SC
scientific conferences

VIII international scientific conference
Stockholm. Sweden
03-04.04.2024

Scientific conferences

THEORETICAL AND PRACTICAL PERSPECTIVES OF MODERN SCIENCE

Proceedings of the VIII International Scientific and Practical Conference

03-04 April 2024

STOCKHOLM. SWEDEN

2024

UDC 001.1

BBC 1

VIII International Scientific and Practical Conference «Theoretical and practical perspectives of modern science», April 03-04, 2024, Stockholm. Sweden. 133 p.

ISBN 978-91-65423-62-6

DOI https://doi.org/10.5281/zenodo.10950374

Publisher: «SC. Scientific conferences»

Main organization: artmedia24

Editor: Hans Muller

Layout: Ellen Schwimmer

The sample of the citation for publication is Sevda Aghayeva Aydin kizi, Aynur Rzayeva Elman kizi FAMOUS AZERBAİJAN WOMEN VIII International Scientific and Practical Conference «Theoretical and practical perspectives of modern science», April 03-04, 2024, Stockholm. Sweden. Pp.19-22, URL: https://sconferences.com

Contact information

Website: https://sconferences.com

E-mail: info@sconferences.com

Philological sciences

Philosophical sciences

Political sciences

Sociological sciences

Technical sciences

ANALYSIS OF EDUCATIONAL MANAGEMENT SYSTEMS

Mamatov Narzullo
Doctor of Technical Sciences, Professor, Head of the Department of Digital Technologies and Artificial Intelligence, National Research University Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Tashkent, Uzbekistan
Ibrokhimov Sanjar
Assistant, Department of Digital Technologies and Artificial Intelligence, National Research University Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Tashkent, Uzbekistan
Samijonov Abdurashid
Assistant, Department of Digital Technologies and Artificial Intelligence,National Research University Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Tashkent, Uzbekistan
Zarat Soumaya
Assistant, Department of Digital Technologies and Artificial Intelligence,National Research University Tashkent Institute of Irrigation and Agricultural Mechanization Engineers, Tashkent, Uzbekistan

Abstract

Despite the fact that learning management systems(LMS) were originally developed for educational institutions, today the demand for them is increasing day by day, and many organizations have begun to widely use such systems in order to retrain their employees. This article briefly analyzes the existing education management systems and describes the features of widely used systems. In addition, the general structure of education management systems is mentioned in it. Based on the results of the analysis and comparison of education management systems, a relatively optimal tool for creating an electronically controlled course is proposed.

Keywords: *learning management system, course, competition, higher education system, HTTP, API.*

Introduction

In recent years, the level of use of e-learning in higher education institutions has been increasing. This is largely due to the coronavirus pandemic that occurred several years ago. It is worth noting that a new stage of education has emerged as a result of the pandemic. In this case, not only the requests and requirements of the student's educational environment but also new ways of organizing the relationship between the teacher and the student on the basis of effective and understandable tools that affect education. Interaction between teacher-student and students takes place in the digital learning environment [1]. The digital learning environment allows for education along with professional activities. In addition, digital education is a convenient tool for obtaining higher education, regardless of the student's financial situation and residence address.

Electronic education not only increases the position of the teacher, but also imposes several additional tasks on him. In particular, in new conditions, it is necessary for the teacher to manage the educational process, take into account the interests of students, in particular, to model the educational process in certain conditions, that is, to determine the laws in it, to express it in the form of mathematical models [2]. In addition, the teacher is required to predict the process. It is also necessary for him to develop educational courses on the basis of predictions and improve his qualifications based on the development of education. In this regard, it is urgent to develop educational tools according to the requirements of the time. This requires an optimal education management system. The main goal of the learning management system (LMS) is to manage all the specific features of the educational process and control the process. Many people think that LMS is unique to distance learning. However, it is possible to organize a voluntary form of education on the basis of modern LMS [3]. Including remote, daytime, external, individual and group view. It is worth noting that LMS has the ability to organize various relationships between students and teachers [4].

