

ADVANTAGE OF MOODLE IN ORGANIZATION OF DISTANCE EDUCATION IN UNIVERSITIES

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ABSTRACT

In this article, the author made an attempt to scientific analysis and critical understanding of the advantages of Moodle in the organization of distance learning in universities. Confirm that the LMS Moodle system meets all the requirements of the e-learning process, using theoretical and empirical research methods.

Keywords: university education, distance education, COVID-19 pandemic, learning, Moodle system, quality of distance learning.

INTRODUCTION

Global computerization in the modern world has affected all branches of human activity and is an integral part of them. Education is no exception. The need to find alternative ways of learning and improving the forms of knowledge presentation, as well as during the COVID-19 pandemic. The distance learning management system Moodle (Modular Object-Oriented Dynamic Learning Environment) combines the functions of most of them, which allows you to transfer information to students in formats they understand. Moodle is equipped with many useful features that allow you to fully control the work of the student in real time. The key function is to keep track of the time spent by the student in the system. The main feature of distance learning is the independent work of the student in order to better assimilate the material, and the time tracking function helps to track the student's activities, which allows, in addition to intermediate control in the form of testing and laboratory work, to perform the so-called "invisible" - operational control over its progress .

A new direction in the development of education is the transition from the classical educational space (building, book, teacher) to a virtual educational space created by computer technology hardware and software, as well as the creation of e-learning on this basis. «Moodle» system, based on special computer technologies, providing training within the academic discipline according to individual optimal programs with management of the learning process.

LITERATURE REVIEW

The first direction in which the literature was studied when writing a scientific article includes scientific research, the authors of which consider the global and applied problems of informatization of education and the implementation of the Moodle system. This is A.A. Andreev, N.G. Alekseev, Yu. K. Babansky, E.V. Bryzgalina, P. Ya. Halperin, B.S. Gershunsky, E.V. Dirsha, V.V. Mironov, A.A.M. Al-araibi, M.N.B. Mahrin, R.C.M. Yusoff, A. Piña, B. Jason and so on.

Various aspects of the creation, development and application of pedagogical innovations based on or related to the issues of informatization of education both in Russia and in the world. This is V.I. Baydenko, E.V. Zagvyazinsky, E.F. Zeer, I.A. Zimnyaya, E.V. Ivanov, V.A. Slastenin, V.I. Slobodchikov, I.G. Shendrik, V.A. Yasvin, C. Brion, D. Didenko, El. Mhouti, M. Erradi, A. Nasseh, N. Law, A. Yuen, R. Fox and so on.

The works of such authors as I.A. Nagaeva, I.A. Boltunov, A.Kh. Gilmutdinov, S.A. Dochkin, R.A. Ibragimov, E.S. Michurina, G.G. Tupikina, I.V. Tsivilsky, SC Kong, T. Chan, R. Huang, Ma Khan, K. Salah and others, in which the organization of e-learning in universities is considered from different sides and the high efficiency of this form of organization of the educational process is shown.

Not all researchers are ready to accept global changes in the education system. The authors are skeptical about the possibility of creating a formalized (ideally, mathematical) model of a person and the educational process in a virtual educational space, adhering to the traditional empirical ways of setting an educational goal, building individual educational trajectories, and assessing the level of achievement of a given educational goal by a student.

Currently, the content, forms and methods of presenting electronic educational content for the organization of e-learning in the system of continuing professional education are not sufficiently developed. The above disadvantages provide a high level of relevance of the research topic discussed.

MATERIALS AND METHODS

Materials and research methods are determined by the topic and the specifics of the tasks set, the solution of which requires an integrated approach. When writing this article, a set of the following complementary research methods was used: theoretical (analysis and synthesis, generalization, comparison, abstraction, concretization, modeling, systems approach); empirical (questioning, testing, expert assessment, analysis of documentation, study and generalization of the experience of organizing the pedagogical process of continuous professional training).

