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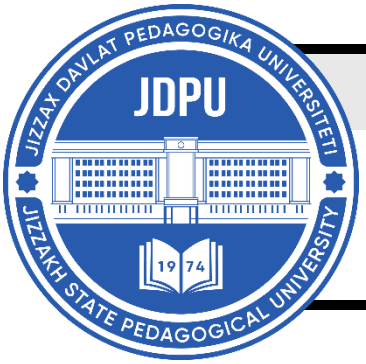

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ADVANTAGES OF USING THE MOODLE PLATFORM IN DISTANCE EDUCATION

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ABOUT ARTICLE

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Abstract: This article discusses the advantages and possibilities of using the Moodle platform in distance education and self-study. The creation of electronic information educational resources of an educational institution is not a purely technical issue, but for this it is required to use the scientific-methodical, organizational and pedagogical capabilities of the institution based on a systematic approach. Using Moodle, it is possible to organize distance courses with content such as text, supporting files, presentations, tests, practical tasks and surveys. The use of Moodle facilitates the educational process, easy creation of educational material, and also provides interactivity between the participants of the educational process. In this regard, the introduction of distance education technologies using information technologies in the educational process, in particular, the use of the Moodle platform in distance education, serves to increase the quality of education and independent education of students.

INTRODUCTION

The modern stage of educational reforms promotes urgent tasks related to the rapidity of changes taking place in society, faster adaptation to new, higher demands placed on educational institutions. In such conditions, the weight of activities aimed at the development of the educational institution and ensuring its functioning at the level of the time requirements increases continuously. Many of the assigned tasks in principle create new requirements, and in solving them it is not enough for the team to work only on the basis of existing experience. The analysis of studies on the theory and practice of management of educational institutions shows that the management of an educational institution in modern conditions is directly related to the management of information exchange in it. This, in turn, shows that it is possible to improve the activity of an educational institution due to the effective use of information technology, and it creates the need to conduct targeted research in this direction, and such issues are defined as tasks that must be performed in state programs [1].

The creation of electronic information educational resources of an educational institution is not a purely technical issue, but for this it is required to use the scientific-methodical, organizational and pedagogical capabilities of the institution based on a systematic approach.

The concept of "electronic educational resources" can be defined as a set of software, information-technical, educational-methodical systems that provide a specific goal-oriented educational process [2]. E-learning resources are characterized by the following symbols:

1. An electronic educational resource at any level is a complex structured object with a systematic nature.

2. The integrity of the electronic educational resource is synonymous with the concept of achieving systematicity, meaning their harmony, it embodies the goals of education and training in the implementation of the personal and professional model of the graduate of the educational institution.

3. The electronic educational resource is a factor affecting the effectiveness of educational and educational work as well as its tool.

MATERIALS AND METHODS

Through the Decree of the President of the Republic of Uzbekistan No. PF-6079, we can see that our state is paying great attention to the introduction of information technologies in education and increasing the effectiveness of education [1]. Conducting the lesson process using electronic textbooks, electronic study guides using information technologies in the educational process, introducing digital technologies into the educational process, in

particular, creating mobile applications for subjects to increase the level of students' knowledge does.

It is necessary to introduce a systematic approach to the creation and management of educational information resources of the educational institution. At the initial stage of this approach, the purpose of the information-educational environment of the educational institution is determined in accordance with the content of modern education. In pedagogical activity, the educational goal performs a systematizing task. It is the defined goal that serves as the basis for choosing the content, purpose and organizational forms of education. The goal of modern education is to form a system of knowledge, skills and competencies that is formed in accordance with the requirements of the specialist model, and it is reflected in the relevant educational standards. In addition, one of the important aspects and requirements of the higher education system in our republic is that the student is not only the object of the pedagogical process, but also becoming its subject. In such cases, the importance of the student's independent education increases and the formation of the following skills and qualifications is required:

- skills and competencies of planning independent education: making a personal plan of independent activity; targeted activity based on the plan; to control its activity and make necessary corrections to it.

- Skills and qualifications to use the Internet, scientific and educational information: independent identification of scientific and educational information; ability to independently analyze and evaluate new information; search and find information sources on the Internet in terms of the problem to be solved; to see new and promising news in the content of received information.

- skills and competencies of working on electronic educational resources: systematic use of electronic manuals and catalogs; Ability to maintain a list of scientific, educational and other literature obtained from the Internet based on the rules of bibliography.

- skills and competences of mastering lectures presented through modern information technology tools: determining the topic and plan of lectures, list of literature; correctness of provided information; distinguish the main problem, idea and conclusions; briefly record the main content in their own words; to process, store and use the provided information for educational purposes.