Currently, LMS is considered as an optimal solution for organizing distance education, but within it there is an opportunity to independently choose the schedule and sequence of studying the material.

It is also possible to monitor each student's learning and identify their strengths and weaknesses [5].

LMSs are intended for use in schools, colleges, universities, and institutes, but since recent years, private companies have also widely used LMS. This is not surprising, because companies striving for development must work using modern technologies and tools and train their employees. Of course, they can also organize traditional offline training, but this may not always be economically correct. Therefore, when there is a need to retrain a large number of employees, organizations take distance education systems as the most optimal decision for the company [6].

Speech recognition technology in LMS enables the conversion of spoken speech into text, enabling users to interact with computers, devices and applications through speech. In doing so, recognition is done through speech signal processing algorithms [7-10], and as a result, by providing voice-controlled navigation and input options, LMS platforms ensure that all students, regardless of their physical abilities, can participate in activities.

Currently, there are 3 types of LMSs, i.e. cloud, box and open source types. Cloud platforms are systems installed on the servers of platform manufacturers. Boxed systems can be installed on their own servers or local computers. Open-source systems are programs that can be changed by programmers in accordance with the needs of the user [11,12].

Modern LMSs usually cover the following components [13]:

- *educational administration;*
- *user management (such as students, tutors, course authors and system administrators);*
- *testing and assessment of knowledge (such as creating reports on student's progress in the course and managing the learning of the content during the study of the course);*
- *course learning management;*
- *learning sequence management;*
- *educational content management, content delivery management;*
- *APIs (software interfaces) for interaction with external subsystems.*

The general structure of LMS is presented in Fig.1, in which 1 - basic information about LMS users; 2 - reports of educational achievements, and test planning; 3 - studying course achievements; Achievements of the current training course, module tests results for the 4th course modules; 5 - management of educational content; 6 - test results (for course modules); 7 - information about the sequence of study of course modules; 8 - choosing the subjects of the study course; 9 - content request; 10 - management of learning courses using API (based on third-party programs); 11 - managing content display for the reader; 12 - content collection; 13 - selected educational content; 14 - the results of content selection from the content repository; 15 - presentation of educational content to the student; 16 - Interaction of HTTP requests using the API.

