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SCIENTIFIC AND PRACTICAL FOUNDATIONS FOR IMPROVING MILITARY SERVICE PREPARATORY CURRICULA ON THE BASIS OF A COMPETENCY-BASED APPROACH

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Abstract

This article examines the legal and regulatory foundations, structural composition, time allocation, and practical effectiveness of military service preparatory curricula from the standpoint of a competency-based approach. The subject chosen for the study is the training process preparing 60 students in grades 10–11 for military service at general secondary school No. 1 of the MMTB in the city of Termiz, Surkhandarya region. The analysis identified five core blocks within these curricula — general military, tactical, physical, information-and-communication, and moral-educational training — and assessed their time distribution and the share of practical exercises within them. Drawing on international experience, particularly the models used in the United States and the United Kingdom, the integration of military education with the civilian higher education system is substantiated as a promising direction for further development.

Keywords: *military education, competency-based approach, curriculum, SATE model, METL, military training, simulation technologies, international experience.*

INTRODUCTION

Under the conditions of modern statehood, strengthening the national defense system and enhancing the combat capability of the Armed Forces is one of the priority directions of state policy. Training personnel who are fit for military service, knowledgeable, and morally mature forms the central core of this task. [1] For this reason, a scientific analysis of the content, structure, and practical effectiveness of military service preparatory curricula carries pressing scientific and practical significance.

The Constitution of the Republic of Uzbekistan establishes the defense of the Motherland as the sacred duty of every citizen. [2] This constitutional norm defines the fundamental purpose of the military education system: to create an integrated framework aimed at shaping young people not merely into specialists possessing military skills, but into patriotic, responsible citizens who value national heritage.

The experience of modern armed conflicts shows that the success of combat operations depends not only on the technical superiority of military equipment, but increasingly on the professional preparedness of servicemen, coordinated cooperation between units, and the ability to use information and communication technologies. [3] For this reason, the requirements placed on the military education system are also being renewed, with the competency-based approach, technological literacy, and psychological stability now recognized as inseparable components of military training.

Despite the relevance of the topic, questions concerning the structural composition of military education programs, their time allocation, and comparative analysis with international experience have not yet been sufficiently addressed in domestic scholarly literature. This determines the purpose and objectives of the present study.

Literature review.

The scientific and practical foundations of improving military service preparatory curricula on the basis of a competency-based approach have been studied

abroad by Abbe A. (2021), Reigeluth Charles M. and Bell Herbert H. (2014), Fletcher J.D., Chatelier P.R., Raven J. (1984), Alberto Cutillo (2013), David Curran (2013), and others. [4]

Within the CIS countries, this subject has been addressed by Dolomanyuk L.V. (2011), Kalashnikov V.L., Bauzina E.N., Oksyukovskaya V.N. (1999), Lenitsky K.S. (2015), Petrachkov O., Kyslenko D., Mykhaylov V., Shostak R., Polyvaniuk V. (2024), and others. [5]

During the years of independence, the theoretical and pedagogical foundations of the competency-based approach within Uzbekistan's military education system have been studied by Umarov I.O. (2025), Islamova M.Sh. (2023), Akhmedov O.G., Alimardonov Z.Sh. (2016), Toshpanov D.Yu. (2021), Mirzoyev N.M. (2020), and others. [6]

Research methodology.

The sources used for this study include the legal and regulatory documents of the Republic of Uzbekistan in the field of military education, training manuals on military preparation, as well as open sources related to the military education systems of foreign states. The following methods were applied in a comprehensive manner during the study: content analysis of legal and regulatory documents; structural-functional analysis of curricula; the comparative-typological method (comparing Uzbekistan's experience with the models of the USA, the United Kingdom, Germany, and Kazakhstan); and the generalization of statistical data together with the systematization of survey results.

The subject chosen for the study was the teaching process that prepares students for military service — specifically, the training process covering 60 students in grades 10–11 at general secondary school No. 1 of the MMTB in the city of Termiz, Surkhandarya region. The survey and observation work was carried out specifically

with this group of students, and the analysis and conclusions presented below were formed on that basis.

