

## A Design-Based Approach to Developing a Mobile Learning System

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**Abstract :** This paper presents technologically innovative and scalable mobile learning solution within the SCOLLAm project (&ldquo;Opening up education through Seamless and COLLaborative mobile learning on tablet computers&rdquo;). The main research method applied during the development of the SCOLLAm mobile learning system is design-based research. It assumes iterative refinement of the system guided by collaboration between researches and practitioners. Following the identification of requirements, a multiplatform mobile learning system <em>SCOLLAm [in]Form </em>was developed. Several experiments were designed and conducted in the first and second grade of elementary school. <em>SCOLLAm [in]Form system </em>was used to design learning activities for math classes during which students practice calculation. System refinements were based on experience and interaction data gathered during class observations. In addition to implemented improvements, the data were used to outline possible improvements and deficiencies of the system that should be addressed in the next phase of the <em>SCOLLAm [in]Form</em> development.

**Keywords :** adaptation, collaborative learning, educational technology, mobile learning, tablet computers

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