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A framework for multiplatform e-learning systems

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## **Abstract**

A multiplatform e-learning system is an e-learning system that can deliver learning content to different accessing devices such as PCs, PDAs and mobile phones. The main objective of the research is to formulate a framework for multiplatform e-learning systems. This thesis focuses on the formulation, competency and constitution of the multiplatform e-learning systems framework and the implementation of a multiplatform e-learning system. In conjunction with the main objective, the research also addresses the factors that influence learner satisfaction during their engagement with a multiplatform e-learning system. In addition, the research investigates the relationships between these factors in influencing learner satisfaction. The research also intends to validate the assertion that multiplatform e-learning systems are better than non-adaptive e-learning systems. A comparative evaluation between a traditional e-learning system and a multiplatform e-learning system from end user (learner) perspective was conducted. The evaluation instrument is based on multiplatform e-learning system questionnaires (MELQ). A total of forty participants took part in the evaluation. Four participants took part in the initial pilot evaluation while thirty six participants took part in the final evaluation. Data analysis and statistical results indicate that there are potential gains in learner satisfaction score in multiplatform e-learning systems over traditional e-learning systems. The results also show that the gain is most significant in mobile devices than in desktop PCs. Statistical analysis reveals that all the factors that influence the learner satisfaction are significant and they have different levels of influence over learner satisfaction. These factors can be further organized into primary factors and secondary factors. These findings and the methodology of evaluation can play an important role for e-learning systems designer to improve the adaptation process and to enhance the level of learner satisfaction in multiplatform e-learning systems.

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