

**Mavlyuda XODJAYEVA,**  
*INTERNATIONAL ISLAMIC ACADEMY OF*  
*UZBEKISTAN,*  
*Associate Professor of the Department of Modern ICT.*  
*m.xodjaeva@iiaau.uz*  
*11, A.Kadiri, Tashkent, 100011, Uzbekistan.*

**Turdali JUMAYEV,**  
*INTERNATIONAL ISLAMIC ACADEMY OF*  
*UZBEKISTAN, katta o'qituvchi, PhD Senior teacher of the*  
*"Department of Modern ICT" t.jumaev@iiaau.uz*  
*11, A.Kadiri, Tashkent, 100011, Uzbekistan.*

**Alimjon DADAMUHAMEDOV,**  
*INTERNATIONAL ISLAMIC ACADEMY OF*  
*UZBEKISTAN, Senior teacher of the "Department of*  
*Modern ICT" a.dadamuhamedov@iiaau.uz*  
*11, A.Kadiri, Tashkent, 100011, Uzbekistan.*

**Barno SAYDAKHMEDOVA,**  
*INTERNATIONAL ISLAMIC ACADEMY OF*  
*UZBEKISTAN,*  
*Teacher of the Department of Modern ICT.*  
*b.saydakhmedova@iiaau.uz*  
*11, A.Kadiri, Tashkent, 100011, Uzbekistan.*

## USING MOODLE SYSTEM IN TEACHING "INFORMATION TECHNOLOGY AND PROCESS MODELING" FOR ISLAMIC AND RELIGIONS STUDIES STUDENTS

**Keywords:** *Moodle, e-learning, virtual method, distance learning, content management system, learning management system*

### 1. Introduction

Upbringing a perfect person and interfaith tolerance are the core ideas of national ideology and state policy. The implementation of this task in the social life is in the focus of attention of government agencies, institutions and public associations. After all, the younger generation is not only our future, but also a participant in the progressive ideas for solving current problems.

It is well known that upbringing a spiritually mature, well-educated, independent thinker and physically offspring is ensured by an advanced education system and skilled professionals. Information and communication technologies are one of the key sectors in ensuring socio-economic development of the country. In particular, the use of information and communication technologies in the educational process dramatically improves the quality and effectiveness of it. All legal, scientific, technical and organizational framework for the training, active implementation of

The use of distance learning technologies in the organization of the educational process, the rapid acquisition of new information in science provides high efficiency. Virtual teaching methods allow to get quickly additional information on the subject. The introduction of distance technologies in the educational process and the study of methods for their effective use, as well as the creation of distance learning courses are some of the most important scientific and technical issues. Based on the foregoing, the use of Moodle in teaching students of Islamic and religious studies field in information technology and process modeling is one of the key topics in the implementation of distance learning technologies in the educational process. The article describes the capabilities of the Moodle system, the advantages of course elements and effective methods of teaching the subject.

information and communication technologies in the educational process is created in the country.

The introduction of e-learning in the education system, including the use of Moodle in teaching information technology and process modeling to Islamic studies students, is highly effective in accelerating the introduction of new information into the learning process. In addition, the use of electronic resources in teaching science opens up great opportunities for learners. In particular, it ensures the integrity and speed of learning. It also provides an opportunity to quickly receive additional information on the topic under study. Therefore, the study of methods of using and effective use of e-learning courses in the educational process, the creation of e-learning resources, is one of the most important scientific and technical issues (Xodjayeve, 2019: 7706 p.).

The important role in shaping today's youth outlook is:

- modern pedagogical technologies, programs with visual information are offered as the main means of improving the effectiveness of the lesson;
- Widespread use of Internet and information technologies in the web sector;
- Ability to more accurately represent the image of a real object in the elements of multimedia media of historical monuments and monuments;
- multimedia in the field of religious studies and Islamic studies.

Training specialists at the International Islamic Academy of Uzbekistan apply modern information technologies in spiritual and educational work, restoring scientific and theoretical, religious heritage and passing it on to future generations, addressing the problems of informatics, shaping the culture of information consumption when addressing religious and secular sources, and international studies in Islamic

studies. to serve as an intermediary (Dadamuhamedov, 2019).

