

# ON-LINE LEARNING AT SCHOOL OF BUSINESS ADMINISTRATION KARVINA

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## **Abstract:**

The following paper summarises current situation in the field of on-line learning at the School of Business Administration in Karviná. Besides several basic terms in the initial part of the contribution, the authors primarily deal with the reasons that lead to broader e-learning implementation into teaching at the School of Business Administration in Karviná, and with the technical aspects of implementation of the project of electronic support for learning in the conditions of School of Business Administration. It also provides a brief outline of further development in the field of e-learning.

## **Key words:**

E-learning, LMS, CMS Moodle, School Information System.

## **1 INTRODUCTION**

E-learning can be described as a modern form of use of new multimedia technologies and the Internet to improve quality of learning by means of simplification of the access to sources and services, as well as support of remote information exchange and cooperation.

On-line learning is a solution for future, however, the near future, and it became a natural part of school education and education in general in many countries. E-learning can help to improve effectiveness of learning, secured information transfer and it provides users comprehensive possibilities in learning management and organization in the institution that chooses this as one of the teaching methods.

Knowledge became new property globally respected. In the world where the access to information represents a key to keeping competent the institution (school) relies on its employees (students), who gradually increase their qualifications and educate continuously during the whole life.

## 2 ON-LINE LEARNING

### 2.1 E-learning at SBA

What can we imagine as e-learning in connection with our institution?

There is a situation, even in our conditions, where it is difficult to organise and assure “face to face” learning effectively in particular time. This situation becomes real e.g. in case of “combined form of study”, where students attend school for one week in one term. They have to take in as much learning matter as possible in this short period, and then a long period follows, when we hope that students revise and practise the matter presented, they write down notes and questions, which they discuss with a teacher at the next visit to school.

This form of study causes huge problems to both students and teachers, and makes great demands for their time and a strong will. Students are often employed when studying combining form of study and they have to ask for holiday when attending school. They spend in the intensive evening classes the whole week.

This system is not perfect, particularly in the situations when **continuous** communication between a teacher and a student is important. Learning materials for this form of study must be also clear, unambiguous, containing all substantial (but brief) information in order students do not have to often ask about every trivial issue.

E-learning management systems (Learning Management Systems = **LMS**) can be the solution to the form of study mentioned above. There is a number of these systems, some of them are elaborate, complex, relatively simple and expensive, or access-free.

### 2.2 LMS selection

When deciding on LMS at SBA in Karviná we had to consider the following aspects:

1. price.
2. possibility of modification.
3. technical support.
4. user-friendliness.
5. possibility of connection to the school internal information system.

### 2.3 Moodle

The criteria mentioned above are mainly based on administrators’ attitudes, however, how do the other parties participating, students and teachers, look at the issue?

We can briefly summarise that e-learning should be an elaborate system that enables teachers and students finish any course taught by means of a computer and the Internet.

Students should be provided with the following possibilities:

- look through study materials
- write questions to teachers
- complete tests
- send tasks in electronic form, etc.

Teachers should be able to carry out these operations minimum in the system:

- create electronic courses, insert them into the system
- enrol students in courses

- create and assign tests, tasks
- communicate with students by e-mail or chat (on-line), etc.

All these qualities and a lot more are provided by CMS Moodle, which was selected to manage on-line learning at SBA in Karviná.

Moodle - CMS (Course Management System) - is a software package, created to simplify on-line courses creation and administration for a teacher. Similar e-learning systems are sometimes called “Learning Management Systems” (LMS) or “Virtual Learning Environments” (VLE) in English. One of the main advantages of Moodle is a strong background in constructive pedagogy.

Students and teachers are required to have an active and constructive attitude to learning. Capability of independent work, creativity and also a responsible attitude are essential requirements for the type of learning mentioned above.

## 2.4 E-learning specifications at SBA Karviná

E-learning currently (June 2004) represents a hatched chicken in the conditions of SBA in Karviná, which is just finding its feet and is getting accustomed to the environs as well as the environs is getting accustomed to it.

