

## ИСПОЛЬЗОВАНИЕ ПЛАТФОРМЫ MOODLE ДЛЯ ОРГАНИЗАЦИИ ОБУЧЕНИЯ В ПЕРИОД ПАНДЕМИИ COVID-19

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**Аннотация.** В данной статье раскрывается эффективность смешанной образовательной среды путем анализа взаимосвязи между характеристиками студента и обучения, также механизмы системы управления обучением (LMS) – широко применяемого и признанного во всём мире комплекса методов обучения, особенно платформы Moodle, указываются положительные стороны и детали платформы Moodle, отличие от традиционных альтернатив. Кроме того анализ применения данной платформы в период пандемии COVID-19.

**Ключевые слова:** LMS, платформа Moodle, анкетирование, пандемия COVID-19, дистанционное обучение.

## COVID-19 PANDEMIYASI DAVRIDA O'QITISHNI TASHKIL QILISH UCHUN MOODLE PLATFORMASIDAN FOYDALANISH

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Buxoro davlat tibbiyot instituti

**Annotatsiya.** Ushbu maqolada talaba imkoniyatlari va masofaviy ta'lim o'rtasidagi aloqani tahlil qilish orqali aralash o'quv muhitining samaradorligi ochib berilgan, shuningdek butun dunyoda keng tarqalgan hamda tan olingan o'qitishni boshqarish tizimi(LMS)lardan biri bo'lgan Moodle platformasining ishlash mexanizmlari, Moodle platformasining ijobiy tomonlari va tafsilotlari, uning muqobil platformalardan farqli jihatlari keltirilgan. Shuningdek, ushbu platformadan COVID-19 pandemiasida qo'llanilish tahlili keltirilgan.

**Kalit so'zlar:** LMS, Moodle platformasi, so'rovnoma, COVID-19 pandemiyasi, masofadan o'qitish

## USING THE MOODLE PLATFORM TO ORGANIZE TRAINING DURING THE COVID-19 PANDEMIC

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**Abstract:** This article reveals the effectiveness of the hybrid educational

*environment by analyzing the relationship between student characteristics and learning tools for the learning management system (LMS) is a widely used and recognized around the world complex learning methods, especially the Moodle platform are specified positive aspects and details of the Moodle platform, unlike traditional alternatives. In addition, an analysis of the use of this platform during the COVID-19 pandemic.*

**Keywords:** *LMS, Moodle platform, questionnaire survey, COVID-19 pandemic, distance learning.*

The COVID-19 pandemic shocked the whole world and human life took on a new form [5, 6]. The training system was organized in a new, remote format. During the quarantine period due to the COVID-19 pandemic, the Bukhara State Medical Institute implemented a distance learning (0) system based on the Moodle platform, which is one of the training methods of the learning management system – LMS) - a widely used and internationally recognized set of training methods.

Learning Management Systems (LMS) are used by educational institutions around the world to organize critical course information and provide hybrid or fully online courses with all the components of a traditional face-to-face class, including assignments, classroom resources, and the ability for students and teachers to collaborate within a centralized digital learning solution [3, 11].

MOODLE (Modular Object-Oriented Dynamic Learning Environment) is the world's most widely used Learning Management System (LMS) for delivering learning through a dedicated learning platform, providing millions of educators with flexible, open-source technologies [2, 16].

The name Moodle is an abbreviation for a modular object-oriented dynamic learning environment. It offers some important benefits that can lead to improved learning outcomes for students [7, 12]. There are more than 100,000 implementations of this LMS worldwide, and more than 160 million students use it.

Some of the advantages of this electronic solution are:

- access your training materials anytime, anywhere. Because Moodle is a web-based solution that also offers a robust Moodle mobile app, students can access course materials from anywhere, anytime. This means they don't need to be in the classroom or have physical materials on hand. They can progress in their training and participate in their courses when it is convenient and appropriate for their busy schedule;

- consistent content delivery and feedback. With Moodle, educators have more ways to ensure each student has access to all the types of content they need to explore, including various media plugin options and forums

that encourage collaboration. In addition, instructors have comprehensive tools for feedback. For example, they can respond to a student's work with a simple categorization tool, evaluating the work against pre-set criteria;

