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ФОРУМ СОСТОИТ ИЗ НАУЧНО-ПРАКТИЧЕСКИХ КОНФЕРЕНЦИЙ, МАСТЕР-КЛАССОВ И ЛИТЕРАТУРНЫХ ВЫСТАВОК И ПРЕДСТАВЛЯЕТ КРУПНУЮ ПЛОЩАДКУ ДЛЯ ОБМЕНА НАУЧНЫМ И ПРАКТИЧЕСКИМ ОПЫТОМ В СОЦИАЛЬНО-ЭКОНОМИЧЕСКОЙ СФЕРЕ МЕЖДУ НАЦИОНАЛЬНЫМИ И ОТЕЧЕСТВЕННЫМИ СПЕЦИАЛИСТАМИ

II КОНФЕРЕНЦИЯ, ТРАНСФОРМАЦИОННОЕ
ЖАРАЁНИДА МОЛИА ТИЗМИ ВА
БУГАЛТЕРИЯ ХИСОБИ
АРХИТЕКТУРАСИНИ ТАКОМИЛТАШ
МАСАЛАЛАРИ

1ST TSUE DEVELOPMENT
STRATEGY FORUM

RAQAMLI IQTISODIYOT VA AXBOROT TEKNOLOGIYALARI

2022

ELEKTRON ILMIY JURNALI / MAXSUS SON

ORGANIZING THE 1ST TSUE DEVELOPMENT STRATEGY FORUM TO ANALYZE NATIONAL ECONOMIC TRENDS. THE AIM OF THE FORUM IS TO PROVIDE A PLATFORM FOR THE EXCHANGE OF IDEAS AND EXPERTISE ON VARIOUS ISSUES RELATED TO THE CURRENT TRENDS IN THE ECONOMIC DEVELOPMENT OF THE COUNTRY.

20-21

I ФОРУМ СТРАТЕГИИ
РАЗВИТИЯ



РАҚАМЛИ ИҚТИСОДИЁТ ВА АХБОРОТ ТЕХНОЛОГИЯЛАРИ DIGITAL ECONOMY AND INFORMATION TECHNOLOGY

Илмий электрон журнал | Scientific electronic journal

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faol kirib bormoqda va yaqin kelajakda biznes aloqalarini tashkil etishning ushbu modeli yanada keng tarqalishi ko'zda tutilgan.

Internet orqali mahsulot va xizmatlarni sotish COVID-19 pandemiyasi davrida yangi

ahamiyat kasb etdi, chunki biznes egalari va iste'molchilarning elektron tijoratni qabul qilishdan boshqa iloji yo'q edi. Bu o'zgarish shu yerda qoladi va kichik biznes egalari uchun onlayn rivojlanish imkoniyatlarini taqdim etadi.

Foydalanilgan adabiyotlar ro'yxati

1. Rayport J. F., Jaworski B. J. Introduction to e-commerce. – McGraw-Hill Irwin MarketplaceU, 2014.
 2. Kwilinski A. et al. E-Commerce: Concept and legal regulation in modern economic conditions // Journal of Legal, Ethical and Regulatory Issues. – 2019. – T. 22. – C. 1–6.
 3. Петенева А. А. Роль электронной торговли в развитии бизнеса // Синергия наук. – 2016. – №. 6. – С. 86–91.
 4. Cheba K. et al. Impact of external factors on e-commerce market in cities and its implications on environment // Sustainable Cities and Society. – 2021. – T. 72. – C. 103032.
 5. Gupta A. E-Commerce: Role of E-Commerce in today's business // International Journal of Computing and Corporate Research. – 2014. – T. 4. – № 1.
 6. Sadq Z. M., Sabir H. N., Saeed V. S. H. Analyzing the Amazon success strategies // Journal of process management and new technologies. – 2018. – T. 6.
 7. Luo S., Choi T. M. E-commerce supply chains with considerations of cyber-security: Should governments play a role? // Production and Operations Management. – 2022.
- Mainardes E. W., de Souza I. M., Correia R. D. Antecedents and consequents of consumers not adopting e-commerce // Journal of Retailing and Consumer Services. – 2020. – T. 55. – C. 102138.

