

A PRELIMINARY STUDY OF COURSE INFORMATION ON I-LEARN PERSPECTIVE: FOCUSING ON ACCESSIBILITY, CONTENTS AND USER INTERFACE PARAMETERS

Mohd Nor Hajar Hasrol Jono, Azlan Abdul Aziz, Nurul Hidayah Mat Zain, Nor Adora Endut, Siti Rahayu Abdul Aziz, Prasanna a/p Ramakrisnan.
Universiti Teknologi MARA, Shah Alam, Malaysia
hasrol@tmsk.uitm.edu.my, azlanaa@tmsk.uitm.edu.my, nurulmz@tmsk.uitm.edu.my, adora@tmsk.uitm.edu.my, rahayu@tmsk.uitm.edu.my, prasanna@tmsk.uitm.edu.my

ABSTRACT

i-Learn serves as UiTM's Learning Management System (LMS) portal; launched by the i-Learn Center (i-LeC) in its aim to provide strategic adaptation of e-learning at the university. The portal includes, as one of its contents, the Course Information module useful as a guideline for lecturers as well as students to understand the structure and content of the courses or subjects being offered. This study aims at analyzing the characteristic effectiveness of the i-Learn portal particularly the Course Information Module focusing on aspects of accessibility, content and user interface parameters. The analysis was based on the results of questionnaires, taking UiTM's lecturers as the respondents. We measured whether the course information tool is useful in terms of speed and ease of use based on the Technology Acceptance Model (TAM). Finally, we present a brief discussion concerning the obtained results as well as future plans for utilizing the findings of this study.

1. INTRODUCTION

The i-Learn portal has been operating since December 30th 2005 in UiTM's quest to incorporate e-learning as an extended learning environment that supports, complements and enriches face-to-face classroom teaching and learning. The portal supports the online delivery of course information, content, assessment and discussion as well as useful resources of reference for lecturers and students alike. The Course Information tool is one of the key features available on the i-Learn portal. This tool is useful for communicating the course plans and expectations to the students. It also contains the course outline and syllabus of a particular course or subject. This is useful for establishing an early point of contact and connection between the students and the lecturer, assisting in setting the initial tone and expectation for the course and helping students assess their readiness for the course. Grunert (1997) promotes a learning-centered approach in providing a course syllabus; which should include the purpose of the course, course description, course and unit objectives, resources, course calendar, course requirements, evaluation, grading procedures, content information, learning tools as well as how to study and use the course syllabus. Altman and Cashin (1992) pro-

vides a more extensive suggestion on the main topics which should be included in the course syllabus, including attendance, class participation and academic honesty. They highlighted the belief that more experienced instructors usually include more material in their syllabus. The Course Information in the i-Learn portal has incorporated most of the items highlighted by Grunert and Altman et al. In particular, the course information provided by the portal consist of course description, credit unit, contact hour, code subject, subject name, assessment procedure, course objectives, preferred textbook and the references. Since its inception, there has yet to be any analysis on the effectiveness of the Course Information tool on the i-Learn portal. Thus, it is interesting to explore the viabilities of improving its features. We therefore embark on a study to measure the effectiveness of the Course Information tool specifically in terms of its content, accessibility and user-interface parameters.

2. EVALUATING EFFECTIVENESS

For the past several decades, studies have linked the success of a particular system with user attitudes; which is the relationship between a person and an object (Woelfel, 1995). The user attitude towards the Course Information tool on

the i-Learn portal can thus be used as a measurement for its effectiveness. Dillon and Morris (1996) defines user acceptance as the willingness within a user group to deploy information technology for the tasks it is designed to support. The Technology Acceptance Model (TAM) associates the users' perception of usefulness and ease-of use with their decision to use a particular novel software package (Davis, 1989). In this model, Perceived Usefulness is defined as "the degree to which a person believes that using a system would enhance his or her job performance"; reflecting the notion that effort is a finite resource that a person will allocate to various activities. Perceived Ease of Use is defined as "the degree to which a person believes that using a particular system would be free from effort". A review of scholarly research on information system (IS) acceptance and usage suggests that TAM has emerged as one of the most influential models in this stream of research. For this particular study, the external variables have been divided into three characteristics which are content, accessibility and user interface. All these variables provide a better understanding of what will influence Perceived Usefulness and Perceived Ease- of Use whereby their existence guide the action required influencing a greater use of the Course Information tool. Figure 1 illustrates the relationship of Perceived Usefulness and Perceived Ease of Use within the Technology Acceptance Model.

