MAINSTREAMING OF LEGAL ISSUES OF THE USE OF ARTIFICIAL INTELLIGENCE IN THE EDUCATION SYSTEM OF UZBEKISTAN

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ABSTRACT. The main target of this research is an attempt to update the issues of legal support for the use of artificial intelligence in education in Uzbekistan. Artificial intelligence can positively influence the development of society, but also cause serious harm if a system of legal and regulatory rules is not established in a timely manner. In this regard, it is necessary to develop specific recommendations, especially those related to the educational sphere, and strictly take into account several important aspects: understanding of artificial intelligence, consideration of ethical standards, data protection mechanisms, training of teaching staff, as well as responsibility for wrong decisions, and protecting the rights of students. Attention is drawn to the study of worldwide experience in the preparation of a law on artificial intelligence in developed countries: the United States, the European Union, Japan and Canada. It is emphasized that the successful development of artificial intelligence is the state support and civil society.

KEYWORDS: artificial intelligence, development, legal issues, a draft law, the education system.

ӨЗБЕКСТАННЫҢ БІЛІМ БЕРУ ЖҮЙЕСІНДЕ ЖАСАНДЫ ИНТЕЛЛЕКТТІ ҚОЛДАНУДЫҢ ҚҰҚЫҚТЫҚ МӘСЕЛЕЛЕРІН ӨЗЕКТІ ЕТУ

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АҢДАТПА. Бұл зерттеудің мақсаты Өзбекстандағы білім беруде жасанды интеллектті қолдануды құқықтық қамтамасыз ету мәселелерін жаңарту әрекеті болып табылады. Жасанды интеллект қоғамның дамуына оң әсерін тигізуі мүмкін, бірақ заңдық және реттеуші ережелер жүйесі дер кезінде белгіленбесе, ол үлкен зиян келтіруі мүмкін. Осыған байланысты, әсіресе білім беру саласына қатысты нақты ұсыныстарды әзірлеу және бірнеше маңызды аспектілерді қатаң ескеру қажет: жасанды интеллект технологияларын түсіну, этикалық стандарттарды, деректерді қорғау механизмдерін, педагогикалық кадрларды оқыту, сияқты сонымен қатар қате шешімдер үшін жауапкершілік және студенттердің құқықтарын қорғау. Дамыған елдерде: АҚШ, Еуропалық Одақ, Жапония және Канадада жасанды интеллект туралы заң дайындаудың халықаралық тәжірибесін зерттеуге назар

аударылады. Жасанды интеллекттің табысты дамуы үшін мемлекет пен азаматтық қоғамның қолдауы қажет екені баса айтылады.

ТҮЙІН СӨЗДЕР: жасанды интеллект, даму, құқықтық мәселелер, заң жобасы, білім беру жүйесі.

АКТУАЛИЗАЦИЯ ПРАВОВЫХ ВОПРОСОВ ИСПОЛЬЗОВАНИЯ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В СИСТЕМЕ ОБРАЗОВАНИЯ УЗБЕКИСТАНА

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АННОТАЦИЯ. Целью настоящего исследования является попытка актуализировать вопросы правового обеспечения использования искусственного интеллекта в образовании Узбекистана. Искусственный интеллект может позитивно влиять на развитие общества, но и нанести серьезный вред, если своевременно не установить систему нормативно-правовых правил. В связи с этим необходимо выработать конкретные рекомендации, особенно касающиеся образовательной сферы и строго учитывать несколько важных аспектов: понимание технологий искусственного интеллекта, учет этических норм, механизмы защиты данных, обучение преподавательского состава, а также ответственность за неправильные решения, и защита прав обучающихся. Обращено внимание на изучение международного опыта подготовки закона об искусственном интеллекте в развитых странах: США, Европейского Союза, Японии и Канады. Подчеркивается, что успешному развитию искусственного интеллекта является государственная поддержка и гражданского общества.

КЛЮЧЕВЫЕ СЛОВА: искусственный интеллект, развитие, правовые вопросы, проект закона, система образования.

INTRODUCTION. One of the most rapidly spreading trends in the country's innovative development is artificial intelligence (hereinafter - AI). Its influence began to be felt in almost all spheres of human life, however, the assessments and prospects for its legal development are quite contradictory. In our opinion, the use of AI should have a modern and adequate legal framework.

