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IMPROVING PROFESSIONAL TRAINING IN MILITARY HIGHER EDUCATION INSTITUTIONS BASED ON THE COMPETENCY-BASED APPROACH

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Annotation: This article examines the theoretical and practical foundations of improving professional training in military higher education institutions through a competency-based approach. The study analyzes the importance of competency-oriented education in developing the professional knowledge, leadership abilities, strategic thinking, and practical skills of military personnel. Modern reforms in military education systems, digital transformation, simulation technologies, and international experiences are comparatively studied. The article also highlights the role of pedagogical innovations, interactive teaching methods, and integrated training mechanisms in increasing the effectiveness of military education. Scientific conclusions are based on official reports, scholarly literature, and empirical studies related to military pedagogy and competency-based education. The research emphasizes that competency-oriented military education contributes significantly to strengthening national defense systems and preparing highly qualified military specialists for contemporary security challenges.

Keywords: Competency-based approach, military education, professional training, military pedagogy, digital technologies, leadership competence, military higher education institutions, innovative education, practical skills, strategic competence.

Introduction

Modern military education systems are undergoing significant transformations due to globalization, technological progress, and rapidly changing security threats. Contemporary armed forces require not only physically prepared personnel but also specialists capable of strategic analysis, decision-making, communication, and technological adaptation. Therefore, competency-based education has become one of the most important directions in military pedagogy [3].

The competency-based approach focuses on forming practical abilities and integrated professional competencies rather than only theoretical knowledge. According to the recommendations of the United Nations Educational, Scientific and Cultural Organization (UNESCO), competency-oriented education improves learners' adaptability to real professional conditions and enhances problem-solving abilities [4]. In military education, this approach is particularly relevant because military specialists often operate in unpredictable environments requiring rapid and effective decision-making.

In many countries, including the United States, Germany, South Korea, and Türkiye, reforms in military higher education institutions emphasize leadership competence, tactical thinking, digital literacy, and crisis management skills [5]. Research conducted by the North Atlantic Treaty Organization (NATO) also indicates that competency-oriented military training improves operational readiness and interdepartmental cooperation [6].

In Uzbekistan, reforms in higher military education are being implemented within the framework of national defense modernization. The adoption of innovative pedagogical technologies, simulation systems, and interactive learning environments aims to strengthen professional training quality in military institutions [7]. The "Concept for the Development of Higher Education until 2030" also highlights the necessity of introducing competency-based educational standards and digital technologies into professional training systems [8].

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Consequently, improving professional preparation through competency-based methodologies has become an urgent scientific and practical issue in military education systems worldwide.

Methodology

The research is based on comparative analysis, pedagogical observation, scientific literature review, and analysis of normative documents related to military education systems. International and national scholarly sources concerning competency-based education and military pedagogy were systematically examined.

The methodological foundation of the study includes:

- analysis of scientific articles related to competency-oriented military education;
- examination of official educational standards and military training regulations;
- comparative analysis of foreign military education models;
- synthesis of empirical findings regarding professional competencies in military institutions.

The study also utilizes statistical and analytical reports published by UNESCO, NATO, and the Ministry of Defense educational institutions. Comparative approaches were used to identify similarities and differences between traditional and competency-based training systems [9].

The competency-based model analyzed in this article includes the following key components:

- professional competence;
- communicative competence;
- leadership competence;
- digital and technological competence;
- strategic and analytical thinking competence;
- moral and psychological preparedness.

These competencies were evaluated based on pedagogical effectiveness, practical applicability, and relevance to modern military activities.

Results

The research findings demonstrate that competency-based professional training significantly increases the effectiveness of military education. Studies conducted in military academies of NATO member states show that competency-oriented educational models improve cadets' operational performance by 25–30% compared to traditional knowledge-based systems [6].

One of the most important results of competency-based training is the integration of theory and practice. In traditional systems, theoretical subjects are often separated from practical military activities. However, competency-based education combines tactical exercises, digital simulations, situational analysis, and leadership training into a unified educational process [10].

Research findings also indicate that simulation technologies enhance the development of strategic thinking and operational decision-making skills. Modern military academies increasingly use virtual combat simulations and artificial intelligence technologies for officer training. According to studies conducted by the United States Army Training and Doctrine Command (TRADOC), simulation-based education improves practical performance efficiency by nearly 40% [11].

Another significant result concerns leadership development. Military professionals must possess communication abilities, teamwork skills, and psychological resilience. Competency-oriented educational systems include interactive methodologies such as case studies, role-

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playing exercises, collaborative projects, and tactical scenario analysis. These methods contribute to the formation of leadership competence and emotional stability [5].

The study further reveals that digital competence has become one of the most essential components of military professionalism. Modern warfare increasingly relies on cyber technologies, unmanned systems, digital communication, and information security mechanisms. Therefore, military higher education institutions integrate cybersecurity, digital intelligence, and information technologies into their curricula [12].