- save time for teachers. Moodle is easily integrated with other tools and systems, the electronic journal of the institute, attendance tools, test books and much more. This integration means that teachers can spend less time registering and managing their students and more time learning.;

- an organized e-learning environment. As already mentioned, since Moodle is able to seamlessly integrate between existing systems, an educational institution can effectively manage training from the center. This helps keep all administrative and training activities more organized, organized, and allows you to store and track this holistic information in one place.;

- the possibility of applying mixed approaches to learning. Training has long since faded into the background. However, using Moodle, you can use a mixed learning approach to include different learning materials suitable for specific goals, and different learning styles to effectively evaluate multiple types of formal and non-formal learning. Using solutions such as virtual classrooms, gamification, and other techniques can help create more dynamic courses and positively impact student engagement and overall success. [10, 17].

Higher education institutions need a learning platform that will allow them to ensure the success of their students and provide their teachers with a flexible solution that can be adapted to the teaching style of each teacher [8, 13]. Moodle, the most widely used and advanced learning management system in the world, can help solve a number of typical learning challenges faced by universities, creating sustainable learning programs that will ultimately improve learning outcomes..

Such features of the Moodle platform are:

- workshops of the virtual laboratories. Virtual laboratories is an MHRD project, which is a repository of about 1,400 simulation experiments used by medical institutes, and an excellent portal that complements the experiments conducted by students over 6 years of study. They cover various areas of medicine [4, 14]. The use of these labs is free and can be done from anywhere, anytime on laptops, desktops, or smart phones..

- short lecture programs: These are 1-2-hour lecture programs on relevant medical and other topics of relevance and importance to professionals. They are conducted jointly with other sections of the society and the Affinity Groups of the section, independently as independent programs. These programs serve as a helper for practicing professionals and for curious students.

In addition to its incredible flexibility, robust functionality, and promising scalability, Moodle is a well-supported open source software. In addition,

Moodle's open codebase allows for multiple hosting options, which can be useful for maximizing the functionality and efficiency of digital courses. Institutions have the option to host their own Moodle site if they have the in-house experience and bandwidth [9, 15].

Obviously, there are many good reasons to choose Moodle as a learning management system. Therefore, it was interesting to see how this platform helps to improve the results of training at the Bukhara State Medical Institute, which was the purpose of our study.

#### Materials and methods of research

Pursuant to Order No. 233 of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan dated March 27, 2020, in order to ensure the introduction of distance education in higher educational institutions, the Bukhara State Medical Institute also issued Order 249/1 of 30.03.20, according to which the Institute provided for the organization of independent distance learning of students from April 1, 2020 and introduced e-learning. During this short period, based on the general conditions, teachers began to conduct classes through the Telegram messenger, Zoom, and e-magazine platforms until the end of the school year. Of course, it was difficult to organize an electronic system of the educational process in this unexpectedly short period. In order to overcome these difficulties, since June 2020, the Bukhara State Medical Institute has started implementing the electronic Moodle platform, where all teachers provided materials for lectures, practical classes, seminars in the form of video files, presentations, text, tests, glossary, etc., in accordance with the curriculum and program. Since September 2020, all subjects taught at the Bukhara State Medical Institute have been organized on the Moodle platform.

In order to find out the effectiveness of the Moodle platform used for distance education for teaching the subject of information technology in medicine and whether it is accessible to students, a survey was conducted among students, which was attended by 280 students from various faculties of the Bukhara State Medical Institute. The questionnaire contained 8 main questions:

1. Through which device do you use the distance learning platform?
2. What technology will you use to connect to the Internet at your place of permanent residence (at home)?
3. Can you master the training program on the Moodle platform yourself?
4. Do you feel that your self-learning skills are developing?
5. What part of the day do you usually use the distance learning platform?
6. Do you think that learning through a distance learning platform can replace traditional learning?
7. Do you have enough financial resources to buy a computer (tablet, Notebook)?

8. Who prevents you from using the Moodle Remote Platform?

Results of the study

When statistically processing the results, it turned out that about 80% of students (Figure 1) use smartphones for distance learning, and using computers is 10 times less, while using laptops is about 16%, tablets - 2.5%, and Smart TV -0.35%. , computers 1.15%.

