# Research and Development of Methodology, Tools, Techniques and Methods to Analyze and Design Interface, Media, Pedagogy for Educational Topics to be Delivered via Mobile Technology

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**Abstract :** Mobile devices are becoming ever more widely available, with growing functionality, and they are increasingly used as enabling technology to give students access to educational material anytime and anywhere. However, the design of educational material's user interfaces for mobile devices is beset by many unresolved research problems such as those arising from constraints associated with mobile devices or from issues linked to effective learning. The proposed research aims to produce: (i) a method framework for the design and evaluation of educational material's interfaces to be delivered on mobile devices, in multimedia form based on Human Computer Interaction strategies; and (ii) a software tool implemented as a fast-track alternative to use the method framework in full. The investigation will combine qualitative and quantitative methods, including interviews and questionnaires for data collection and three case studies for validating the method framework. The method framework is a framework to enable an educational designer to effectively and efficiently create educational multimedia interfaces to be used on mobile devices by following a particular methodology that contains practical and usable tools and techniques. It is a method framework that accepts any educational material in its final lesson plan and deals with this plan as a static element, it will not suggest any changes in any information given in the lesson plan but it will help the instructor to design his final lesson plan in a multimedia format to be presented in mobile devices.
**Keywords :** mobile learning, M-Learn, HCI, educational multimedia, interface design