Artificial intelligence (AI) is specified as the ability of an artificial entity to solve complicated problems using its own intelligence. Computer science and physiology are combined in Artificial Intelligence [1]. AI is the Science and Engineering domain concerned with the theory and practice of developing systems that exhibit the characteristics we associate with intelligence in human behavior, such as perception, natural language processing, problem solving and planning, learning and adaptation, and acting on the environment. Its concrete basic purpose is understanding the principles that enable intelligent behavior in humans, animals, and artificial agents.

This scientific goal directly supports a few engineering goals, such as, developing intelligent agents, formalizing knowledge and mechanizing reasoning in all areas of human endeavor, making working with computers as easy as working with people, and developing

human-machine systems that exploit the complementariness of human and automated reasoning [2].

Potentially, such a system creates an opportunity to increase the quality of service in medicine, education, energy, agriculture, urban planning and in other different sectors and industries.

AI doesn't relate to one branch of knowledge, because it represents interdisciplinary achievements in mathematics and physics, psychology, biology, philosophy and other sciences. Being created by concepts and methods of different fields of study, AI causes contradictory opinions in the field of legal regulation and rule-making.

The use of AI requires changing the processes of public administration by creating the necessary institutional conditions and infrastructure. The benefits of using AI in the public sector may include providing unbiased information for forecasting, further automating the delivery of public services, modeling capabilities, and conducting experiments before implementing certain mechanisms with unintended consequences.

Government priorities that change according to modern realities, reflected in government strategies, concepts and other policy documents, should be reproduced in AI settings and tools. At the same time, the use of AI in public administration should not disturb the balance between public interests and the rights of citizens. The lack of proper regulation of the concept of AI, its development, as well as the implementation and use of AI systems poses a large amount of risks from the point of view of state, social and personal security and also privacy.

Therefore, the implementation of AI must be coordinated considering the potential harm that AI systems can cause, and contain mechanisms to prevent or minimize it.

The use of AI in education is highly relevant, as technological innovations are increasingly affecting educational processes. In May 2023, the United States Department of Education released a report titled Artificial Intelligence and the Future of Teaching and Learning: Insights and Recommendations. The office had conducted listening sessions in 2022 with more than 700 individuals, including teachers and parents, to estimate their views on AI.

The report noted that "constituents believe that action is required now in order to get ahead of the expected increase of AI in education technology-and they want to roll up their sleeves and start working together." People expressed anxiety about "future potential risks" with AI, but also felt that "AI may enable achieving educational priorities in better ways, at scale, and with lower costs." [3]. Usage of AI in education can better access to education, adapt learning to the individual needs of students, reduce learning costs, and improve teaching quality.

However, the emergence of AI in education causes a number of legal issues and controversy among legal scientists in many foreign countries. One of the main legal questions is related to ensuring the confidentiality of students' personal data. When using AI in education, a large amount of information is collected about students, their academic performance, social activity and individual interests.

In this regard, the question arises about the storage, processing and protection of these data in order to prevent their abuse or unauthorized access. An important issue is the transparency and objectivity of AI algorithms that make decisions in the process of teaching and assessing students.

Legal scientists are concerned about the potential for bias and discrimination if algorithms are based on incorrect data or have wrong assumptions. Another important aspect is the problem of responsibility for decisions made by AI in the context of education.

The question remains open is the responsibility of developers, educational institutions and other parties in case of AI

decisions that negatively affect the student. First of all, there needs to be a debate among legal scientists about the adoption of a regulatory legal act on the use of AI in education.

Some believe that it is enough to develop clear legal regulations to protect the rights and freedoms of students, as well as ensure the ethics and transparency of the use of AI. Other scholars take the view that legislative intervention can limit the innovation and development of AI in scientific and educational institutions.

Thus, the discussion of legal scholars in different countries leads to the conclusion that there must be a balance between the benefits of using AI in education and the protection of the rights and interests of students.

MATERIAL AND METHODS OF RESEARCH. The international community believes that the role of AI in education should be to reducing inequalities in access to knowledge, eliminating the technological gap at national and international levels, opportunities to take advantage of technological progress in the field of innovation, personalized and adaptive learning for students.

AI has the potential to provide a broad range of benefits for education. With the help of AI, it becomes possible to analyze various data about students, improve the learning process, automate administrative tasks in order to focus on other important aspects of teaching.

At the same time, management in education requires the development of support measures aimed at the effective, safe and fair use of educational technologies supported by AI.