СУНЪИЙ ИНТЕЛЛЕКТ ОРҚАЛИ МАСОФОВИЙ ТАЪЛИМНИ ТАКОМИЛЛАШТИРИШ

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Аннотация

Бугунги кунда ёшлар ўртасида таълим самарадорлигини оширишнинг энг замонавий усулларида бири таълим жараёнида инновацион технологиялардан самарали фойдаланишдир. Шу боис олимлар томонидан инновацион технологиялардан фойдаланган ҳолда талабалар учун масофавий таълим тизимини яратиш бўйича турли лойиҳалар ишлаб чиқиш бўйича илмий ишлар олиб борилмоқда. XXI асрда фан ва ахборот-коммуникация технологияларининг ривожланиши таълим тизимининг сезиларли даражада тезлашишига олиб келди. Ушбу мақола янги таълим технологияларини ўрганиш учун муҳим бўлган сунъий интеллект ёрдамида масофавий таълимни қўллаш ва ривожлантириш ҳақида асосий маълумотларни тақдим этишга мўлжалланган.

Калит сўзлар

Масофавий таълим, масофавий таълим тизими, интернет технологиялари, сунъий интеллект, ўқув қўлланмалари, COVID-19.

Introduction. The development of information and communication technologies has led to the emergence of a new direction in distance education. At present, great attention is paid to the current work of distance learning in educational institutions of the Republic. At the same time, the development of science and technology, the change in the composition of knowledge, skills, qualifications and the constant increase in the volume are characterized by the high demands on today's specialists. Distance learning is the implementation of the relationship between teacher and student in the learning process on the basis of the use of modern information and communication technologies. Distance learning system (DLS) is an independent education that does not require participation in lectures and classes, which allows the student to study at a time and place that suits him / her. is convenient with. The distance learning system requires only one continuous, active study of the learner. In this way, along with the knowledge of the specialist, the quality of the qualification also increases. Thus, the technology of distance learning system is an interactive communication technology of teaching, which covers the interaction between teacher and student. The teacher takes into account the individual characteristics of the student. The learner, on the other hand, has the opportunity to acquire knowledge in accordance with these characteristics. This allows the learner to study the material in depth and thoroughly. It requires the teacher to constantly improve their pedagogical skills, as interactive teaching requires the teacher to constantly update their knowledge. The technical implementation of the distance learning system is a complex set of software. [1]

Distance education - to provide students with the basic volume of the studied material, interactive interaction of students and teachers in the learning process, to allow students to work independently on the independent study of the studied material and a set of information technologies that provide an assessment of the knowledge and skills they have acquired in the learning process. Also, distance education system is a modern method of teaching. Significant changes are taking place in the education system of our country. It is gratifying that distance learning is being used, among other forms of education. It is no secret that the majority of the population of our country uses the Internet only to read the news, search for information, use e-mail or sell rumors. The possibilities of the Internet are growing day by day. A new phase of the use of the Internet has begun, which means that the Internet has been introduced in various

fields. Internet technologies: distance learning, electronic libraries, telemedicine, telemetry, e-business, e-shops, etc. Here are some tips to help you get started: Today, progress is very rapid and rapidly changing. Almost every second, changes, news and surprises take place in different parts of the planet. Every day is full of information. The flow of information follows us at home, at work and on vacation. Man cannot work without the influence of information. Understanding and studying life takes place through the collection and assimilation of information. Another advantage of distance learning is that it allows students to study at a time that suits them and even without leaving work. It is because of these advantages that this style is now widely available in the world. And one more advantage of distance learning is that the duration of study is determined by the student, that is, the student begins to study at any time, mastering the material under the supervision of the teacher. Students' mastery is determined by the completion of assignments and tests. The faster a student masters the program, the faster he or she will graduate and receive a certificate. If he fails to master the program, he will be given the opportunity to work independently and continue his studies. [2]