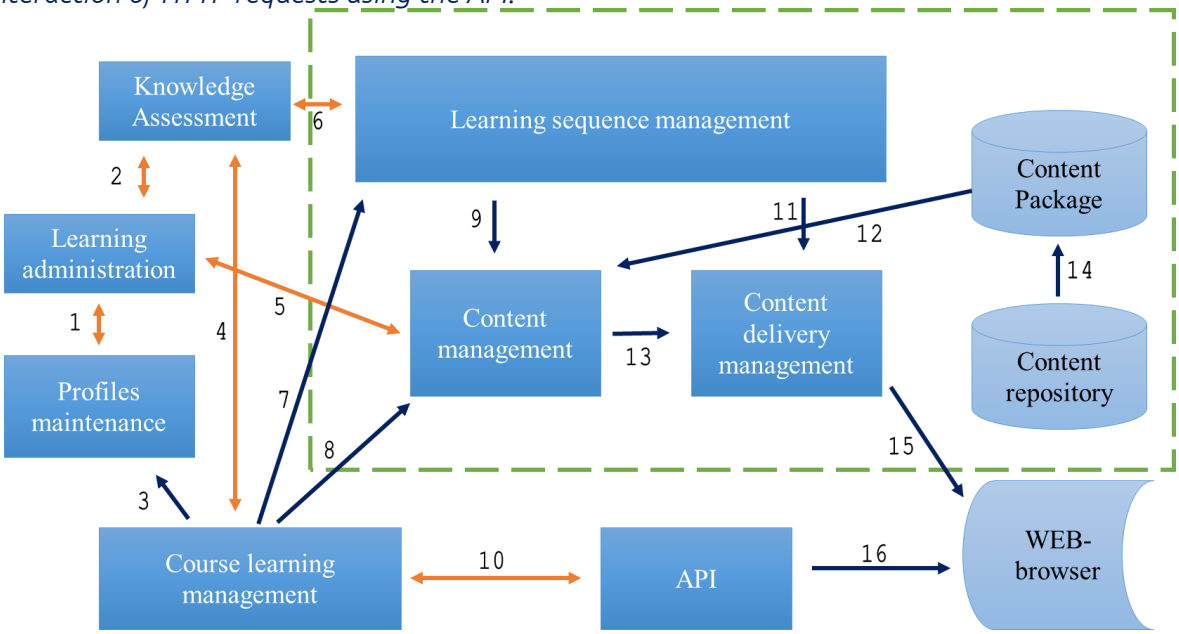

Fig.1. Modern Learning System Architecture

Developed LMSs in the world. *Currently, there are many types of LMSs. Rather than analyzing all existing LMSs, it is appropriate to study LMSs that are considered optimal and widely used by higher education institutions (HEIs) around the world, and a brief description of them is given below:*

1. iSpring Learn is a cloud-based LMS with a simple and intuitive interface. It was developed by the

iSpring company and is considered the most advanced tool for creating electronic courses in the world. Through it, distance courses can be started quickly and students can be tested. It supports all types of training materials, webinars and statistics. Ability to edit courses and learn directly from your smartphone. The lack of autonomous configuration, limited user types and non-availability of a boxed version are its main disadvantages [14].

2. Teachbase is a cloud-based system for e-learning that can be used to organize distance learning and sales of created courses without leaving employees. The ease of using the catalog of ready-made courses on the platform through a few short steps has caused many users to increase their interest. The Teachbase system supports the integration of payment systems with other systems. The high price of the platform is its main disadvantage [15].

3. AntiTrenigi is a distance learning platform with a user-friendly interface and many integrations. It has a playful approach, building and developing brands, as well as protection for downloading educational materials. Inflexible tariffs are the main drawback of the system.

4. eTutorium also belongs to the class of cloud systems, which includes cloud services such as the organization of distance learning with a test and survey designer, a built-in webinar platform and motivational tools. eTutorium is a very convenient tool for conducting webinars, meetings, training, and other forms of training. Its main disadvantage is that it does not support international standard packages for e-learning courses, that is, it does not have a wide integration package.

5. Mirapolis is a system designed mainly for large corporations and educational projects, which allows not only remote training of employees but also planning face-to-face events. Its main drawback is the slow implementation speed and the lack of a free trial version.

6. GetCourse is a platform for conducting seminars, training, courses, and face-to-face and online classes, all modules are fully interconnected, so you can import data into other services and it is not necessary to collect them separately for each one. High tariffs and complex interfaces prevent many users from using this system.

7. WebTutor is one of the first systems of distance education and automation of business processes, which can be changed according to changes in the interface of the educational portal and the specific characteristics of the company. A mobile app is also available for offline access. Its main disadvantages are low system speed and high cost.

8. Unicraft is an electronic system for training employees of small and medium-sized businesses, which is designed to be fast, simple, and convenient to use. The Unicraft system includes a course editor, and game approaches, and supports integration with other services. The main drawback of this system is the lack of discussion forums or blogs and the webinar window.

9. Motivity is a system with more than 20 modules for training, motivating, and adapting employees. There are separate applications for computers, tablets, and smartphones. Its main drawback is the lack of a free version and its lack of compatibility with open training and online sales.

10. Moodle is the most developed and widespread system of distance education, and now there are more than one million Moodle sites. It is a free platform with a wide range of options for editing the interface and developing new modules, and there is a large collection of plugins that help to expand the functionality of the system and change its design. Easily integrates with other platforms and can be deployed both in the cloud and on servers. The main disadvantage of this system is that it needs professional help for the organization using it.

Conclusion

Based on the above, it can be said that the listed systems are the most suitable open-source education management systems. Because in its implementation there is only a fee for the services of developers, and they can quickly and easily improve the operation of the program, add various functions or fix possible errors. The Moodle system is the most widespread LMS in the world, it has been translated into more than 100 languages and is used in more than 200 countries. In addition, it is widely used by large universities and private companies. Ideal for long-term projects, it can be edited to suit the client's goals and objectives. Therefore, Moodle is the most suitable tool for educational organizations, training centers and corporate training. Based on the results of the analysis and comparison with other LMSs, it can be proposed as a relatively optimal tool for creating an electronically controlled course.