All these activities are aimed at introduction of new pedagogical and information technologies in the education system of the republic, particularly in the field of religious studies and Islamic studies, including electronic education, conducting of electronic forums, video conferences, creation of electronic textbooks and manuals and their use in educational process.

The basis of application of information and communication technologies in the educational process is virtualization of the educational process in the disciplines, organization of multimedia and network systems. Currently, a large number of e-learning resources are created on the subjects taught in many educational institutions.

## 2. Methods

It should be noted that the use of Moodle in teaching “Information Technology and Process Modeling” allows:

1. Independent work. Independent work plays an important role in improving the effectiveness of education. There are the following options for organizing independent work in Moodle system:

- Lectures with theoretical materials;
- Exercises and training to work on;
- Additional questions and comments.

2. Automation of the evaluation system. Two types of valuation systems can be used in Moodle:

- Score and rating. An example is an automated testing system.
- Evaluation of criteria. There is a “Seminar” element in Moodle that can be used to determine the level of development of each section.

3. Remembering the learning process. The more electronically the learning process is, the more memorable its history and results will be.

Training sessions are usually held in the form of lectures, consultations, seminars, practical exercises, lab work, control and independent work, and so on. Training technology is determined by many factors. From the point of view of educational process management, the choice of technology is made by the teacher of the university. In addition, the set of didactic tools chosen to achieve the learning objective depends on the form of education.

Distance learning includes the basic forms of traditional organization of the learning process. Lectures, seminars and workshops, laboratory practice, control systems, student research and independent work are among them. The use of all these forms of teaching students in Islamic studies allows for easy integration of student self-knowledge activities with various sources of information, quick and systematic

communication with the instructor, and group work of students.

The differences in the choice and structure of lecture materials and methods of reporting are determined not only by the peculiarities of science, but also by the peculiarities of Islamic studies. The method of lecture teaching depends on the stages of the study of the subject and the general preparation of the students, and the form of the lecture. Depending on the studied science and didactic objectives, it is possible to use problematic lectures, lecture-visualization, lecture-press conferences, earlier erroneous lectures and other forms of lectures.

Practical classes are intended for deep study of science. The lessons will help them gain the skills to think in theoretical material, express their personal views, and gain professional experience in Islamic studies.

## 3. Results and discussion

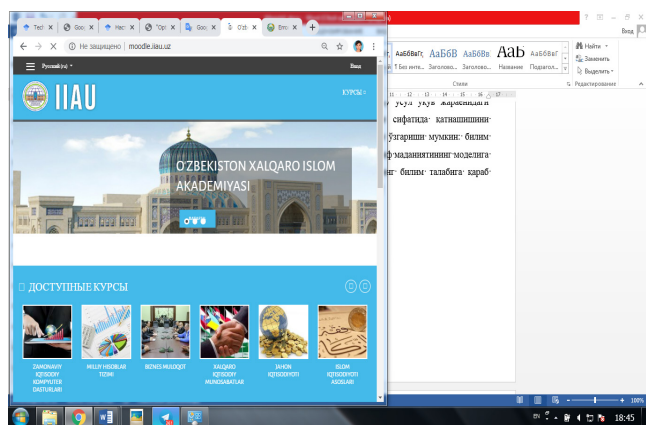
Moodle (<http://www.moodle.org>) is an application that organizes online teaching and online classes. This project was designed to disseminate sociocultural views on education.

In a nutshell:

- New knowledge is derived from previous knowledge and individual experiences.
- The learner is more effective in explaining what he or she is learning to others. When applying this view, you rely on the learner’s experience, which is the most effective way to absorb the learning material you need. This method ensures that both the student and the learner participate in the learning process as teachers. The function of the teacher can change: instead of the source of knowledge, it becomes a “center of influence” and a model of class culture. The teacher should treat each student individually, depending on his or her learning needs.

Moodle is more of a hybrid approach, mainly suited to classical style teaching. Moodle is good for creating multimedia sites. Works on computers with PHP and MySQL or PostgreSQL databases. The Moodle website provides free, high-quality support to platform users (Dadamuhamedov, 2019; Сайдахмедова, 2019; Kushwaha, 2019: 471 p.; Mappalotteng, 2018).

Moodle is a product management system (Content Management System - CMS) site management tool, online tutorials and operating system. Such e-learning systems are often referred to as Management Education (LMS) or Virtual Learning Environments (VLE). Moodle is a resource repository designed not only to create and operate online courses, but also to work with educational websites. The basis of the program is the study of social theory construction and operation (Дюбкова, 2019; Шкунова, 2019; Медведева, 2019).



