance for uncertainty and ambiguity; and Long-/Short-Term Orientation-the degree of future vs. historic orientation of the culture.

In the case of the three regions, one of which is the Arabic-speaking region, several countries had been grouped together based on the assumption of having similar cultural traits. The Arabic-speaking region comprised Egypt, Lebanon, Libya, Kuwait, Iraq, Saudi Arabia and the United Arab Emirates. This group has been frequently applied in cross-cultural interface design studies to different extents (Barber & Badre, 1998; Callahan, 2007; Zahir, Dobing, & Hunter, 2002). However, grouping the seven countries into one group, excluding the rest of Arab countries, and assuming that Arab users have similar needs, expectations, and preferences on the web, without acknowledging possible individual differences across countries, can create potential problems in Arabic interface localization. Therefore, the main objective of this study is to investigate whether Arab users have similar expectations and preferences when it comes to web interfaces,

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considering that Arab countries are treated as one composite group in cross-cultural web analysis. The first part of the study, which is reported here, asked users from Jordan (i.e. excluded from Hofstede's model) to compare and evaluate a website from their own country with another from Lebanon (i.e. included in the model). The second part asked users from Lebanon to evaluate the same two websites used in the first part.

2 Methodology

2.1 Participants

Native-Arabic internet users living in Jordan and Lebanon are the population for this study, where 20 Jordanians (first group) and 13 Lebanese (second group) ranging from 20-65 years old took part in evaluating the design of two Arabic websites. These participants were recruited by the researcher through personal contacts in two cities in Jordan and Lebanon. The study was in compliance with all ethical guidelines used by the researcher's university.

2.2 Websites and Tasks

A random government website was chosen from Jordan's e-Government portal and then matched with the equivalent website from Lebanon. Using the Ministry of Health's websites in these two countries, each participant was handed a paper with questions asking her/him to find a list of public hospitals and contact information for each ministry. These tasks were chosen because they were consistent across the two websites, and because they require the participants to perform some searching and browsing through the websites to find the answers. The participants also filled out a pre-task questionnaire for the demographic information, and a post-task questionnaire that inquired about what the participant thought of the design of these two websites. The general questions included in this questionnaire were adapted from Marcus and Alexander (2007); for example, how would the participants describe the imagery of the websites, would these websites appeal to people from their country, and what content is missing. The more specific questions about design elements such as keyword searching and customization were derived by the researchers based on previous work (Khashman & Large, 2011, 2012).

This study poses a number of limitations that might have affected the results and should be taken into consideration for future research. First, there were 20 Jordanian participants who took part in the first stage of the evaluation process, a number not matched by the 13 Lebanese participants who participated in the second stage of the study; a higher number might be needed to calculate significant statistical differences. Secondly, the evaluation involved just two government websites, which could have influenced the design of the website, and hence users' perception of this design. Thirdly, due to internet connection problems and several power failures in Lebanon, participants' searching times were dropped in favor of their subjective satisfaction of the websites. Future research will take these limitations into consideration and investigate users' preferences and expectations in regards to Hofstede's model.

2.3 Analysis

Statistical analyses were performed using SPSS program based on the specific level of measurement for each variable for the quantitative aspect of this study. Descriptive statistics were used to describe continuous variables such as time for searching and completing tasks.

3 Findings

The preliminary results from the first group of participants show that out of 80 tasks that were undertaken on the two websites, only four were unsuccessful divided equally between the two websites. For the remaining successful tasks, the participants performed the search and found the answers relatively faster on

the Jordanian website, although the difference between the two websites was not statistically significant, and despite that the participants thought that their performance on both websites did not differ much.

On a 5-point Likert scale, 1 being the lowest and 5 the highest, the participants were asked how much they liked the design of both websites. For the first group, the website from their country scored slightly more than the Lebanese one with 3.60 and 3.25 respectively. The same case was for the second group, as they liked the design of the website designed for their own country compared to the other from Jordan, with 3.38 and 3.23 respectively.

A significant majority of the participants from the first group preferred to use Jordan's website ($\chi^2(1)=5.00$, $p=.025$) and found it easier to use ($\chi^2(1)=9.80$, $p=.002$), but they did not think it was much faster to use ($\chi^2(1)=3.20$, $p=.074$) which was confirmed by the actual results of search times. For these three categories, the results from the second group were not significantly different.

The second part of the post-task questionnaire asked the participants to rank on the Likert scale how important was it for them to have specific design elements on any website, these elements were previously identified as culturally specific markers (Barber & Badre, 1998). As shown in Table 1, participants thought it was very important to have keyword searching, a supporting second language version of the website, and site map, while customization was less important for the first group and keyword searching was less important for the second group. When asked about having restricted sections on websites to access information 79% of all participants did not prefer to have such feature on either website. Table 2 provides the results of image preferences for the first and the second group, reporting the highest percentage between the categories.

Element	<i>First Group (Jo)</i>		<i>Second Group (Leb)</i>	
	M	SD	M	SD
Customization	3.70	1.34	4.08	.86
Second Language	4.60	.99	4.69	.63
Keyword Searching	4.75	.72	4.54	.97
Site map	4.25	1.16	4.23	.83
Animated Images	3.25	1.45	3.23	.73

Table 1: Importance of specific design elements

Element	<i>Number of PPl</i>		<i>Gender</i>		<i>Status</i>	
	(Group vs. Indv.)		(Men vs. Women)		(Officials vs. Citizens)	
	<i>Jo</i>	<i>Leb</i>	<i>Jo</i>	<i>Leb</i>	<i>Jo</i>	<i>Leb</i>
First group (Jo)	40% Group	35% Group	65% Mix	65% Mix	35% Neither	35% Neither
Second group (Leb)	69% Group	69% Group	61.5% Mix	61.5% Mix	46% Citizens	46% Citizens

Table 2: Image preferences

4 Conclusion

The 33 participants compared and evaluated two websites from two Arab countries, Jordan and Lebanon. The main objective of this study was to explore how people from a country that is excluded from Hofstede's model (i.e. Jordan) perceive and compare a website from their country with another one from a country that is included in the model (i.e. Lebanon), and vice versa. This is one part of a larger study that aims to explore whether users expectations and preferences of Arabic web design match the Arabic cultural-specific attributes which are described and predicted by Hofstede's model of culture. The findings from this small

study suggest that users show an overall preference for a website developed for their country over another from other Arab countries even if they share the same culture.

Arab countries have been occasionally treated as one entity in web design, just as in Hofstede's cultural model, which could explain why many international corporations and NGOs, among other institutions, tend to have one global website for Arab-speaking countries. If websites were localized by adjusting cultural design elements to conform to the target audience in each Arab country, it would help corporations create global demands, and establish a reliable, professional and international image online (Sun, 2001).

Therefore, the findings might indicate that country variations within the same Arabic culture should be taken into consideration when designing websites for that culture, whether it is a global, international, or a local design. For example, customization was found to be more important for the Lebanese participants, which means they prefer to have site customization tools like changing the font size or the background color. While Jordanian participants indicated the need to have keyword searching more than their Lebanese counterparts. These preferences need to be taken into consideration from the early stages of the design process to match those particular countries.

The findings also suggest a need for a more comprehensive study underlining not only the similarities, but also the differences between Arabic web interfaces based on the design characteristics inferred from Hofstede's model. The results from this study could also be used to improve the design of Arabic government websites in accordance with the cultural markers associated with their culture, whether as described by Hofstede or not.

5 References

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