It is well known that this method has many advantages. All higher education institutions are working on the implementation of distance learning techniques and technologies. The development of information technology requires a new approach to the organization of distance learning. Modern models of distance learning are based on communication and network technologies. For distance learning, it is not necessary to gather a certain number of people who want to study at the location of the educational institution. Secondly, there is no need for the listener or student to overspend. Thirdly, it is possible to exclude the age restrictions of those involved in this type of education. The contingent involved in distance learning may include persons belonging to the following social groups: those wishing to obtain a second higher or additional education, training and retraining; heads of regional authorities and administrations; young people who do not have access to education due to the limited opportunities of the traditional education system; employees of companies and enterprises who want to raise the status of their education to the level of modern requirements; listeners seeking second parallel information; people from remote, underdeveloped areas; persons with limited mobility; persons with disabilities; military personnel, etc. [1]

Methods and results. In the field of education, innovations are constantly being introduced

that allow any person to receive a large amount of information in a minimum amount of time, learning and developing in any field using distance learning. Today, there are many systems and technologies of distance learning, and therefore, when introducing distance technologies into the practice of an institution or an individual teacher, the question arises of choosing a specific distance learning system.

Distance education has methodological, economic, social advantages and disadvantages as well.

- Methodological achievements and advantages include: Convenience of the lesson schedule. The student can participate in the learning process at any time. Easy to use addresses. Students can participate in the learning process from Internet cafes, homes, hotels, workplaces and more. Easy pace. Education is conducted at the pace of students' understanding of new knowledge. Convenient curriculum. Curricula can be tailored to meet the individual and state educational needs of students. Database collection. Ability to collect and use the knowledge of previous students. Demonstration facilities. Take full advantage of multimedia features. Involve qualified teachers in the educational process.

- Economic benefits and advantages include: Teaching unlimited distance. The distance between the teacher and the students does not matter. Not to interfere with the work process. The student is educated as a part of the work. Increase the number of students. The number of students in an educational institution that fully uses distance learning technologies can increase by 2-3 times. Cost. Distance learning courses are 2 and 3 times cheaper than regular courses.

- Social achievements and benefits include: No social segregation. Those who want to take a second higher or additional education in a distance education course, who want to improve their skills and retrain; students wishing to obtain a second parallel information; people from remote, underdeveloped areas; physical defects persons; military service; persons with limited mobility; and others may participate. There are no age restrictions and the age limit for applicants is excluded.

But it should be noted that distance education also has its drawbacks. We can add to them: Distrust of e-learning and communication processes. For this reason, students are more likely to pursue regular (full-time or part-time) education than virtual education. Lack of state distance education standards and, as a result, no state-issued diplomas. For this reason, many distance education graduates are issued only a

certificate of completion of the course. Relation to virtual environment and hardware. Distance education refers to the availability of the Internet, the cost of using it, the speed and availability of services, the availability and operation of special communication techniques.

Innovative technologies in education have led to the emergence of new educational technologies and forms of teaching based on electronic means of information transmission and processing. The following technical means and technologies are used in distance learning: trainer, tester and means of communication. Teaching aids include glossaries, search tools, e-textbooks, video lectures and more. Test tools include test questions, self-tests. The means of communication are forums, mail, audio and video cassettes. The traditional course of lectures in traditional teaching involves: lectures, comments (interpretation of the study material by the speaker), assessment in the oral, final exam. In distance education, the function of the teacher is performed by teaching and testing tools (fully automated, complete software products), as well as video and electronically published teaching materials that create an automated learning environment. The possibilities of the electronic textbook can be expanded with the use of modern means of animation and video equipment. These can be video lectures on the course, demonstrations of production processes, speeches of famous scientists, etc. When creating an electronic textbook, you need to create a database and enter data into it. In this case, there are some ways to access the database and perform actions on the materials contained in it. Didactic programs for modern computers (electronic textbooks, computer assignments, multimedia electronic textbooks, hypertext information systems, electronic archives, electronic catalogs, reference books, encyclopedias, test and formative training programs) multimedia teaching aids. [3]

