USABILITY AND ITS ROLE IN ENHANCING THE ONLINE USER EXPERIENCE IN THE EGYPTIAN WEB-BASED GOVERNMENTAL SERVICES PORTALS

Mostafa Mahmoud Abou EL Neil

Information and Decision Support Center (IDSC), The Egyptian Cabinet, Egypt
1, Magless El Shaàb st., Kasr El Einy, Postal code: 11582 P.O. Box: 191 Magless El Shaàb, Cairo, Egypt

Abstract: In Egypt we should start from where the others ended, we should shift the focus from programmer-computer interaction to user-computer interaction. The number of internet users in Egypt has been increased by 2.520.0% more than 10% of the population with change rate 5.59%. The research methodology based on analytical investigation using four most important usability issues toward enhancing the online user, beneficiaries and investors experience and in the same time related to the nature of the selected Egyptian Ministers websites and services portals. While the study focus is on how usability standards can improve the online user, beneficiaries and investors experience, it also presents insights on bridging the gap between what online beneficiaries want and what they really get from the Egyptian Governmental Portals, This paper also suggest some visual solutions that would better support beneficiaries' needs.

1 INTRODUCTION

Usability considered as one of the most essential factors in the web information systems industry. The term usability was first popularized in the early 1980's (Gould & Lewis, 1985). Due to the successful implementation of the "free-access to Internet" strategy in 2002, Egypt now has the largest Internet market in Africa (Paul Budde Communication Pty Ltd, 2007). A "PC for Every Home" initiative in 2002 followed by a "Broadband Internet" initiative launched by the government in 2003. The paper analyzes and evaluates the aptitude of carefully selected Egyptian governmental portals in accurately serving the main beneficiaries and targeted users.

2 RESEARCH PROBLEM

There are no examined usability standards tailored according to the targeted beneficiaries and investors.

The online users, beneficiaries and investors don't gain the maximum advantages from the e-services provided online by the Egyptian government.

3 RESEARCH OBJECTIVES

Highlight the benefits of formulating usability standers tailored specially according to the online user, beneficiaries and investors' needs and requirements.

The research aim to emphasize the role of applying the usability standards as major phase in the Egyptian governmental portals development strategy, and how it can impact the online user experience.

4 RESEARCH METHODOLOGY

The research methodology based on analytical investigation using the four most important usability issues toward enhancing the online user, beneficiaries and investors experience and in the same time related to the nature of the selected Egyptian Ministers websites and services portals.

The websites samples limited to selection from the Egyptian Ministers websites and services portals. The websites screen shots and samples retrieved

from the worldwide web during the period of September-October 2007.

5 USABILITY ISSUES

The usability issues envisioned from the "Research-Based Web Design & Usability Guidelines-2006", the reasons I've selected this book, First because it is published by the U.S. Department of Health & Human Services and as forwarded: "effectively respond to the President's Management Agenda and his E-government Act of 2002". Second, the contributors are: "Carefully selected panels of professional Web designers, usability specialists, and academic researchers" (U.S. HHS, 2003). Third "the Guidelines have been widely used by government agencies and the private sector, implemented in academic curriculum, and translated into several foreign languages" (U.S. HHS, 2006). Also I've returned to many original references and books to get more information which could help in better usability investigation.

5.1 Communicating and Emphasizing the Web Site's Value and Purpose

Many users waste their time or even leave because they misunderstand the purpose of a Web site. Most people browsing or searching the Web will spend very little time on each site. Emphasizing what the site offers is the real value to users (Nielsen, 2003).

The Egyptian Ministry of CIT has performed an exploratory study on the Governmental sector employees opinions about the e-GOV project and the implementation framework, the study discovered that the most important and effective factor on the e-GOV workflow is the citizens perception and awareness about the importance and advantages which could be achieved from using and participating in the new e-governmental services, and the adjustment between the new services and the citizens life-style (e-Gov Program, MCIT, 2004). From this study we clearly state the importance of communicating and emphasizing the website value and purpose and its impact on the implementation of the E-GOV program and achieving its targeted objectives.

We shouldn't expect users to read a lot of text or to click into the Site to determine a Site's purpose (U.S. HHS, 2006). Designers should clearly and prominently communicate the purpose and value of the Web site on the homepage. In some cases the purpose of a Web site is easily inferred. In other cases, it may need to be explicitly stated through the use of brief text or a tagline (U.S. HHS, 2006).

5.2 Optimizing the Credibility of Information-oriented Web Sites

Fogg, B.J. and others (April 2001) perform large quantitative study on "What Makes Web Sites Credible?" they outline some design implications and present them as proposed guidelines for creating highly credible Web sites, I will represent the guidelines in simple and conciseness context: (Fogg, B.J. and others-April 2001)

- Convey the "real world" aspect of the organization through the design such as listing a physical address and showing employee photographs. Highlighting features that communicate the legitimacy and accessibility of the organization.
- Including markers of expertise is a key component in credibility. Important "expertise" elements include listing an author's credentials and including citations and references.
- Including markers of trustworthiness by Adding design elements such as linking to outside materials and sources, stating a policy on content.
- Tailoring and personalizing the user experience: People think a site is more credible when it acknowledges that the user has visited it before.
- Avoid the pitfalls of amateurism: Organizations should be ever vigilant—and perhaps obsessive—and avoid small glitches in their Web sites. These "small" glitches seem to have a large impact on Web credibility perceptions.

