

Designing Usable Localised Websites: Differences between Western and Arab Cultures

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Abstract

This paper presents a case study from a western country (UK) and an Arab country (Oman) to extract the views of Web designers in both countries regarding web usability. The purpose is to determine the most important issues that should be considered when designing for a particular culture. To obtain a deeper and more detailed knowledge on how designers work in each country, it necessitated that the researchers get closer to the designers environment. In such a way the researchers can enquire, observe and converse with them in an open-ended style of discussion. This can best be done through a case study in each of the two countries (Oman and UK). The specific aims of conducting these case studies in the two selected countries were to: 1) investigate the extent of the usage of the published usability guidelines and tools in the design of the user interface of a website; 2) Explore the differences and similarities in designing websites for each of the two cultures; 3) Discover whether they design for different cultures; if they do what considerations they take into account when designing for different cultures? and 4) Investigate whether the designers in both countries consider using Cultural User Interface (CUI) profile or something similar to capture the target culture preferences and expectations, and whether it would fit into the way they normally do business.

The data collection instrument consisted questionnaire for the designers and in many cases, this was followed with an interview or an email to the surveyed design companies to clarify their responses. In addition to the questionnaire, the researchers made use of available documentation or archival data that could provide any help to the current research. The researchers also investigated the usability tools and guidelines used as well as other specific

design tools which the company found helpful in designing usable websites.

The main outcome of this study was that the designers in both countries believed that although the users share similar preferences and perceptions about many website usability issues, however, they differ in the importance they give to certain usability elements such as the adherence to local language, culture and religious beliefs. The results of this study proved that one-size-for-all is not the right approach for a successful website. It highlighted the need to consider the customers' cultural background and their real world experience.

1. Introduction and Background

The Internet enables global distribution of products and services through websites. There is consensus among system analysts and designers that well-designed user interfaces improve the performance and the appeal of the website, helping to convert "surfers" into "customers" [Marcus and Gould, 2000]. The user interface development process focuses attention on usability and accessibility in addition to understanding users and acknowledging demographic diversity. The literature highlights the fact that culture can make a difference in reading and interpreting various issues such as colours, graphics and signs. For example, the same colour can have different meaning to people of different cultural backgrounds, causing them to react differently. Companies that want to do international business on the web should consider the impact of culture on the understanding and the use of web-based communication, content, and tools. This paper contributes to the study of this complex and challenging issue by extracting and analysing the needs, wants, preferences, and expectations of

people from two different cultural backgrounds, namely the British and Arabs cultures.

The use of computers originated primarily in the United Kingdom (e.g. LEO, ENIAC and Cray precursor). However, America has become arguably more successful in adopting, advancing and marketing the computer related products especially the computer software and hardware. Software was therefore developed in American English, which has a slight variation from UK English. It has different spellings for certain words, different idioms and sometimes different words for the same objects e.g. “trash can” for “rubbish bin”. Therefore understanding American English is the first hurdle that must be overcome for a computer/Internet user whose mother tongue is not English, that is, Arabic, German, Chinese, French, Russian, and Urdu for example. Not only is the language slightly different, but North American cultural influences have also spread throughout the world by the use of different software and web technology that are currently influenced by American culture. [Al-Badi and Mayhew, 2004] discusses some of the problems caused by the misunderstandings arising from cultural differences.

The consequences for people from different cultures working with imported North American oriented human-computer interfaces are now being recognised and questioned as people have started complaining. For example, the Arab/Muslim and Francophone worlds are protesting against the fact that their countries are being flooded by American idioms. They are afraid that this will contribute to the proliferation of the North American culture all over the globe, thus depriving other countries of the chance to express their own cultural identity in the new media.