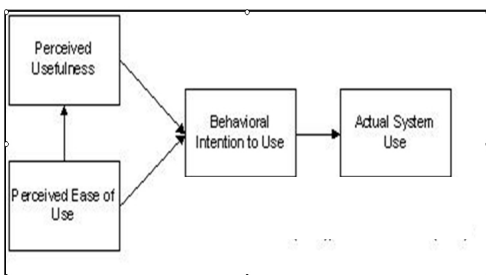


Figure 1: The Technology Acceptance Model (TAM) Source: Davis et al (1989)

2.1 Content

A survey on the literature highlighted that users focus more on the quality and content of a website than navigational or design issues (Morkes & Nielsen, 1997; Shum, 1996; Spool et al, 1997). In essence, good content is the

key to an effective website, including an e-learning portal. We take into account the perceived ease-of-use and perceived usefulness in the measurement of effective content. Nielsen (1997) suggests the limitation of using full-page graphics and using easy-to-understand as some of the tips in creating effective website content taking into consideration the difference of user attitudes when reading online content as opposed to content in document forms.

2.2 Accessibility

Accessibility refers to the measurement of the degree to which a system is usable by as many people as possible. It can also be viewed as the ability to access the functionality of an information system (Bolichini & Yu, 2004). W3C published a specific set of guidelines for web design in order to ensure that web content is accessible for people of all abilities or disabilities. In other words, all users should have equal access to information and functionality. Web accessibility encompasses the visual, motor/mobility, auditory, seizures and cognitive/intellectual aspects of disability among web users. Hence, web content should be properly designed to cater to each of these aspects.

2.3 User Interface

Aesthetic and navigational factors complement accessibility in garnering the overall success of a product or system (Green and Jordan, 2001; De Angeli et al, 2006). We include the use of onscreen visual objects including menus, language, options, screen layout, commands as well as the relationship between the objects to encompass the user interface parameter in our analysis. The user interface design of the i-Learn portal should be evaluated in terms of its capability to engage users in fulfilling interaction, and generating affective responses in order to fulfill both the Perceived Usefulness and Perceived Ease of Use of the TAM.

3. METHODOLOGY

The purpose of this preliminary study was twofold. First, it serves as a quantitative measurement of the effectiveness of the Course Information tool on the i-Learn portal specifically in terms of its content, accessibility

and user interface parameters. Second, it provides the basis for the exploration of viability to improve and enhance the i-Learn portal.

Subjects of the study were 150 lecturers of the university randomly selected from 24 faculties and subjects were required to interact with the i-Learn portal over a 2-month period. The questionnaire was designed to contain four sections; Section A is concerned with the overall structure of the Course Information Module, Section B consists of questions concerning the Content, Section C concerns the Accessibility variable and finally Section D concerns the User Interface variable questions.

4. RESULTS AND FINDINGS

4.1 Course Information

Respondents were asked to answer questions concerning the overall Course Information tool in Section A.

4.1.1 The Importance of Course Information in Teaching

Figure 2 illustrates the results for the subjects' perception on the importance of the Course Information tool in the i-Learn portal.

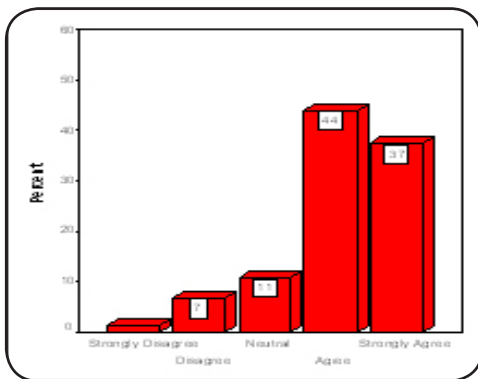


Figure 2: The Importance of Course Information for Teaching

4.1.2 The Course Information Module Provides Enough Information

Figure 3 shows the overall percentage of respondents' perception on whether the Course Information module provides enough information about a particular course.

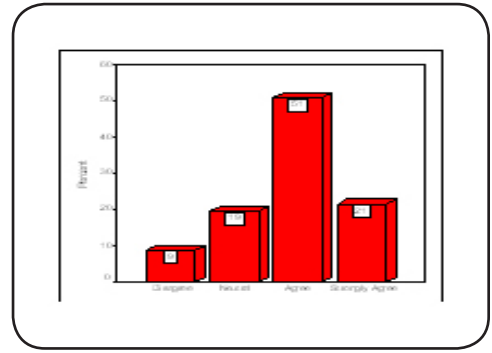


Figure 3: The Course Information Module Provides Enough Information

4.1.3 The Course Information Module is Useful

Figure 4 shows the overall percentage of respondents' perception on whether the Course Information module is useful.

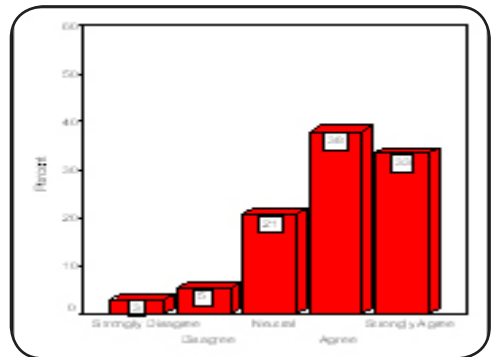


Figure 4: The Course Information Module is Useful

4.2 Content

Respondents were asked to answer questions concerning the Content variable in Section B.