**Figure 1.** Moodle system overview of the International Islamic Academy of Uzbekistan

The Moodle system provides a wide range of distance learning opportunities, as well as a wide range of support for learning - comprehensive access to learning materials, quality control and control. Currently, the Moodle system is supported by the largest universities in the world.

Moodle is a modular Object-Oriented Dynamic Learning Environment. Moodle works with PHP-supported operating systems such as Unix, Linux, FreeBSD, Windows, Mac OS X, Netware and other modifications. The data is stored in the MySQL and PostgreSQL databases. The latest version of Moodle is SDO Moodle's global customer association <http://www.moodle.org>. download from the site.

The Moodle system includes a package of distance learning courses and website development software. The main features of the system are:

- The system is designed taking into account the current pedagogical achievements and the focus on collaboration between students.
- Can be used both for distance learning and for daytime training.
- It has a simple and effective web interface.
- The design has a module structure and is easily modified.
- Provides full localization of connectable language packages
- Students can edit their own accounts, add photos and change many of their own personal information and details.
- Each user can specify their own local time. At the same time, all dates in the system are transferred to him / her in local time (forums, message deadlines, etc.).
- Various course content is supported: "calendar", "forum", "thematic".
- Each course can additionally be protected by a code word.

- Module Developers for Chat, Poll, Forum, Glossary, Workbook, Lesson, Test, Questionnaire, Scorm, Survey, Wiki, Workshop, Resource (text or web page or directory) There is a rich collection (Xodjayeva, 2019)..

- Changes in the course after the last login of the user can be displayed on the first page of the course.

- Almost all typed texts (resources, forum posts, notebooks) can be edited by WYSIWYG Rich Text - editor.

- All grades (forums, workbooks, tests and homework) can be collected on a single page (or as a file).

- You can get a complete report (last entry, read times, messages, notebooks) on logging in and work on the tables and details of various modules.

- Email can be sent - posts, forums and teachers' comments and comments can be sent.

Currently, distance learning technologies are widely used in the educational process. Systematic implementation of distance technologies is important for further education effectiveness. For systematic introduction of distance technologies into the learning process, first of all, there are steps to identify goals and objectives, to select the appropriate methods and tools, to implement the tasks and to analyze the results achieved and to eliminate gaps.

We will consider these steps as an example of implementing Moodle in the learning process.

The process of selecting the appropriate methods and tools will be based on the following aspects of the system being implemented:

- Pedagogical capabilities of the system: The Moodle system can effectively organize the learning process based on traditional pedagogical approaches.

- Growth rate: The Moodle system is actively developing and improving both in terms of pedagogical structure and management.

- system prevalence, scope and scope

- The quality and quantity of documentation

- Ability to interact with other systems: extensive capabilities of Moodle for external users (external MB, CAS server, FirstClass server, IMAP server, LDAP server, NNTP server, PAM, POP3 server, RADIUS server, Shibboleth, NTLM) There are different mechanisms for recipient registration (internal registration, Authorize.net Payment Gateway, IMS Enterprise, LDAP, Paypal).

In the implementation of the tasks, the tasks identified at the first stage are fulfilled and formed as a system of interconnected data. The independent development of the Moodle platform, the automated evaluation system, and the storage of the learning process as an interconnected system are automatically implemented.

The systematic introduction of the Moodle system into the learning process will help to make education more effective. The Moodle system is designed with the help of modern pedagogy and collaboration between learners and teachers, and it has many tools for organizing the learning process.

The following steps are taken to establish distance learning systems:

1. Selection of science resources.
2. Conclusion of agreements on the right to use and recycle resources.
3. Develop a list of contents and concepts.
4. Create a section for processing and helping texts in sections (modules).
5. Electronic implementation of hypertext.
6. Development of computer support.
7. Selecting the material to bring it to multimedia objects.
8. Preparation of material for visualization.

The elements of the distance learning course created in the Moodle system on “Information Technology and Process Modeling” for Islamic and Religious studies students include:

**Lessons.** Theoretical materials are divided into several parts, each section contains questions on the topic. Each section is considered mastered only after the questions are answered correctly and move on to the next section.