In fact, some of these cultures consider that the American culture can lack moral values and in some cases is offending their traditions and religious values. Therefore, localisation (L10N)¹ is becoming increasingly important. It is preferable to preserve the culture of different

¹ L10N is the official appellation for the word “Localisation”. The number 10 represents the number of letters found between the “L” and the “N” in the word “Localization”.

societies, that is, to localise websites for different indigenous cultures. A single version of the website to be used in all cultures (one size fits all) may lead to a user feeling forced to receive disturbing messages or perform counter-intuitive tasks, even though the website is not meant to be offensive. Another way to accommodate the cultural diversity of users is to adopt internationalisation (I18N)², which means to strip a product/ a website of all cultural contexts. However the latter approach is less likely to create a successful website. The design would have to be extremely unattractive and bland. It would also prevent the designers from accommodating local specifics such as currency and date format and the users would not return to such a site.

In order to localise to a particular market, designers need to know about its preferences, likes and dislikes, so they can provide cultural metaphors³, and real world representation of the user interface objects, and eliminate any culturally offensive material.

The importance of cultural effect on perception of the content of a website has been discussed in the literature. The interface design is the most important element that the users see and interact with. Previous work by Evers and Day [Evers and Day, 1997] (based on the Technology Acceptance Model after [Davis, 1993]) has indicated that the culture does indeed influence interface acceptance.

Issues like colours, graphics, signs and placement of web elements may have different connotations for people in different parts of the world. Audiences may differ in age, educational level, ethnic and religious background. In the future users might be able to use a personal user interface as described by Yeo [Yeo, 1996] or similar.

² I18N- Stands for Internationalization (where I and N are separated by 18 characters).

³ In human-computer interface design, elements from the real world are used to represent the virtual world. This is done to help users out through reference to knowledge they already have from their everyday lives.

As well as functioning properly, the website should be usable by all people, to the greatest extent possible, regardless of location, language, business practices, or cultural backgrounds. For a website to be usable, the surface representation must correspond to something that is well known to the user. Some icons⁴ that are meaningful in North America may not correspond to the real world of the other countries.

2. Study Method

In order to obtain a clear and detailed picture of the design firms' thinking and practice behind their actions, two case studies were carried out, one in a UK company and one in an Omani (Arab) company. These were amongst design companies, that is, one from each country. In Britain, the case study took place in a Norwich (UK) based web Design Company, hereafter referred to as Accent. In Oman the case study took place in a Muscat (Oman) based web Design Company, hereafter referred to as OTN. These two design companies were chosen on the basis of their willingness to participate in this research and their ability to communicate the required information quickly. They were also companies who had several years of experience of web design and were well known and respected in this field. The choice of one from each country was for comparative purposes.

The "Designers' Questionnaire" was used in the two case studies that were conducted in Oman and the UK to start off the discussion. The authors employed several methods for data collection and these included the use of questionnaire, documentation, interviews and observation.

The two case studies were carried out during several visits to the chosen web design company in Britain and Oman. The method used was to ask the group leader to fill in the Designers' Questionnaire and an arrangement for another meeting was made with the same person to discuss the items on the questionnaire in addition to any other points that might require clarifications. In many cases, the discussion led

to other important points regarding designing for other cultures: problems and solutions. In effect during the interview the designer was asked to carry out a demonstration of the different website the company designed, showing the different styles and techniques that were employed in each website. The discussion goes on highlighting the decision mechanism that the company uses to decide upon the different styles, layouts and price for the different websites. In addition to the questionnaire, the researchers made use of available documentation or archival data that could provide any help to the current research. The researchers also investigated the usability tools and guidelines used as well as other specific design tools which the company found helpful in their work. Table 1 outlines the data collection methods used in this case study.

Table 1: Data Collection Methods Employed in Case Studies

In the UK, the researchers had several meetings with the company (Accent) representative, Mr. Geoff Somner (Managing Director), starting in May 2003. He showed considerable interest in helping put this case study together. Similarly, in

Source of Evidence	Use of Source in these Case Studies
Questionnaire	Open-ended questionnaire
Documentation	<ul style="list-style-type: none"> ○ Reports from the organisation under study ○ Reference material downloaded from the organisation website
Interviews	Structured and unstructured interviews
Observation	Formal and informal meeting with the interviewees for gaining further insights

Oman, the researchers had several meetings with the company (OTN) representative, Mr. Syed Nusrath (Consultant), starting in August 2003. He also showed considerable interest in helping to put this case study together.