4.2.1 The i-Learn Course Information Contents Build Motivation to Access the i-Learn Portal

Figure 5 shows the respondents' perception on the Course Information contents' perceived usefulness in building motivation to access the i-learn portal.

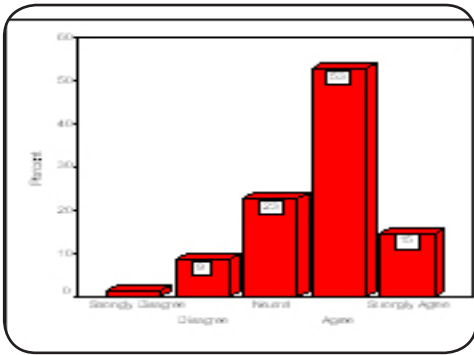


Figure 5: The i-Learn Course Information Contents Build Motivation to Access the i-Learn Portal

4.2.2 The i-Learn Course Information Contents Help Develop the Ability to Plan Work

Figure 6 shows the respondents' perception on the Course Information contents' perceived usefulness in building helping them develop the ability to plan work.

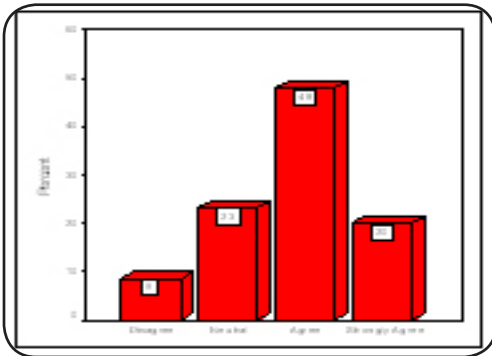


Figure 6: The i-Learn Course Information Contents Help Develop the Ability to Plan Work

4.2.3 The i-Learn Course Information Contents is Relevant

Figure 7 shows the respondents' perception on the relevance of the Course Information contents.

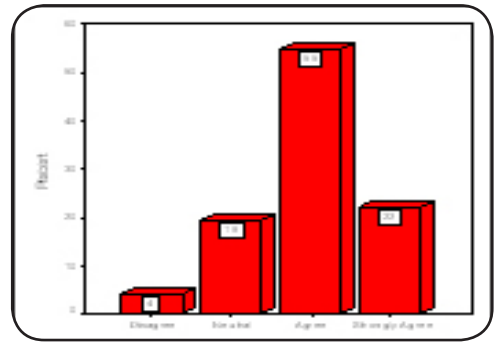


Figure 7: The i-Learn Course Information Content is Relevant

4.3 Accessibility

Respondents were asked to answer questions concerning the Accessibility variable in Section C.

4.3.1 I Frequently Access the Course Information Module

Figure 8 illustrates the respondents' answers concerning the frequency they access the Course Information Module on the i-Learn portal.

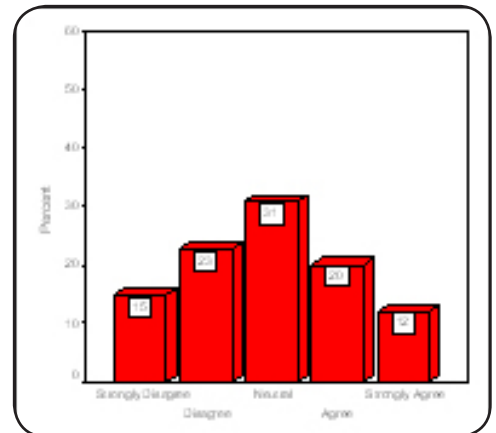


Figure 8: I Frequently Access the Course Information Module

4.3.2 There Was No Difficulty When Accessing the i-Learn Course Information Module

Figure 9 illustrates the respondents' perception on the difficulty experiences while accessing the Course Information module.

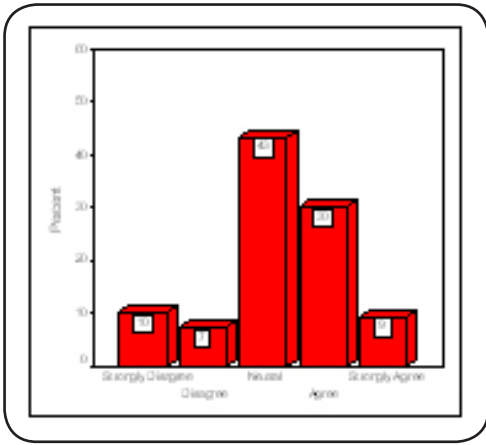


Figure 9: There Was No Difficulty When Accessing the i-Learn Course Information Module

4.4 User Interface

Respondents were asked to answer questions concerning the User Interface variable in Section D.

