International Journal of Education, Social Science & Humanities.
Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-7| 2023 Published: |22-07-2023|

USAGE OF INTELLECTUAL SYSTEMS IN THE IMPROVEMENT OF THE MANAGEMENT SYSTEM OF EDUCATIONAL PROCESSES IN HIGHER EDUCATIONAL INSTITUTIONS

https://doi.org/10.5281/zenodo.8133449

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Annotation

This article focuses on examining the theory behind the utilization of intellectual systems for quality assurance in higher education institutions and its scientific and practical outcomes. It includes a review of scholarly theoretical perspectives and an examination of the literature concerning intelligent systems and Learning Management Systems (LMS). The article also investigates the application of intellectual systems in Uzbekistan's higher education system and explores the design and implementation of an intelligent educational management system through a comprehensive study and analysis.

Key words

intellectual information system, quality management process, LMS, e-learning, e-university

Introduction

To establish the key focus areas for the systematic overhaul of higher education in the Republic of Uzbekistan, efforts are being made to enhance the quality of education by elevating the training of highly skilled professionals with contemporary knowledge and strong moral and ethical values. Various steps and initiatives are being undertaken to advance educational technologies and modernize higher education, aiming to foster the development of the social sphere and economic sectors in line with these objectives. Presently, the higher education system is placing significant emphasis on incorporating intelligent learning environments into the instructional procedures. Consequently, there has been a growing concern about implementing information and communication technologies to manage the educational process within our country. The current situation reveals uncertainties in the specifications of information systems utilized for managing the educational process in higher education institutions. Intelligent information systems play a vital role in ensuring quality assurance within these

institutions. The purpose of implementing such systems is to automate processes related to quality, eliminating the need for unnecessary and redundant tasks. Moreover, these intelligent systems assist all stakeholders involved in the higher education system by facilitating task performance and monitoring.

One of the seven priorities in the development strategy of the new Uzbekistan for 2022-2026 is to increase the level of digitization of production and operational processes in the real sector of the economy and in the financial and banking sectors to 70% by the end of 2026, to increase the volume of the software industry by 5 times, and their export by 10 times.It was increased to 500 million US dollars.

Literature analysis and methodology

Exploring ways to enhance the management of the educational process in higher educational institutions and integrating electronic platforms into it stands as a primary objective during this period. Extensive research and investigations are being conducted in this domain to advance the methodology and mechanisms of educational process management, as well as to establish the theoretical and practical foundations of various types of automated information systems. Additionally, ongoing studies focus on the practical implementation of information systems, including their forms, operational methods, potential for further development, and the exploration of new applications. Notably, A.V. Ostroux's work on the conceptual underpinnings of intelligent information systems deserves recognition. Furthermore, the works of E.T. Mannopova, G.N. Okhunova, R. Alimov, B.A. Begalov, N.M. Makhmudov, Sh. Shodiyev, and other scholars from our country shed light on the interconnection between economic sectors and the educational system.

The approval of the Decree of the President of the Republic of Uzbekistan, dated October 08, 2019 No. UP-5847 “On the approval of the concept of the development of the system of higher education in the Republic of Uzbekistan until 2030” highlights various recommendations for implementation within educational institutions. These include developing effective public oversight mechanisms to ensure high-quality education, fostering collaboration with media outlets and civil society institutions in this regard. Additionally, as outlined in the 25th objective of the New Uzbekistan Development Strategy for 2022-2026, the digital economy is designated as a key sector, with efforts underway to expand its size by at least 2.5 times and further enhance digital infrastructure. Improving the quality of education necessitates a primary focus on the organization and enhancement of the educational process.

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To ensure the quality of higher education, several prerequisites need to be fulfilled, such as implementing contractual agreements, establishing effective procedures and systems for managing and enhancing educational quality, and addressing other relevant factors. The development of knowledge management systems represents a crucial domain within this context.