The analysis was carried out in two stages: in the first stage, the regulatory basis and structural composition of the curricula were identified; in the second stage, the practical effectiveness of the program was evaluated — that is, the ratio between theoretical and practical exercises, the level of logistical and technical support, and compliance with international experience. In doing so, the results of surveys and observations previously conducted by the researcher were also used. [7]

Analysis and results.

The regulatory basis of the military education system is the body of legal documents that determines the content, requirements, and organizational procedures of the curricula. In the Republic of Uzbekistan, the system of preparation for military service relies on several key legal and regulatory documents: the Military Doctrine of the Republic of Uzbekistan, [8] which establishes the need to modernize the Armed Forces and introduce information technologies; the Law “On Universal Military Duty and Military Service,” [9] which sets out the conscription procedure and stages of preparation; and the Law “On Education,” [10] which enshrines personnel training on the basis of a competency-based approach as a priority direction. In addition, the Regulation on Drill Training [11] and the training manuals “Pre-Conscription Basic Training” [12] form the methodological foundation of military education practice.

While the completeness of the regulatory framework ensures that curricula are developed in line with national security requirements, the analysis shows that standards regulating simulation technologies and digital military management have not yet been sufficiently developed at the regulatory level.

Based on the analyzed programs, it was found that military service preparatory curricula consist of five mutually complementary main blocks [13] (see Table 1).

No.	Block name	Main content	Competencies formed
1	General military training	Military regulations, drill preparation, weapons handling, principles of discipline	Discipline, patriotism, responsibility
2	Tactical and tactical-special training	Unit command, field exercises, rapid decision-making	Tactical thinking, coordinated action
3	Physical training	Strength, endurance, agility, meeting military standards	Physical resilience, stress tolerance
4	Foundations of information, communication, and management	Digital communication, geoinformation systems, automated control	Technological literacy
5	Moral and educational training	National history, patriotic upbringing, military traditions	National pride, loyalty to the Motherland

Table 1. Source: compiled by the author based on the analysis.

The first block — general military training — forms the foundation of the curriculum and also serves as a means of shaping values such as loyalty to the Motherland and a sense of responsibility. The second block — tactical training — is aimed at developing servicemen's ability to make rapid decisions; however, the analysis shows that in some cases training exercises are not brought sufficiently close to real combat conditions. [14] The fourth block — the foundations of information and

communication — represents a new requirement of modern military education, and survey results indicate that the volume of training and the level of equipment provided for this block remain insufficient. [15]

The results of the comparative analysis indicate that the minimum volume of military training programs should be at least 1,500 hours, while a more complete level of preparation should reach 1,800 hours [13] (Table 2).

Subject / type of exercise	**Number of hours**	**Share (%)**
Tactical training	288	16.0
General military training	216	12.0
Physical training	180	10.0
Foundations of information and communication	144	8.0
Moral and educational training	108	6.0
Military history and foundations of national defense	72	4.0
Combined-arms regulations	72	4.0
Training assembly (14 days)	108	6.0
Troop internship (30 days)	216	12.0
Elective and optional component	396	22.0
Total	**1,800**	**100.0**

Table 2. Source: compiled by the author based on program analysis.

As the table shows, the greatest amount of time is allocated to tactical and general military training. Troop internship and training assemblies — together amounting to 324 hours — constitute a decisive share of practical preparation. The ratio between theoretical and practical exercises is approximately 60:40, which corresponds to the basic principles of the competency-based approach. [12] However, a certain portion of the time allotted for practical exercises is not being fully utilized due to a shortage of logistical and technical support, and the lack of training simulators and simulation equipment is becoming an important factor limiting practical preparation.