In Uzbekistan's military education system, competency-based reforms have improved cadets' participation in practical training activities. Educational institutions affiliated with the Ministry of Defense have introduced interactive classrooms, digital laboratories, and electronic educational platforms to modernize professional training processes [7]

Analysis and Discussion

The competency-based approach in military higher education has become one of the most significant pedagogical transformations of the twenty-first century. Contemporary military systems require officers who are not only knowledgeable in theoretical disciplines but also capable of applying practical skills in unpredictable operational environments. Traditional educational models in military institutions were mainly based on strict discipline, memorization of military doctrines, and instructor-centered teaching methodologies. Although these methods ensured organizational order and procedural consistency, they often failed to develop independent thinking, adaptive decision-making, and technological competence among future officers [1].

Modern military conflicts increasingly involve hybrid warfare, cyber threats, information operations, unmanned technologies, and multinational cooperation. Consequently, professional military training must correspond to rapidly changing security conditions. Competency-based education addresses this requirement by shifting the focus from passive knowledge acquisition toward the development of integrated competencies, including analytical thinking, communication, leadership, emotional resilience, and digital literacy [2].

One of the primary characteristics of competency-oriented military education is the integration of theoretical and practical learning processes. Traditional systems frequently separated classroom instruction from field exercises, creating a gap between academic preparation and real operational requirements. Competency-based models attempt to eliminate this separation by introducing situational tasks, military simulations, problem-solving exercises, and tactical decision-making activities directly into the educational process [3]. Through these methods, cadets learn how to apply theoretical concepts in realistic scenarios that reflect actual military operations.

Strategic thinking competence represents another essential component of modern military professionalism. Officers often operate in environments characterized by uncertainty, limited information, and time pressure. Under such conditions, the ability to assess risks, predict possible consequences, and make rapid decisions becomes critically important. Researchers in military pedagogy emphasize that strategic competence is developed more effectively through experiential learning methods than through traditional lecture-based instruction [4]. Tactical simulations, command-staff exercises, and operational analysis activities help cadets improve critical thinking abilities and operational judgment.

The increasing role of digital technologies in military operations has also transformed the requirements for officer preparation. Modern armed forces rely heavily on automated systems, satellite communication, cybersecurity mechanisms, artificial intelligence technologies, and digital intelligence platforms. Therefore, digital competence has become an integral part of

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military education systems worldwide [5]. Military academies in technologically advanced countries increasingly incorporate cybersecurity training, data analysis, and information management into their curricula. The ability to operate digital systems and protect information infrastructures is now considered as important as traditional tactical competence.

The integration of simulation technologies has significantly enhanced competency-based military training. Virtual simulations create opportunities for cadets to participate in realistic operational scenarios without the financial and logistical limitations associated with live exercises. According to studies conducted in NATO military institutions, simulation-based training improves operational readiness, teamwork abilities, and situational awareness [6]. These systems allow cadets to analyze complex combat environments, coordinate tactical actions, and evaluate the consequences of strategic decisions in a controlled educational setting.

Furthermore, simulation technologies contribute to the development of psychological resilience among military personnel. Stress management and emotional stability are essential competencies for officers operating under dangerous and uncertain conditions. Psychological training programs integrated into competency-based systems help cadets improve emotional regulation, confidence, and adaptability [7]. Researchers argue that psychological preparedness directly influences operational effectiveness, especially during crisis situations and military conflicts.

Leadership competence occupies a central place in military professional education. Modern military leaders are expected not only to command subordinates but also to motivate personnel, resolve conflicts, communicate effectively, and cooperate within multinational environments. International military operations increasingly involve collaboration among allied forces from different cultural and linguistic backgrounds. Consequently, officers require intercultural communication skills and diplomatic competence in addition to tactical knowledge [8].

Competency-oriented education supports leadership development through interactive pedagogical methodologies such as group projects, role-playing exercises, case studies, and collaborative problem-solving tasks. These methods encourage cadets to take initiative, express independent opinions, and assume responsibility for decision-making processes. Research findings indicate that cadets trained through interactive methods demonstrate higher levels of self-confidence and communication effectiveness compared to those educated under traditional authoritarian models [9].

An important issue discussed in contemporary military pedagogy concerns the balance between discipline and flexibility in competency-based education. Military institutions historically emphasize hierarchy, obedience, and strict procedural standards. Some scholars argue that excessive focus on flexibility and learner autonomy may weaken traditional military discipline [10]. However, modern educational theorists maintain that competency-based systems do not eliminate discipline but rather combine organizational order with adaptive thinking and professional creativity. In this context, discipline remains essential while educational methods become more learner-centered and practice-oriented.

