Chapter 16
Usability Evaluation of E–Government Websites in Saudi Arabia by Cognitive Walkthrough

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ABSTRACT

Government websites are the easy sources of getting access to the services offered by governmental organizations. These websites provide manifold benefits to their users i.e. efficiency of use, cost decline, effective communication between citizens and government, delivery of different service, transparency and time saving. However, users cannot get full benefit out of these services if the e-government websites are not interactive and user friendly. Keeping this view into consideration, study investigated the usability concerns of the e-government websites in Saudi Arabia. Cognitive walk-through is selected as the implication method to figure out usability related traits by the real users of the interfaces. Findings from the study showed that these websites are partially usable for the users, as they lack some of the major concerns of the usability. Evaluation results showed the clear picture of the usability features of the selected websites of Saudi Arabia both in positive and negative ways. Furthermore, recommendations are given to improve overall quality of these websites.

INTRODUCTION

With the widespread use and advancement in technology, governmental organizations have also taken steps to apply the technology in the public sector organizations generally called as e-government. (Garcia 2005). Since the widespread use of this technology, governmental organizations are also facing some challenges, when it comes to user interaction and usability is considered as one of the major issues in the field of user interaction (Mohammad 2015).

E-Government is defined as the use of the advance technology by governmental organizations to provide quality services to their citizens and business (Wan 2010). Generally, it is the process of providing easy accessible services to citizens, deleting extra effort and extra systems, cost effectiveness and achieving other goals such as accountability and transparency very easily (Raza 2016). Therefore, e-government is defined as the easiest way of electronic communications between the government, citizens and the business organizations. There are manifold benefits (Ndou 2004) of the implementation of e-government both for developing and developed countries such as:

1. E-government is considered as the easiest way to get access to the governmental services offered to the customers without any time constraint i.e. government services are available to the citizens without any delay 24/7 i.e. 24 hours a day, 7 days a week.
2. Reduction in organizational cost and time.
3. Customers/citizens satisfaction due to delivery of the services at their door steps with any extra effort.
4. Improved transparency, accuracy and security of information and knowledge sharing etc.

Usability is defined as the user satisfaction degree to which users can use the system efficiently and effectively. Usability Evaluation is a process of measuring the usability traits of the user interface in order to identify common usability problems. Usability is considered as one of the most important factor in assessing the quality of user interfaces. The race to develop more user friendly web applications has paved a way for a number of methods and tools to cope with the usability problems. In addition, a wide number of usability evaluation methods are developed to evaluate the user friendliness of an interface.

Usability evaluation methods are divided into the following main categories:

1. **User Based Methods:** End users which are the real users of the system are the part of the usability evaluation process. By the use of different evaluation tools (interviews, questionnaire and observation), users are meant to assess the performance and user satisfaction levels.
2. **Evaluator’s Methods:** To measure and assess the usability of a system a number of usability experts (evaluators) are taking part in this category of usability evaluation. Heuristic Evaluation and cognitive walkthrough are considered as the most widely used method in this category.
3. **Tool based Methods:** This method is used to identify usability related problems automatically by the use of various software tools (Gull 2015).

In this study cognitive walkthrough is used as a main method to identify the usability related issues in the e-government websites in Kingdom of Saudi Arabia. The cognitive walkthrough is a commonly used method for evaluating the usability of the system by actually going through the real system and using it as the real users. To execute this method, a number of analysts choose some specific tasks or services that are offered by the interface to observe and record the usability related issues (Clayton 1997). The aim of the study in hand is to describe the results of the cognitive walkthrough of the some of the e-government websites in Saudi Arabia. For the execution of cognitive walkthrough, a number of usability traits were selected which should be the part of an interface for effective and efficient use of the interface and the services offered by the websites. A number of participants who are also the real users of the e-government websites in Saudi Arabia took part in the evaluation process and through cognitive walkthrough the interfaces noted down some major usability problem in each category of usability traits.