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A Context Aware Mobile Learning System with a Cognitive Recommendation Engine

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Abstract : Using smart devices for context aware mobile learning is becoming increasingly popular. This has led to mobile learning technology becoming an indispensable part of today's learning environment and platforms. However, some fundamental issues remain - namely, mobile learning still lacks the ability to truly understand human reaction and user behaviour. This is due to the fact that current mobile learning systems are passive and not aware of learners' changing contextual situations. They rely on static information about mobile learners. In addition, current mobile learning platforms lack the capability to incorporate dynamic contextual situations into learners' preferences. Thus, this thesis aims to address these issues highlighted by designing a context aware framework which is able to sense learner's contextual situations, handle data dynamically, and which can use contextual information to suggest bespoke learning content according to a learner's preferences. This is to be underpinned by a robust recommendation system, which has the capability to perform these functions, thus providing learners with a truly context-aware mobile learning experience, delivering learning contents using smart devices and adapting to learning preferences as and when it is required. In addition, part of designing an algorithm for the recommendation engine has to be based on learner and application needs, personal characteristics and circumstances, as well as being able to comprehend human cognitive processes which would enable the technology to interact effectively and deliver mobile learning content which is relevant, according to the learner's contextual situations. The concept of this proposed project is to provide a new method of smart learning, based on a capable recommendation engine for providing an intuitive mobile learning model based on learner actions.

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