4.4.1 The i-Learn Course Information is Presented Clearly

Figure 10 shows the perception of the respondents on the presentation clarity of the Course Information module.

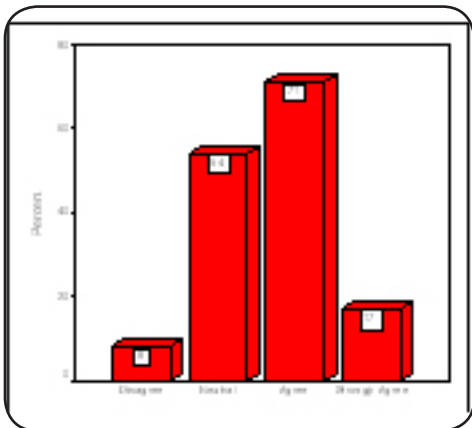


Figure 10: The i-Learn Course Information is Presented Clearly

4.4.2 The Background Color and Font Type is Appropriate

Figure 11 shows the respondents' view on the aesthetic value of the Course Information module.

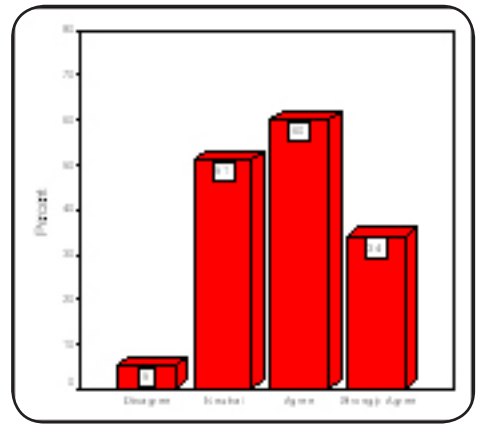


Figure 11: The Background Color and Font Type is Appropriate

5. CONCLUSION AND FUTURE WORK

The Learning Management System (LMS) portal initiated and launched by UiTM incorporates e-learning as an extended learning environment that supports, complements and enriches face-to-face classroom teaching and learning environment far from alienating the academicians. To fully serve the purpose of communicating the course plan, the expectations, and being early point of contact and connection between the students and the learners, it is imperative that the portal be evaluated on the very essence that it was intended to serve. From the study, most of the respondents found the course information sufficient and useful, the content helpful and relevant, less complication in the accessibility parameter, and the interface appealing and appropriate. These findings are merely indicators that UiTM's LMS is on the right track not proclaiming it as foolproof or complete. In the future, more studies can be carried out to look into the areas for further refinement and improvisation.

REFERENCES

- Altman, H.B. and William E.C. 1992. Writing a Syllabus. In Idea Paper 27. Center for Faculty Evaluation and Development, Division of Continuing Education, Kansas Sate University
- Bolchini, D. and Yu, E.S.K. 2004. Modelling User Requirements for Web Application Design. Journal of Communication Sciences. 4(2), 173-196.

Davis, F.D. 1989. Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*. 13(3), 319-340.

De Angeli, A., Sutcliffe, A. and Hartmann, J. 2006. Interaction, Usability and Aesthetics: What Influences Users' Preference? Proceedings of the 6th ACM Conference on Designing Interactive Systems.

Dillon, A. and Morris, M. 1996. User Acceptance of Information Technology; Theories and Models. *Annual Review of Information Science and Technology*. (p 3-32). Medford NJ. Information Today, Inc.,

Green, W.S. and Jordan, P.W. 2001. *Pleasure with Products: Beyond Usability*. Taylor & Francis, London.

Grunert, J. 1997. *The Course Syllabus: A Learning-Centered Approach*, Anker Publishing. Bolton, M.A.

Morkes, J. and Nielsen, J. 1997. Concise, SCANNABLE, and Objective: How to Write for the Web. Available online at <http://www.useit.com/papers/webwriting/writing.html> Accessed: May 16th, 2007

Nielsen, J. 1997. Be Succinct! (Writing for the Web). Available online at <http://www.useit.com/alertbox/9703b.html> Accessed: May 19th, 2007

Shum, S.B. 1996. Design Argumentation as Design Rationale. In Kent, A. & Williams, J.G. (Eds). *The Encyclopedia of Computer Science and Technology*. 95-128. Available online at <http://kmi.open.ac.uk/people/sbs/docs/SBS-ECST-1996.pdf> Accessed: May 19th, 2007

Spool, J.M., Scanlon, T., Schroeder, W., Snyder, C. and DeAngelo, T. 1997. *Web Site Usability: A Designer's Guide*. Morgan Kaufmann Publishers.