1. Distance learning system "Moodle" as the basis of an innovative educational space

One of the promising directions for the development of the education system is the transition from the classical educational space (building, book, teacher, educational process) to the virtual educational space created by computer hardware and software, as well as the creation of the basis of the Moodle e-learning system on it. [14]

The integrated application of evidence-based modern pedagogical approaches in the organization of e-learning "Moodle" to setting an educational goal, organizing the educational process in a virtual educational space, continuous pedagogical measurements and correction of the educational process depending on the results obtained, combined into a single pedagogical concept, will ensure the effectiveness of the electronic learning. Moodle training. Keeping up to date will mean an innovative approach to learning. This will provide a well-designed interactive learning environment for any student, anywhere, anytime, using the resources of various digital technologies, as well as other forms of learning materials suitable for an open learning

environment. Moodle learning is moving from a data management system to a knowledge management system. [thirteen]

E-learning or "Moodle" as a new specific learning system should provide provisions for the organization of the educational process and be based on the following principles: [8]

- The principle of consistency - a set of well-structured and closely related elements;
- The principle of predictability - the use of pedagogical expertise as a system for predicting and correcting the educational process;
- The principle of flexibility of the educational process, when the individual educational trajectory of the student is systematically corrected and rebuilt as a result of the implementation of pedagogical support;
- The principle of learning mobility - the availability of electronic educational content in time and space;
- The principle of individualization of education - the creation of optimal conditions for the guaranteed achievement of individual educational goals by students;
- The principle of joint action - the interaction and cooperation of all participants in the educational process (students, teachers, specialists and experts, mentor, resource developers - designers of pedagogical situations, technicians, etc.) to guarantee the result;
- The principle of independence - immersion of the student in the information virtual educational environment, which encourages independent "acquisition" of new knowledge and methods of action;
- The principle of objectivity - the maximum exclusion of subjectivity in the organization of the educational process and the assessment of the level of achievement by the student of the educational goal.

Thus, we represent the educational process as an individual educational trajectory of the student from the input educational situation of the lower level to the target educational situation, which is his "individual educational goal". [1]

Effective practical implementation of the educational process of e-learning at the university takes place in a "virtual educational environment", the information content and communication capabilities of the local, corporate and global computer networks formed in it are used for educational purposes by all participants in the educational process.

2. The main possibilities of organizing e-learning at the university

Summarizing the results of scientific research in the field of pedagogical design, in particular pedagogical design of the organization of e-learning at the university, we highlight the following conceptual provisions, the implementation of which ensures the correctness of the results of pedagogical design: its adequacy to the process of e-learning at the university: [5]

1. The individual educational goal of the student is considered as a "personally-oriented situation", an ideal prediction of the level of development of the cognitive, activity, motivational, ethical, social and behavioral competence of the student, measured in relation to the event in the life of the individual, which should be the result. The setting of an individual educational goal is carried out by the student himself as an implementation of the principle of self-design.

2. Pedagogical design is continuous, "permanent", takes into account the laws of natural development and functioning of the student, takes into account his spontaneous fluctuations and internal intentions.

3. Achieving an individual educational goal is non-linear - the presence of feedback is taken into account.

4. The functions of teachers as "performers" of the project, which are different from the modern activities of teachers in "classical" education, have been clarified and adjusted. Next, we will consider the joint activities of teachers (tutor, subject teachers, designers of learning situations), as well as technical specialists who ensure the functioning of the educational platform of an educational institution.

5. A new pedagogical position is being introduced - a tutor-teacher-mentor who will develop individual educational trajectories for students, accompany the process of individual learning at a university, in the system of additional and continuing education.

6. Pedagogical design is a means and form of managing a complex social system, the object of which is a student, aimed at ensuring that he achieves his individual educational goal.

