Information Quality Characteristics for M-Learning Applications

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***Abstract*—This research study investigates the potential to apply a quality analysis process for mobile learning (M-learning) software applications in accordance to a defined set of information quality characteristics in attempt to increase the level of quality in the mobile learning systems. This empirical study is conducted on widely accepted and used M-learning application form both close source and open source systems comprising a known reasonable amount of MLOC, medium-scale. Four M-learning applications were selected for conducting this study including Moodle, Blackboard, Edmodo and Schoology. The systems are statically analyzed and examined to determine if it meets the proposed quality characteristics or not. For each system the features and techniques used with respect to the defined characteristics are determined and tabulated. This study focuses mainly on particular information quality characteristics include maintainability, reusability, testability, and security. The data shows that the approach is applicable and effective but needs further formalization and improvement to be effectively implemented. New ideas are additionally proposed for future work to include other dimensions of the M-learning application quality characteristics such as availability, reliability, performance, usability, and functionality. This empirical study is part of funded research project investigating the development, adoption and dissemination of M-learning in Oman.**

***Index Terms*—Mobile learning, M-learning, Mobile Application, Information Quality Characteristics, Quality Management.**

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