Motivation and problem statement

State-of-the-art solutions are
• Mostly interrogator-responder based
• Repetitive
• Not exciting
• Not available for smartphones

Build a next-generation mobile learning environment based on Google Android
• Mobile operating system released in 2008
• Constantly increasing number of devices
• Java runtime compatible with version 1.6
• Sophisticated SDK for third party applications

Approach

Interactive e-learning for mobile devices
• Allow the execution of interesting, exciting e-learning courses
• Take advantage of modern hardware features such as cameras
• Use different input techniques
• Collectively form a variable and interesting learning experience

Integration of e-learning with social networks
• Users can publish their learning results on social networks
• Learners are encouraged to discuss content with other students
• Motivation through competition between connected students

Methodology and results

A platform for course suppliers
• Exercises use plugins to present content
• Courses are encoded in XML

Research work
concerning didactical topics and a comparison of existing e-learning solutions

Survey among potential users
questioning usage of mobile phones and experience with e-learning environments

A framework for developers of e-learning solutions

Server
stores courses and plugins and provides them for download by
requests individual results from and may publish them through social networks

Application prototype

A prototype for evaluating how interactive e-learning can enhance the learning progress

Case study with test users
using a sample first-aid course, the SOMA prototype and three sample plugins