Work in Progress - A Mobile Performance Support System for Vocational Education and Training

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Abstract - Mobile devices are popular and well used by many people within our target groups, but not for learning. With the current rate of development mobile devices will have the capability of delivering high quality, multi-media content at affordable prices within next years. Performance centered approach has been proven to be more effective than the traditional lecture-practice-test (expository inductive) in training higher order skills, for preparing learners for self-learning, improving, adapting for changing jobs. This project applies performance-centered approach in mobile learning management system for educational and training purposes. Students receive a set of learning resources; description of adaptive scenarios; performance centered assessment methods and criteria for evaluation and experts’ advices. Evaluation plan/strategy and the measurement instruments are aimed at measuring the effect of the project on knowledge, skills and attitudes of students and trainees.

Index Terms – mobile learning, performance-centered learning, self-directed learning, vocational education.

INTRODUCTION

Students, trainees and trainers, we are all becoming more mobile - over half of all employees now spend up to half of their time in mobility. And there is quite a bit of evidence to show that people would like to make more use of this time for learning purposes.

Mobile devices are always available and can be used for a variety of learning functionality - providing access to content (both informational and instructional) and for communication and collaboration purposes. They can be used for formal or informal learning purposes as well as for performance support [1]-[2], i.e. for delivering information and support just-in-time and in context.

OBJECTIVES

The overall objective of the project is designing, developing, evaluating and implementing a Mobile Performance-centred Self-directed System for Education and Training (mPSS) in engineering education. To this objective, the project will work toward achieving the following specific objectives:

3. Implementing the mPSS in real educational and training settings.
4. Evaluating usability, utility and effectiveness of the mPSS.

DESCRIPTION

The project presents m-learning as a form of performance support system for educational and training purposes. The advantages for trainees are derived from providing learners with a job aid in the context of their work:

• Puts training and performance support where the actual work takes place.
• Allows new skills or knowledge to be immediately applied.
• Enables training when it is needed.
• Allows use of rich media when appropriate.

The advantages for students from vocational education institutions:
Students will have more flexibility and choice in where and when they learn outside of the wired (or un-wired) classroom.

Students will use the technology in their study that would enhance their readiness for tomorrow’s workplace where employers want graduates who know how to use technology for learning and working.

Teachers/trainers will be involved in mPSS development process from the preliminary stage to the review process as the main part of the review team. They will be involved in course materials development and integration in mPSS. They will be involved in the pilot and they are the main users of the results, conclusions and discussions in mPSS report from data analysis.

Students and trainees are the main actors in the pilot, during two semesters, at three universities. In the needs analysis phase, in addition to the interviews, some surveys and cards sorting methods are carried out as well some advanced techniques such as experts’ group multidimensional scaling and cognitive mapping. The usability and utility of mPSS will be tested by small group of experts with methods such as walk-through the tool, observations, individual interviews, and focus group discussion. Materials will be tested for usability, utility and effectiveness.

CONCLUSIONS

The innovative performance-centered approach has been developed, tested and implemented in a number of European universities, high schools, vocational training institution, SMEs, within four pilot projects. Our partnership experience returned strong positive results - performance centered approach has been proven to be more effective than the traditional lecture-practice-test (expository inductive) in training higher order skills, for preparing learners for self-learning, improving, adapting for changing jobs.

This project seeks to build on previous work in the field using performance-centered approach in different educational and training contexts, and mobile learning experience in Europe, enhance the field of performance-centered education and training by the deployment of state of the art mobile technologies.

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REFERENCES


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