The requirement to present the student's individual educational goal as his individual "personally-oriented situation", on the one hand, and the need to present it with computer hardware and software in connection with the technical base of the organization of e-learning. on the other hand, they entail special requirements for the presentation of the educational space and the educational environment of an educational institution, the algorithm for organizing the educational process as a process of achieving an educational goal by a student, the development of forms and methods, continuous automated monitoring of the degree of formation and development of a student's level of development of cognitive, activity, motivational, ethical, social and behavioral competence of the student and assessment of students' achievement of the set learning goals. [3]

The second equally important problem is the student's representation of an individual educational goal by the semantic constructions of a natural human language.

Traditionally, pedagogical modeling of educational activity is considered as a classic case of a non-deterministic task, a goal, an initial state of affairs and ways to achieve the goals that cannot be described by exact quantitative values.

At the same time, similar non-deterministic problems in medicine, economics, technical sciences, etc. Successfully solved by creating an "intellectual" professional environment in which, although the goal and ways to achieve it cannot be described with exact quantitative values, nevertheless, the user, relying on his own and attracted expert knowledge, experience, worldview and feelings, finds ways to solve tasks under conditions of uncertainty. "There are well-known and well-established mathematical methods of the so-called "fuzzy logic", where parameters with a high degree of "fuzziness" are formalized in a quantitative or relative scale. The most promising from a pedagogical point of view are logical-semantic models that use the logic of predicates and the provisions of the theory of fuzzy sets. Such models adequately reflect real processes in social systems, are easily described by the semantic constructions of a natural language, but, most importantly, are easily formalized and suitable for their implementation using computer technologies." [11]

Let us consider in more detail the issues of creating a formalized model for organizing e-learning in a university, on the one hand, easily described by means and forms, semantic structures of a natural human language, and on the other hand, suitable for its practical implementation by means of computer technology.

Currently, about 400 open platforms are used to organize e-learning in educational institutions of various levels, to one degree or another, such as Atutor, Dokeos, dotLRN, ILIAS, LON-CAPA, Moodle, OpenUSS, Sakai, Spaghetti Learning. The most common system is Moodle. [9]

The functioning of Moodle and the implementation of a real educational process is impossible without the creation of a formalized pedagogical model of an educational institution, including formalized pedagogical models of the educational space and educational environment; mechanisms of their interaction and organization on this basis of the educational process of e-learning. At the same time, the student also becomes an element of the educational space and educational environment, which is subject to the requirements of building a formalized pedagogical model. [10]

In pedagogical design, all model representations are built on a common basis using methods of abstraction, generalization, analogy, formalization, hypothesis, as well as other categories and methods of cognition. Accordingly, "pedagogical modeling means the development and creation of a formalized model of the educational process or its components, reflecting the main ideas, methods, forms, tools, techniques and technological solutions that are subject to further experimental study in the context of real life. studying process".

Modeling in the general case is a universal method of scientific research, however, pedagogical modeling has a number of specific features, the main of which is that pedagogical modeling makes it possible to study the process holistically, it becomes possible to reflect and reproduce not only the structure, elements, properties, but also the relationship, mutual influence and relationship between the elements of the process under consideration. [16]

"Pedagogical modeling has its own systemic foundations, which are based on epistemological principles and no longer need to be confirmed by practice." Scientific works show that "using the theory of pedagogical modeling, we can build a flexible learning technology in an open information community that has functional completeness." At the same time, quantitative criteria and their effectiveness, such as the degree of achievement of the goal, in the implementation process will complement the descriptive, qualitative and subjective characteristics.

Thus, "a formalized pedagogical model is a heterogeneous set of elements, some of which have been studied in detail, that is, specifically and structurally, and the other part is based only on considerations of its overall effectiveness, that is, in a generalized form. and functionally". A detailed set of elements is a mathematical model suitable for implementation by means of computer technology, which is associated with the use of information units as the basis of models and information structures as the basis for a generalized description of models and the transfer of knowledge from one model to another.