**Forums.** There is a discussion of course participants and teachers.

**Glossaries.** There is a dictionary of terms and concepts used in the course.

**Resources.** There are a variety of materials used in the course.

**Choices.** It is a simple tool, with questions containing multiple answer options.

**Assignments.** Tasks on the topic are posted and their answers are posted electronically.

**Tests (Quizzes).** There are different types of test questions.

**Test module.** The teacher can create a database that includes questions for multiple use in a web interface for multiple tests:

- tests are automatically evaluated (questions can be re-evaluated if the value is changed);
- tests may have a limited time frame;
- tests can be conducted several times at the teacher's choice,
- Answers or correct answers may be indicated;
- questions could include HTML - text and images;
- questions that involve the choice of answer options may have one or more correct answers;
- It is supported to answer the question in words or sentences;
- alternative (alternative) answers are supported (true / false).

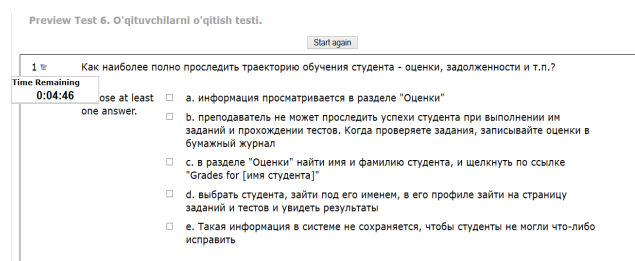


Figure 2. The appearance of test questions in the course

The drop-down list “Add an activity” is used in the edit mode to add each course item.

**Real-Time Tests.** Real-time tests are posted, questions are shown in real time, and are done with the permission of the instructor. The next question will not be passed until each question is completed.

In addition, the following Moodle modules are included in the course:

**Games.** The glossary contains terms and concepts, as well as various types of games that teach test questions, including crossword, sudoku and more.

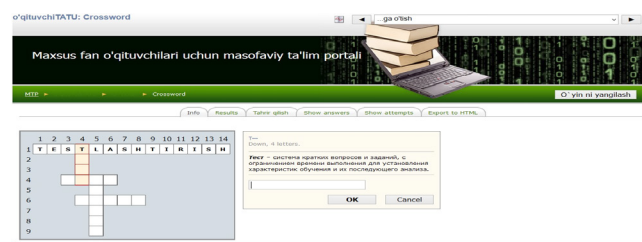


Figure 3. View of games posted in the course (Crossword)



Figure 4. Visualization of games posted on the course (Sudoku)

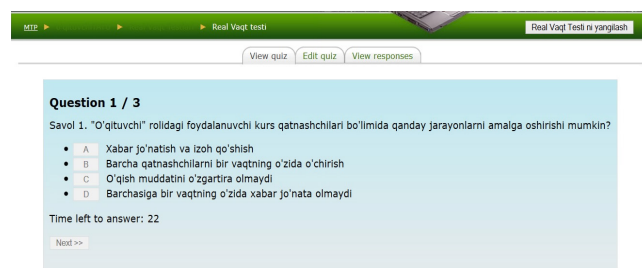


Figure 5. View of real-time tests in the course

**Multitrack tests.** Multiple-choice tests are hosted, question options are treated as categories, and responses to each category are analyzed.

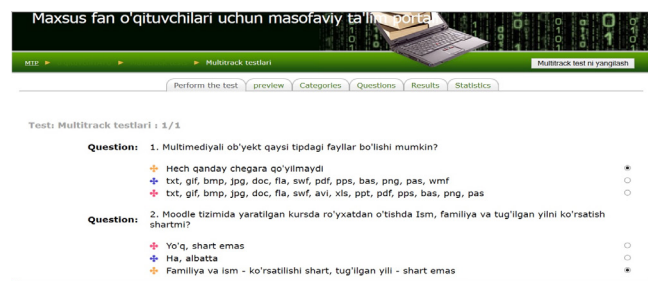


Figure 6. View of Multitrack tests in the course

**Quiz Ports adaptive testing module.** Forms and methods in the system of pedagogical technologies allow the student to effectively study independently. This is a system-friendly and easy-to-read training for personnel whose structure of initial training can be immediately transferred to further training. It provides assignments and exercises based on the knowledge of the examiner and evaluates the knowledge of students or staff quickly.

