Visual Interface Design and Usability Study of Academic Transcripts

A Thesis Submitted in Partial Fulfillment of the Requirements for the Master Degree in Information Technology

Submitted by
Muna Mansoor Al-Mahari
University number: 20051563

Supervised by
Dr. Hesham Al-Ammal
(Assistant Professor)
Co-supervisor
Dr. Lamya Al-Jasmi
(Assistant Professor)

University of Bahrain

Kingdom of Bahrain
December, 2017
Abstract

Several authors within the HCI field proposed that the users prefer simple designs and reject complex ones before attempting to use them. The major objective of this study is to investigate whether the users prefer the simple or the complex interfaces; this will be explored within the case of the University of Bahrain academic transcript. The current transcript is legacy system, so a new visualized design alternative will be proposed in order to investigate the user preferences regarding the simplicity and complexity.

A usability study of the current online transcript was conducted, which included testing four different usability goals, namely: Effectiveness, Efficiency, Control, and Learnability. The study also investigated the User Experience. The results of the usability study show that only two goals (i.e. learnability and efficiency) exceed the target of 70% and all other goals have lower scores.

Based on the usability study two different visualized designs were proposed for the academic transcript. Version (A) presents all the required information in the dashboard and utilizes all the interface area. Version (B), (C) and (D) decrease the number of visible components and increases the area of white space, which simplify the interface. Those designs present important information in the homepage, while hiding the rest away through an embedded interface.

Based on the results, Version (A) which presented a more efficient design was preferred by the users. This leads to rejection of the proposed hypothesis that users prefer simplicity over efficiency. The investigations also lead to the implementation and evaluation of several design principles as well as a study of the stakeholders’ requirements. This resulted in the design of a proposed interface for a visualized academic transcript.

Keywords: Complexity, Design Principle, Simplicity, Transcript, Usability, Visualization.