

УДК 378.1:355.23

DOI <https://doi.org/10.33989/2519-8254.2023.14.300228>

ORCID 0000-0001-5585-50-20

ВІЙСЬКОВО-ТЕХНІЧНА КУЛЬТУРА ФАХІВЦІВ ВІЙСЬКОВО-МОРСЬКИХ СИЛ: СУТНІСТЬ, ЗМІСТ ТА СТРУКТУРА

Олександр Ільченко,

старший помічник начальника навчального відділу;
Інститут Військово-Морських Сил Національного університету
«Одеська морська академія»

У статті вивчено психолого-педагогічну сутність, зміст та структуру військово-технічної культури фахівців військово-морських сил у сучасних ЗВО України; з'ясовано, що рівень розвитку військово-технічної культури фахівців військово-морських сил у сучасних ЗВО сьогодні не відповідає потребам та вимогам Збройних сил України. Встановлено, що в процесі професійної підготовки у військовому ЗВО інтерес перетворюється в цілеспрямоване прагнення оволодіти військово-професійною діяльністю, проте зацікавленість здобувачів у підвищенні військово-технічної грамотності носить нестійкий та несистемний характер. Доведено, що військово-технічна культура фахівців військово-морських сил – це вид професійної культури, який представляє собою інтегративну властивість особистості, що включає сукупність знань, вмінь, професійно важливих якостей та ціннісних орієнтацій, які забезпечують готовність майбутнього офіцера до здійснення військово-інженерної діяльності. Система формування військово-технічної культури фахівців військово-морських сил ґрунтується на загальних (свідомості та активності, сумісності реалізації системи з умовами військового ЗВО, зв'язку теорії та практики, диференціації та індивідуалізації) та специфічних (трансформації загальної інженерної культури в військово-технічну культуру курсантів, аксіологізації змістового наповнення системи, інновацій, міждисциплінарної інтеграції) принципах.

На основі вивчення комплексу літературних джерел встановлено, що військово-технічна культура розглядається вченими як особистісне утворення, як комплекс якостей особистості, як сума професійних інженерних знань, умінь і навичок та як засіб досягнення результату та саморозвитку здобувачів у навчальній діяльності. У процесі наукового пошуку виокремлено функції військово-технічної культури (спрямовуюча, трансляційна, змістова, розвиваюча, рефлексивно-оціночна); компоненти військово-технічної культури (ціннісно-мотиваційний, когнітивний та діяльнісно-комунікаційний) та логічні рівні їх сформованості (алгоритмічний, репродуктивний, реконструктивний та креативний).

Ключові слова: майбутні фахівці військово-морських сил, професійна культура, військово-технічна культура, функції військово-технічної культури, принципи формування військово-технічної культури, критерії, показники та логічні рівні військово-технічної культури.

Problem statement. Modern socio-economic and geopolitical transformations affect the quality of higher education negatively, including military education. In modern times, when complicated innovative technologies are used in the army, and weapons have a significant destructive power, the task of improving the naval specialists training quality becomes of strategic importance for the whole country. Modern military structures can not be imagined without new, technically advanced models of small arms, melee weapons, military and special equipment, robots, information tools, etc. The ability to apply them effectively is one of the main qualities of graduates of military higher education institutions, which are able to perform the service and combat tasks of peacetime and wartime successfully. The formation of these abilities

is closely connected with the development of the culture of military engineering activities of future officers, the foundations of which are laid in military higher educational institutions.

In modern military practice, situations that do not have ready-made solutions and algorithms prevail. Consequently, the military technical culture of naval forces specialists bases on the ability to think outside the box and to approach the solution of the tasks creatively. In connection to the aforesaid, the problem of an engineering culture formation among cadets of military higher educational institutions becomes extremely relevant in modern times and requires detailed study and solution.

The solution of the mentioned problems and contradictions is facilitated by the creation of such an educational system that would ensure the formation of a professional culture among higher education applicants, which is a culture of technical activity, technical thinking, engineering ethics, the desire for constant development and military professional activity improvement.