Research has shown that, at the moment, the adoption of acts governing the use of AI has so far been limited to a small number of them. However, some countries have taken steps or are developing legislation in this area. Below are some of them:

-In 2019, the European Commission published an action plan for the use of AI in the EU, but legislation has not yet been adopted. In April 2021, the European Commission proposed the first EU regulatory framework for AI. It says that AI systems that can be used in various apps are analyzed and classified according to the risk they pose to users. The different risk levels will mean more or less regulation. Once approved, these will be the world's first rules on AI [4];

- in the United States at the federal level there are no general laws on the use of AI yet, but some states, such as California and Illinois, have laws regarding privacy and the use of AI algorithms in certain areas, including education. In the 2023 legislative session, at least 25 states, Puerto Rico and the District of Columbia introduced artificial intelligence bills, and 14 states and Puerto Rico adopted resolutions or enacted legislation [5];

- In Japan, in 2019, the AI Doctrine was adopted, which formulated the directions for the development of the AI sector. However Japan has no regulations that generally constrain the use of AI. Also in 2019 the Japanese government published the Social Principles of HumanCentric AI (Social Principles) as principles for implementing AI in society. The Social Principles set forth three basic philosophies: human dignity, diversity and inclusion, and sustainability [6];

- Canada is developing legislation that will give the government the ability to regulate AI to protect consumers and students.

These are just some examples, and while a number of countries are working on legislative drafting for AI usage regulation, in most of them legislation in this area has not yet been adopted or is under discussion.

In Uzbekistan, the beginning of the legal support of AI was launched in 2021 by the adoption of several decisions of the President of the Republic of Uzbekistan. One of the resolutions is devoted to measures of creation conditions for the accelerated introduction of artificial intelligence technologies [7]. This legal act not only proposed measures for the

study and implementation of AI as an essential part of the technology industry, but also approved a list of pilot projects using such technologies in different sectors, such as rural economy, banking, finance, taxation, energy and healthcare, and transport.

The decision of the head of state was followed by a government decision to organize the activities of the Research Institute for the Development of Digital Technologies and Artificial Intelligence [8].

It was proposed to conduct research work, fundamental and applied research on the development of digital technologies and AI on the basis of the Scientific and Innovation Center for information and communication technologies at the Tashkent University of information technologies named after Muhammad al- Khorazmi and the Scientific and Practical Center for intelligent software systems at the National University of Uzbekistan named after Mirzo Ulugbek. By the specified resolution of the Cabinet of Ministers, it was decided to finance priority projects, develop regulatory documents, research work and programs at the expense of The information and communication technologies development fund.

In the same year, on August 26, 2021 another Decree was adopted [9]. This document should be considered a continuation of the state policy regarding AI technologies, for further deepest and most comprehensive study of its advantages and factors influencing the formation of a general public perception of this phenomenon.

The resolution states that it was adopted in order to create a conducive and optimal ecosystem to develop an innovative business models, products and service delivery methods based on AI technologies, their realization and practical implementation in established priority industries and areas.

One more Resolution of the Cabinet of Ministers of the Republic of Uzbekistan approved the special regime includes the creation of the essential organizational and legitimate conditions for legal entities and scientific organizations that carry out experimental work based on AI technologies, the advancement of software products and the arrangement of services, as well as the legal framework that emerges within the handle of testing and putting into practice the developed software products [10].

Nevertheless, the study of the legislation showed that in Uzbekistan the education sector still remains without due attention and regulation through the prism of the development of AI. While in other states, serious efforts are underway to settlement relations concerning AI that arise in education.

RESULTS AND THEIR DISCUSSION. Each of the regulations listed above has its own characteristics, but the general trends are the formation of regulatory requirements for development, taking into account the features of AI, and protecting the rights and interests of users. In the short term, when preparing a legal act on AI in Uzbekistan, especially provisions related to the educational sphere, it is necessary to take into account following important aspects:

-	understanding of AI technologies for a comprehensive assessment of its capabilities, so that the law reflects all the features of regulatory mechanisms and its use in education. Both the benefits and risks associated with the use of AI should be taken into account and appropriate measures should be developed to protect the interests of students;

-	consideration of ethical standards. The use of AI in education can have ethical implications, so it is necessary to include in legislation requirements that guarantee the ethical use of AI. This involves the protection of students' personal data, the transparency of AI algorithms, the prevention of discrimination for AI developers;

-	establishing mechanisms for protecting student data and preventing unauthorized access to them. This may include requiring

educational institutions and AI system providers to adhere to strict data security standards and ensure the privacy of students' personal data;

- providing measures to educate faculty and other staff regarding the use of AI;

- it should be envisaged mechanisms of responsibility for the wrong decisions made by the AI and protection of the rights of students in case of problems defined.