5.3 Ensure Visual Consistency of Website Elements within and between Web Pages

Consistent placement of interface elements can help users learn to recognize them, allowing maximum benefit from experience using the site (Badre, 2002).

Mendes, Suomi, and Passos (2004) discussed the low user take-up of e-Services as a main problem: Many examinations and assessments have revealed deficiencies. Long is the list of shortcomings: a general lack in targeting the audience; an inadequate and inconsistent design lacking of comments and adequate examples; a sloppiness in maintenance showing unreliable and outdated pieces of information.

Two studies found that the number of errors made using visually inconsistent displays is reliably higher than when using visually consistent displays.

Visual consistency includes: (U.S. HHS, 2006) size and spacing of characters - colors used for labels - fonts and backgrounds - locations of labels, text and pictures - placing the navigation bar at the top or on the left side of every page (Badre, 2002)

Earlier studies found that tasks performed on more consistent interfaces resulted in: (U.S. HHS, 2006): Reduction in task completion times, Reduction in errors, Increase in user satisfaction and Reduction in learning time.

5.4 Provide Intelligent Assistance to the Targeted Beneficiaries

Users sometimes require special assistance. This is important if the site was designed for inexperienced users or has many first time users. A special link was prepared that allowed new users to access more information about the site and described the best way to navigate (U.S. HHS, 2006).

There are numerous variations of user assistance offered to beneficiaries on the Web. Providing tailored assistance for the beneficiaries of governmental services portals to describe the process of completing task of one or more specific service, is something very important and has major impact on the usability considering the task time completion and error rate. The Egyptian internet users need special assistance to help them use the governmental e-service portals in more effective way, the internet in Egypt since 1993 but serving the citizens and helping them accomplish the same tasks via the web they use to achieve in the physical world, this transitional period needs special attention while crafting the design and development strategy of any Egyptian governmental portals.

FAQs are one of the widespread assistance techniques. The design of FAQ should be concise, simple questions with answers, designed in a way that allows users to quickly scan for target words (Robert w. Proctor & Kim-Phuong L. Vu, 2005).

The emphasis is now on designing intelligent visually based systems that give relevant, context-sensitive information to users, instead of text-based information that has been adapted from paper-based documentation (Robert w. Proctor & Kim-Phuong L. Vu, 2005).

Baecker (2002) described five visually based solutions or sets of tools to provide help to web users including: (Robert w. Proctor & Kim-Phuong L. Vu, 2005) Screen linking (remote control of users screen) - Visual streaming (like video conferencing) - Animated icons (like bubble help and tool tips) - Screen capture (tools that allow easy capture for demo purposes) - Structured video tools (multimedia that show users how to do something)

Ames (2001) described how technical communicators must continue the trend of designing proactive, intelligent user assistance features that provide context-sensitive, visually based interfaces that give users the information they need, when they need it (Robert w. Proctor & Kim-Phuong L. Vu, 2005).

6 USABILITY INVESTIGATION AND SUGGESTED SOLUTIONS

Egyptian Government Services Portal: The web site purpose and value are not clearly communicated through the visual design. There is only the traditional welcome message. There is no clear message about the website purpose. Figure 1.

Figure 1: Egyptian Government Services Portal.

Suggested Solution 1: stating and communicating the main purpose of the portal in clearly deliverable message is very important to achieve its objectives. Figure 1a.

Figure 1a: Suggested solution 1.

The Central Agency for Public Mobilization & Statistics: the main purpose of the web site clearly identified through the clearly stated slogan "Helping you make informed decisions", but there is no point to the Egyptian government.
Suggested Solution 2 Figure 2**:** Adding "Arab Republic of Egypt" above the CAPMAS title.

Figure 2: Suggested solution 2.

The Central Agency for Public Mobilization & Statistics: since the website is offered in both Arabic and English languages the organization name should be clearly stated in both languages.

Suggested Solution 2: adding English organization name in the Arabic interface. Figure 2.

Both **CAPMAS** & **CMA** websites suffer from major usability problem related to the website visual identity. There is no obvious visual message clarifying the subordinately of these websites to the Egyptian government.

Capital Market Authority : The website presents example of not communicating the purpose and value to the user unless he read a lot of text. As shown in the next figure the purpose and value stated under the Mission title. Figure 3.

Figure 3: Capital Market Authority.

Suggested Solution 3: Adding "The Egyptian" or "Egypt's" under the CMA logo: Egypt's Capital Market Authority - The Egyptian Capital Market Authority. Also as shown in Figure 3a, the designer could communicate the added value right to the user by bringing out the website main purpose on the banner.

Figure 3a: Suggested solution 3.

Egyptian Government Services Portal: some sections of the portal suffer from real consistency problem, Figure 4 presents sample of the original inside page including the main layout elements.