In Western literature, adaptive testing is defined in 3 different ways. The first one is called pyramid testing. After the initial questions, students are asked moderate and difficult questions, followed by light and difficult questions. Each step is used to split the weight of the questions into the rule. The second option (flexilevel) is given different initial control questions corresponding to the level of the degree, and then the degree closer to the actual level of knowledge. The third option (stradaptive, stratified adaptive) is when students pass the test tasks in a question bank when their knowledge is weighted. If the student responds correctly, he will move on to the next level.

The QuizPort adaptive testing module only works with Hot Potatoes and Qedos (which is also free for testing). The main advantage of this module is that it works seamlessly when interacting with other test formats. The principle of working with the rest is to write down the weight of questions in central adaptive testing.

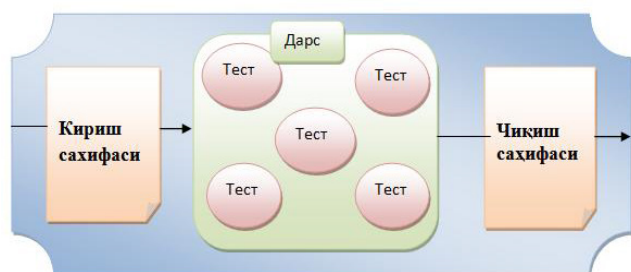


Figure 7. The principle of operation of the QuizPort testing module

Once the QuizPort package is installed and set up, go out of the admin panel and click on user or teacher mode to add a course. From that section, select QuizPort and download and export your queries from the format.

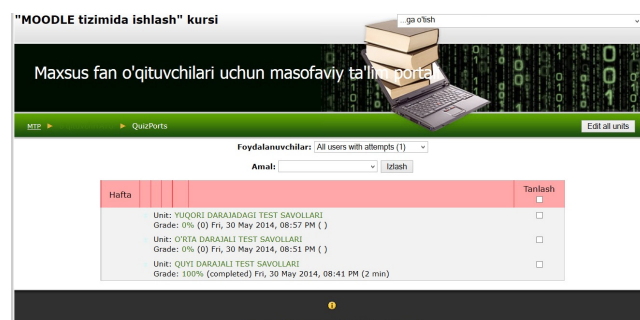


Figure 8. View of the QuizPort module embedded in the course

#### 4. Conclusions

The use of distance technologies and the creation of distance learning courses are of particular importance in improving educational efficiency. In particular, the study and introduction of effective methods for establishing a distance learning system is an important aspect of achieving our goals.

In the article the requirements for distance learning courses were analyzed, the stages of using Moodle's system in teaching information technology and process modeling to students of Islamic studies, the conceptual basis of creating distance learning courses.

The capabilities and key features of the Moodle platform in distance learning management were reviewed and the importance of the structure and implementation of the Moodle CMS system in the learning process was examined.

The system of distance learning courses allows the trainees or users to quickly and independently obtain the knowledge in a timely manner, regardless of the location and distance. Today

To date, a number of educational institutions of our country have been strengthened with the technical bases, including a new generation of computer equipment, as well as their access to the Internet and electronic communications. All of these are aimed at introducing new pedagogical and information technologies in the Republic's educational institutions to make educational content more effective, using new interactive methods and tools in the curriculum, including distance learning, computerized conferences, creation of electronic textbooks and their application in the educational process. events.

Development, implementation and implementation of modern educational technologies in the higher

education system in accordance with the country's educational goals and with the aim of developing and implementing this process are gradually developing the regulatory framework.

Foreign experience in the development of e-learning environments demonstrates that standardization of e-learning environments is relevant for the development and implementation of basic requirements for the organization of the educational process in our country. It should be taken into account as well as its interoperability, flexibility, long-term use, practical and economical feasibility.

The use of e-learning resources in the learning process is reflected in:

- the student can independently plan their activities;
- ability to work in the information space, that is, he / she chooses subject information and has the skills of independent search activities;
- effectively organizes activities with the ultimate result;
- skills of analytical activity - sorting out the received information and adequately using it for the given issue;
- be able to present results of activities using various information technologies.

The use of information and innovative technologies in the education system enhances the effectiveness of the educational process, enhances students' ability to work on themselves, strengthen their knowledge and use them in practice.

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