In drafting the law in education, it is vital to require into consideration worldwide guidelines and best hones in this zone. Pre-established cooperation with scientific organizations in developed countries contributes to the formation of effective and harmonized legislation on the use of AI in education.

This will help legal scholars identify international trends and best practices that can be applied in the development of national legislation. A distinctive feature in the preparation of this law will be the mandatory study of AI technologies and the possibilities of their impact on education by legal scientists.

To systematize research in the field of legal aspects of the use of AI in education, first of all, it is necessary to conduct a constant analysis of current key issues, problems and conclusions observed both in public administration and in education. At the same time, each of the issues from the perspective of AI will require a special attention and may be trendy in a certain period of time: copyright, personal data protection, morality issues, responsibility, etc. Not every practical solution will entail the preparation of a regulatory document, but it should be done in the legal field. The desire to systematize the legal framework for the use of AI in education, to structure the emerging legal aspects contributes to the further improvement of legislation in this area.

Research should include an analysis of international norms and standards developed, for example, by the UN, EU, SCO or other organizations, to identify risks and potential threats in the near future and their regulation. In addition, scientific research should cover issues of social and ethical norms related to the use of AI in education. Legislators should exclude discrimination, privacy and other rights and interests of students, and most importantly, develop measures to protect them. During the discussion of the bill, law institutions should hold public consultations and study public opinion regarding the introduction of AI in education.

Key technical issues also become liability for automatic decisions, the use of AI robots and autonomous systems, the protection of personal data when using AI, the responsibility of AI developers and organizations for wrong decisions made by AI, testing and certification of AI, as well as questions of civil society's trust in AI. It can be noted that these are just a few examples of research conducted by foreign scientists in developed countries in the field of AI legislation, but they cause a constructive discussion in scientific publications.

For example, our study of the experience of countries such as the United States, Finland, South Korea, Singapore or Estonia can be useful in understanding which AI methods and technologies are effectively implemented in education.

It has been established that for the effective implementation of AI technologies in education, the state should provide professional training for teachers, cooperation to obtain expert support and technical advice, take into account the specific needs of the industry in the development and implementation of AI projects in education. An important factor is the coverage of performance evaluations, the acceptance of feedback from teachers, students and parents.

CONCLUSION. In conclusion, the use of AI in education in general requires a strategic approach and evidence-based recommendations. The preparation and implementation of a draft strategy on artificial intelligence and several mechanisms

for its successful use in education will help develop high-quality training for competitive personnel. The document could provide for the creation of a regularly updated database based on structured data for the acquisition of knowledge in the field of AI by the population, especially young people. It may contain the basic concepts of AI, its scope, conduct free online courses, as well as highlight the strategy of AI and create an online platform for the exchange of innovative ideas.

The development and adoption of a law on AI will require the creation of specialized regulatory bodies that will be responsible for coordinating and strictly enforcing the rules and regulations in the field of the use of AI. These bodies will be responsible for developing and implementing policies and procedures to ensure the ethics, safety and proper use of AI. Regulators should be responsible for monitoring and controlling the use of AI in accordance with the law, conducting systematic audits, conformity assessment, quality control of AI in specific sectors of the economy, such as education, medicine, transport, energy, and others.

When it comes to legal support for the use of AI in education, there are several key points to consider:

- in case of errors caused by the use of AI in education, the law should determine those responsible for such errors, as well as for the possible negative consequences of the use of AI in the educational environment;

- it is important to obtain appropriate permissions to use materials created by others and ensure that data is collected and stored legally in compliance with the rules and requirements of personal data protection and copyright laws;

- for a deeper understanding of the use of AI, it is highly recommended to study court decisions and practices related to the legal aspects of the use of AI in various fields.

A consistent step will be the preparation of curriculum for training AI developers, lawyers, government officials, teachers and other stakeholders. Innovative curricula will help build an understanding of the ethical and legal issues associated with AI, as well as teach the public to effectively use and adapt AI in their work.

All the proposed mechanisms will be a condition for the implementation of state support of AI projects, as well as a justification for the launch of new bachelor's and master's programs in the field of AI. In the future, this approach contributes to the gradual change in legal regulation, taking into account the traditional values of law, the creation of a comfortable environment for interaction between the state and society.

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