The purpose of the article: to study the psychological and pedagogical essence, content and structure of the military technical culture of naval forces specialists in modern HEI of Ukraine.

Analysis of previous studies and publications. Understanding the importance and significance of the problem of the formation of military technical culture of naval forces specialists made us to turn to the accumulated pedagogical experience in this direction. Studies of O. Yevsiukov, Y. Lisnichenko, M. Neshchadym, V. Yahupov, M. Ktitorov and others are devoted to the problems of professional training of military HEIs applicants. V. Yahupov identified that the components of a military specialist's competence are the content of military professional knowledge, skills and abilities, which are the basis for maintaining authority among the personnel and for professional teaching of combat and humanitarian training disciplines (Yahupov, 2000); I. Andrushchenko, exploring the concept of «technical competence of the future specialist», offers to distinguish technical (hardware-based and technical) and technological (informational and technological) components in the technical and technological component of professional competence (Andrushchenko, 2014). M. Ktitorov interprets the military technical competence as the ability to use specialized software to assess the combat effectiveness of samples and complexes of weapons and military equipment (Ktitorov, 2022). O. Yevsiukov in his dissertation considers the pedagogical conditions of the formation of future officers' professional competence in the educational process of a military higher educational institution (Yevsiukov, 2006). In the researches of Y. Lisnichenko the peculiarities of professional competence formation of future officers in the process of professional disciplines studying on the basis of a competence approach are studied (Lisnichenko, 2016).

Competence aspects of the development of the future officer's culture are studied in the works of I. Bukhun, Y. Denysenko, P. Khomenko (technological aspect) (Bukhun, 2021; Denysenko, Khomenko, 2023); O. Antonova, L. Maslak (culturological aspect) (Antonova, Maslak, 2011); D. Zavhorodnii (research aspect) (Zavhorodnii, 2018); V. Petruk (professionally oriented aspect) (Petruk, 2006); E. Sarafaniuk (aspect of virtual modeling) (Sarafaniuk, 2005). At the same time, there are no systematic studies of the content and structure of the military technical culture of naval forces specialists in modern HEIs of Ukraine.

Presentation of the main material. The analysis of the existing theory and practice in the studied field shows that the level of development of the military technical culture of naval forces specialists in modern HEI today does not meet the needs of the Armed Forces of Ukraine. This is explained, firstly, by the permanent development and improvement of weapons, military and special equipment, which is provided to the army, and secondly, by the insufficient provision of military HEI with the latest weapons and, as a result, the imperfection of curricula and educational programs.

A survey of graduates of the Institute of Naval Forces of the National University «Odesa Maritime Academy» showed that only 10,8% of them are interested in military technical literacy increasing. At the same time, 86,4% of respondents intend to build their professional career in the military field.

However, according to the survey data, on the initial courses of study, 94.9 % of applicants show interest to the content of military technical training. This profession attracts them with its unusualness, prestigiousness, non-standard engineering solutions. On senior courses, interest turns into a purposeful intention to master the military professional activities (88.2 % of applicants), but interest for military technical literacy increasing is unstable.

Consequently, the results of the survey confirmed the need to find new ways, methods and opportunities that ensure the formation of a military technical culture of applicants of military HEIs of Ukraine.

The professional culture of future specialists of naval forces is defined as an integrative personal formation that reflects the level of development of socio-cultural, military professional and special knowledge, skills, abilities and qualities, which creates an effective personal and legal basis for the successful performance of official duties on officer positions. Professional culture is presented as a comprehensive formation, which is both a condition and a prerequisite for effective professional activity, as well as an orienting point for professional self-improvement and an indicator of the level of professional competence of naval forces specialists.

The military technical culture of naval forces specialists is a kind of professional culture, which is an integrative property of the personality, including a set of knowledge, skills, professionally important qualities and value orientations that ensure the readiness of the future officer to military engineering activities conducting. Formation of military technical culture applicants of military HEI is a purposeful process of systematic accumulation of knowledge, skills, professionally important qualities and value orientations, which ensures the readiness of future officers to military engineering activities providing.