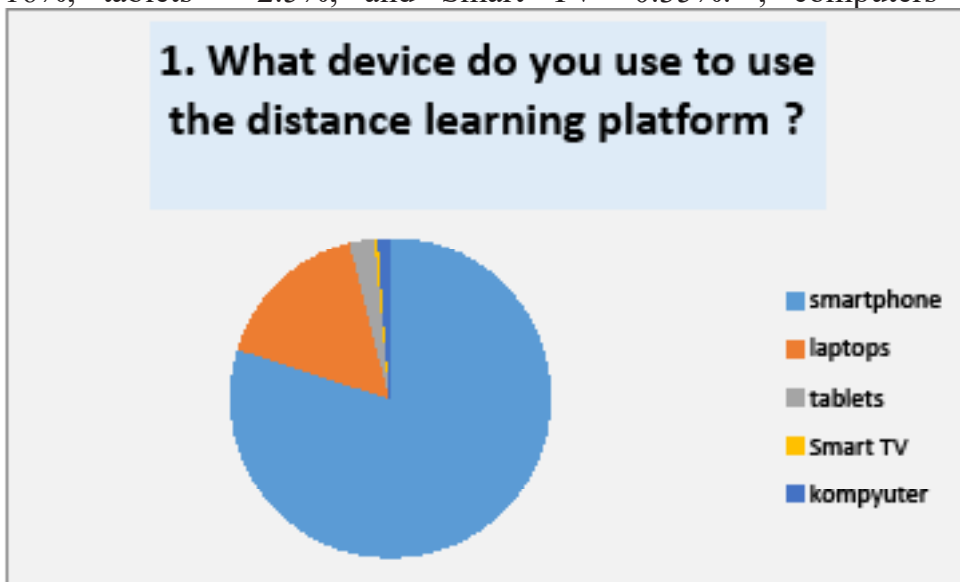


Figure 1. Through which device do you use the distance learning platform?

In addition, students prefer 4G to connect to the Internet from home (Figure 2) - 52.36%, and about 26% use 3G, while 14.10% of students use ADS, and 4.25% use VDS and 3.2% Access point.

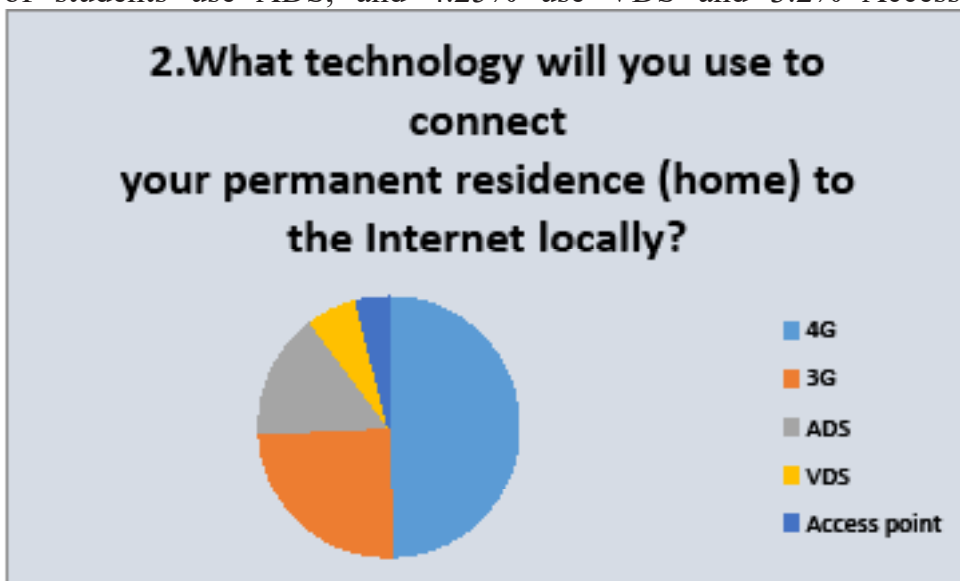
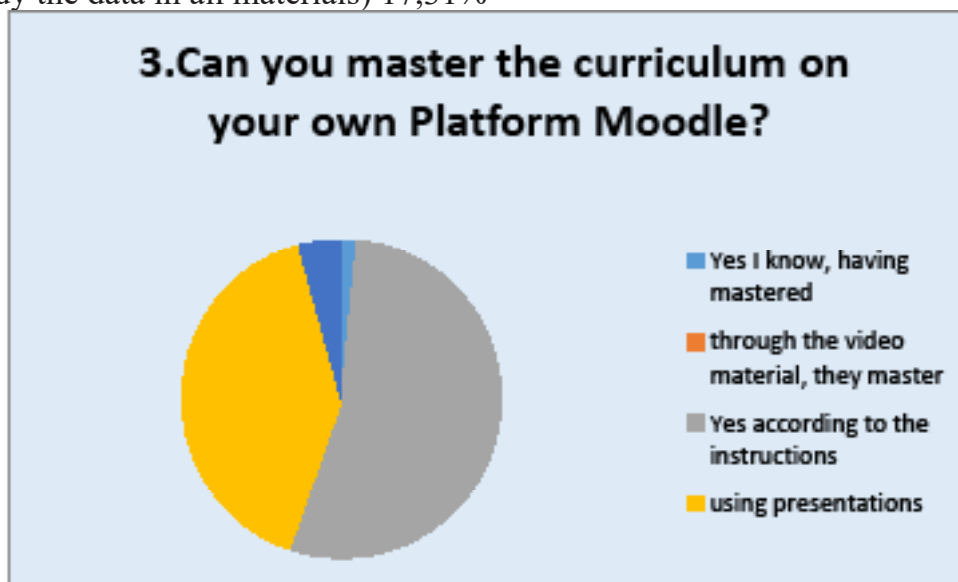