Figure 4: Egyptian Government Services Portal – Citizen Services (Arabic only).

Figure 4a presents another page within another section, the section title displayed in different font kind with different visual effects from the section title in Figure 3. Also the "user login" link is missing and the vertical navigation area not exists.

Figure 4a: Egyptian Government Services Portal – Universities admission (Arabic only).

Figure 4b presents another page in the same website; with completely different layout, banner design, color scheme, icons even some design aspects in the logo have been changed.

Figure 4b: Egyptian Government Services Portal – Taxation Service (Arabic only).

Egyptian Government Services Portal: the website provide two basic solutions for helping users, first is the traditional hypertext web-based document containing brief about the portal and description of the different sections (Arabic only), second is simple FAQs page. There is no interactive user assistance or visually based help interfaces.

Suggested Solution 4: The portal should provide bilingual interactive demo for one or more of its services. Also providing special assistance for the complaints and inquiries section guiding the user through the "Complaints, inquiries or Following up" processes.

Egyptian Investment Portal: the portal provides help demo to support the users using the personalization features, the demo is "one shot presentation" and doesn't provide: indication to navigation between the main sections or supportive instructions such as "How to customize the Latest News", "How to use the Edit Button" or "Catalog Zone". Since the portal is multilingual the user assistance should be in both languages.

Also the designer divided the FAQs into many sections and pages, in most cases it requires from the user more than 3 clicks to reach specific answer, and

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the site doesn't provide navigation options between FAQs sections.

Suggested Solution 5 Figure 5**:** Adding auto-hide taskbar containing the main help sections should ease the navigation and proof the user control over the presentation demo.

Figure 5: Suggested solution 5.

Suggested solution 6 Figure 6**:** providing direct navigation links to the same level sections.
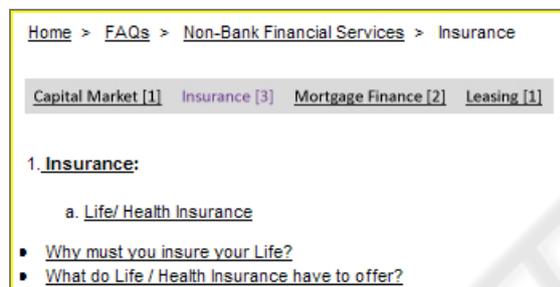
Figure 6: Suggested solution 6.

7 CONCLUSIONS AND RECOMMENDATIONS

In order to encourage citizens, beneficiaries and investors to benefit from the web-based governmental services and motivate them to trust the government initiatives and trends toward the e-Gov program, usability standards must be adequately applied and there should be enough usability tests approved before the final launching of the information portals.

Increasing attention should be paid to computing research issues related to usability and visual design.

Usability has to be an intrinsic part of both web products and the culture of Web information systems development especially in the governmental sector also designers should practice user-centric design principles that are based on logical thinking from the point of view of the end user: the beneficiary.

REFERENCES

Badre, A.N. (2002). *Shaping Web Usability: Interaction Design in Context* - Boston, MA: Addison Wesley Professional.

E-Government Program, MCIT (2004) - *EISI-Government, The Egyptian Information Society Initiative for Government Services Delivery (Arabic version)* - www.egypt.gov.eg/arabic/documents.

Erik P. Bucy and John E. Newhagen (2004) - *Media Access Social and Psychological Dimensions of New Technology Use* - Lawrence Erlbaum Associates, Inc.

Fogg, B.J. and others (April 2001). *What Makes A Web Site Credible? A Report on a Large Quantitative Study* - Stanford Persuasive Technology Lab. Stanford University - www.webcredibility.org/guidelines.

Jakob Nielsen - Alertbox, November 10, 2003 - *The Ten Most Violated Homepage Design Guidelines* - www.useit.com.

Karen Donoghue (2002) - *Built for Use Driving Profitability Through the User Experience* - The McGraw-Hill Companies, Inc.

Manuel J. Mendes, Reima Suomi and Carlos Passos (2004) - *Digital Communities in a Networked Society: e-Commerce, e-Business and e-Government* - Kluwer Academic Publishers.

National ICT Plan (Sep.2007)-MCIT–Egypt.

Paul Budde Communication Pty Ltd (2007) – Egypt: *Convergence, Broadband & Internet Markets* - www.budde.com.au.

Peter Lyman and Hal R. Varian (2003)–*How Much Information?*-Berkeley University of California.

Robert w. Proctor and Kim-Phuong L. Vu (2005) - *Handbook of Human Factors in Web Design* - Lawrence Erlbaum Associates, Inc., Publishers.

Shneiderman, B. & others (2004) - *Designing the User Interface: Strategies for Effective Human*-Computer Interaction, 4/E preview- University of Maryland, Human-Computer Interaction Lab.

U.S. Department of Health & Human Services (2003) - *Research-Based Web Design & Usability Guidelines* - www.usability.gov – USA.

U.S. Department of Health & Human Services (2006) - *Research-Based Web Design & Usability Guidelines* - www.usability.gov – USA.