EVALUATION OF NAVIGATIONAL ASPECTS OF MOODLE

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ABSTRACT

EVALUATION OF NAVIGATIONAL ASPECTS OF MOODLE

Learning and communicating with students through electronic medium provides many benefits that cannot be achieved through conventional approaches. The use of a learning management system (LMS) is the most popular way of electronic resources. By this facility education is persisted without limitation of time and location. There are many learning management systems available, both commercial and open source. Existing studies showed that although there are many other reasons of high distraction from LMSs such as inappropriate use of contents and technology, but the key issue is poor usability of such platforms. Though, considerable efforts have been paid on usability characteristics of LMSs, such as efficiency, ease of use, learnability, attractiveness, operation-ability, memorability, errors, and satisfaction and many more. But very little attention has been focused on evaluating the usability of LMS in relation to navigation aspects and the impact these may have on usability.

This study, therefore, aims to develop a framework for evaluating the navigational structure of LMS. Different factors of evaluation framework are gathered through an extensive literature study. For the purpose of validating the framework, we applied it on Moodle - an open source LMS that has been increasingly achieving global popularity.Consequently, this study also aims to assess usability issues of Moodle associated with navigation. Results of this study offer suggestions for improving the navigation in Moodle so that users will feel more interested to participate in learning activities. Implications for Moodle navigation are derived based on both qualitative and quantitative data gathered through survey. The survey was conducted among students and teachers of two leading universities of Pakistan. Some of the problems we found in Moodle navigation structure are: inconsistency in placement of buttons, presence of back page button on some pages, visited and unvisited links are not distinguishable, some icons do not have supporting text, and no support for adaptive navigation. The efficiency of navigation in Moodle can be improved, if identified problems are fixed. Moreover, result of this study shows that ease of navigation

increases navigation efficiency and it is alsohighly correlated with the factors of proposed framework.

Certificate of Originality

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institution of learning.

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Dedication

I would like to dedicate this thesis to my beloved parents who always supported me and whose unconditional support is always with me. They have given me encouragement to deal with each and every problem with enthusiasm and determination. Without their support I would not be able to complete this thesis. Their love, affection and belief in me, made me achieve my goals successfully. Further, I would like to extend my dedication to all those who always pray for my success.

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Key to Abbreviations

LMS:	Learning Management System
Moodle:	Modular Object-Oriented Dynamic Learning Environment
ICT:	Information and communication technology
OSS:	Open Source Software
SCORM:	Sharable Content Object Reference Model
HCI:	Human Computer Interaction
ANS:	Adaptive Navigation Support
IT:	Information Technology
NUST:	National University of Sciences and Technology