Using the M-Learning to Support Learning of the Concept of the Derivative

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Abstract : One of the main obstacles in Mexico's engineering programs is math comprehension, especially in the Derivative concept. Due to this, we present a study case that relates Mobile Computing and Classroom Learning in the "Escuela Superior de Cómputo", based on the Educational model of the Instituto Politécnico Nacional (competence based work and problem solutions) in which we propose apps and activities to teach the concept of the Derivative. M- Learning is emphasized as one of its lines, as the objective is the use of mobile devices running an app that uses its components such as sensors, screen, camera and processing power in classroom work. In this paper, we employed Augmented Reality (ARRoC), based on the good results this technology has had in the field of learning. This proposal was developed using a qualitative research methodology supported by quantitative research. The methodological instruments used on this proposal are: observation, questionnaires, interviews and evaluations. We obtained positive results with a 40% increase using M-Learning, from the 20% increase using traditional means.

Keywords : augmented reality, classroom learning, educational research, mobile computing

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