- skills and qualifications for working with electronic textbooks: familiarity with electronic textbooks in general, knowing its author, content, conclusion, illustrations and annotations; extracting the logical structure of the electronic textbook; to fully understand the subject

being studied, additional guides: animation, dictionary, encyclopedia, references; record the obtained information in the form of theses, abstracts.

E-learning resources fulfill three main functions:

- to help external resource subjects to create an idea about the information and educational resources of the educational institution with the help of modern information technologies;

- to increase the mutual cooperation of the employees of the educational institution and to create an environment for the exchange of information and educational resources;

- organization and management of effective information exchange through information-educational resource tools in an educational institution.

Setting the purpose of the information-educational environment in the educational institution is carried out taking into account the periodic sequence of three processes: in the first period, the results of information resource analysis are studied; in the second period - appropriate actions are determined; in the third period, the goal of the information-educational resources of the educational institution is developed.

The main task of the e-learning course is to organize electronic interactive communication between the professor and the student, to exchange various electronic resources, to provide education by placing tasks and issues in the system of the educational course, and to increase the efficiency of independent education.

The professor-teacher forms his own module - electronic complex. After the department's discussion, the professor posts it on a special portal on the website before the start of the course.

Moodle (object-oriented dynamic modular learning tool) is a free learning management system, which is primarily focused on organizing interaction between a teacher and a student.

Because Moodle is created and improved by a large group of developers, it has several language versions.

When the Moodle training system is installed on the server and ready for use, the appropriate services for the web server and database server must be started. Once the servers are up and running, the Moodle home page can be accessed at http://ip-address/moodle/.

Naturally, when a DNS server is used in the network, the IP address can be replaced with a name, for example, http://masofaviy.uz/moodle/.

Moodle (**Modular Object-Oriented Dynamic Learning Environment**) with its functionality, this system is gaining popularity and is successfully competing with commercial LMS.

Moodle was developed by Martin Dougiamas to help educators create online courses and focus on interaction and collaborative content creation.

In 1999, Martin Dugiamas began testing early prototypes of a new learning management system. The search for a new system served as the basis for the dissertation “Improving the effectiveness of online learning”[16].

In 2001, Peter Taylor installed Moodle on his own at Curtin University. Martin Dugiamas and Peter Taylor will publish “An Interpretive Analysis of an Online Course Designed Using a New Course Design Tool Called Moodle.”

By the end of 2001, Moodle could be downloaded via CVS (Git arrived in 2010 and replaced CVS in 2013) and basic installation documentation was available.

In 2002, Moodle 1.0 was released (Latest version: 4.3.3 (February 12, 2024)). Users now have the opportunity to discuss Moodle on a new forum. A community team emerged to translate Moodle into different languages and create themes. In 2003, the first module offered (Workshop) was released and Moodle.org became a branch of the Moodle community, and Moodle.com began to represent the commercial aspect.

In 2004, academic discussions on Moodle were held in Oxford, and companies began to become Moodle partners.

Moodle is used in 242 countries worldwide, in more than 50,000 educational institutions, in 159,700 locations, and has been translated into almost 100 languages. Today, more than 47 million courses have been created on the Moodle platform installed in about 160 thousand places, about 419 million electronic resources are placed on it, the number of users is more than 413 million, and the number of those who completed the courses is 2 billion 312 million [17].

In digital educational environments, personalization of learning can be achieved through the implementation of individual educational trajectories, adaptive course content, interface customization (the ability to choose color design, panel layout, input parameters, etc.), various forms of presentation of educational content, and choice of training time , variability of feedback from the teacher, etc. Continuous monitoring of student activity indicators in the digital environment can help identify the personal preferences and needs of the student and satisfy the state and public request for personalized learning. Such indicators are listening to lectures, completing assignments and electronic tests (including speed of completion, number of attempts, order of completion), educational interactions

(correspondence on forums or blogs), the order of movement between course resources, etc. [3].

Various digital environments, including open educational platforms (Coursera, edX, NPTEL, FutureLearn, Open Education, Universarium, Lectorium, etc.), distance learning systems (MOODLE, iSpring, Mirapolis, ShareKnowledge, Teachbase, WebTutor, etc.) store digital traces of their users, thereby providing the ability to monitor student activity. Despite a significant number of studies, these opportunities are not widely and effectively used by teachers to assess the quality and design of a personalized educational process [15].

