

**CONTEXT-AWARE FRAMEWORK FOR
MODELING A LEARNER**

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DECLARATION

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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ABSTRACT

Given the growing use of mobile devices, there is an increasing interest in the potential for supporting the mobile learners. Therefore, many researches have been conducted in the field of Technology Enhanced Learning (TEL) in the past decade. Context awareness and adaptability are two key enablers for intelligent systems that provide effective recommendations to users to optimize their learning process in the Technology Enhanced Learning (TEL) field.

This research developed a framework that enables context aware recommendations for an optimized learning process through identification of learning styles, categorization of the learners to the appropriate group and providing context aware learning recommendations based on the categorization. In this work we have identified the useful contextual information and developed a complete learner model by collecting, storing and modeling the identified contextual information. The contextual information is captured and filtered through a simple mobile app, which is a mobile interface to the Moodle learning management system. The proposed model is implemented on the Moodle learning management system and the system can be extended to provide recommendations for enhanced learning experience to the learners. The developed system is evaluated using a sample dataset collected over a period of one week of Moodle access by twenty users for fifty topics related to computer science. The evaluation results show that the developed model can effectively categorize the users.

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