The learning management software, or LMS platform, should adhere to SCORM standards and include an autoproctoring system. The educational management system encompasses various components. The information resource component, available on the LMS platform, offers educational literature such as textbooks, monographs, scientific articles, and research findings. The management component facilitates system services, such as maintaining a directory and user registry, managing user access rights and personalized settings, logging user activities, authentication, and user administration. The attendance and learning accounting component enables tracking resource utilization, monitoring individual student progress, forming personalized study plans, and analyzing learning outcomes. The communication component facilitates interactive information exchange among users, including forums, chats, messaging, emails, and video conferences. Users can receive system notifications and provide feedback on courses and teaching staff through this component.

Emerging learning management systems (LMSs) are designed to offer remote and convenient learning experiences for students while simultaneously allowing teachers to focus solely on teaching. With numerous LMS options available, each boasting unique features and functionalities, several common components can be found in higher education LMSs. This include:

- Attendance tracking and digital list sheet for students
- Personalized registration control and monitoring
- Document management tools for uploading and managing course materials
- Web-based interfaces that provide access to course content from any device and location
- Calendars for posting and sharing schedules, deadlines, assignments, and tests
- Interactive features that enable communication and interaction, such as email, instant messaging, discussion forums, and video conferencing
- Assessment tools for checking knowledge retention

Information systems used in the educational process

Table 1

Informatio	Definition	Users

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Finland Academic Research Science Publishers
ISSN: 2945-4492 (online) | (SJIF) = 7.502 Impact factor
Volume-11| Issue-7| 2023 Published: |22-07-2023|

n System		
Blackboard Learn	This system helps students in online education. Teachers can assign assignments and receive student grades	Universities, colleges, schools
Canvas	This system helps to create curricula for online education, display all educational information, evaluate classroom performance and organize the performance of others. | |	Universities, colleges
Edmodo	This system helps students and teachers to share knowledge and staff can communicate with students.	Schools, secondary and higher educational institutions
Moodle	This system is used to organize key people for online learning, send questions to students, create information for students, upload assignments, and more.	Universities, schools, colleges
Khan Academy	This system is computer science, mathematics, documentary education and other programs. Video lessons, study materials and instructions are available	Secondary and higher educational institutions
Google Classroom	This system is integrated with Google Docs and Google Drive. Teachers can use it to send assignments to students, create classes, upload materials, and communicate with students.	Schools, universities
Reminder	This system helps students and teachers to send messages via SMS, email and call.	Schools
Udemy	This system is designed for buying, learning and sharing programs online.	General users

Discussion and results

Intelligent learning management systems support tools that respond to the needs of students, teachers, and learning content, and should appropriately reflect students' personalities and take into account their behaviors. It involves intelligent, effective involvement of the student in the learning process. In this respect, LMS offers a flexible and highly effective learning path for students, which is more meaningful than mass-produced learning models, and the free teaching and learning system is perfect for users. Studies show that 90% of students prefer to study in this system.

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The primary objective of educational institution management systems is to effectively handle educational operations within these institutions. Their functions are intended to fulfill the daily requirements of these institutions. Intelligent systems are designed to enhance the educational management level of these institutions, thereby ensuring a systematic, standardized, and intelligent approach to the educational process. The design of such management systems is based on five core principles:

1. Institutionalization of management: The principle of designing the educational process management system should be compatible with the educational management management system of the colleges. To ensure that the system is practical, relevant educational standards and systems should be taken as a benchmark.
2. Principle of System Openness and Commonality: The design of systems should be open in order to facilitate the sharing of information and data and the operation of users across platforms
3. Principle of accessibility: Since the majority of educational processes are straightforward to handle, the system's functionality should prioritize user-friendly and efficient access to facilitate management tasks.
4. Principle of effortless updating: Considering the complexity and diversity of information involved, it is crucial for the learning management system to have a streamlined process for updates and improvements.
5. Principle of security and dependability: Educational process management systems need to ensure a high level of security and stability to safeguard sensitive information and maintain reliable operations.

Summary

LMS systems are being introduced and improved in the educational process in the world's leading higher education institutions. By implementing LMS systems in HEIs, it is possible to increase the potential audience (number of students) of HEIs and attract foreign students to HEIs. Through LMS systems, it is possible to create, import/export training courses in cooperation with the world's leading educational institutions. In our Republic higher institutions are using these systems in their educational process and managing systems are being carried out to electronic systems step by step in order to increase effectiveness, to make easy the process and decrease documents in education system.

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