

# ANALYSIS OF LMS SYSTEMS IN THE EDUCATIONAL PROCESS

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**Abstract:** This article discusses LMS systems used in education and during the learning process, their existing technological processes, and their remote management capabilities. In particular, it provides an understanding of the advantages and disadvantages of using LMS (learning management systems).

**Keywords:** The New Media Consortium, MOOC, Forums, Materials, Messenger, Chat, Exercises, Group work, Student tracking, IMS, SCORM, MySQL or PostgreSQL, Apache or IIS, GNU Public License, Windows, Linux, Mac OS X, Novwill Netware, LMS

## Introduction

Such urgent tasks include the development of fundamental mechanisms for the integration of education with science and production, its implementation in practice, individualization of learning, independent learning, development and mastering of technologies and tools of the distance education system, and acceleration of student learning using e-learning based on new pedagogical and information technologies. It is necessary to make certain changes to the principles of organizing the educational process on the basis of e-learning, including improving the presentation of educational materials. In this regard, the introduction and use of modern information technologies in the educational process is the most effective way to achieve the goal. The main tasks of introducing electronic information and educational technologies into the education system, critically assessing and improving the state of the material and technical base of educational institutions are as follows:

- creating the necessary material and technical base for implementing e-learning in the educational process;
- creation and application of educational technologies for e-learning for the educational process;
- to develop students' knowledge and skills in the field of modern electronic educational technologies;
- Increasing the efficiency of the education and training process through the introduction of e-learning.

Teaching using personal mobile devices - in this type of teaching, students complete subject-related tasks using their personal mobile devices during class.

Adaptive learning technologies are a type of education in which a learning trajectory is formed based on an individual approach to each student, based on the concept of person-centered education.

Massive Open Online Courses - Since 2001, all courses taught at the university have been made available to the public for free. As a result, any student who wants to learn from any point in the world has the opportunity to study courses from prestigious universities and colleges around the world via the Internet.

Blended learning is a type of education that includes part of the traditional classroom learning and the rest of the learning in an online environment.



Among the above innovative types of education, we would like to focus on massively open online courses.

Massive open online courses are called Massive open online courses, MOOC, from the English language.

The reason why they are called massive online open courses is because they are courses that have not 100 or 1,000, but more than 100,000 listeners. An online open course is a course that is posted publicly on the Internet and is open to anyone who wants to enroll in it. Examples of MOOCs include courses created by Stanford, Harvard, Massachusetts Institute of Technology, Johns Hopkins, Melbourne, and Toronto universities, such as edX, Coursera, Udemy, and Khan Academy.

These courses include 10-20 minute lessons on physics, mathematics, foreign languages, biology, chemistry, and other subjects. These courses are being translated into languages other than English.

We offer the following recommendations for the effective use of LLCs:

It is considered appropriate to organize special expert groups by the department to study the courses available at the OOOK and, based on this, recommend the courses to students for independent study based on the decision of the department.

Using the courses provided by OOOK, professors and teachers can use them to organize their English-language courses based on courses at the most advanced foreign universities.

Below we present information on the names of free and open source LMS software packages that allow you to organize the distance learning process and their main capabilities.

A tutor is an open source LMS system that manages the learning process. The system includes the following training modules: Forums, Materials, Messenger, Chat, Exercises, Group work, Student tracking and other modules. Since the system supports several standards,

Students with physical disabilities can access educational resources through the system via the internet. In particular, visually impaired students can listen to the words in the educational content in audio format by connecting to the system through special web applications.