⁴ Icons are small pictorial images that are used to represent system objects, applications, utilities and commands.

3. Web Design Case Study Results

In this section authors outline the results obtained from both case studies, UK and Oman respectively.

3.1 Results of Questionnaire and Interviews: UK

3.1.1 *Target Audience Characteristics Consideration*

The company (Accent) representative stated that Accent mainly designs for British culture, but has started designing for other cultures as well (e.g. America and some European countries). Although they said they do not make use of CUI profile as such but rather they rely on their experience and knowledge about the target cultures. Furthermore, from the discussion, it was found that the Accent designers broadly take into account the users' age, gender, educational background, computing and surfing skills, data format and the basic infrastructure of the target audience. They do not conduct a wide survey on target cultures but rather they use intuition on these issues. For example, they said that for children the website has to be colourful, for old people it has to be simple, for female dominated audience, the designer has to use soft colours (pink, purple and light red) and so on. In fact they said the design depends largely on the type of applications as well as audience.

Regarding testing and users' involvement in the design process, they claimed that they conduct internal testing according to the users' requirements. In many cases, after that they conduct a number of demonstrations of the website to the target users and then reflect their feedback on the final version before handing over the website to go online. After handing over, Accent provides maintenance through an established contract with the website owners for some time. However, Accent does not per se involve the local users at the design stage except during the requirement analysis.

Regarding the user interface elements (e.g. icons, metaphors, images, animation) that on cultural or religious grounds might offend a target audience, Accent argues that the design always has to be appropriate to the specific target audience of the website. They consider there is very little that

will offend the British audiences but it is better to avoid American spelling and phrases.

3.1.2 *Usability/Accessibility Tools and Guidelines*

Regarding usability/accessibility tools usage, they stated that they use Bobby, W3C HTML validation tools, Multiweb [Multiweb, 2004], JAWS [Microsoft, 2004], and LYNX [Delorie, 2004] but not for all websites, only when there is a user requirement. It was clear that not all website owners require that their websites have to be accessible to all possible users. Up till now, most website owners go for the majority of the population (i.e. the able bodied) and give less consideration to the minorities, such as people with disabilities. Nevertheless, whenever there is a requirement, Accent showed a willingness and ability to meet that requirement. For usability/accessibility guidelines they stated that they use W3C WCAG and they agreed that the use of usability/accessibility tools and guidelines could contribute to the usability/accessibility of the website. It was noticed, however, that the use of these tools and guidelines was not the top priorities for Accent, they justified that saying "what you ask for- is what you get". The designers articulated that the adoption to these tools and guidelines could increase website price significantly.

3.1.3 *Site and Page Structure Navigation System*

Accent designers consider the navigation system as the most important issue in web design and they thought it was important to have a clear navigation bar on a web page, and it was best located at the top and left of a website. Also they said that the location of the navigation bar is more important to be at the top and left of a website, especially if a website has to be accessible to disabled people. That is to enable it to support a "screen reader".

The designers have to use their common sense and experience when choosing between one long page that requires vertical scrolling and short web pages connected with hyperlinks, keeping to one scrollable page if all information is relevant to the current request (within reason). In some cases, they use drill-down information, for example, listing the search results, displaying some information about all related items and giving the option to display the rest of the

information in case the user wants more about certain item. This is why they described the web design as an “art”, not a procedure to follow and you will be successful but rather intuition and experience.

Page length

The Accent designers also expressed the following opinions:

The divider bars are very useful to separate items to improve website readability. Furthermore, it is important to make consistent use of text colours, text size, font type, and style of links (URLs) to avoid user frustration. The use of clear and concise content attracts users to read written material on the website. Text on the screen must be more concise than on the printed page. It is also a good idea to create a separate printable version where users may wish to print a page, especially if that page contains a lot of text.

