Learning Managements System as a Basis for Virtual Campus Project

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Abstract— **Learning management system has an important role in web-based education. Mediamaisteri Group is an expert company in web-based solutions for e-learning and provides the platform for EVICAB (European Virtual Campus for Biomedical Engineering) project. In the project the openness and free availability has been the fundamental ideas since the beginning. Moodle learning management system supports the idea. Moodle is an open source platform. Leaning management system has been modified for providing the needed tools for virtual campus project.**

Keywords— **Learning management system, ICT, Moodle, Virtual learning environment**

I. INTRODUCTION

Learning managements system (LMS) has an important role in web-based learning and especially in virtual campus projects. Activities and modules provided by the LMS can be chosen so that it supports the learning process. European Virtual Campus for Biomedical Engineering – project the driving idea has been open access, open content and free of charge utilization of all the material in the system. Based on the idea the open source Moodle platform was chosen.[4] Moodle platform has been used as a basis for the courses and all education. In addition to this the platform has provided beneficial tool for project management and communication between partners. In this report some aspect concerning the usability of such learning management system in virtual education and in project management will been discussed.

II. WEB-BASED MANAGEMENT

A. Course Management

The benefit of the open source platform in the EVICAB project has been the possibility to modify the platform based on the needs of the learning process and content. The education in EVICAB is based on the totally distant education, and combination of contact teaching and virtual lessons. The learning process has several aspects which have to be supported when there is no direct contact with the teacher. The first problem is to provide easy access and appealing environment for the students to study. The layout and color schemes have been designed so that the usability of the platform is as easy as possible. The main focus of the student has to be in the content and not in the applicability for ensuring successful learning experience. This can be achieved by careful design of the platform.

Second issue is to provide inspiring and interesting lecture material. In this context the applicability is once again the key issue. The content of the lectures have to be easily accessible in order to let the student to focus to the content and not on the applicability. The content providers and teachers are advised to use media that are not based on any particular format and can be opened in a web-browser. For instance in video lecture production the Flash format is supported by the learning management system by providing a Flash module. Other, text based material, should be implemented to tools provided by the platform if possible, to ensure the functionality of the resource.

Tutoring and communication with fellow students are also supported by the platform. Internal message system and e-mail lists are used for non-synchronous communication. Chat, provided by the platform, can be used for synchronous communication. Very popular communication channel in EVICAB has been the discussion forums. Forums have been opened on the course pages for various topics. Students may add their comments and questions related to the given topics.[2]

LMS provides various tools for teacher to create different activities for the students. These activities support the exercises, assignments, quizzes and other tasks given for the student during the course.

Moodle has built-in student administration and enrolment system, which have been used in EVICAB for keeping the record on the visitors, students, teachers and other personnel. [2]

B. Project Management

Learning management system has not only been used for supporting the web-based education but has been used in EVICAB project management. Various tools such as communication tools have been beneficial for the project. Several sites have been created to support the project work and work packages. Project files can be shared and modified in

cooperation between different institutes by using the tools provided in the platform. For creating all the fore-mentioned tools without learning management system the project would not be possible. The role of custom made platform for the education has been very important in terms of the whole project.

The approach in the project is that "The system will guarantee a sustainable learning environment and content, of which development is based on continuous dynamic peer and self evaluation and effective exploitation of information and computer technology".[1] For this approach the Moodle platform was considered as the best option. Open source and free software supported the idea of the EVICAB project. Continuous development world wide of the platform ensures the dynamically evolving and up-to-date system. It is important to have dynamical and developing management system for dynamical virtual campus such as EVICAB.

III. CONCLUSIONS

Learning management system is a key factor in web-based education. In the EVICAB project the Moodle platform has been successfully used as an educational tool but also as a project management tool. The selected platform for educational purposes may be further discussed but the experiences in EVICAB project have been very positive.

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