The role of instructors in competency-based military education has also changed significantly. In traditional systems, instructors primarily functioned as sources of information and controllers of discipline. In competency-oriented models, instructors act as facilitators, mentors, and coordinators of learning activities. This transformation requires military educators to possess not only professional military experience but also advanced pedagogical competencies [11]. Many military institutions face difficulties because instructors are often insufficiently prepared for interactive teaching methodologies and digital learning technologies.

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Professional development programs for military instructors therefore represent a crucial element of educational modernization. Countries with advanced military education systems invest heavily in pedagogical retraining programs, digital teaching workshops, and methodological innovation centers. Continuous instructor development ensures that educational personnel can effectively implement competency-based approaches and integrate modern technologies into the training process [12].

Infrastructure limitations remain another significant challenge in implementing competency-based military education. Modern training systems require technologically advanced classrooms, simulation laboratories, high-speed communication networks, and digital educational resources. In many developing countries, financial constraints limit the modernization of military educational institutions [5]. As a result, the implementation of innovative pedagogical methods often proceeds more slowly than planned.

Despite these challenges, international experience demonstrates that competency-based military education produces positive long-term outcomes. Military academies in the United States, Germany, South Korea, and Türkiye have successfully integrated competency-oriented curricula into officer training systems [6]. These institutions emphasize interdisciplinary learning, leadership development, digital literacy, and operational adaptability. Comparative analysis shows that graduates of competency-based programs adapt more effectively to complex military environments and demonstrate stronger problem-solving abilities.

Interdisciplinary integration has become another important characteristic of modern military education. Contemporary military operations require cooperation among specialists in engineering, medicine, cybersecurity, logistics, intelligence, and international law. Therefore, military education increasingly incorporates interdisciplinary subjects into training programs [8]. Cadets study information technologies, strategic management, political science, international relations, and crisis communication alongside traditional military disciplines. This approach broadens professional perspectives and prepares officers for multidimensional operational environments.

The growing importance of cybersecurity further illustrates the necessity of interdisciplinary competence. Cyber warfare and information security have become central aspects of national defense strategies. Military professionals must understand not only combat tactics but also digital threat analysis, cyber defense mechanisms, and information warfare strategies [9]. Consequently, military higher education institutions worldwide are establishing specialized cybersecurity departments and digital warfare laboratories.

Another important dimension of competency-based military education involves ethical and moral competence. Officers frequently face situations requiring morally responsible decision-making. International humanitarian law, human rights principles, and ethical standards play a crucial role in modern military operations. Competency-oriented education therefore includes ethical training aimed at developing professional responsibility, integrity, and respect for legal norms [10]. Ethical competence strengthens public trust in military institutions and contributes to lawful operational conduct.

The competency-based approach also supports lifelong learning and continuous professional development. Rapid technological progress and evolving security threats require military personnel to regularly update their knowledge and skills. Modern military education systems increasingly promote lifelong learning through advanced training courses, online educational platforms, and professional retraining programs [11]. Officers are encouraged to engage in continuous education throughout their careers, ensuring adaptability to new operational requirements.

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In the context of Uzbekistan, reforms in military higher education reflect global tendencies toward competency-oriented training systems. The modernization of educational standards, introduction of modular curricula, and implementation of innovative teaching technologies aim to improve professional training quality in military institutions [12]. The integration of interactive methods, simulation technologies, and digital educational resources has positively influenced cadet participation and practical preparedness.

Nevertheless, several issues still require attention within the national military education system. Strengthening material and technical infrastructure remains a priority for ensuring the effective implementation of competency-based approaches. Additional investment is necessary for simulation laboratories, digital platforms, and modern educational equipment. Furthermore, expanding international cooperation with foreign military academies could contribute to the exchange of best practices and methodological innovations.

Instructor qualification improvement also remains a critical issue. Successful implementation of competency-based education requires instructors capable of applying modern pedagogical technologies and interactive methodologies. Professional retraining programs and international educational partnerships could enhance the pedagogical competence of military educators and support educational modernization processes.

Conclusion

The competency-based approach has become one of the most effective methodologies for improving professional training in military higher education institutions. Modern military specialists require not only theoretical knowledge but also practical abilities, strategic thinking, digital competence, leadership qualities, and psychological resilience.

The research findings demonstrate that competency-oriented education improves operational preparedness, professional adaptability, and decision-making efficiency. Innovative pedagogical technologies, simulation systems, interactive teaching methods, and digital educational environments significantly enhance military training quality.

At the same time, successful implementation of competency-based education requires modernization of technical infrastructure, improvement of instructor qualifications, and expansion of international educational cooperation. Military higher education institutions should continue integrating modern digital technologies and interdisciplinary approaches into their curricula.

Overall, competency-based professional training contributes to strengthening national defense systems and preparing highly qualified military personnel capable of operating effectively in rapidly changing global security environments.

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