Readability and Writing Styles

Regarding the language level/writing style, Accent simply uses scan-readable text (when possible). Scan-readable content is one in which designers provide short paragraphs and summaries with links for further information for those who might be interested for more details. The designers are, however, often faced with a situation where the text is supplied by the owners of the website (frequently pre-printed materials) and they are not allowed to change it. It is not the normal practice at Accent to use Readability Index tools (e.g. Fog, SMOG or Flesch-Kincaid formula) when designing a user interface for a website. They said, this is for two reasons, firstly they use simple, short and concise English whenever possible and secondly these Readability formulas are designed mainly for the American system of education (Grade system), not for other countries.

To enable users to scan-read text on a web page, Accent implements the following strategies: highlighted words and phrases, meaningful sub-headings as well as bulleted lists. Although the designers try to use scan-readable text, it is important for customer satisfaction to have grammatically correct text in a web page, even if this takes longer to read.

The use of colour can improve readability by implementing high contrast between text and backgrounds, but they avoid red/green combinations (because of their effect on colour blind users) and also red/blue colour combinations as these can also affect the eyes. However, they claimed that there is no specific colour or colour combination that they try to avoid when designing for the British audience.

For Accent’s British audience, top left is the most eye-catching position on a web page. They may reconsider this when they start designing for other cultures.

Data Entry form Styles and Layout

Accent agreed completely that in order to avoid user frustration when designing a data entry form, designers need to do the following:

- Form fields should be clearly labelled with appropriate textual information
- Form fields should be clearly labelled as to whether required or optional
- Formatting requirements of a field should be clearly presented (e.g., date is DDMMYY)
- Messages should be displayed when data or data formats are incorrect or incomplete
- Default values should be displayed whenever possible
- Data facilitation should be provided (e.g., list boxes, pop-up boxes)
- Data entry form should remember the latest values entered.

General Website Issues

Similarly, Accent designers presented their experience and opinions as follows:

- It is important to have consistent error, confirmation and prompt messages. They also emphasised the importance of consistency throughout the website to facilitate customer retention.
- It is important to have a search service on a website. Only for website that large enough and required such mechanism but small websites do not need search mechanisms.
- The placement of elements on a web page has an effect on ease of use and improves visual appeal. This is one of the approaches to have effective, attractive and satisfactory websites. In this regard, designers can make

use of white space or blank areas to help simplifying the page layout.

- The amount of text within the page affects the ease of use. Too much material on one page has negative impact on the user's first impression of the page. Therefore, the ease of use and readability of page content can be improved by a careful and consistent use of the font types (e.g., Arial, Times Roman), font size and font style (e.g., bold, italics, shadowing). When asked how this can be done, the answer was that the experience and common sense are the most influential factors in these regards.

Triangulating the questionnaire and the interview was a very useful process where initial neutrality on some issues (through the Questionnaire) was converted to useful comments from the team leader of Accent (through the interview) as follows:

- The online articles need to prove its authenticity (author, date, etc) to customers. Meaning that the online articles should display this information on a clear position on the page of the article. They added also that it is useful and imperative for any website to provide the contact details on the home page of the website.
- The Accent' team leader presented a case where they provide what is called a "Cookies Crumb/ Bread Crumb" trail on a website. He explained its importance as to allow the user to be able to recognise his/her current location.
- A colourful website is more attractive and preferable, but it is not possible to generalise this statement. Normally children's websites tend to have more colourful pages whereas professional ones tend to be more simple and direct to the point.
- Animation helps convey information. Accent designers believe that some animation and Flash can sometime be useful. However, they emphasised that when a website contains flash, another version (HTML) that does not contain flash is needed to enable both the screen readers and those with slow internet connection to access the website is important.

3.1.4 Website localisation vs. Internationalisation

Regarding website localisation, Accent said that it depends on the target audience and the type of information to be presented. Initially, the owners of the website will usually localise to their local market. Later, if they start receiving orders from overseas, they will internationalise their website. Then, if they discover that they have key markets overseas (e.g. China), they will localise their website to suit these markets, provided such work is economically viable.

