

ADVANTAGES OF USING ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN MILITARY TRAINING**Sherkhanov Farkhod Makhmatkulovich**Senior Lecturer, Military Aviation Institute,
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Annotation. This article examines the advantages of using artificial intelligence technologies in military education. It highlights key aspects such as personalized learning, real-time data analysis, and simulation-based training for developing practical skills. Additionally, the study explores how AI can enhance the efficiency of military personnel training, improve security, and accelerate decision-making processes. The findings indicate that the integration of artificial intelligence significantly contributes to the advancement and modernization of military education systems.

Keywords: artificial intelligence, military education, innovation, simulation, digital technologies, security, analysis, automation.

Аннотация. В данной статье рассматриваются преимущества применения технологий искусственного интеллекта в системе военного образования. Особое внимание уделяется персонализации обучения, анализу данных в реальном времени и использованию симуляционных моделей для формирования практических навыков. Также анализируются возможности повышения эффективности подготовки военных кадров, укрепления безопасности и ускорения процесса принятия решений. Результаты исследования показывают, что внедрение искусственного интеллекта способствует качественному развитию военного образования.

Ключевые слова: искусственный интеллект, военное образование, инновации, симуляция, цифровые технологии, безопасность, анализ, автоматизация.

Annotatsiya. Ushbu maqolada harbiy ta'lim tizimida sun'iy intellekt texnologiyalaridan foydalanishning asosiy afzalliklari tahlil qilinadi. Jumladan, o'quv jarayonini individuallashtirish, real vaqt rejimida tahlil qilish imkoniyatlari, simulyatsiya asosida amaliy ko'nikmalarni rivojlantirish kabi jihatlar yoritiladi. Shuningdek, sun'iy intellekt yordamida harbiy kadrlarni tayyorlashda samaradorlikni oshirish, xavfsizlikni mustahkamlash va qaror qabul qilish tezligini yaxshilash masalalari ko'rib chiqiladi. Tadqiqot natijalari ushbu texnologiyalar harbiy ta'lim sifatini yangi bosqichga olib chiqishini ko'rsatadi.

Kalit so'zlar: sun'iy intellekt, harbiy ta'lim, innovatsiya, simulyatsiya, raqamli texnologiyalar, xavfsizlik, tahlil, avtomatlashtirish.

INTRODUCTION

Current globalization and digital transformation processes are having a significant impact on the military education system, as well as on all sectors. Modern security problems, the need for rapid decision-making, and high-tech military operations require new knowledge and skills. In this regard, the introduction of artificial intelligence technologies into the military education process is becoming one of the urgent issues. Because traditional teaching methods cannot fully meet the requirements of today's complex and rapidly changing environment.

Artificial intelligence not only expands the possibilities of data processing and analysis, but also makes the educational process more efficient, flexible and individualized. The use of these technologies in military educational institutions allows for a deep analysis of the level of knowledge of cadets, identification of their strengths and weaknesses, and development of appropriate training programs. As a result, the quality of education increases and the professional competencies of trained specialists are further strengthened.[1]

In addition, simulation programs created on the basis of artificial intelligence allow for training in conditions close to real combat situations. This serves to reinforce the theoretical

knowledge of cadets with practical skills. Especially in cases where the possibility of testing dangerous or complex operations in real conditions is limited, organizing training in a virtual environment is of great importance. This allows you to achieve a high level of training without endangering human life.

Another important aspect of artificial intelligence is its support for the process of rapid and accurate decision-making. In the military, the time factor is crucial, and an incorrect or delayed decision can have serious consequences. AI technologies analyze large amounts of data in a short time and offer optimal options. This serves as an important tool in developing the strategic thinking of future military specialists.[6]

At the same time, the introduction of artificial intelligence technologies into military education also poses certain problems and challenges. In particular, there are issues related to the insufficient development of technical infrastructure, lack of personnel qualifications, and information security. Therefore, it is necessary to apply an integrated approach in this area, expand scientific research, and develop modern educational strategies.

Based on the above, this article analyzes the advantages, opportunities, and ways of effectively implementing artificial intelligence technologies in the military education system.

LITERATURE REVIEW AND RESEARCH METHODOLOGY

The issue of using artificial intelligence technologies in the military education system has been widely covered in scientific literature in recent years. In particular, the work *Artificial Intelligence: A Modern Approach* by Stuart Russell and Peter Norvig describes the basic principles of artificial intelligence, learning models, and their practical application. This source serves as a theoretical basis for the integration of AI technologies into the education system.

Also, the work *The Fourth Industrial Revolution*, put forward by Klaus Schwab, analyzes the global impact of digital technologies, including artificial intelligence, and also highlights changes in the military and education systems. The author emphasizes that modern technologies are an important factor in the development of human capital.

