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AN M-LEARNING MATURITY MODEL FOR UNIVERSITIES AND HIGHER EDUCATIONAL INSTITUTES

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Abstract - An m-learning maturity model is put forward in this research to assess the mobile technology adoption rates in universities and higher educational institutes. The model is derived from Capability Maturity Model (CMM), which has been widely used in organizations to gauge the adoption of various new processes. Five levels of m-learning maturity are specified including preliminary, established, defined, structured, and continuous improvement. Each of these maturity levels is gauged through nine critical success factors (CSFs) in assessment questionnaires. The CSFs used in measuring instrument of the model are adopted from three of our previous empirical studies. Using an assessment questionnaire and a rating methodology, the study replicates the model to two universities to gauge their level of m-learning adoption. Thus, two case studies are presented to evaluate the applicability of the model. Hence the model provides a comprehensive approach, while opening new areas of future research.

Keywords: *e-Learning, Mobile learning, Learning systems, Critical success factors, Capability maturity model*

INTRODUCTION

Mobile technology has become a ubiquitous part of our daily lives by offering innovative ways to communicate, gather and share information, and entertain [1]. At the same time, the unique capabilities offered by smart phones and mobile devices of today, make them a potential learning tool as well. By diminishing the boundaries and limitations of space and time, mobile devices have the potential to enrich the learning experience of learners.

Acknowledging the applicability and potential offered by mobile devices, many educational institutions have started adopting them as a tool to extend and facilitate learning to students. However, unlike various existing maturity models [2], [3], [4], no specific m-learning maturity model is available to date to test the adoption rates in universities and higher education institutes. Since the lack of an evaluation methodology is one of the major hurdles in implementing m-learning across educational institutions, the need for such a model is critical.

OBJECTIVES

Adopting the Capability Maturity Model (CMM) as the underlying framework and making appropriate modifications, this research work puts forward an M-Learning Maturity Model (MLMM) with the aim to gauge the maturity of m-learning adoption amongst higher educational institutes.

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METHODS

The model takes into account various critical success factors to enable the assessment of m-learning adoption from different perspectives including university management, students, and instructors [5], [6]. Additionally, the study also offers a rating methodology and assessment questionnaires. To test the model, case studies of two universities are also presented.

RESULTS

The current maturity of an m-learning platform is assessed by this model with assessment methodology of defining and conducting case studies. An integral feature of the MLMM is the methodology for specifically evaluating m-learning platform maturity [7]. This model will help university management perform adoption and assessments of their m-learning projects and boost their upgrading strategies.

CONCLUSION

The proposed MLMM model is based on nine key factors, and we have empirically analyzed and identified them in the three previous studies. The area that is less attractive to the researchers is the CSF assessment of m-learning, and, accordingly, a process that estimates the m-learning maturity is the main contribution of this work. An evaluation questionnaire for four of the five maturity levels is part of composition of the framework of this model, as well as a rating methodology and a performance scale. Additionally, we have also studied the execution of two m-learning projects in two universities and discussed the findings as case studies. Leaving the limitations aside, this work has contributed to setting up an all-inclusive approach for m-learning maturity and addressed the imperative subject of factors of evaluation in m-learning.

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