3.1.5 Reliability, Business Nature and Security Assurance

Accent believes the following likely computing environment features of the target market must be taken into consideration during the design of a website user interface: Monitor size, browser type and version, and Internet connection. Also, the organisation's strategic goals (business nature) influence the design of user interface.

Accent designers stated that the download speed in UK is not a major concern because the Internet speed in the UK is one of the fastest in the world. Therefore, they create attractive websites with high graphics, rich images and many flash presentations.

Accent also believes that it is important to provide some assurance indicating that online transactions are secure and reliable.

When the designers were asked to summarise the most important issues that make the website usable and attractive to customers, they highlighted the following main points:

1. Successful website must have an intuitive interface. There should not be too many options, seven is the magic number. This means that the menus and procedure steps should be minimised as much as possible to avoid user frustration due to inability to remember so many steps.
2. Pages should have meaningful titles, headings and links. Use words, phrases, and concepts familiar to the target users.
3. Consistency throughout the website: adhere to uniform conventions for

- layout, formatting, typefaces, labelling, etc.
4. Simple navigation system that facilitate movement between related topics. It should allow the user to determine her/his current position at all times while on the website. It should also make it easy to return to an initial state.

Having explored the views of practices of a British Design Company, in the next section the researchers conduct the same for an Omani Design Company, in order to identify the similarities and differences.

3.2 Results of Questionnaire and Interviews: Oman

3.2.1 Target Audience Characteristics Consideration

The company representative stated that while most corporate websites in Oman are in English (95%), the government websites are bilingual (Arabic/English). OTN designs websites using both the Arabic and English languages. It mainly designs for the Omani culture, but has started designing for other Gulf States (i.e. Qatar, Bahrain, and UAE). From the discussion, the researchers found that while they take into account the users' age, data format and the basic infrastructure of the target audience, they do not consider the users' gender, education background, computing or surfing skills.

A discussion around the testing and user's involvement in the design process, they said that after completing the design of a website they test it internally according the users' requirements. After that, they usually demonstrate it to the target users and then reflect their feedback on the final version before handing over the website to go online. Although it is not their normal practice, sometimes they ask the organisation commissioning the website (website owner) to delegate an individual to be the liaison between the two organisations and help in communicating the different issues that may arise during the design. This person is located with the design group and should participate in the discussion at all times. From this experience OTN designers reckoned that involving the local users at the design stage can save time and money in the long

terms. In many cases they stay providing their services through a maintenance contract with the website owners for sometimes.

As for the user interface elements (e.g. icons, metaphors, images, animation) that on cultural or religious grounds might offend their target audience, OTN stated that the designers for the Arab audiences must ensure that their design avoids offending Arab culture and religious beliefs.

3.2.2 Usability/Accessibility Tools and Guidelines

Regarding usability/accessibility tools, designers stated that they do not use any of the listed ones. They believe that these tools are not of much use when designing for cultures other than North American. They added that these tools might be useful for the English version of a website designed for English readers living in Oman. They claimed that they conduct a "user testing" instead. However, upon further investigation on this matter, it was found that the designers conduct the normal testing according to the clients' specifications. Then they install the website on clients machines and conduct super-users (owners) training which acts as user testing as well. Regarding the website usability/accessibility guidelines they admitted being aware of these guidelines but they do not use them, as such, in their designs presently. They believe that their accumulated experience can substitute for such guidelines and that the website accessibility is not part of the users' requirements. This finding was also backed by another study in this regard [Abanumy et al., 2003] and by the answers of some the designers during the "Designers Survey".

3.2.3 Site and Page Structure

Navigation System

Designers in Oman also rated navigation system in a website as very important. Designers stated that it is important to have a clear navigation bar on a web page, and it is best located at the top and right of the Arabic version and top and left of the English version of a website, but it also depends on the kind of layout of the website. This choice is, in fact, due to the direction of writing of the Arabic language. Regarding the "screen reader" and whether the websites

designed by OTN for the Arabic users support this device. The answer was that if there is a requirement they will work on it but so far none has been expressed. OTN has found from experience that it is better to have short web pages connected with hyperlinks. Meaning, the Omani users do not like long pages that require vertical scrolling.