A priori, it is believed that human modeling is impossible due to its multifactorial nature. "As soon as a person becomes the goal of education, the building material for which is life (personal, subjective) experience and, as a conclusion from it, a certain system of meanings, then choose

an educational activity that will determine the formation of such an experience, and even with the values we want turns out to be impossible. "But one of the postulates of the competency-based paradigm of education is "refusal to receive education as ready-made knowledge. This is being replaced by an understanding of education as the property of the individual, as a means of self-realization in life." as a means of building a personal career." [2]

Thus, the student sets himself an educational goal: what kind of specialist and what level, in what area of human activity he wants to become, what to achieve, what knowledge he will need in this case, what personal competencies he needs to have. developed.

This allows in the process of pedagogical modeling not to pay attention to the physical parameters and subjective characteristics of the student's personality, but to take into account only those qualities that correspond to them, as an individual educational goal - a list. competencies.

To conduct pedagogical modeling, it can be assumed that a student, from the point of view of organizing e-learning at a university, is a current educational situation similar to the student's individual educational goal, presented as his individual "personal-oriented situation". in terms of his cognitive, activity-oriented, motivational, ethical, social and behavioral competence.

The transition from the "classical" forms of organization of the educational process in the organization of e-learning implies "turning it into an active subject of the educational process, who learns purposefully, independently, realizing himself, his inclinations and abilities, knowing what he wants to achieve in the chosen profession, what exactly and at what level for this he must study, realize and assimilate.

Creating an adequate pedagogical model for organizing e-learning at a university is possible only if it has all three properties in full. At the same time, it should be borne in mind that the main value of models as a form of knowledge lies in the fact that they contain objective truth. However, in addition to unconditionally true content, the model contains both conditionally true (i.e., true under certain conditions) and presumably true (i.e., conditionally true under unknown conditions), and therefore false, or rather indeterminate, under given conditions. that the process we are modeling fully possesses the properties of multi-parameter and multi-factoriality. It should be noted that in pedagogical modeling, a learning model and a model of the educational process are distinguished. Thus, although the student himself is clearly not a separate element of the pedagogical model, a mechanism is needed to take into account his physical and personal characteristics in the created model. [7]

To assess the conformity of the constructed model of the educational process with its real implementation in pedagogical modeling, the concept of pedagogical validity is used, which is close to the concepts of reliability, adequacy, but not identical to them.

The pedagogical validity of modeling is determined in a complex way: conceptually, criterially and quantitatively, taking into account the fact that a multifactorial phenomenon is being modeled, the essential factors of which are diversity, multivariance, ambiguity of educational tasks, diversity of learning content. and types of educational material, ambiguity in the manifestation of the patterns of its assimilation, depending on the individual characteristics of students, the style of their cognitive activity, and many others.

Based on the general scientific interpretation of Kurt Gödel's theorem on the incompleteness and consistency of formal systems, it can be said that when building a formalized pedagogical model for organizing e-learning at a university, it is impossible to determine a complete and final set of information. about the educational process and, as a result, cannot be built. exact mathematical model. However, to solve such problems, logical-semantic pedagogical models are well developed and actively used, formalizing educational processes based on "fuzzy" methods of mathematical modeling.

3. Introduction of Moodle into the educational process of a modern university

When organizing e-learning, one of the most important issues is to take into account the role, place and main functions of its subjects: students, subject teachers, mentor, constructor of pedagogical situations, specialist experts.

A student (student, student) remains a full-fledged subject of the educational process. Its role in the pedagogical system of e-learning is changing dramatically, from the object of education it passes into the status of a subject. He is given the task of determining his individual educational goal, on the basis of which his individual educational trajectory is built in Moodle. Specialists-experts are asked questions not so much about the prospects and methods of development of a particular area of science and technology, but about the role and place of a person in this direction of development, the predicted results for society as a whole and for students personally. [12]

The most important subject of the educational process in Moodle is the teacher. Its role is difficult to overestimate. It is from his professionalism, personal qualities, experience that the result of the educational process depends. He must competently organize the educational environment, choose the algorithmic content of training, develop software, and find an adequate organizational form of work. The teacher should master these new functions, which are not typical for traditional teaching, as soon as possible. E-learning as a special form of learning, the essential feature of which is the immersion of the participants in the educational process in a virtual educational environment that exists around the clock in real time based on modern digital technologies, has an impact on the teacher's activities.