The significance of artificial intelligence can play in learning at a distance is broad and varied. Some roles feature prominently in the learner experience to promote engagement and performance improvement. Others support the Educator to develop efficiency and the most effective usage of limited resources. Still others support critical analytical capability that guide program-level decision-making by revealing insights and identifying critical predictive information. Factually, there are very few areas of technology based learning experiences that would not benefit from AI support and users of some systems for learning at a distance may even be unaware that some peculiarities of those systems are already driven by AI algorithms.

Artificial Intelligence is a system of software and hardware that demonstrates at least one or more of the following behaviors associated with human intelligence: planning, learning, reasoning, problem solving, knowledge representation, perception, motion, and manipulation and, to a lesser extent, social intelligence and creativity.

Artificial intelligence is a separate branch of computer science, which is usually engaged in the creation of computer systems with the capabilities of the human mind: language comprehension, teaching, discussion, problem solving, translation and so on. Artificial intelligence (AI) allows computers to study their own experiences, adapt to given parameters, and perform tasks previously only possible for humans. In many cases of AI implementation from computer chess players to unmanned vehicles - the ability to learn deeply and process natural languages is crucial. Thanks to these technologies, computers can be "trained" to perform certain tasks by processing large amounts of data and identifying patterns in them. Artificial (computer) intelligence is one of the most promising areas of computer science and computer engineering. Work in the field of artificial intelligence focuses on the development of methods, tools and technologies for designing computer systems (training, expert, consulting, robotics, etc.) to solve traditional intellectual problems. Unlike ordinary programmers involved in the development of identified software products, artificial intelligence professionals are able to shape these features, which is one of the most important tasks in designing any software product. What is artificial intelligence? Artificial intelligence (SI) allows computers to study their own experiences, adapt to given parameters, and perform tasks previously only possible for humans. In many cases of SI implementation - from computer chess players to unmanned vehicles - the ability to learn deeply and process natural languages is crucial. Thanks to these technologies, computers can be "trained" to perform certain tasks by processing large amounts of data and identifying patterns in them. [3]

The importance of artificial intelligence (AI) is currently being developed on a large scale and is attracting the attention of educational circles. Today's artificial intelligence typically mimics and even assumes the functions that humans perform. Lu et al. (2018) said that a number of technology companies have introduced AI, including Amazon, Facebook, Microsoft and Google. However, few people know that this AI has also entered the world of education and training. With the development of schools followed by technology. For example, the college uses online textbooks

through practical applications in the field of accounting. Even Microsoft co-founder Bill Gates is one of the proponents of artificial intelligence in education. Gates even believes that artificial intelligence can improve a person's ability to learn in a variety of ways. Based on these beliefs, we want to understand the effectiveness of artificial intelligence in education during the pandemic and future education. (Güzer and Caner, 2014; Engeström & Sannino, 2010). Lee et al. (2020) examined whether artificial intelligence was able to differentiate COVID-19 from pneumonia that attacks the thoracic community. Speech training means learning to speak smarter than usual before AI was invented. The curriculum of this artificial intelligence system is a personalized learning system that enhances the learning experience of students in a deeper and more interesting way. How to understand AI in individual systems shows that it can improve student attention. This is because artificial intelligence can teach students individually and identify the areas needed to find effective ways to teach students through artificial intelligence. For example, if a student is interested in AI technology hobbies, an AI machine can be used as an analogy or example to understand a topic. In other words, this machine determines what students don't understand.

Analysis and discussion. An important condition for high-quality modern education is a competent combination of traditional education and the use of innovative tools. The use of digital technologies in a modern the education system is one of the most important aspects of improving and optimizing the educational process, enriching the arsenal of methodological tools and techniques that allow you to diversify the forms of work and make the lesson interesting and bright.