Page length

Although OTN believes that the divider bars are useful to separate items to improve website readability, but they would rather use other methods such as short pages and a better navigation system.

It is important to make consistent use of text colours, text size, font type, and style of links (URLs) to avoid user frustration. This can be achieved by implementing CSS which works on maintaining website uniformity.

Readability and Writing Styles

The use of clear and concise content attracts users to read written material on the website. OTN believes that the material for the web has to be written in a special way which helps the surfers to scan-read online pages. However, it is not normal practice at OTN to use Readability Index tools (e.g. Fog, SMOG or Flesch-Kincaid formula) when designing a user interface for a website. When asked why they do not use these formulas, they confessed that they need to look into the issue and determine the usefulness of such formulas when designing for the Omani audience.

To enable users to scan-read text on a web page, OTN implements the following strategies: highlighted words and phrases and meaningful sub-headings. It is important that the website speaks the user's language, with words, phrases and concepts familiar to the user. While trying to implement scan-readable text, it is very important for customer satisfaction to have grammatically correct text in a web page, even if this takes longer to read. For an OTN audience, top right is the most eye-catching position on a web page.

Designers indicated that the use of colour can improve readability by implementing high contrast between text and backgrounds, but they did not specify any colour combinations that

should be avoided. However, it was brought up that the accumulated experiences of the designers enable them to avoid any colour combinations that might affect the clarity of the content of website page. They stated that there is no specific colour or colour combinations that they avoid when designing for an Omani audience on cultural or religious backgrounds.

Data Entry form Styles and layout

In addition to the aesthetic and functionality of the data entry forms, OTN designers agreed completely with statements that, to avoid user frustration, when designing a data entry form:

- Form fields should be clearly labelled with appropriate textual information.
- Form fields should be clearly labelled as to whether required or optional.
- Formatting requirements of a field should be clearly presented (e.g., date is DDMMYY).
- Messages should be displayed when data or data formats are incorrect or incomplete
- Default values should be displayed whenever possible.
- Data facilitation should be provided (e.g., list boxes, pop-up boxes).
- Data entry form should remember the latest values entered.

General Website Issues

The following recommendations were extracted from both the Questionnaire and the interviews with the designers of OTN:

- It is important to have consistent error, confirmation and prompt messages throughout the website. In fact, this issue raised a long discussion where the designer emphasised the importance of the consistency for making a usable website.
- It is important to have a search service on a website. Designers believed that this feature is especially important in websites containing a large amount of information spread across many pages.
- Animation helps convey information. However, too much animation can have negative impact in terms of download and accessibility that necessitate using assistive technology.
- The placement of elements on a web page has an effect on ease of use and improves visual appeal. They believe that the use of reasonable white space around objects can

improve ease of use and improve visual appeal. The designers need to consider the eye catching place for the target readers. Emphasis was put on the importance of having an easy and simple to use navigation system for a website to be successful.

- The amount of text within the page affects the ease of use. Too much content on the page can have negative impact on the usability and might lead to a situation where the surfer leaves the site immediately.
- The designers in OTN consider that the ease of use and readability can be influenced positively by consistent use of font types (e.g., Arial, Times Roman), font size and font style (e.g., bold, italics, shadowing). They highlighted that using different styles for web pages can confuse the user because he/she might think that he/she is not on the same website anymore as the style changes.

During discussions with OTN representatives, they also made the following recommendations:

- Online articles should prove their authenticity (author, date, etc) to surfers. This act gives the surfer the opportunity to judge the quality of the work. Furthermore they added that each website must display the full contact information at clearly located position on the website.
- Providing what is called a “Cookies Crumb/Bread Crumb” trail on a website is crucial. This feature allows the user to determine her/his current position at all time while on the website. In fact they emphasise the importance of this feature in order to retain surfers.
- A colourful website is more attractive and preferable. However, designers warn about having too many colours on one page. They said doing that will give the impression that the website is not professional or “children like” website.