E-learning system at SBA Karviná consists of a few fundamental parts:

- **CMS Moodle** - simply said it is represented by web pages for users, which they can display by means of web browser (e.g. Internet Explorer). They can carry out activities that were specified in the previous chapter, after logging in, on these pages.
- **Toolbook, HTML, Flash and others** - are various developmental environments, which enable you e-learning courses creation. This means courses contents, mainly learning texts (lectures) enriched by a lot of pictures, animations, supplemented by sound or videos.
- **School information system Athos** - is a computer system which enables students to enrol on exams, courses, etc. There is also teaching official work linked with teaching. What is crucial is its connection with LMS Moodle, which is being modified currently.
- Specialised **e-learning department**, formed at the Department of Information Technology for the present, but being built to serve the whole faculty, or university.

The following activities are within authority of the E-learning Department at the Department of Information Technology:

- assistance to teachers at e-learning creation (in the environment Toolbook, Flash, HTML pages),
- technical support to LMS Moodle users (students and teachers),
- LMS Moodle administration.

## 2.5 School information system Athos

Since the 1990s we have been developing the faculty information system at SBA Karviná, which simplified official work connected with studies and teaching in general. Every new

student or employee is enrolled in the system and it records various activities connected with studies.

Students enrol to the year, courses and for exams in particular subjects by means of this system, etc.

Teachers display their schedule of lectures and exercises here, they can write out a list of students enrolled in particular courses. IS Athos is used by teachers for offering exam dates. There are students' results (achievement) in the system. There is also personal information about students and teachers including their photographs.

## **2.6 Moodle and Athos systems Interconnection**

The interconnection of Athos and Moodle systems appears suitable because of undesired doubling of records in databases.

As IS Athos is the school's own system, created especially for it, and LMS Moodle is originally an Australian project, which gradually proliferated into the whole world, it is necessary to carry out interconnection of both the systems sufficiently in such a way that the substantial information automatically transfers from the former system to the latter.

a great advantage of the Moodle system is the fact that it is OpenSource project. In practice this means that source codes of Moodle are available free and every capable programmer working in the language PHP, which is used for Moodle, can modify the system according to his/her needs.

**The main aim** of e-learning department at SBA in future will be primarily creation of mutual interconnection between IS Athos and LMS Moodle in such a way that this information can be transferred from Athos into Moodle:

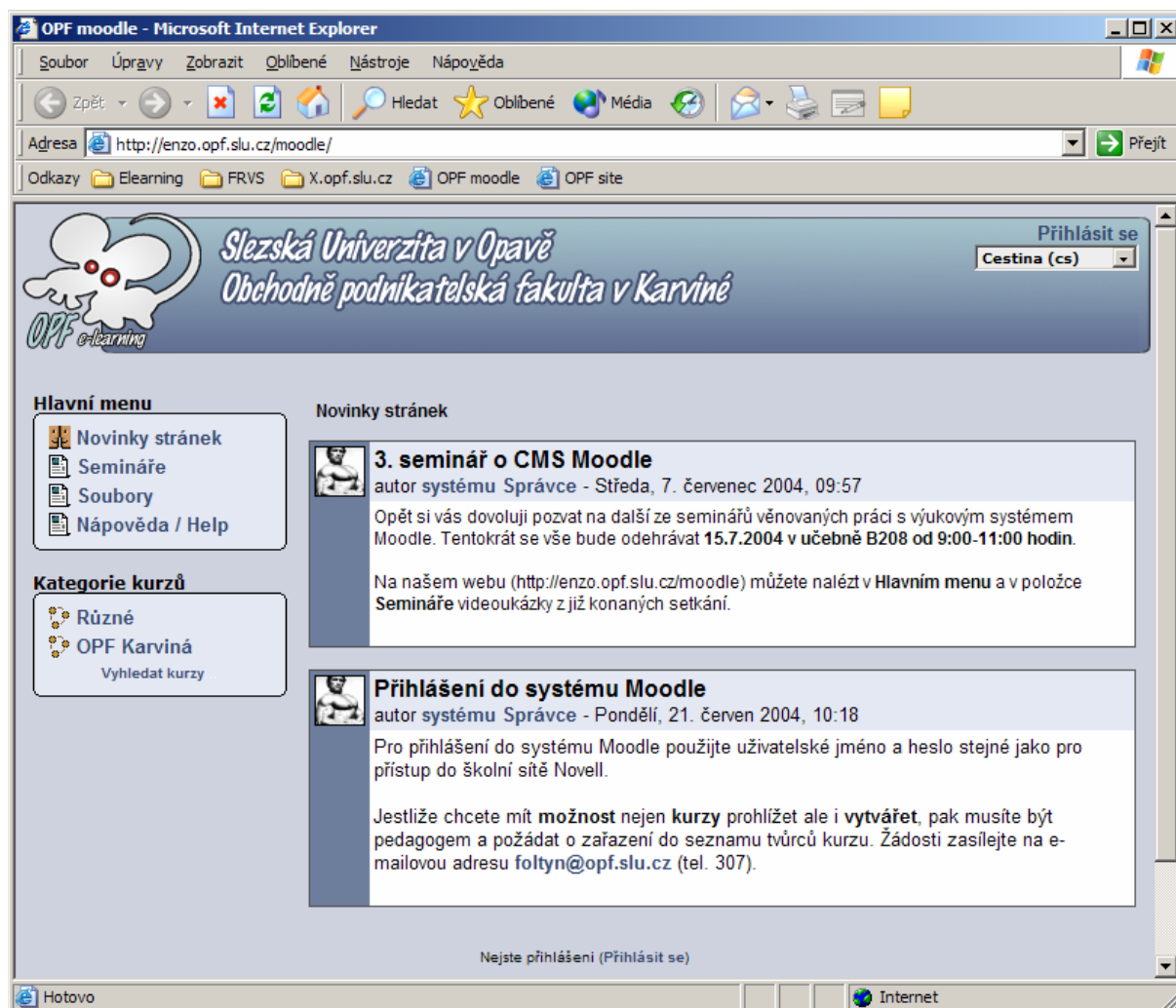
- student's or teacher's name and surname
- a photograph of the student or the teacher
- identification of courses registered by the student
- identification of courses taught by the teacher.