There are a large number of platforms for distance or e-learning. When choosing a specific site, first of all, you should determine the overall strategy: set goals and objectives for the implementation of a particular platform, predict the final result.

When working with pupils or students, it is important to decide whether new technologies are being introduced to digitalize and automate the educational process, or to organize distance learning. In the second case, the teacher has new roles: tutor, coordinator of the cognitive process, corrector of the taught course, consultant, head of educational projects. It should be noted that interaction with students is carried out mainly asynchronously using E-mail or instant messengers.

If distance learning is used at trainings, webinars, conferences for teachers, then the choice

of platform must be made taking into account the availability of special tools for the implementation of such events with the possibility of issuing a certificate or certificate of advanced training at the end.

Traditionally, distance learning is divided into two main categories: synchronous and asynchronous. When using the synchronous model, communication takes place in real time using various platforms and various methods of information transfer: infographics, mind maps, educational portals, simulators, etc. With the asynchronous model, the student himself determines the pace of learning and passes the finished work to the teacher for verification.

In addition, AI can determine what concepts are not understood by students. Thus, AI can then make adjustments to find new ways to help students learn, which is an advantage of this AI mechanism to improve today's generation of learning services. Artificial intelligence is designed to expand the readiness of artificial intelligence programs in modern generation education investments. With AI, this program will also be conducted to help students use artificial intelligence to develop technological literacy in line with the implementation of the Industry 4.0 program in every country pursuing advanced technology-based education projects in the 21st century. In many countries that have begun to look at AI, schools have developed solutions to address the various challenges facing the world of teaching, especially the world of education (Boden, 1998; Alava et al., 2017). Society must continue to learn and work through the world of education. Especially during the COVID-19 pandemic, using artificial intelligence, students are learning significantly and save themselves from the spread of plague. [2]

Artificial intelligence (AI) capabilities are available in online education and training broad (Anderson et al., 1985; Baker, 2016; Roll et al., 2018; Seo et al., 2020b; VanLehn, 2011), ranging from automating individual education for students and routine tasks for teachers until evaluated using intelligence. (Popenici and Kerr, 2017). For example, AI tutoring systems can provide personal guidance, assistance, or feedback by tailoring learning content based on learner-specific learning patterns or knowledge levels (Hwang et al., 2020). AI teaching assistants help teachers save time in answering simple, repetitive questions from students in online discussion forums, and instead teachers can dedicate their saved time to more expensive work (Goel & Polepeddi, 2016). AI analysis allows teachers to understand student performance, development,

and potential by encrypting click stream data (Roll & Winne, 2015; Fong et al., 2019; Seo et al., 2021; Holstein et al., 2018). While the possibilities for AI are promising, students and teachers can understand that Adverse effects of AI systems. For example, as described in the Facebook-Cambridge Analytica data conflict, students may perceive the discriminatory collection and analysis of their data through artificial intelligence systems as a violation of privacy (Chan, 2019; Luckin, 2017). Behavior of AI agents that does not take into account the risk of data inaccuracy or algorithmic bias may be perceived as discriminatory by students (Crawford & Calo, 2016; Murphy, 2019). Teachers are concerned that too much reliance on AI systems can impair a student's ability to learn independently, solve problems creatively, and think critically (Wogu et al., 2018). It is important to study how students and teachers perceive the impact of AI systems in an online learning environment (Cruz-Benito et al., 2019). [4] [5] [6]