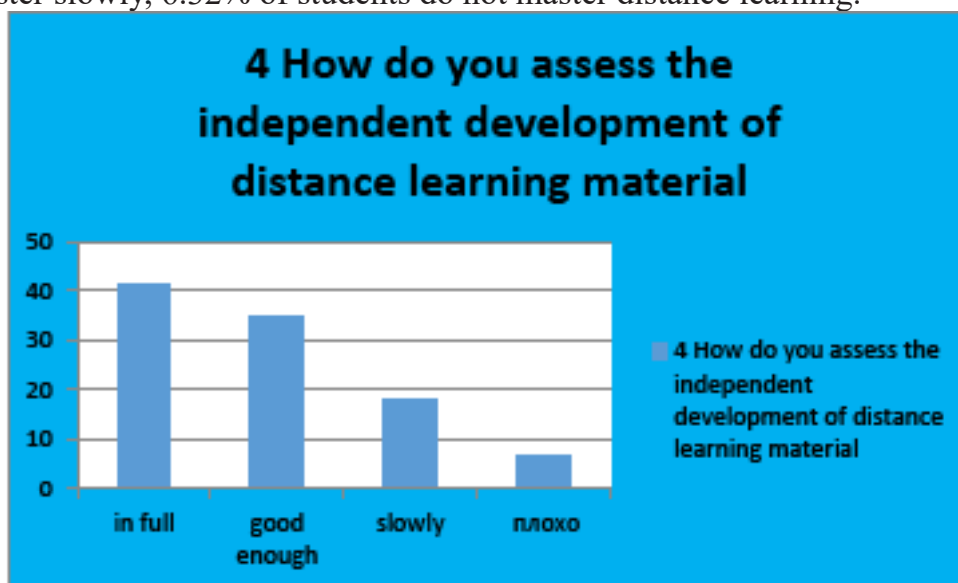
Figure 2. What technology will you use to connect to the Internet at your place of permanent residence (at home)?

Also, when asked about the independent development of the curriculum on the Moodle platform, about 50% of students answered « yes « (Figure 3), 18.33% learn through video material, and 13% through presentations, or 1.36% of students can master the educational material in all types. Yes (I can study the data in all materials) 17,31%