This information can be transferred from Moodle to Athos:

- identification of finished courses,
- identification of tests taken,
- point results achieved in tests, or test assessment,
- assessment of the tasks assigned,
- total assessment of the student in the course.

Further data essential for both the systems can appear in the course of the work, however, the list mentioned above represents the substantial part of data interaction between the information system Athos and CMS Moodle.

Picture 1 - an external view of Moodle system, which could be also modified and e.g. match in colours with the official web sites of the faculty.



Picture 1

## 2.7 Czech instruction manual to CMS Moodle

There is no Czech manual to Moodle system describing work with CMS. Therefore we have decided to create help by ourselves particularly for users of our faculty Moodle system. This help is, however, available to other web visitors (<http://enzo.opf.slu.cz/moodle>). After clicking the item **Main menu** → **Help**, Czech help to CMS Moodle appears, this involves brief instructions supplemented with a lot of pictures and also a few flash animations by way of illustration.

As Moodle system is developing dynamically, also our manual has to be developed and modified dynamically. The fundamentals of work in Moodle system described in the manual are virtually unchangeable so that the manual can serve well in case it does not describe an up-to-date version of Moodle.

## 2.8 Teaching seminars for tutors

One of the main contents of the E-learning Department at SBA is training future tutors who will manage courses in CMS Moodle. As we start from scratch, it is necessary to work with tutors by visual demonstration, and take their occupation into account. Therefore all the

seminars are recorded with a video camera, bought particularly for e-learning purposes, and after processing the video recording, it is placed back in our web.

Item **Main menu** → **Seminars**.

## 2.9 Interconnection of Moodle and Novell

Currently learning system Moodle is configured and connected with school server Novell Netware, so that students, teachers and other employees can log in into the system with their password that they use for access to school net LAN. This assures basic interconnection of LMS and school information system. At the same time this can prevent people who are not students or employees from logging in.

Authentication of the login name or password to the Moodle system is carried out by **LDAP** server, where we can find information for access to Novell. This possibility of authentication is directly built into Moodle system, so its coming into operation was just a question of the right LMS configuration.

## 2.10 Tools applied within e-learning framework

School information system Athos is operated on relation database Interbase 6.0 and operating system Debian Linux. Moodle system using MySQL database was chosen for LMS, running on server under operating system Debian Linux. Interfaces between both the systems will be provided by software built on PHP 4 script language technology.

## CONCLUSION

The paper should continue the paper from the last year, Moodle system is, however, in operation and tested in real operational conditions. We have simultaneously started fulfilment of learning courses and creation of e-learning courses. In future we plan gradual training of teachers in handling and managing LMS Moodle and their preparation for creation of e-learning courses. Konečnou podobu textu příspěvku zašlete ve formátu camera-ready i v elektronické formě do 31. května 2004 na adresu:

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