The introduction of e-learning in the university involves a change in the role of the teacher, more precisely, the role of the teacher becomes even more significant, and his functions are expanding. This is possible under the condition of a certain clear organization of the educational process of e-learning in an educational organization, as well as an understanding by the teachers themselves of this role and functions that they are forced to take on, thereby changing their place. in the learning process as a whole. E-learning is a complex multifunctional and labor-intensive phenomenon based on the use, processing, analysis, etc. of huge information content, which makes it necessary to involve more participants in the educational process who are able to organize it optimally. Therefore, the number of teachers is not reduced, but increased by attracting the necessary specialists. In addition to subject teachers, mentors, designers of pedagogical situations, and practitioners play an important role. [15]

Determining the main tasks and activities of the above entities involved in the organization of the educational process of e-learning at the university helps to optimize the activities of the university teacher.

The functions of the subject teacher are expanding significantly. In the learning process, the teacher solves the problems of teaching, developing and educating students, performs a number of functions that are closely related to the specifics of the disciplines taught: accumulates new knowledge in the field of the subject being studied; teaches directly; develops work programs for given disciplines; determines the appropriate forms, methods and means of teaching them, taking into account the age and individual psychological characteristics of students; prepares educational and methodological materials, including the development of electronic educational content; conducts classes provided for by the curriculum; bears full responsibility for the preparation of students in their field; establishes communicative relations with colleagues and students; has a direct and indirect educational impact on students, etc.

An important place in the educational process in Moodle is given to the constructor of pedagogical situations. This is a university teacher who has competencies in the development of pedagogical situations, the preparation and placement of electronic educational content on the educational platform, as well as the preparation of electronic courses. The only difference in functionality is the need to make all educational materials as interactive as possible, which means that the teacher must be sufficiently proficient in modern information technologies. This role can be combined with other activities of the teacher. [4]

A relatively new role in the educational process in Moodle is given to technology. Its main function is to ensure the functioning of the educational platform. Its functions also include organizing, setting up and testing the operation of automated information systems, providing technical, technological and methodological assistance to university teachers when they use innovative electronic technologies during classes.

One of the most important and widespread roles in the organization of e-learning belongs to the tutor. This is the most controversial figure in the scientific and pedagogical literature. Let's take a closer look at his activities. A tutor is first and foremost a teacher. Types of professional activity of a mentor: building and supporting an individual educational trajectory, organizing group educational events and interaction of subjects of the educational process; organization and conduct of pedagogical expertise in relation to each student; design of the educational environment and space. The function of the teacher in this role is generally one of full support for the students, and the role does not necessarily involve participation in the learning process itself. The main task of the tutor is to support individual learning and organize independent activities of students, as well as direct and control it. The tutor helps to determine the educational trajectory and the resources needed to achieve the educational goal. [6]

Distance education offers an educational environment independent of time and space, supported by cutting-edge web platforms and technologies.

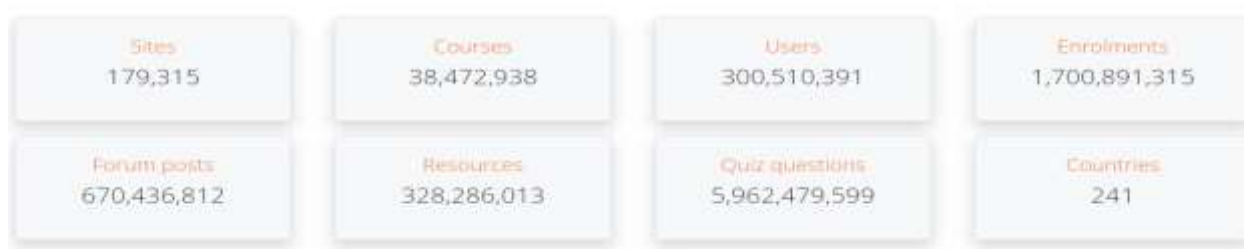
Educational institutions choose distance education for a number of reasons, such as access to training and education, improving skills, increasing economic efficiency, improving the quality of the educational structure, increasing the capacity of the education system, balancing inequalities between age groups, providing education to specific target groups, providing

training to target groups in emergencies, expanding educational opportunities in new subject areas, linking work and family life with education, and adding an international dimension to education.[18]