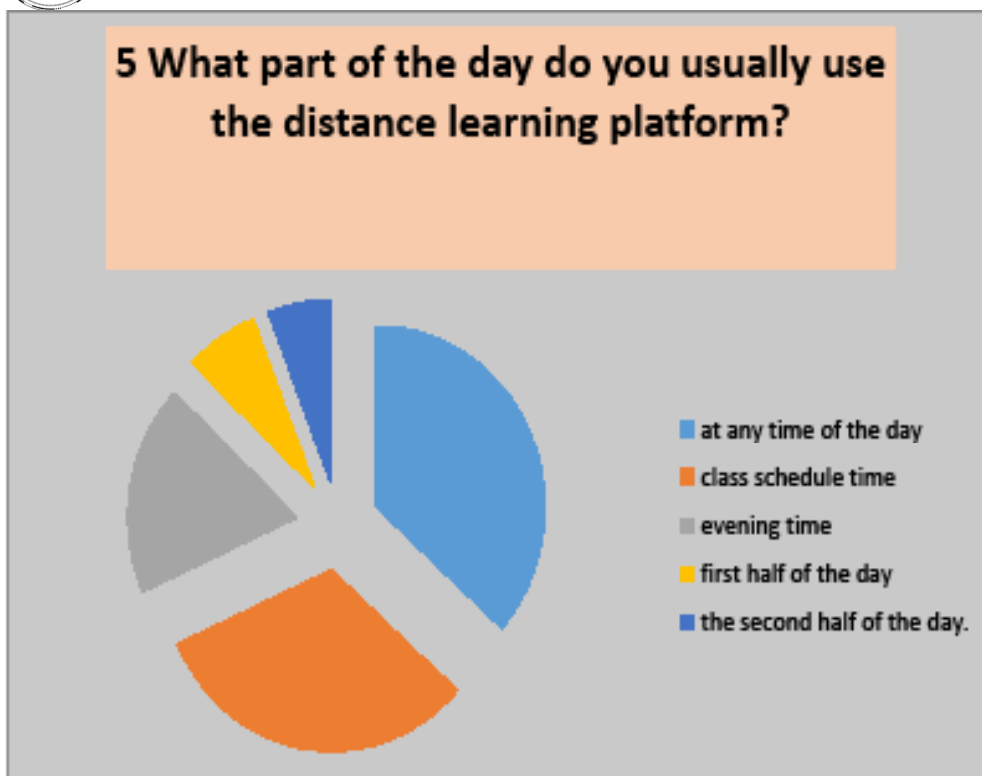
**Figure 3. Can you master the training program on the Moodle platform yourself?**

In addition, to the question «How do you assess the independent mastering of distance learning material? «(Figure 4), 41% of students answered «in full», and 34.76% of students believe that it is quite good; however, 17.92% master slowly, 6.32% of students do not master distance learning.



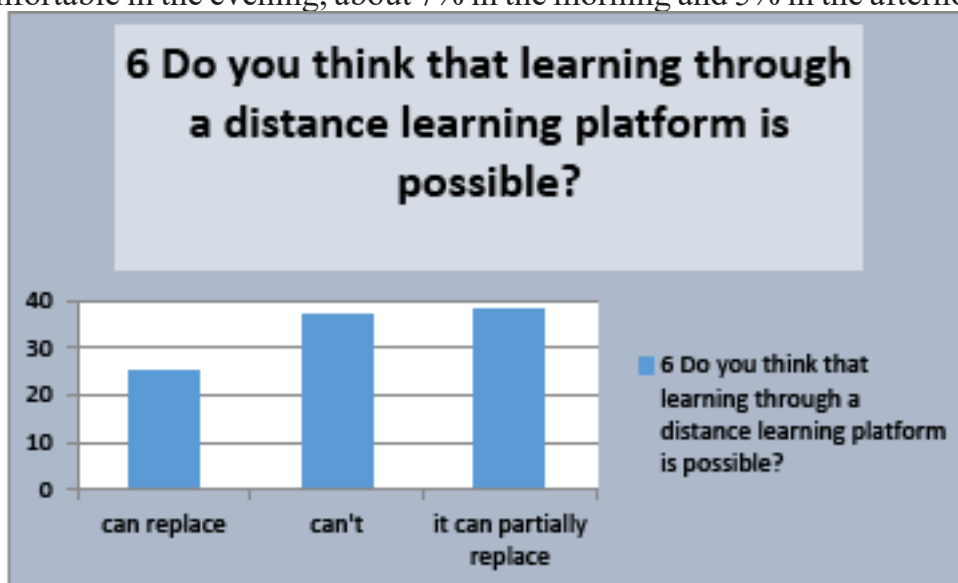
**Figure 4. How do you assess the independent development of distance learning material?**