In education, the AI community is increasingly exploring the impact of AI systems on online learning. For example, Roll and Wylie (2016) call for AI systems to be more involved in communication between students and teachers and in educational programs outside the school context. However, Zavacki-Richter and colleagues (2019) systematically reviewed AIED publications from 2007 to 2018, resulting in a critical reflection of the ethical impact and risks of AI systems on student-teacher interactions. found that Popenici and Kerr (2017) examined the impact of AI systems on learning and teaching and identified potential conflicts between students and teachers, such as privacy issues, changes in power structures, and oversight. All of this research required further study of the impact of AI systems on student-teacher interactions, which revealed to us any gaps, problems that prevent AI systems from achieving their intended potential. or help identify obstacles. Indeed, student-teacher interactions play a crucial role in online learning. Kang and Im (2013) showed that factors such as communication, support, and availability of student-teacher interactions improve student satisfaction and learning outcomes. Student-teacher interactions affect students' self-esteem, motivation to learn, and confidence in solving new problems (Laura and Chapman, 2009). However, little is known about how the introduction of AI systems into online education will affect student-teacher interactions. Guilherme (2019, p. 7) predicted that AI systems would "have a profound impact on the classroom, changing the relationship between teacher and student". More work is needed to understand how and why different forms of AI systems affect

student-teacher interaction in online learning (Felix, 2020).

Conclusion. To summarize, let us make the following conclusions.

– Educational technologies based on video communication are becoming an important the educational technologies based on video communications are becoming an important factor in increasing the efficiency and quality of learning at all levels of education. One of the forms of the educational process most promising for the implementation of communication is a distance lecture.

– The existing development of standards and technologies of videoconferencing, as well as the modern development of information and communication infrastructure in the country and the world as a whole provide an opportunity to create systems for distance lectures with the necessary technical characteristics.

Thus, various educational platforms or online tools can be used for distance learning in the education system. Their advantages and disadvantages are determined on the basis of specific purposes of application and significantly depend on the technical capabilities and experience

of users. Everyone is adapting to the new format of interaction: teachers, parents, children. Therefore, it is important to inform them about the digital tools that exist today and the algorithms for their use.

Developing distance learning through artificial intelligence is necessary not only for educational institutions today, but also in the process of globalization in today's large enterprises, institutions in the training of specialists, their retraining, a high level of their knowledge and skills. There is an opportunity to increase the general level of knowledge of the population and the quality of this knowledge through the use of distance learning. It will be possible to meet the voluntary educational needs of all segments of the population. There is an opportunity to disseminate knowledge to the general public in a timely manner. By creating a single learning environment, it is possible to integrate all knowledge. In the distance learning method, constant communication is maintained even if the student and the teacher are separated from each other at a distance. This is done using e-mail and Internet technologies, which are a separate way to control learning.

REFERENCES

1. A.A. Abdukodirov, A.H. Pardaev. «Theory and practice of distance learning». Tashkent, 2009.
2. A.A. Abdukodirov. Technology of distance learning in higher education // «Scientific and pedagogical bases of the introduction of modern technologies and best practices in the educational process of higher education» res. scientific-practical conference (November 28-29, 2008), T., 2008, pages 11-14.
3. A.A. Abdukodirov. One of the main forms of education of the XXI century // Education Management, 2006. 64-p.
4. Andersen, J. C. (2013). Learner satisfaction in online learning: An analysis of the perceived impact of learner-social media and learner-instructor interaction. Doctoral dissertation. East Tennessee State University, Tennessee.
5. Anderson, J. R., Boyle, C. F., & Reiser, B. J. (1985). Intelligent tutoring systems. *Science*, 228(4698), 456-462.
6. Baker, R. S. (2016). Stupid tutoring systems, intelligent humans. *International Journal of Artificial Intelligence in Education*, 26(2), p 600-614.
7. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
8. Boden, M. A. (1998). Creativity and artificial intelligence. *Artificial intelligence*, 103(1-2), 347-356.
9. Du Boulay, B. (2016). Artificial intelligence as an effective classroom assistant. *IEEE Intelligent Systems*, 31(6), p 76-81.



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Litsenziya AI: № 2537 08.02.2022 y. Bosishga ruxsat etildi: 18.10.2022.
Qog'oz bichimi: 60x84 1/8. Shartli bosma tabog'i: 12,75.
Adadi: 50 nusxa. № 19/10-2022-sonli buyurtma.


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