The system's personal website contains more than 20 different modules:

Claroline is a free and open source web-based software package that enables the organization of distance learning courses. The system was developed at the Institute of Pedagogy and Multimedia of the Catholic University of Louvain (Belgium). The software package is available under the GNU (General Public License), which means it can be used for free. The system requires PHP/MySQL/Apache to be installed on the server. The system was tested on EasyPHP installed on Windows 98 and NT, Mandrake Linux8.1. The Claroline software package is used in more than 80 countries and has been translated into more than 30 languages (application interface) [6]. The system can accommodate more than 2000 students at a time. The Claroline software complex meets all the requirements for organizing a distance learning process, in particular, it allows the administrator to register users, assign user roles in the system (subject teacher, student and guest), create courses, edit their content, control student knowledge, conduct monitoring, analyze control results, use and manage communication elements between users within the system (chat, forum, short message sending modules). Like other LMSs, the system has the following training modules: Forums, Materials, Messenger, Chat, Exercises, Group work, Student tracking, Calendar, Wiki and other modules. Like other LMSs, it supports IMS and SCORM standards.

Dokeos is a new software package that was developed from Claroline version 1.4.2. Dokeos is the product of the work of several members of the original working group that developed the Claroline platform, who aimed to adapt it to employees of state enterprises, unlike Claroline, which was created for educational institutions.

LAMS was created in 2003 based on the IMS Learning Design standard. Written in the JAVA programming language. Cross-platform, the program interface is translated into 32 languages, and is



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available for free under the GPLv2 license. The LAMS software complex differs from other LMS in that it allows teachers to use visual tools to structure the learning process, which provide a visual representation of the sequence of learning resources (electronic learning resources, chat, questionnaires, assignments) and types of control in the learning process. In this case, the teacher can easily change these sequences using the "sinkhole".

LAMS is a revolutionary new application due to its ability to visually modify and create educational content in an electronic learning resource. It provides the teacher with an intuitive and understandable interface for creating educational content. This interface includes a variety of individual tasks, frontal tasks in group teaching.

Moodle is a powerful pedagogical software package for organizing online learning and classes in a Web environment. The system includes the following learning modules: Forums, Materials, Messenger, Chat, Exercises, Group work, Student tracking and many more. Like other LMSs, it supports IMS, SCORM and other standards. Analysis shows that the software package with the most additional plugins and modules compared to other LMS systems is Moodle.

Currently, distance learning processes are being organized in educational institutions in many countries of the world using the Moodle software package [5].

Moodle is a virtual learning environment used in many educational institutions in Uzbekistan. In particular, it is widely used in the virtual learning environment of the Tashkent University of Information Technologies - etuit.uz, the "Open Education and Information Center" of the National University of Uzbekistan, the "Center for the Development of Multimedia General Educational Programs" under the Ministry of Public Education - <http://moodle.uzedu.uz/>, the Tashkent Turin Polytechnic University - moodle.polito.uz and other institutions.

The open source Moodle software package is a special Web-oriented system for managing the educational process, designed for use on the Internet. Open source software was used to create the system. To use it, a server with a database management program (MySQL or PostgreSQL), a PHP processor, and a Web service program (Apache or IIS) is required. As an operating system, you can use any of the popular systems (Windows, Linux, Mac OS X, Novwll Netware). Moodle is a successfully used and continuously improved project.

Its founder and author is Martin Dougiamas from Western Australia. He has been involved in the use of information technologies in education for more than 23 years and defended his thesis on the creation of an open-source software system that allows you to create distance courses on the Internet. Martin Dougiamas began creating the Moodle system in 1999. The first version of the system was launched in August 2002. Since then, the project has been expanding and developing.

Moodle is distributed as Open Source software under the GNU Public License. Moodle belongs to the Learning Management System class and is used to develop, manage and distribute online learning materials that allow multiple users to share. These learning materials are created in a visual learning environment, preserving the learning sequence. Currently, distance learning is organized based on the Moodle system in leading universities in 193 countries of the world.

The program has been translated into 75 languages, including Russian and Uzbek. The number of Russian-language websites of educational institutions using Moodle software on the Internet exceeds 250.

The Moodle distance learning system (DLS) is designed according to social constructivist pedagogy, which combines teamwork and an active learning environment.

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