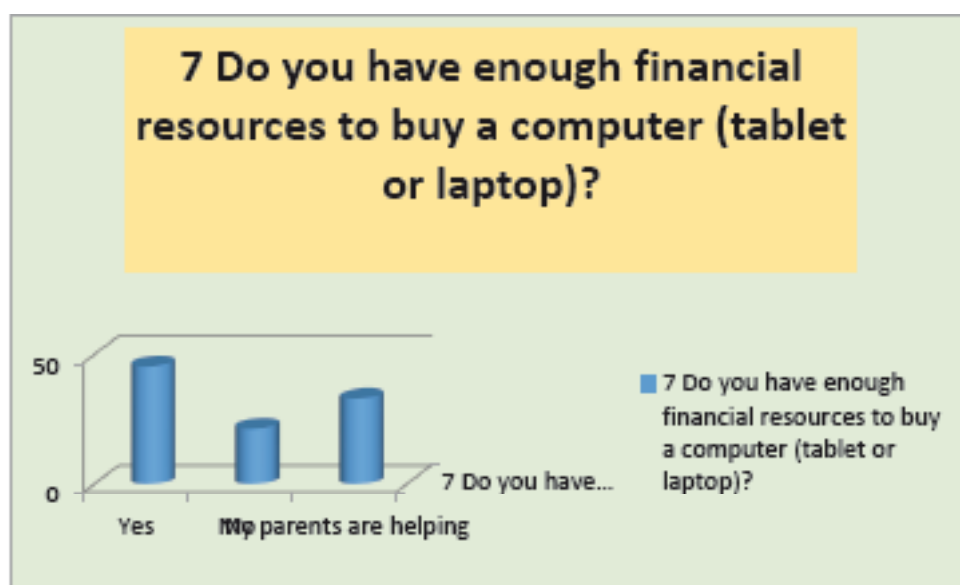
**Figure 5. What part of the day do you usually use the distance learning platform?**

When asked about the time of using the distance learning platform (Figure 5), about 37% of students answered «at any time of the day», and 32% of students indicated the time of the class schedule, while 19% of students were comfortable in the evening, about 7% in the morning and 5% in the afternoon.



**Figure 6. Do you think that learning through a distance learning platform can replace traditional learning?**

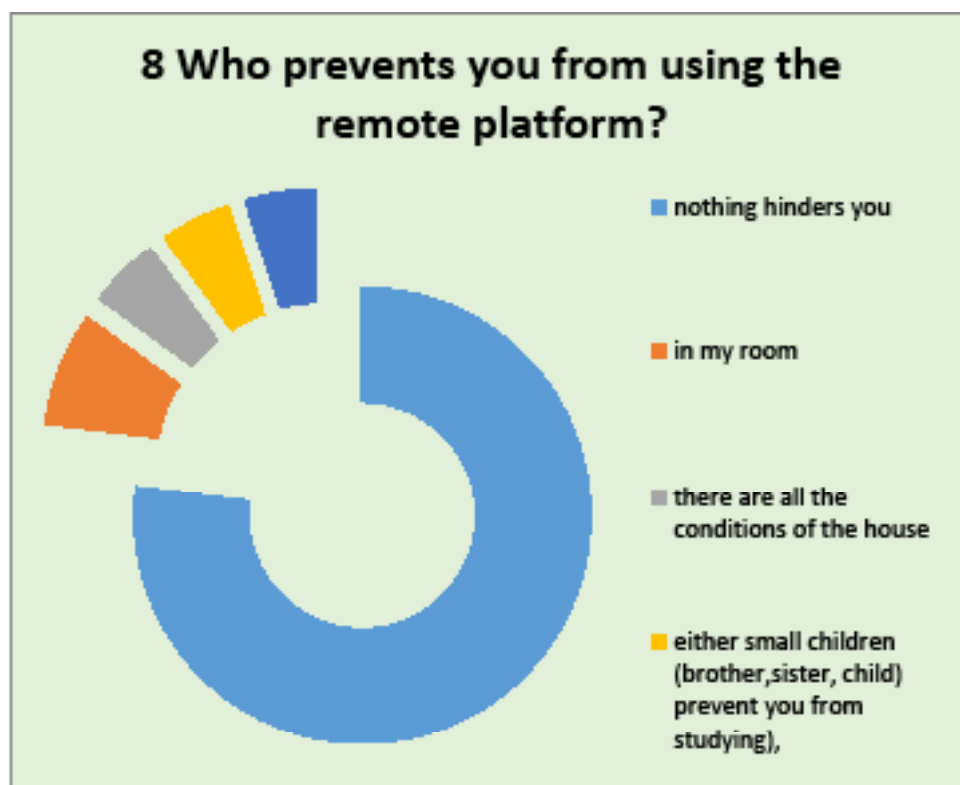
It is known that traditional training for medical schools is considered mandatory and nothing will replace the skills acquired by a student «near the patient», this practice is for life. However, in such a complex epidemiological situation, the training of medical students was undoubtedly organized remotely on the Moodle platform. When asked whether distance learning via the Moodle platform can replace traditional learning, 38% of students answered (Figure 6) that they can't, but the other 37% of students are sure that they can partially replace it, but about 25% of students believe that they can replace it.