We have focused on the aspects of acquiring and transferring experience in data analysis accumulated in LMS MOODLE, since the massive preference of Russian universities for the implementation of distance and blended learning in this system has been maintained for quite a long time, which is dictated by the following aspects of the environment: a free modular system of electronic training with open source and detailed technical documentation, a strong community (which develops the platform, creating new modules and providing wide functionality), full customization and localization into more than 100 languages, a flexible system of statistics and reports [4, 5].

New opportunities for identifying student characteristics based on data and digital traces accumulated in the educational system are provided by methods of intellectual data mining (EDM), an actively developing area today, within which modern methods of data research for decision making are being developed. in the field of education.

Many universities are actively building distance courses based on LMS MOODLE. It is among the top 10 countries in the world in terms of the number of sites using MOODLE in official educational structures - Russia - 37%, USA - 34%, Italy - 32%.

An experimental study to assess students' activity in mastering an online course in LMS MOODLE using standard statistical reports of the system and the possibility of adjusting the course structure based on it is described in [6]. In [7], the authors examined the relationship between student activity logs in an LMS and their final grades and concluded that course views, assignment views, forum views, and resource views have the greatest impact on student grades. In article [9], students' behavior in MOODLE is compared with their personal motives and strategies for learning. The results of the study confirmed the expectation that students who adopted deep learning motivations and strategies (as measured by the Biggs questionnaire) also showed a high degree of engagement in the LMS environment. The article [8] compares the performance of students who spent different amounts of time completing the learning modules of an online course. Perceived differences

were levels of prior knowledge, intrinsic motivation, and performance. The number of successfully completed modules was not affected by the time spent on training.

RESULTS AND DISCUSSION

The Moodle system belongs to the LMS (Learning Management System) class. In our country, such software is more often called a distance education system, because it is with the help of such systems that distance education is organized in most higher educational institutions. Moodle is free software with a GPL license, which allows free use of the system, as well as the ability to modify the system according to the requirements of the educational institution and integrate it with other software tools.

Using Moodle, a teacher can create distance learning courses with content such as text, supporting files, presentations, quizzes, exercises, and quizzes. To use Moodle, it is enough to have an optional web browser that can make the teacher and the student comfortable. The teacher can evaluate the students and make comments on the results of the tasks. In this way, Moodle, in addition to being a center for the creation of educational material, also provides interactivity between the participants of the educational process.

Moodle allows you to design, create and manage educational resources. The work of teachers who do not have programming skills in the system interface, who do not have a deep understanding of creating and managing a database, website, etc. is also taken into account. The system has a convenient, intuitive interface. A teacher can create and manage e-courses using only system references. Almost all resources and elements of the course use a convenient WYSIWYG HTML editor as an input field, and there is also the option to enter formulas in TeX or Algebra format. Table, diagram, graphics, video, flash, etc. can be placed. Using a convenient customization mechanism, the course creator will be able to easily formalize the elements of the training material without even having a working knowledge of HTML.

The teacher can organize the structure of the course in a thematic or calendar mode based on his choice. In the thematic structure, the course is divided into sections by topic.

In the calendar structure, each week of course study is reflected in separate sections, the convenience of this structure is that it helps users to plan their educational work properly.

Editing of the course content is done by the author of the course on a voluntary basis and can be easily done during the training process. Various elements: lecture, assignments, forum, glossary, test, etc. are easily added to the e-course. Each e-course has a handy page to keep track of the latest course changes.

The management of the learning process is also well established. A teacher with administrative rights can register other teachers and students, assign appropriate roles

(rights) to them (such as course creator, teacher with or without editing rights, student, guest), distribute rights, combine students into one virtual group, each student may have aggregated information about his work. With the help of the system calendar, the beginning and end of the course, assignment and test submission deadlines are determined. Information and news about the course are published using comment and forum tools.

Moodle, a learning management system focused on distance learning, has a large set of communication tools. This includes not only e-mail and teacher-uploaded file exchange, but also forum (general news on the home page of the system, as well as various private forums), chat, private messaging, and blogging.

In the Moodle system, in addition to the multifunctional test module, learners are evaluated on a voluntary basis based on the scale set by the teacher through the Course **Assignment, Forum, Wiki, Glossary** and other similar elements. There is also a wiki, an article in the glossary, and the possibility to evaluate the answers in the forum with other participants of the course. All grades are tracked on the Course Grades page with display views and grade group settings.