During the COVID-19 pandemic, universities have gained invaluable experience with distance learning methods. Such experience includes the development of training materials, the organization of adequate feedback and the receipt of appropriate evaluation of training. Despite problems with the Internet, especially in the regions, universities managed to use additional alternative forms of organizing the educational process (for example, applications Telegram, Skype), as well as establish friendly and almost round-the-clock academic support for students. [17]

Unlike the traditional activity of a teacher, when the latter acts as a carrier of knowledge and a means of transferring it to a student, the activity of a tutor is associated with the purposeful development of the cognitive independence of students, helping them in their development. setting an individual educational goal. Accordingly, "such an approach to the organization of the educational process requires the mentor to possess certain functions: managerial, diagnostic, methodological, motivational, as well as the functions of planning, goal setting, establishing communications, control, reflection."

4. Some statistics on Moodle users from the official Moodle site



Top 10 from 241 countries by registrations

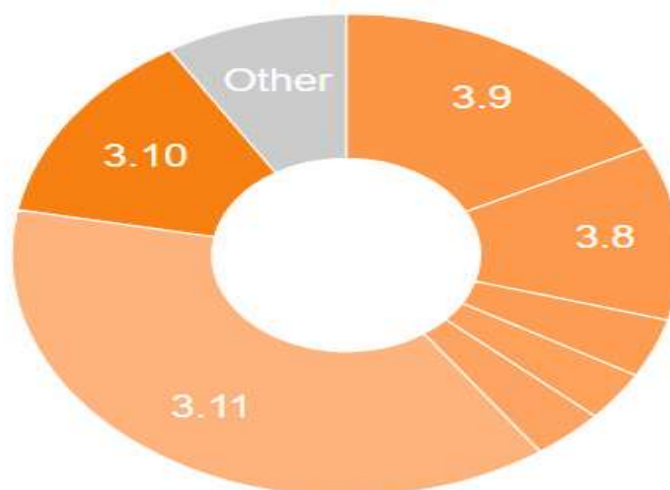
Country	Registered sites
United States	13,528
Spain	12,902
Germany	10,177
Mexico	9,664
Brazil	9,047
Indonesia	7,032
India	6,294
France	6,193
Russian Federation	6,048
Colombia	5,190

Registered sites by size

Users	Registered sites
0 - 1,000	155,923
1,000 - 10,000	18,232
10,000 - 20,000	2,329
20,000 - 50,000	1,747
50,000 - 100,000	594
100,000 - 200,000	310
200,000 - 300,000	66
300,000 - 400,000	29
400,000 - 500,000	15
500,000 - 1,000,000	17
> 1,000,000	9

Versions used

● 3.9 ● 3.8 ● 3.7 ● 3.6 ● 3.5 ● 3.11 ● 3.10 ● Other



FINDINGS

Giving a pedagogical model of organizing e-learning at a university of an "innovative" orientation, giving it the ability to implement "promising" individual educational goals, including in relation to professional activities, the development of basic qualities of

competencies that will be guaranteed in demand in the future, after the end of the learning process, perhaps only by involving a wide range of expert specialists in setting and correcting educational goals of students, conducting a "prognostic" pedagogical examination when setting an individual educational goal for students.

CONCLUSION

Effective activity for the implementation of all the declared functions is possible only when all "routine" operations are transferred to computer technology; special training for teachers; integration of the activities of all the main subjects of the educational process in Moodle.