**Figure 7. Do you have enough financial resources to buy a computer (tablet or laptop)?**

Along with questions about the effectiveness of distance learning, the questionnaire included social questions about financial opportunities (Figure 7) to buy a computer (tablet or laptop), to which 45.55% of students answered positively and 21.45% of students answered negatively, and about 33% of students rely on parental assistance.





**Figure 8. Who prevents you from using the remote platform?**

And to the question of who interferes with the use of the remote platform (Figure 8), 77% of students said that nothing interferes; 8% of students study in their room; 5% of students have all the conditions at home to study on the remote platform; and 5% of students are prevented from studying either by small children (brother ,sister, child), 5% or the atmosphere in the house.

This study was conducted in the context of the introduction of innovative pedagogy, involving the use of a learning management system-MOODLE, for the first time in teaching and training at the Bukhara State Medical Institute, due to the epidemiological situation in the republic. The studied characteristics of students for the effectiveness of blended learning include self-regulation, computer competence, workload management, attitude to distance learning, social and family support. Moodle LMS is provided free of charge as open source software, so anyone can adapt, extend, or modify the platform without any license fees..

Conclusions. During the quarantine period due to the COVID-19 pandemic at the Bukhara State Medical Institute, the implemented online training system gave its results. The effectiveness of blended learning can depend on many other factors, including student characteristics, design features, and learning outcomes. This program not only complemented the students ‘ training at the Bukhara State Medical Institute, but also helped

them to learn how to apply the knowledge gained, gave them the opportunity to create tangible applications or products, such as blogs, web pages, web applications, and so on, which will help students become more able-bodied and ready to do their job well

#### REFERENCES:

1. Кравченко Г.В. Использование дистанционной среды Moodle в образовательном процессе студентов дневной формы обучения//
2. Кравченко Г. В., Волженина Н. В. Работа в системе Moodle: руководство пользователя : учебное пособие. — Барнаул, 2012.
3. Лаврентьев Г. В. Дистанционное обучение: теоретико-методологические основы // Вестник Алтайской академии экономики и права. — 2012. — Вып. 2 (25).
4. Н.П.Клейносова, Э.А.Кадырова, И.А.Телков, О.М.Баскакова, Р.В.Хруничев. Дистанционное обучение в среде Moodle: методические указания. Рязань. - 2011.
5. Облокулов А.Р, Мусаева Д.М., Элмурадова А.А. Клинико-эпидемиологическая характеристика новой коронавирусной инфекции (COVID-19)//Новый день в медицине. - 2020. - №2 (30/2). – С. 110-114.
6. Ядгарова Ш.С., Сайтов Ш.О., Набиева С.С. Требования к питанию и применение биологически активных добавок при COVID-19//Новый день в медицине. – 2020. - №4 (32). – С. 715-717.
7. Жалолова В.З., Рахматова М.Р., Кличова Ф.К., Назаров С.Э. Роль инновационных методов обучения на развитие уровня знаний студентов// Новый день в медицине. – 2019. - №4 (28). - С.32-35.
8. Мусаева Д.М., Клычова Ф.К., Очилова Г.С., Очилов А.К. Интеграция инновационных и традиционных методов в медицинском образовании// Материалы Второй Международной учебной конференции// Современное состояние медицинского образования, проблемы и перспективы. Бухара. Узбекистан. – 2019. - С.136-138.
9. Насирова С.З. Основные виды обучения в системе инновационного образования// Сборник материалов 2-Международной учебной конференции//Современное состояние, проблемы и перспективы медицинского образования. Ташкент. Узбекистан. – 2019. - С. 144-148
10. Рахимов З.К., Мусаева Д.М., Раджабов Н.Г. Глобализация даврида олий таълим тизими// Тиббиётда янги кун. - 2020. - Т. 2. – № 30/2. - С. 115-117.
11. Шарипова О.З., Мелибоева Ш.Ш., Мусаева Д.М. Инновационные методы обучения в медицинском образовании не отрицают традиционные// Новый день в медицине. – 2020. - №2 (30/2). – С. 101-103
12. Шарипова О.З., Мусаева Д.М. Эффективная интеграция инновационных и традиционных методов обучения в медицинском образовании// Сборник материалов III Международной учебной онлайн конференции//Современное состояние медицинского образования: проблемы и перспективы. Бухара. Узбекистан. – 2020. – С. 65-68.
13. Мусаева Д.М., Очилова Г.С., Жалилова Ф.С., Самадов Б.Ш., Шарипова О.З. Программа для интеграции инновационных и традиционных методов в медицинском образовании по типу “Перевернутый класс”// Свидетельство об официальной регистрации программы