The methodological foundation of military training programs is the SATE (Systems Approach to Training and Education) model. This model envisions planning military training through five sequential stages — analysis, design, development, implementation, and evaluation. [15] During the analysis stage, the unit's specific list of combat tasks (METL) is determined; during the design stage, long-term, medium-term, and short-term training plans are drawn up; during the implementation stage, the principle of "train as you fight" is observed; and during the evaluation stage, the "After Action Review" method is applied. [3] In the Armed Forces of Uzbekistan as well, large-scale exercises consistent with this approach, such as "Zafar-2022" and "Jasorat-2023," have been planned on the basis of METL. [16]

The practice of training military personnel on the basis of civilian higher education institutions is widespread in many countries. [3,17,18] According to international data, approximately 30 percent of commissioned officers in the UK Armed Forces have completed specialized training courses at civilian universities, while in the United States this figure reaches up to 90 percent (Table 3).

Country	**Main model**	**Application potential for Uzbekistan**

Country	Main model	Application potential for Uzbekistan
USA	ROTC — officer training at universities (90%)	Expanding the military module within higher education institutions, adapting it to the credit system
United Kingdom	Courses at civilian universities (30%)	Introducing military-applied courses as an elective module
Germany	Bundeswehr University — unity of military and civilian education	Academic cooperation between the military academy and higher education institutions
Kazakhstan	Military-professional programs adapted to the credit system	Regional experience and mutual-recognition mechanisms

Table 3. Source: compiled by the author based on open-source data.

The data presented in the table shows that integrating military education with the civilian education system is a systematic approach substantiated by many countries. This model is more cost-effective, broadens the intellectual environment, and strengthens ties with civil society. For Uzbekistan as well, expanding military-professional disciplines as an elective module within higher education institutions, and adapting troop internships to the academic credit system, can be considered a promising direction. [19]

Based on the results of the research survey and observations, the following generalization is proposed. Strengths include the following: curricula are formed on the basis of national values and the ideology of independence; systematic training

planned on the basis of SATE methodology and METL enhances the combat effectiveness of units; and special attention is given to teamwork and leadership skills when training young officers. [3] Weaknesses include the following: the use of simulators and training equipment for developing practical skills is insufficient; preparedness in the use of information and communication technologies remains at an average level; [7] and young officers face methodological difficulties in managing units during the initial period of their service. [20]

Based on the results of the analysis, the following well-founded proposals are put forward: [21] first, to introduce a separate module on “Foundations of Digital Combat Management” into the curricula (at least 72–144 hours in volume); second, to widely introduce simulation and augmented reality technologies; third, to bring the share of practical exercises to at least 50 percent of total training time; fourth, to revise evaluation criteria on the basis of the competency-based model; fifth, to introduce a system for monitoring military-practical competencies; and sixth, to strengthen the psychological training and moral-educational blocks.

CONCLUSION

The analysis conducted makes it possible to draw the following conclusions. First, the system of preparation for military service in the Republic of Uzbekistan rests on a solid legal and regulatory foundation, [10,11,19,21] yet the regulatory framework governing simulation and digital management standards needs to be further developed. Second, the current curricula, covering five main blocks, are aimed at comprehensively shaping the professional profile of servicemen, and the systematic training organized on the basis of SATE methodology serves to enhance combat effectiveness. [3] Third, although the level of theoretical knowledge is satisfactory, practical exercises in simulation and technological preparation, as well as in management skills, remain insufficient. [17] Fourth, international experience confirms that integrating military education with the civilian education system is an

economically and pedagogically effective approach. [7] Fifth, the set of proposals put forward — a digital management module, simulation technologies, an increased share of practical exercises, integrated evaluation, and monitoring of competencies — together make it possible to create a systematic model of military education that meets modern requirements. This model not only enhances combat readiness but also serves to shape young people into patriotic and responsible citizens.

The results of this research are of practical value for institutions overseeing the military education system, military departments of higher education institutions, and specialists engaged in curriculum development, and they lay the groundwork for future research aimed at a deeper study of digital management competencies.

The analysis and conclusions set out above rest on the survey and observation results gathered from the teaching process — the subject of this study — that prepares 60 students in grades 10–11 for military service at general secondary school No. 1 of the MMTB in the city of Termiz, Surkhandarya region, which ensures that the proposals put forward are practically grounded specifically within a school setting.

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