OTN disagreed with the statement: “It is good practice to have lots of horizontal scrolling”. They found through their experience that horizontal scrolling makes the website’s user frustrated and leave the website for another one as consequence.

3.2.4 Website localisation vs. Internationalisation

Regarding localisation, OTN designers said that it depends on the type of site. Companies should localise only if there is a good market. Clearly, the issue here is the target market, the budget available for the project and the company long term planning. It was agreed that if the companies can afford it, localisation is the best option to go for. Internationalisation is believed to be less expensive but less users friendly to the different audience worldwide, but it is better than nothing. However, starting with an internationalised website may have some risks, i.e. that surfer might go for a localised website that better satisfies all his/her needs and expectations.

3.2.5 Reliability, Business Nature and Security Assurance

OTN believes the following target computing environment features influence the design of a website “user interface”. Therefore, the monitor size, browser type and version and Internet connection speed need to be taken into account when designing website. Therefore, it is very important to test the website in different environments but particularly important to know what are the dominant monitor size, browser type and version of the target audience and design accordingly.

The organisation’s strategic goals (business nature) influence the design of “user interface”, for example, website targeting children is different in style, layout and navigational aids from a news website.

Moreover, the OTN designers emphasised that the websites targeting Oman need to be simple to download because the current Internet speed in Oman cannot afford to download websites with high graphics, rich images and many flash presentations. Although this might change when the government owned “Telecommunication Company” enhance its infrastructure and introduce broadband as the company’s representatives indicated is on the agenda.

OTN also believes that it is important to provide some assurances, for websites where users perform online transactions, indicating that transactions are secure and reliable. For that OTN displays a security message and the logo of the third party security company that provides this service whenever the user enters a transactional section of a website that is designed by OTN.

4. Conclusion

Fundamental to good website design is an understanding of the needs of the organisation that is commissioning the website, i.e. the nature of the business involved, whether, for example, is it a government department or a children's play area. Almost equally important is an understanding of the target audience and their requirements, abilities and the likely computing environment. These generalities naturally apply to all website design.

When designing websites for a British audience, the researchers concluded from the case study of 'Accent' that the highest priority was to make the website as attractive to look at, as easy to read and as quick to navigate as possible.

Consistency was also highly rated. In relation to URLs, the text colours, text size, font type and style had to be consistent throughout the site. Error, confirmation and prompt messages all had to follow the same style. Similarly, the font type, font size and font style must remain the same throughout the site.

According to 'Accent', there is little that would offend a British audience but it was obvious that the designers know their target audience and would not cross commonly accepted standards of decency. Security, on the other hand, was considered vitally important in interactive websites where there are online transactions. A search service was felt to be useful on large sites but less important on sites where less information was presented.

Accent uses a variety of design tools and technologies, which enhance their design, according to the type of website. As far as usability/accessibility tools are concerned, Accent agreed that they could improve website usability/accessibility but they were not essential

for all websites. In fact at Accent, these were only deployed when there was a user requirement.

The researchers found that for an Arab audience, the priorities were almost the same as for a British audience, i.e. to make the website as attractive to look at, as easy to read and as quick to navigate as possible, with consistency of fonts, colours and general styles throughout the website.

OTN's opinion on the importance of security for online transactions and their view on the need (or otherwise) for a search service, coincided with the views of their British counterparts at Accent.

The greatest difference between the two cultures was that OTN designers were always conscious of designing for an Arab culture. This involved primarily respecting the teachings of Islam. The opinion of the government of the country for which the website is being designed was also sometimes relevant.

Another significant difference was the need for many of the websites to be bilingual (Arabic and English) because there is a substantial number of non-Arabic speakers resident in these countries.

The findings extracted from these case studies reinforce and strengthen the previous findings obtained from both the Users' Survey and the Designers' Survey. These all helped in building realistic CUI, country and computing environment profiles for the two countries studied in this research. All these studies combined drew attention to the importance of fully understanding the culture and the environment of the target audience for a website design to be successful.

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