для ЭВМ. Агентство по интеллектуальной собственности Республики Узбекистан. - 2020. - № DGU 08497.

14. Nazarov A.I., Sergeeva O.V. The advantages of distance learning technologies: students' and university lecturers' views. *Open Education*. 2016;(6):42-50. (In Russ.) <https://doi.org/10.21686/1818-4243-2016-6-42-50>

15. Rakhmatova M.R., Jalolova V.Z. The place of innovative technologies in training of highly qualified personnel in the highest medical educational institutions// *Electronic science journal «Biology and integrative medicine»*. - 2018. - №3. - P. 234-247.

16. Weronika Fernando, Moodle quizzes and their usability for formative assessment of academic writing, *Assessing Writing*, Volume 46, 2020, 100485, ISSN 1075-2935, <https://doi.org/10.1016/j.asw.2020.100485>. (<http://www.sciencedirect.com/science/article/pii/S1075293520300465>)

17. Leonardo Oliveira Reis, Osamu Ikari, Khaled A. Taha-Neto, Antonio Gugliotta, Fernandes Denardi, Delivery of a urology online course using moodle versus didactic lectures methods, *International Journal of Medical Informatics*, Volume 84, Issue 2, 2015, Pages 149-154, ISSN 1386-5056, <https://doi.org/10.1016/j.ijmedinf.2014.11.001>. (<http://www.sciencedirect.com/science/article/pii/S1386505614002160>).

18. For Teachers, Trainers and Administrators Revised January 2005

19. Инновационные методы обучения в высшей школе. Инновационные методы обучения в высшей школе. Выпуск 2015 (Сборник статей по итогам методической конференции ННГУ 12–13 февраля 2015 г.). – Нижний Новгород: ННГУ им. Н.И. Лобачевского, 2015. – 151 с

20. Structured methods interviews , questionnaires and observation. Constantinos N. Phellas, Alice Bloch and Clive Seale. 2011 y.

21. David W. Hacy. Investigative Uses of Technology : Devices. Tools, and Techniques. Acting Principal Deputy Director, National Institute of Justice.

22. Literature Review on the Impact of Digital Technology on Learning and Teaching ICF Consulting Services Ltd November 2015.

23. BARRON'S \*AP and Advanced Placement Program are registered trademarks of the College Board, which was not involved in the production of, and does not endorse, this book. 7TH EDITION Roselyn Teukolsky, M.S.

24. Innovative Methods of Teaching Dr. Damodharan V. S. ACCA, AICWA and Mr. Rengarajan.V AICWA.

25. Strategies for effective teaching. A Supplement for Special Education Louisiana Teacher Assistance and Assessment Program Louisiana Department of Education Cecil J. Picard State Superintendent of Education 2004

26. International Journal of Research in Education and Science (IJRES) Teaching and Learning with Technology: Effectiveness of ICT Integration in Schools Simin Ghavifekr, Wan Athirah Wan Rosdy Faculty of Education , University of Malaya, Malaysia, [drsimin@um.edu.my](mailto:drsimin@um.edu.my) Volume 1, Issue 2, Summer 2015