The pedagogical system of formation of military technical culture of naval forces specialists is developed taking into account the requirements of the state personnel order, state educational standards, peculiarities of cadets training on the basis of systemic and synergetic, culturological, technological, activity orientated, resource-based and personal approaches. It includes motivational and target (creation of an educational environment that promotes the emergence of motives, their comprehension and consolidation of internal beliefs of the significance of the engineering culture for military professional activities and the need for its formation among future officers), normative and analytical (renovation and updating of the information and analytical environment in the educational process of military HEI), technological (implementation of the developed technology of military technical culture formation of applicants within the framework of professional disciplines, field (technological) and military practice) and resultant and corrective (diagnostics of the level of military technical culture formation among applicants of military HEI) components.

The designed pedagogical system of the formation of military technical culture of naval forces specialists is based on general (consciousness and activity, compatibility of the implementation of the system with the conditions of military HEI, the connection of theory and practice, differentiation and individualization) and specific (transformation of general engineering culture into the military technical culture of cadets, axiologization of the content of the system, innovations, interdisciplinary integration) principles.

Military technical culture as a personal formation reflects the level of knowledge, skills and abilities that subject achieved to solve professional problems; it is characterized with maturity and development of natural and scientific and technical knowledge, the presence of practical skills and abilities, as well as professionally important qualities of the personality (creative individuality, the ability to self-development and self-improvement, analytical thinking, imaginative structural representation, graphic thinking, etc.).

Military technical culture as a complex of personality qualities characterizes the readiness for the rational implementation of military engineering activities, which provides the optimal balance between technical expences and the possibilities of sustainable life support of a person, society, nature; the culture of the engineer specialists of naval forces is determined by the personal and professional qualities, properties and characteristics of the applicants, the degree of mastery of professional and engineering competence.

Military technical culture as a means of results achieving and self-development of applicants in educational activities is that the formation of engineering culture is conducted from the standpoint of a competence approach, which gives a vector of completeness and effectiveness to the educational process. In this regard, the content of the educational programs has a clear definition of the parameters of the acquired knowledge, skills and abilities at the final stage of professional training.

Military technical culture as the sum of professional engineering knowledge, skills and abilities is the desire to use new cultural images, and not just the ability to adhere to certain norms; engineering culture characterizes the state of self-renewal of one's own culture and cultural identity in education.

So, military technical culture is a multifaceted phenomenon, which is a holistic integrative personal formation, the limits of which, on the one hand, are the qualities of the personality, and on the other, a means of a real goal achieving. Integral formations that reflect the level of knowledge, skills and abilities that the subject has mastered to solve professional problems are situated between these boundaries of military technical culture. Engineering activities in this case should be considered as a product of the military technical culture of future specialists of naval forces.

In the process of the complex of scientific research analysis, we allocated a number of functions of military technical culture:

- directing – reflects the focus of engineering culture on a certain kind of activity (object), thus, simplifies the decision-making process in the course of military technical activity;
- translational – engineering culture acts as a transmitter of the set of values of engineering activity in the process of its further development;
- axiological – reveals the objects of military technical activity as a dynamic set of engineering values;
- substantive – encourages a constant increase of the level of military technical activity basing on personal substance, goals, ideals, beliefs;
- developing – the focus of military technical culture on the comprehensive and holistic development of the personality of future specialists of naval forces, their professionally significant qualities, motives, interests in cognition and work;
- reflective and evaluative – adhering in the process of military technical activity to the set of accepted norms and rules, as well as its timely transformation, if necessary.