References

1. Маматов, Н., & Иброхимов, С. (2023). Ta'lim jarayonini boshqarishda sun'iy intellektdan foydalanish. Информатика и инженерные технологии, 1(2), 105-107.

2. Rustam o'g'li, I. S. (2022). LUA DASTURLASH TEXNOLOGIYASIDA MATEMATIK FUNKSIYALAR

BILAN ISHLASH BANDIDA SHART APERATORLARI BILAN TANISHISH QISMINI O'RGANISH. Journal of new century innovations, 19(1), 31-40.

3. Solidjonovich, M. N., O'G'Li, I. S. R., O'Gli, F. V. O., & O'G'Li, S. A. N. (2023). SUN'IY INTELLEKT VOSITALARINI TA'LIMNI NAZORAT QILISH VA BAHOLASHDA QO 'LLASH. Al-Farg'oniy avlodlari, 1(4), 291-297.

4. Маматов, Н., Иброхимов, С., & Самижонов, А. (2024). ТАЛАБАНИНГ АКАДЕМИК ФАОЛИЯТИНИ МОНИТОРИНГ ҚИЛИШДА СУНЬИЙ ИНТЕЛЛЕКТНИНГ ЎРНИ. Евразийский журнал академических исследований, 4(3), 125-133.

5. Маматов, Н., & Иброхимов, С. (2023). Artificial intelligence in education: paving the way for a more effective learning experience. Информатика и инженерные технологии, 1(2), 107-109.

6. Костицына, Д. (2023, September 25). Плюсы и минусы системы MoodleTM. LMS-Service. https://lms-service.ru/stati/plyusy-i-minusy-sistemy-moodle/

7. Ниёзматова, Н., Маматов, Н., Самиджонов, А., & Самиджонов, Б. (2023). Nutqni avtomatik tanib olishning neyron tarmoqlari. Информатика и инженерные технологии, 1(2), 88-92.

8. Маматов, Н., & Джалелов, К. (2023). Nutqni tanib olishni ochiq manbali dasturlari tahlili. Информатика и инженерные технологии, 1(2), 110-113.

9. Mamatov, N. S., Babomuradov, O. J., & Dusanov, X. T. (2023). Shaxsni ovozi asosida identifikatsiyalash uchun ma'lumotlar bazasini shakllantirish. INTERNATIONAL JOURNAL OF THEORETICAL AND APPLIED ISSUES OF DIGITAL TECHNOLOGIES, 5(3), 25-31.

10. Niyozmatova, N. A., Mamatov, N. S., Tulyaganova, S. A., Samijonov, A. N., & Samijonov, B. N. (2023, June). Methods for determining speech activity of uzbek speech in recognition systems. In AIP Conference Proceedings (Vol. 2789, No. 1). AIP Publishing.

11. Булатова, Д. (2020, October 30). Обзор LMS: 10 лучших платформ для обучения. LMS-Service. https://lms-service.ru/stati/obzor-lms-10-luchshih-platform-dlya-obucheniya/

12. Ibrokhimov, S., Hui, K. L., Al-Absi, A. A., & Sain, M. (2019, February). Multi-factor authentication in cyber physical system: A state of art survey. In 2019 21st international conference on advanced communication technology (ICACT) (pp. 279-284). IEEE.

13. Kultsova, Marina & Anikin, Anton & Irina, Zhukova & Dvoryankin, Alexander. (2015). Ontology-Based Learning Content Management System in Programming Languages Domain. 10.1007/978-3-319-23766-4_61.

14. Cloud LMS for Corporate Training | iSpring Learn. (n.d.). https://www.ispringsolutions.com/ispring-learn

15. Teachbase. (n.d.). Платформа для обучения Teachbase. https://teachbase.ru/

ISBN

https://sconferences.com
info@sconferences.com