DEVELOPING A METHODOLOGICAL FRAMEWORK FOR INTEGRATED TECHNOLOGIES TO MONITOR STUDENTS' KNOWLEDGE

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ANNOTATION

This article discusses integrative educational technologies and suggests ways to improve the information-methodological support for monitoring student knowledge based on these technologies. The article focuses on the importance of educational technologies, particularly integrative educational technologies, in controlling and monitoring student knowledge.

Keywords: *educational technologies, integrative educational technologies, knowledge monitoring, information-methodological support.*

The concept of "Integration" may seem new in name, but it has always been an essential aspect of various fields, such as the universe, society, life, and production, to name a few. Integration is a vast concept that spans from the micro world to the macro world. It plays a crucial role in solving the environmental issues that our planet is facing today, and it can only be achieved through a better understanding of its essence and practical application. Many scientists believe that pedagogy and the integration process in education are vital components in solving these problems.

Integration in education is both theoretically and practically important and has been recognized for a long time. The word "integration" is derived from the Latin word "tegragrac" which means reconstruction, restoration, and filling ("integra" - complete, whole, whole). In the "Russian Uzbek dictionary" (1983), Koshchanov M.K., Akobirov S.T., Adkhamova N.A and others define "integration" as developing in a connected state and "integrirovat" as combining into a whole to make a complete entity.

In light of the comprehensive reforms implemented in our country, which aim to develop the education sector, strengthen the material and technical base of educational institutions, provide educational institutions with highly qualified specialists, effectively apply international experiences in the teaching process, and support the natural and intellectual development of students, the use of integrative educational technologies has increased in the development of abilities.

The integrative determination involves synthesizing information to arrive at the only correct conclusion. This is based on the interdependence of all the small parts that make up the information, and their integrity and unity. From a scientific standpoint, integration is achieved through the interconnectedness of the elements that make up the universe. Pedagogically and educationally, integration involves coherence, interdisciplinarity, and interrelationship, serving as a mutually complementary, expanding, and deepening tool. It is considered a logically completed result that synthesizes the content of educational subjects, at least at the DTS level. An integrative approach requires studying the object as an integrated system, from the perspective of comprehensive relationships.

A Learning Management System (LMS) is a type of software that is used for the administration, documentation, tracking, and reporting of training courses, programs, or learning and development programs. The concept of a Learning Management System came directly from e-learning. Although the first LMS appeared in the higher education sector, most LMSs today are aimed at the corporate market. Learning Management Systems are the largest segment of the learning system market.

LMS was first introduced in the late 1990s. Learning Management Systems are designed to identify gaps in teaching and learning using analytics and reporting. LMSs are primarily focused on delivering online learning, but they support a variety of uses, including acting as a platform for online content, including asynchronous and synchronous-based courses.

An LMS (Learning Management System) is a tool that provides classroom management for both instructor-led classes and Flipped classrooms, which are commonly used in higher education. Nowadays, modern LMSs are equipped with intelligent algorithms that make automated recommendations for courses based on the user's skill profile. These systems also extract metadata from learning materials to ensure the accuracy of the recommendations provided.

Furthermore, LMSs can help educators create, access and deliver customized tests to students. These platforms are equipped with different types of questions, such as one multi-line answer, multiple choice answer, drag and drop mode, essay, true or false, yes or no, fill in the blanks, deal scope and offline tasks.

Some LMSs also allow integration with attendance management and classroom activities. This means that administrators can view records of student attendance, lateness or absences from classes and activities.

Many universities and educational institutions strive to create their own virtual information learning environment using modern technologies in order to manage their educational process. However, there is no longer a need to create such an environment, as various software packages, adapted to the web environment, are now available through the collaboration of enthusiastic programmers and education professionals, with the support of educational funds. This has resulted in the creation of free and open source software of considerable power.

In this educational module, an analysis of a range of free and open source programs is presented, which provide the opportunity to organize the process of distance education. The analysis of software packages presented in the educational module is the result of many years of scientific research.

Distance education is a form of education that makes use of information and telecommunication technologies, encompassing part-time and full-time education, and including the best traditional and innovative methods, teaching tools, and forms.

Distance learning is an educational system that employs new information and telecommunication technologies to facilitate learning, without the need for physical presence in a classroom. This system enables learners to work independently, providing them with standardized learning conditions and communication with teachers while adhering to educational laws and regulations. Thus, the learning process is not limited to a specific time or place, making it more flexible and accessible to students.

Distance education is an educational complex that utilizes remote means to exchange educational information. With the help of a special information environment, teachers can provide educational services to all strata of the population, including foreign students.

The distance education system is organized based on the conditions of distance learning. It has a structural purpose, content, methods, tools, and organizational forms like all educational systems.

The use of information and communication technologies in education, especially in distance learning, can be achieved by two means. First, by providing technical equipment such as computers, network devices, video conferencing equipment and high-speed Internet networks. Second, by offering specialized software, which can be in the form of software that uses existing devices or a collection of software designed for educational purposes.

In recent years, e-learning or electronic education has become popular in the West. It refers to various forms of education that rely on information and communication technologies. There are several sources of e-learning organization, such as authoring software products (Authoring tools), Virtual educational process management systems LMS (Learning Management Systems), and internal content management systems CMS (Content Management Systems).

There are many scientific and pedagogical requirements that need to be considered when organizing a distance education (MT) process. However, the technical and software requirements are not fully described in the literature. Here are the steps that can be followed to implement an MT process:

• Step 1: Analyze the needs of the educational institution, the number of users involved, the methods and forms of training, the technical, software, and human resources needed, and the economic basis of the project.

• Stage 2: Design the MT process.

• Step 3: Implement the MT process.

• Step 4: Create educational content.

• Step 5: Launch the MT process.

• Stage 6: Develop the MT process further.

During the second stage, the analysis will be performed to design the scope of work and technical assignment.

In the third stage, the software package that controls the selected distance education process will be installed on the appropriate server. The system's appropriate domain will also be selected. Training sessions will be organized to teach the technical support staff how to use the software complex that manages the distance education process.

During the fourth stage, educational content will be created in collaboration with the educational department and industry experts. Experts will check the created educational content, which is one of the main elements of the distance education process.

At the fifth stage, the distance education process will be launched. Throughout the course, the educational process will be under constant control, with the system's security measures being monitored.

During the sixth and final stage, any shortcomings from the previous stages will be corrected. New training courses will be created, technical capabilities will be expanded, and the scope of work related to the development of the system will be

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