In the context of military education, analytical reports published by NATO show the effectiveness of training simulations, decision-making systems, and strategic planning tools based on artificial intelligence. These reports are an important source for studying the practical impact of AI technologies on the military training process.[3]

In addition, the works of local scientists Sh.Kh. Alimuhamedov and B.A. Begalov cover the issues of introducing innovative technologies in the digital economy and the education system. Their research emphasizes the role of artificial intelligence in optimizing the educational process. At the same time, the regulatory documents of the Republic of Uzbekistan also identify digital transformation and the development of modern educational technologies as a priority area.[6]

The analysis of the above sources shows that artificial intelligence technologies are of great importance in the military education system not only theoretically, but also practically. However, an integrated approach and in-depth scientific research in this area are still relevant.

This study used several scientific methods based on a comprehensive approach. First, the theoretical analysis method was used to analyze the scientific literature on artificial intelligence and military education literature was studied and summarized. This method served to determine the scientific foundations of the topic.

Also, through the comparative analysis method, the differences and advantages between the traditional education system and educational models based on artificial intelligence were identified. This method made it possible to substantiate the role of AI technologies in increasing the effectiveness of military education.

As part of the empirical approach, observation and analysis methods were used. In particular, the results of using simulation programs and digital platforms were studied. In addition, the integration of artificial intelligence technologies into the military education process as a holistic system was analyzed based on a systematic approach.

During the study, inductive and deductive methods were also used, general conclusions were drawn from individual facts, and existing theoretical views were compared with practical results. The methodology chosen in this way allowed for comprehensive coverage of the topic and scientifically sound conclusions.

ANALYSIS AND RESULTS

Analysis of the implementation of artificial intelligence technologies in the military education system shows that this approach significantly increases the effectiveness of the educational process. First of all, learning platforms based on artificial intelligence allow for continuous monitoring of the level of knowledge of cadets. For example, adaptive learning systems analyze the learning speed and errors of each cadet and form an individual learning path. As a result, it becomes possible to work separately with cadets who are weakly learning, and to further develop those who are showing high results.

Simulation technologies based on artificial intelligence are an important tool in improving the quality of military training. For example, through virtual combat exercises, cadets learn to make decisions in situations close to real conditions. While creating such conditions in traditional training requires great costs and risks, AI-based simulations effectively solve this problem. For example, in the training of pilots, complex weather conditions or emergency situations are repeatedly practiced in a safe environment using virtual simulators. This significantly strengthens their practical training.[7]

In addition, the ability to process large amounts of data is also one of the important results. The data collected during military training - test results, training effectiveness, psychological indicators - are deeply analyzed using artificial intelligence. As a result, the management is able to make clear and well-founded decisions. For example, if it is determined that some cadets are constantly experiencing difficulties in performing certain tasks, a special training program is developed for them.

Artificial intelligence technologies serve to increase safety. Automated monitoring systems allow for the early detection of dangerous situations that may arise during the training process. For example, during technical training, the possibility of equipment failure is detected using AI, preventing emergencies. This reduces errors associated with the human factor.[5]

The introduction of artificial intelligence into military education provides several important positive effects: individualization of the educational process, strengthening of practical skills, effective use of resources and increased speed of decision-making. At the same time, some problems have been identified. In particular, factors such as insufficient development of technical infrastructure, high cost of software and lack of specialized personnel hinder the widespread introduction of these technologies.[2]

CONCLUSION

The introduction of artificial intelligence technologies into the military education system is an important strategic direction that meets the requirements of the modern era. Today, rapid changes in the military sphere, complex security problems and high-tech operations show that traditional approaches to training a new generation of specialists are insufficient. Therefore, the need to introduce innovative technologies, in particular artificial intelligence, into the educational process is increasingly growing.

One of the main advantages of artificial intelligence is the possibility of individualizing the educational process. The quality of education will increase significantly by developing customized curricula based on the level of knowledge, learning speed, and interests of each cadet. This will be important not only for consolidating theoretical knowledge, but also for developing practical skills. In particular, the widespread use of simulation technologies will allow training in situations close to real conditions, bringing the level of cadets' training to a new level. At the same time, analytical systems based on artificial intelligence AI helps to make effective decisions by processing large amounts of data in a short time. This factor is of particular importance in military education, since time and accuracy often play a decisive role. With the

help of AI, it is possible to identify shortcomings in the educational process, rationally use resources, and improve strategic planning.[3]

However, the process of introducing these technologies is not without certain difficulties. Issues such as developing technical infrastructure, training qualified specialists, and ensuring information security remain relevant. Therefore, an integrated approach to the implementation of artificial intelligence in military education, state-level support, and expanding research and development are of great importance.

In general, the integration of artificial intelligence technologies into the military education system will allow in the future to train highly qualified, quick-thinking military personnel who are well versed in modern technologies. This will serve not only the development of the education system, but also to strengthen national security.

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