We think that the components of military technical culture are:

- valuable and motivational component, including a value-based attitude to engineering activities, the need for technical and technological optimization of processes related to military professional activities, realizing and understanding of the meaning of the use of equipment and technologies in it, motivation and desire to form an engineering culture, understanding of its significance for future professional activities, taking the social responsibility for the engineering and technical decisions taken;
- cognitive component, including a high level of development of engineering thinking, mnemonic abilities and imagination, the ability to predict and orient in non-standard professional situations, a creative approach to problem tasks solving in military professional activity, theoretical knowledge in the field of engineering activity, professional self-consciousness;
- activity orientated and communicative component, including readiness to engineering activities conducting during the performance of professional tasks, the ability to regulate and control this readiness, to create the optimal conditions for its implementation, the formation of professional and personal qualities, practical skills and abilities, a high level of development of communication skills necessary for adaptation in a professional environment and the implementation of military technical activities in it.

We estimate the formation of the military technical culture of future specialists of naval forces at the following logical levels:

I. Algorithmic level (non-formation of components of military technical culture): lack of professionally important qualities and desire for self-improvement; unwillingness to make independent decisions (low level of theoretical training, undeveloped creative abilities);

inconsistency of value orientations (value orientations are not related to professional activities); lack of information competence (poor knowledge of computer technology, unpreparedness for the effective use of a large amount of information, difficulties in searching and processing).

II. Reproductive level (low level of military technical culture): limited amount of basic knowledge (inability to apply the knowledge gained in practical activities flexibly and quickly); orientation to personal experience (theoretical preparedness is not supported with appropriate skills); low level of professional and personal qualities formation (uncertain ideas about the value and ethical norms of engineering activities).

III. Reconstructive level (formation of the main components of military technical culture): realizing of moral values (realizing and understanding of professional engineering ethics); the formation of professionally important qualities (the desire for professionalism and self-improvement); uncertainty about actions in new conditions (the ability to apply knowledge and skills only in typical situations).

IV. Creative level (the formation of all components of military technical culture): the presence of diverse and strong knowledge and skills (the ability to apply knowledge and skills in professional activities flexibly and effectively); creative approach to the performance of duties (the ability to independent decision-making in non-standard situations); formation of professional qualities (stable professional and moral value orientations); the desire for constant self-improvement (constant and systematic professional self-development); high level of professional communication (ability to take into account the interests of partners in engineering activities); ability to work in a team (establishing professional relationships, the formation of a positive emotional microclimate in the team); deep knowledge of computer technology (the ability to search, preserve, use and transmit professionally important information).

Conclusions and prospects for further research. Thus, military technical culture is a kind of professional culture of future specialists of naval forces, which is an integrative property of the personality, including a set of knowledge, skills, professionally important qualities and value orientations that ensure readiness for engineering activities providing. Prospects for further research are seen in the development and implementation of an integrative model and a methodical system of the formation of military technical culture of naval forces specialists.

ЛІТЕРАТУРА

- Андрущенко, І. О. (2014). Зміст поняття «технічна компетентність майбутнього фахівця» в сучасній педагогічній практиці. *Збірник наукових праць Уманського держ. пед. ун-ту ім. П. Тичини*, 2, 15-22.
- Антонова, О. Є., Маслак, Л. П. (2011). Культурологічна компетентність офіцера радіоінженерної спеціальності як складова професійної компетентності. В кн. О. А. Дубасенюк (Ред.), *Професійна педагогічна освіта: компетентнісний підхід*: монографія (с. 150-165). Житомир.
- Бухун, А. Г. (2021). Сутність і структура технологічної компетентності майбутніх офіцерів. *Українська професійна освіта*, 9/10, 218-226.
- Євсюков, О. Ф. (2006). *Педагогічні умови формування професійної компетентності майбутніх офіцерів у навчальному процесі вищого військового навчального закладу*. (Дис. канд. пед. наук). Харків.
- Завгородній, Д. С. (2018). Дослідницька компетентність майбутніх офіцерів військово-морських сил: сутність і структура. *Фізико-математична освіта*, 1(15), 2, 98-101.
- Ктіторов, М. О. (2022). Організаційно-методичні аспекти формування та розвитку професійних компетентностей майбутніх офіцерів НГУ в умовах воєнного стану. *Наукові записки кафедри педагогіки*, 51, 30-38.
- Лісніченко, Ю. М. (2016). Формування професійної компетентності майбутніх офіцерів у процесі вивчення фахових дисциплін на засадах компетентнісного підходу. *Молодий вчений*, 7, 432-435.
- Нещадим, М. І. (2003). *Військова освіта України: історія, теорія, методологія, практика*: монографія. Київ.

