



**WEB USABILITY FOR EFFECTIVE COMMUNICATION:
LOCAL USER PERCEPTION VERSUS GLOBAL GUIDELINES**

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ABSTRACT

The issue of website usability has attracted the attention of researchers, website developers, evaluators and companies that are using websites as a communication media as well as a critical marketing tool in the recent years. In order to characterize and ensure the usability of websites from the perspective of end users, international organizations have developed international standards and guidelines to determine the factors that ensure usability. However, usability has also culture-related elements and effective communication relies on recognizing and incorporating such elements. Hence, the present study compares the usability of websites as defined by two sets of international standards namely ISO 9241-151:2008(E) and HHS guidelines developed by the U.S. Department of Health and Human Services (2006) on one hand, with usability as perceived by local (Iranian) end users on the other hand. The result of the study leads to two significant observations: firstly, the international standards address some factors that do facilitate effective communication on a cross-cultural basis and secondly, there is indeed a cultural element to usability leading to a meaningful difference between the concept of usability as defined by the guidelines and the perceived usability by local users.

Key Words: Website Usability, Standards and Guidelines, User Perception

Introduction

Internet is the largest and one of the most comprehensive networks covering people from all around the world, and web sites are the key communication media used on the Internet. Like any other medium, in order for a websites to be successful, customers must be satisfied with their experience with the websites and they must find the website usable and easy to communicate with. Given the importance of usability for websites, various methods and criteria are developed to assess whether a particular user interface is usable or not. Among these methods, international guidelines and standards have recently attracted the attention of website developers and evaluators and they are being widely used during the design and the evaluation processes as the basis to evaluate the usability of website. Two examples of prominent standards in the area of website usability are HHS - developed by department of Health and Human Services in US- and ISO 9241-151(2006) standards-provided by the world's largest developer of International Standards. The general question addressed in the present paper is whether international guidelines cater for all users in all countries and cultures and if they can be defined or followed regardless of users' culture or context of use.

More particularly, the purpose of the present study is to compare the usability of websites as defined by the standards on one hand, with usability as perceived by Iranian users on the other hand, and to check the international guidelines against the perception of the Iranian users. It also intends to examine if the issues highlighted by the standards and guidelines are considered significant by Iranian users, or in other words, if the international guidelines can be applied to the websites being used by Iranian users. Hence, we examine whether there is any particular issue perceived important by the users which is not rated that important in international standards.

Methodology

The sample groups in this research are classified into three groups: the sample group of websites, the sample group of end users and the sample of international guidelines. The two websites chosen for this research are Kish University and Harvard Business School website, because the research intended to select and compare an Iranian designer's work (who has the same cultural background with the sample group of users) with a non-Iranian website to highlight the cultural differences. The sample of participants chosen as representative of Iranian users for the above mentioned websites, were Iranian university students or graduates with different educational background who were familiar with English language to some extent. Regarding the international guidelines and standards, two dominant sets of guidelines have been selected to represent the usability guidelines in the area of website usability: U.S. Department of Health and Human Services (HHS) guidelines (HHS, 2006) and ISO CD 9241-151:2008 usability guidelines (ISO 9241-151, 2008).

Design of Checklist and Questionnaire

In order to assess the usability of websites based on international standards, a checklist was developed based on the above two sets of international usability guidelines. Using the content analysis method, the websites were examined to check their compliance with the guidelines mentioned in the checklist. Then a simple averaging method was used to arrive at a score indicating the usability of each website based on international guidelines.

In the next stage, a usability questionnaire was utilized to assess the users' idea regarding the usability of the above-mentioned websites. We asked the participants to refer to the two websites and find the tuition fees for the MBA program in each of them, and subsequently, fill in the questionnaire regarding their idea about the usability of the two websites separately. Each question was a statement with a rating on a five-point scale (from Strongly Disagree to Strongly Agree) that enabled us to compute the average usability score given by the Iranian users to each websites. We also included two open questions in our questionnaire to capture the users' idea regarding the most important strengths and weaknesses of the two websites. The participants' answers to these two questions were later compared with the top priorities identified in international standards to determine if the guidelines which are rated high in relative importance to the success of website are perceived highly important for Iranian end users, as well.

In the final stage, the statistical method of one-sample T-test was applied to compare the score computed from the results of the checklist with the mean score given by end users (the result of the questionnaire).

Results

According to the international standards and guidelines, the usability scores of the Kish University and the Harvard Business School websites were, respectively, 2.4 out of 5 (or 49%) and 3.6 out of 5 (or 73%). After applying the one sample T-test method, to compare the above mentioned scores (as the test value) with the average usability scores given by the Iranian



users in the questionnaire, the following results were established: In the case of the Harvard Business School website, the results showed a significant difference between the international guidelines usability scores with that of Iranian users ($t(30) = 3.05, p = .00$). With regard to the Kish University website, there was also a meaningful difference between the users' perception and the international guidelines evaluation on the usability of the website ($t(30) = 3.48, p = .00$).

Concerning the comparison of the most significant weaknesses and strengths of the two websites, from the perspective of the Iranian users, simplicity and clear organization of content were the most significant strengths of the Kish University website. These aspects are not fully covered by the guidelines rated five (highly important) in the HHS set. In addition, according to the Iranian users the complexity of organization and design and linking and categorization of the homepage are considered as the most significant disadvantages, and effective search facilities and comprehensiveness of information are regarded as the most important strengths of the Harvard Business School website. The former is covered to some extent by the guidelines related to search, while the latter is not fully covered by those guidelines rated five in the HHS set.

Conclusions

Based on the findings of the present study, the priorities set by the international guidelines are not irrelevant to the preferences of local users, but they only partially reflect local users' interests and it seems that they need to be adopted according to the local cultural preferences. Iranian end-users stress more on the simplicity and clear organization of the content of a websites rather than its comprehensiveness and technical advancement. Simplicity is regarded as both the major strength of the Kish University websites and the major weakness of the Harvard University website. Moreover, a poor locally-designed website based on the international guidelines and standards is perceived more usable than a relatively good and advanced foreign designed website. Therefore website developers are suggested to include people from the target cultures and use their preferences in their design team. The results indicated a meaningful difference between the concept of usability defined by the guidelines and the perceived usability by local users. Further research has to be carried out to indicate the sources of this difference in more details and find out which elements affect the perception of users, language-related elements or cultural elements. For instance, the perception of users can be assessed on a website designed by foreigners while its text is composed by local people and vice versa. Also, similar research can be done with larger population of users and different genres of website to investigate whether similar results are reached when repeating the study.

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