

**PEDAGOGICAL AND PSYCHOLOGICAL ASPECTS OF IMPLEMENTING
ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN THE EDUCATIONAL
PROCESS OF MILITARIZED HIGHER EDUCATION INSTITUTIONS**

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Abstract: The article presents a theoretical and analytical examination of the pedagogical and psychological features of the use of artificial intelligence technologies in the educational process of militarized higher education institutions. Based on the synthesis of contemporary domestic and international research, the study reveals the specificity of artificial intelligence application under conditions of military discipline, regulatory control, and heightened personal responsibility of learners. Particular attention is given to the influence of artificial intelligence on learning motivation, critical thinking, and independent decision-making. The article substantiates the necessity of regulated and pedagogically controlled use of artificial intelligence as a supplementary educational tool within the system of military education.

Keywords: artificial intelligence, militarized higher education institutions, military education, pedagogical and psychological aspects, critical thinking, digitalization of learning, professional training of cadets.

Introduction

The digital transformation of modern society has led to the widespread integration of artificial intelligence technologies across various spheres of activity, including higher education. In academic literature, artificial intelligence is defined as a set of intelligent algorithms and software solutions capable of performing functions of data analysis, forecasting, adaptation, and decision support within the educational process [1, 2]. Within higher education systems, these technologies are increasingly regarded as tools for enhancing learning efficiency, personalizing educational trajectories, and optimizing academic workload.

At the same time, the use of artificial intelligence in the educational process of militarized higher education institutions differs fundamentally from its implementation in civilian universities. Military education is characterized by strict regulatory frameworks, hierarchical organizational structures, rigorous disciplinary requirements, and increased personal responsibility of learners for decisions made during training.

Main body

The preparation of cadets is aimed not only at the development of professional competencies but also at the formation of personal qualities essential for future service,

including independent thinking, critical evaluation of information, psychological resilience, and readiness to make decisions under conditions of uncertainty.

As noted by researchers, the majority of studies on artificial intelligence in education focus primarily on civilian educational institutions and insufficiently consider the specific nature of professionally oriented military training [3]. This situation gives rise to a scientific contradiction between the growing need for digital technologies in education and the necessity to preserve the fundamental pedagogical principles of military education, which prioritize the human factor in decision-making processes.

In this context, there is a clear need for an in-depth theoretical analysis of the pedagogical and psychological features of artificial intelligence use in the educational process of militarized higher education institutions.

Theoretical and methodological foundations of using artificial intelligence in militarized higher education

In contemporary research, artificial intelligence in education is conceptualized as an intelligent technological system designed to support learning through the analysis of educational data, adaptation of instructional content, and generation of recommendations for learners [1]. According to experts, the potential of artificial intelligence lies in its capacity to improve access to knowledge and optimize educational processes [2].

However, within the context of militarized higher education, these capabilities must be considered through the lens of the specific objectives of professional officer training. Military pedagogy traditionally relies on principles of discipline, personal responsibility, and preparedness for action in extreme conditions. Consequently, the substitution of learners' cognitive activity with automated algorithmic solutions is methodologically unacceptable.

Studies in the field of human–automation interaction highlight the phenomenon of overreliance on intelligent systems, which may result in reduced situational awareness and diminished analytical activity [4, 5]. In military education, such effects pose a particularly serious risk, as the professional activity of officers requires independent judgment and the assumption of personal responsibility for decisions made.

From a psychological perspective, the impact of artificial intelligence on learners' cognitive and motivational processes is of particular importance. Motivation theories emphasize that the development of stable professional and intrinsic learning motivation is achievable only through active engagement in learning activities and awareness of their significance [6]. When artificial intelligence is used primarily as a source of ready-made solutions, it may undermine intrinsic motivation and foster an orientation toward minimizing intellectual effort.

Thus, the analysis of scientific sources indicates that the use of artificial intelligence in militarized higher education institutions must be strictly regulated and aimed at supporting, rather than replacing, cadets' cognitive activity.

Pedagogical and psychological factors, conditions, and limitations of implementing artificial intelligence

Most researchers agree that the effectiveness of artificial intelligence implementation in education depends not on the technological sophistication of the system itself, but on the pedagogical conditions under which it is applied [3]. In the context of a militarized higher education institution, the instructor retains a central role in organizing the educational process, performing functions of methodological guidance, supervision, and educational influence.

From a pedagogical standpoint, the following conditions for the use of artificial intelligence in military education may be identified:

- regulatory definition of the scope and forms of artificial intelligence application;
- preservation of the instructor's leading role as the subject of pedagogical interaction;
- orientation of artificial intelligence use toward the development of analytical and critical thinking;
- formation of cadets' conscious and critical attitude toward the results generated by intelligent systems.

From a psychological perspective, the application of artificial intelligence should enhance cognitive engagement rather than replace it. As emphasized in human factors research, final decision-making in professional activity must remain the responsibility of the human operator, even when intelligent support systems are available [4].

Conclusion

The theoretical analysis conducted in this study leads to the conclusion that the use of artificial intelligence technologies in the educational process of militarized higher education institutions possesses significant potential but requires rigorous pedagogical and psychological justification. Artificial intelligence should be regarded exclusively as a supplementary educational tool applied within a framework of regulatory control and pedagogical supervision.

Ignoring the specific characteristics of military education in the implementation of artificial intelligence may result in reduced levels of independent thinking and critical analysis among cadets, which contradicts the objectives of professional officer training. The findings of this article may be used in the development of conceptual and methodological foundations for the integration of artificial intelligence technologies into military education systems.

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