- Петрук, В. А. (2006). *Теоретико-методичні засади формування професійної компетентності майбутніх фахівців технічних спеціальностей у процесі вивчення фундаментальних дисциплін*: монографія. Вінниця.
- Сарафанюк, Е. І. (2005). *Педагогічні умови підвищення якості загальновійськової підготовки курсантів вищих військових навчальних закладів з використанням віртуального моделювання*. (Автореф. дис. канд. пед. наук). Одеса.
- Хоменко, П., Денисенко, Є. (2023). Гуманітарно-педагогічне моделювання розвитку професійної компетентності майбутніх офіцерів. *Імідж сучасного педагога*, 4 (211), 21-28.
- Ягупов, В. В. (2000). *Теорія і методика військового навчання*: монографія. Київ.

REFERENCES

- Andrushchenko, I. O. (2014). Zmist poniattia «tekhnichna kompetentnist maibutnoho fakhivtsia» v suchasni pedahohichni praktysi [The content of the concept of "technical competence of the future specialist" in modern pedagogical practice]. *Zbirnyk naukovykh prats Umanskoho derzh. ped. un-tu im. P. Tychyuny* [Collection of scientific papers of the Uman state. ped. University named after P. Tychyuny], 2, 15-22 [in Ukrainian].
- Antonova, O. Ye., & Maslak, L. P. (2011). Kulturolohichna kompetentnist ofitsera radioinzhenernoi spetsialnosti yak skladova profesiinoi kompetentnosti [Cultural competence of a radio engineering officer as a component of professional competence]. In O. A. Dubaseniuk (Ed.), *Profesiina pedahohichna osvita: kompetentnisnyi pidkhid* [Professional pedagogical education: competence approach]: monohrafiia (pp. 150-165). Zhytomyr [in Ukrainian].
- Bukhun, A. H. (2021). Sutnist i struktura tekhnolohichnoi kompetentnosti maibutnikh ofitseriv [The essence and structure of technological competence of future officers]. *Ukrainska profesiina osvita* [Ukrainian professional education], 9/10, 218-226 [in Ukrainian].
- Khomenko, P., & Denysenko, Ye. (2023). Humanitarno-pedahohichne modeliuvannya rozvytku profesiinoi kompetentnosti maibutnikh ofitseriv [Humanitarian and pedagogical modeling of the development of professional competence of future officers]. *Imidzh suchasnoho pedahoha* [The image of a modern teacher], 4 (211), 21-28 [in Ukrainian].
- Kitorov, M. O. (2022). Orhanizatsiino-metodychni aspekty formuvannya ta rozvytku profesiinykh kompetentnostei maibutnikh ofitseriv NHU v umovakh voiennoho stanu [Organizational and methodical aspects of the formation and development of professional competences of future officers of NSU in the conditions of martial law]. *Naukovi zapysky kafedry pedahohiky* [Scientific notes of the department of pedagogy], 51, 30-38 [in Ukrainian].
- Lisnichenko, Yu. M. (2016). Formuvannya profesiinoi kompetentnosti maibutnikh ofitseriv u protsesi vyvchennia fakhovykh dystsyplin na zasadakh kompetentnisnoho pidkhodu [Formation of professional competence of future officers in the process of studying professional disciplines on the basis of the competence approach]. *Molodyi vchenyi* [A young scientist], 7, 432-435 [in Ukrainian].
- Neshchadym, M. I. (2003). *Viiskova osvita Ukrainy: istoriia, teoriia, metodolohiia, praktyka* [Military education of Ukraine: history, theory, methodology, practice]: monohrafiia. Kyiv [in Ukrainian].
- Petruk, V. A. (2006). *Teoretyko-metodychni zasady formuvannya profesiinoi kompetentnosti maibutnikh fakhivtsiv tekhnichnykh spetsialnostei u protsesi vyvchennia fundamentalnykh dystsyplin* [Theoretical and methodological principles of the formation of professional competence of future specialists in technical specialties in the process of studying fundamental disciplines]: monohrafiia. Vinnytsia [in Ukrainian].
- Sarafaniuk, E. I. (2005). *Pedahohichni umovy pidvyshchennia yakosti zahalnoviiskovoi pidhotovky kursantiv vyshchykh viiskovykh navchalnykh zakladiv z vykorystanniam virtualnoho modeliuvannya* [Pedagogical conditions for improving the quality of military