Since one of the main forms of knowledge control in distance education is a test, the LMS Moodle system also has a wide set of tools for creating tests, conducting training and control tests. Test questions can be presented in different formats (multiple choice, multiple choice, true/false, short answer, essay, etc.). Moodle has many features that facilitate test processing. During the preparation of the test tasks by the teacher, a rating scale is displayed to evaluate the results of the students after passing the test, and the mechanism of automatic evaluation of the results is used. The system has improved statistics of test results, and another important aspect is analysis tools for the level of complexity of test questions for learners.

Moodle is an educational management system that is useful not only in the formation of distance education, but also in the traditional educational process of educational institutions.

The list of electronic courses available in the system can be opened using the Courses link in the navigation blog.

System management is carried out using the commands of the "**Administration**" blog, which is located on the home page of the system and is accessible only to system administrators. The management capabilities can be identified from the names of these blog commands.

On this page, system users can be added to the system (registration - through the "**Add user**" button), deleted, and user data can be edited. Here, a role (right) is defined for

the user, the defined role is global within the system, that is, the user has the defined right in all courses in the system. Local roles (rights) are defined within the course (**Management - Assign Roles**).

The following roles are used in Moodle:

• **Administrator** (can perform full management on the site and optional course);

• **Creator of the course** (course creator – can create a course and teach in it);

• **Teacher** (teacher - manages within the specified course, can edit course materials);

• **A teacher without the right to edit** (a teacher who does not have the right to edit - can teach and evaluate students);

• **Student** (Student – can use course materials of which he is a member);

• **Guest** (guest – can use only the course materials authorized for use by guests).

All Moodle modules (course elements, blocks, filters) can be configured at the system level. These settings will apply to items used in all courses.

We will learn to create an electronic course, getting acquainted with the main capabilities of the Moodle system. Let's get acquainted with the elements and capabilities of this system on the example of creating an electronic course on computer graphics and web design.

Select and create a course category

In order to search for and enter the desired course among the large number of created electronic courses, the Moodle system has the ability to divide them into categories and sections. For this reason, you need to determine which category or section the course you are creating belongs to and place it within that section. The system administrator of Jizzakh State Pedagogical University divided the electronic courses into the following categories and sections:

Electronic courses created from subjects taught for undergraduate students are placed in the Undergraduate category, and subjects taught in Master's specialties are placed in the Master's category.

In turn, these categories are divided into sections as follows.

At the university, undergraduate students study in 12 faculties. Classes are conducted by professors and teachers of existing departments in these faculties. Therefore, the teacher who is creating an electronic course should place his electronic course in the section named after the relevant department. For example, classes in computer graphics and web design are conducted by teachers of the Department of Informatics and digital educational technologies for students of mathematics and informatics.

When the name of the department is selected from the available list, a list of e-learning courses created by professors of the selected department will be generated.

If you are just creating your e-learning course, click on the **add course** button at the end of this list.

It should be noted that the lines marked with * are the lines that must be filled in such pages. ? by clicking on the icon you will be able to get detailed information about this line.

In the **The full name of the course** field, you indicate the full name of the e-learning course you are creating.

The full name of the course you entered will appear in the e-course list and at the top of each course page.

Enter the short name of the course in the **The short name of the course** field. This name is used in navigation elements and in emails.

In the **category course** field, select the course category. This parameter is used to indicate the category and section in which the e-course should be placed. The selection in it is generated automatically, otherwise you can also select a category and section from the list.

The availability parameter determines whether or not this course is displayed in the list of e-courses. If hidden is selected in this option, this course will not be visible to users other than the teacher and administrator.

Start date of the course parameter determines the start date of the first week of the course for courses in the "**Sections by week**" (Departments by Weeks) format. Also, the date on which the report on the course elements can be obtained is determined by the date specified in this parameter. If the course is cleared for the next academic year and the date is changed, all dates in the e-course will change to the new course start date.

The description of the course entered in the course description field is reflected in the list of electronic courses in the system. You can use their name and description when searching for a course.

You can attach files for the e-learning **course description** in the file description course field. Course description files (for example, an image file) appear next to the description in the course list.

You can define the format of the e-learning course you are creating using **the Format course section**. Using the format field, you define the display format of your e-course.

After filling the fields with the necessary parameters, click the button **Save and return** or **Save and show**.

As a result, the e-learning course with the name you created will appear in the list of courses in the category or section you specified.

CONCLUSION

In conclusion, LMS Moodle provides the teacher with a wide range of tools for presenting the teaching and methodical materials of the course, conducting theoretical and practical exercises, organizing individual and group educational activities of students. In this regard, the introduction of distance education technologies using information technologies in the educational process, in particular, the use of the Moodle platform in distance education, serves to increase the quality of education and independent education of students.

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