LMS Moodle is a system suitable for any teacher who prefers e-learning or traditional e-learning. An innovative teacher can easily organize his learning process with the help of MoodleCloud, even in educational institutions where the information infrastructure is poorly organized.

REFERENCES

1. Басев И.Н., Голунова Л.В. Мониторинг учебной деятельности студентов в LMS Moodle. Вестник СГУПС: гуманитарные исследования. 2019. № 2 (6). С. 29-36.
2. Васильева Л.Г. Использование технологий дистанционного обучения в обучении взрослых. Информация и образование: границы коммуникаций ИНФО. 2018. № 10 (18). С. 273-275.
3. Гаирбекова П.И., Применение системы дистанционного обучения Moodle в образовании. Научные междисциплинарные исследования. 2021. № 3. С. 446-453.
4. Иванова О.В., Опыт использования технологии модульного обучения в вузе средствами Moodle. Образовательные технологии (Москва). 2018. № 2. С. 87-99.
5. Истратова Е.Е., Ласточкин П.В. Использование элемента «Лекция» для разработки интерактивного задания в среде Moodle. Творчество и современность. 2018. № 4 (8). С. 119-123.
6. Ланина С.Ю., Использование дистанционной среды Moodle в образовательном процессе высшей школы. Вестник Амурского государственного университета. Серия: Гуманитарные науки. 2018. № 82. С. 114-116.
7. Медведева О.А. Интерактивные возможности электронного учебного курса, разработанного на основе системы Moodle. Педагогика. Вопросы теории и практики. 2019. № 1. С. 62-67.
8. Минеева О.А., Прохорова М.П., Борщевская Ю.М., Терехина А.Е., Преимущества и недостатки системы управления обучением Moodle с точки зрения студентов. Азимут научных исследований: педагогика и психология. 2018. Т. 7. № 4(25). С. 162-165.
9. Муслимова А.З., Дирксен С.В. Система управления обучением Moodle в организации технического и профессионального образования. Вестник Казахского национального женского педагогического университета. 2019. № 4. С. 112-118.
10. Мухаметшин Л.М., Салехова Л.Л., Мухаметшина М.М., Использование системы lms Moodle в современном образовательном процессе. Вестник ТГГПУ. 2019. № 2 (56). С. 274-279.

11. Родионова И. В., Moodle как один из способов оптимизации учебного процесса в вузе. SJ International journal of theoretical and practical research. 1 (2), P.81-86.
12. Смирнова О.Г., Процукович Е.А. Опыт использования образовательной платформы Moodle в университете. Научное наследие. 2020. № 51. С. 46-47.
13. Старикова Е.М., Этапы разработки электронного учебного курса на платформе LMS Moodle. Вестник ХГУ им. Н.Ф. Катанова. 2020. № 1. С.151-160.
14. Степанова Л.В., Применение образовательной технологии Moodle в образовательном процессе вуза. Проблемы современного педагогического образования. 2019. № 65-3. С. 197-200.
15. Умарова У. У., Использование педагогических технологий в дистанционном обучении Moodle. Проблемы педагогики. 2020. № 6 (51). С. 31-34.
16. Шкунова А.А., Прохорова М.П., Лабазова А.В., Белоусова К.В., Булганина А.Е. Внедрение технологии смешанного обучения с помощью LMS Moodle. Инновационная экономика: перспективы развития и совершенствования. 2019. № 2 (36). С. 108-115.
17. Хусанов К.А., Кахаров Р.Т. Влияние пандемии COVID-19 на развитие цифрового обучения в высшем образовании Узбекистане. SCIENTIFIC COLLECTION "INTERCONF" №3(36), p.513-522 WASHINGTON, USA, 26-28.11.2020. Available at: <https://www.interconf.top/documents/2020.11.26-28.pdf>
18. Кахаров Р.Т., Организация и внедрение системы дистанционного образования во время пандемии COVID-19. International scientific-online conference. BERLIN on 11- January, 2022. p.110-120. Available at: <https://interonconf.com/archive.php?id=5>.