UNIVERSITI TEKNOLOGI MARA

EVALUATING THE LEARNABILITY OF COLLEGE MANAGEMENT SYSTEM OF INTERNATIONAL ISLAMIC COLLEGE

SUHAILA BINTI AB KADIR

IT Project submitted in partial fulfillment
of the requirements for the degree of
Master of Science in Information Technology

Faculty of Computer and Mathematical Sciences

January 2015

ABSTRACT

Learnability is a major component of usability, a non-functional requirement of a software system. Up till now, learnability is not unanimously defined, measured and evaluated by the researchers and it is not extensively studied. Good learnability is not considered as an important aspect in the design of a system, especially in the custom-built system. Many educational higher institutions customised their campus management system due to the specific requirements which are not featured by on-the shelf products. Similarly, International Islamic College also has its own system to manage the everyday processes. This research is conducted with the aim to evaluate the learnability of the College Management System of International Islamic College, due to the dissatisfaction expressed by users for inability to easily use the system, which hinder their productivity. Their remarks are obtained from the preliminary interviews with five users using learnability related questionnaires extracted from System Usability Scale. Hence, the objectives of the research are to identify the learnability attributes to evaluate a system, evaluate the learnability the College Management System and subsequently propose the design elements that will improve its learnability. The scope of the research is on the Lecturer's Portal only. The learnability attributes are selected based on the previous studies in the same area, coupled with the user interface design guidelines. Ease of learning, consistency, predictability, informative feedback, continuity of tasks, error messages and help documentation are the attributes of learnability, modeled to be the evaluation aspects of the College Management System. The system is evaluated qualitatively using think aloud protocol observation on five real, novice users of the system. After the observation sessions, users are interviewed to gather their thoughts on the system learnability to support the earlier findings. The findings are evaluated using the thematic analysis, based on the selected attributes. It shows that the system needs to be improved as it does not offer the learnability design features to the users. Among the suggestions for learnability enhancements to the system are to provide standard training to users, apply consistent, predictable design elements, provide informative feedback and error messages for users in the logical task sequences as well as ensure the help documentation is available for all the functions. These suggestions are conveyed to the system administrator of International Islamic College for further action. Further reseach can be performed in both functional and non-functional area such as the functionality and usability testing because the system is not thoroughly tested prior to its deployment. Future works can also emphasize on the user satisfaction, efficiency and effectiveness on the system, using mixed methods instead of qualitative method.

ACKNOWLEDGEMENT

First and foremost, thank you Allah for His blessing that allows me to gain the experience of being a student again and making me chose this path in life.

I would like to express my sincere gratitude to my supervisor Dr Emma Nuraihan Mior Ibrahim for the opportunity to be under her tutelage to complete my research and report writing for my Master. For me, her guidance, thought and encouragement are priceless. My heartiest gratitude also goes to my colleagues at International Islamic College for their commitment, encouragement, and insightful comments for my project.

Last but not the least; I would like to thank my family; my parents, my dearest husband, Zamri Ahmat, and my children, Nur Hannan, Ahmad Zharfan and Nur Kaiesa for being my pillars of strength, for their prayers, love, continuous moral support and understanding throughout my irreplaceable post-graduate journey.

TABLE OF CONTENTS

CHAPTER 3 : RESEARCH METHODOLOGY