- training of cadets of higher military educational institutions using virtual simulation*]. (Extended abstract of PhD diss.). Odesa [in Ukrainian].
- Yahupov, V. V. (2000). *Teoriia i metodyka viiskovoho navchannia [Theory and methodology of military training]: monohrafiia*. Kyiv [in Ukrainian].
- Yevsiukov, O. F. (2006). *Pedahohichni umovy formuvannia profesiinoi kompetentnosti maibutnikh ofitseriv u navchalnomu protsesi vyshchoho viiskovoho navchalnoho zakladu [Pedagogical conditions for the formation of professional competence of future officers in the educational process of a higher military educational institution]*. (PhD diss.). Kharkiv [in Ukrainian].
- Zavorodnii, D. S. (2018). Doslidnytska kompetentnist maibutnikh ofitseriv viiskovo-morskykh syl: sutnist i struktura [Research competence of future naval officers: substance and structure]. *Fyzyko-matematychna osvita [Physical and mathematical education]*, 1 (15), 2, 98-101 [in Ukrainian].

MILITARY-TECHNICAL CULTURE OF NAVAL FORCES SPECIALISTS: ESSENCE, CONTENT AND STRUCTURE

Oleksandr Ilchenko,

Senior Assistant to the Head of the Educational Department;
Institute of Naval Forces of the National University
«Odesa Maritime Academy»

The article examines the psychological-pedagogical essence, content, and structure of the military-technical culture of naval forces specialists in modern Ukrainian higher education institutions. It has been proven that the level of development of the military-technical culture of the naval forces specialists in the modern armed forces today does not meet the needs and requirements of the Armed Forces of Ukraine. It has been established that in the process of professional training at a military higher education institution, interest turns into a purposeful desire to master military-professional activities. However, students' interest in improving military-technical literacy is unstable and unsystematic. It has been proven that the military-technical culture of naval specialists is a type of professional culture that represents an integrative property of the individual, which includes a set of knowledge, skills, professionally essential qualities, and value orientations that ensure the readiness of the future officer to carry out military engineering activities. The system of formation of military-technical culture of naval specialists is based on general (awareness and activity, compatibility of the implementation of the system with the conditions of military training, connection of theory and practice, differentiation and individualization) and specific (transformation of general engineering culture into military-technical culture cadets, axiologising the content of the system, innovations, interdisciplinary integration) principles.

Based on the study of a complex of literary sources, it has been established that military-technical culture is considered by scientists as a personal education, as a set of personality qualities, as a sum of professional engineering knowledge, abilities, and skills, and as a means of achieving results and self-development of students in educational activities. In the process of scientific research, the functions of military-technical culture (directive, translational, meaningful, developing, reflexive-evaluative) have been singled out; components of military-technical culture (value-motivational, cognitive and activity-communicative) and logical levels of their formation (algorithmic, reproductive, reconstructive and creative).

Keywords: *future specialists of the naval forces, professional culture, military-technical culture, functions of military-technical culture, principles of formation of military-technical culture, criteria, indicators and logical levels of military-technical culture.*

Надійшла до редакції 15.08.2023 р.