Enhancing Future Officers' Training to Provide Logistics Support: The Case of Ukraine

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Abstract

The article presents a methodology for training future officers to provide logistics support in the military units, as evidenced by a comprehensive study conducted from 2019 to 2022 at the Bohdan Khmelnytskyi National Academy of the State Border Guard Service of Ukraine. The findings of the research indicate that the effective training of future officers to execute logistics activities within the State Border Guard Service of Ukraine (SBGSU) is possible upon the integration of the proposed methodology and pedagogical conditions into the educational framework of the higher military educational institution. A structured experiment, consisting of confirmatory and forming stages, was designed with control and experimental groups in order to assess the efficacy of the developed training methodology. During the confirmatory phase, the current state of professional readiness among future officers to conduct logistics activities was evaluated, revealing significant deficiencies. Throughout the experiment, a comprehensive diagnostic assessment was conducted utilizing specific methodological approaches. Additionally, a specialized training course titled "Organization and Implementation of Logistics Activities in SBGSU Units" was developed. As a result, the experimental group showed a 22.03% increase in the number of cadets achieving a sufficient professional readiness level. These results confirm the effectiveness of the proposed methodology, highlighting its potential to enhance the logistics capabilities of the SBGSU personnel and ensure that future officers are adequately prepared to meet the challenges of combat operations. Furthermore, this research contributes to the ongoing discourse on current military education problems and highlights the necessity to align with NATO and European Union standards.

Keywords: methodology, professional training, border guard officers, logistics support, experiment, research, operational and search activity

1. Introduction

The dynamics of the processes taking place in the Armed Forces of Ukraine, including the State Border Guard Service of Ukraine (hereinafter - SBGSU), regarding changes in the logistics system and the introduction of logistics approaches, demonstrate the urgent need to update the system of professional training of border guards according to modern military educational standards and requirements for the logistics operations.

In modern, technology-oriented warfare, military-economic logistics is a critical function for managing resources and ensuring operational effectiveness during combat and everyday activities at a military base. It serves as an integrative force, as a set of means of controlling processes that make it possible to effectively solve the problems of comprehensive integration of military-economic, military-financial, and military-production activities. Modern researchers of the military sphere believe that military logistics have to perform an integrative function of managing military-economic activities in the armed forces and a future military officer must be competent in these aspects (Masliy, 2012).

Speaking about the professional competence of future logistics officers, it is determined by the level of development of professionally important qualities, which are formulated based on an analysis of professional activity. The main feature of training future logistics officers is the formation of professional competence in the field of military-economic logistics, which involves the general integrative ability of a logistics officer to establish the important personal qualities in this area and to adequately influence the process of performing functions and tasks in this area of military

activity (Androshchuk, 2010).

In the nowadays conditions of a full-scale invasion of russian troops to Ukraine, the tasks of logistics support of the State Border Guard Service of Ukraine depend on the state of the military (ship) economy at the border guard units, on its ability to ensure the transfer of border guard units from peacetime to martial law, as well as on the ability of border guard units entrusted with logistics functions to start successfully functioning in a combat situation. This task requires highly qualified, dedicated specialists who are aware of the tasks performed by the military logistics unit of the SBGSU and are able to organize its logistics support.

The fact that the reform of the Border Guard Service has led to new specific tasks inherent in logistics units, proves that the successful fulfillment of the tasks assigned to the military units depends on the level of professional training of the rear officers, their ability to quickly and correctly navigate challenging economic conditions and the level of their moral qualities development. However, the historically formed military education system did not have special training for logistics officers for such a specific military organization, which is the SBGSU (Ponomarenko, 2006).

Moreover, the armed aggression of the russian federation against Ukraine, which began in 2014, testifies to the importance of comprehensive preparation by the Border Guard Agency to solve the logistics issues under various conditions, including combat ones. According to observations in the field, the organization of logistical operations in a separate border guard unit that performs tasks of protecting the state border does not require a separate position of a Deputy Chief for food, clothing service, or fuel and lubricants. Such specialists can and should be trained in a military educational institution to perform specific tasks in the border guard unit. Given the above, the training of future border guard officers to manage the logistics of a military unit and their training to perform such tasks is of particular relevance nowadays.

Given this, there is an obvious need to improve the educational process to achieve the necessary professional competencies that a future border guard officer must have to organize logistics support. Even though the Bohdan Khmelnytskyi National Academy of the State Border Guard Service of Ukraine (hereinafter - NASBGSU), pays much attention to improving the quality of education, the universality of officers' training and their adaptability to serve in various positions in military units, there is a need to enhance the training process of officers to carry out logistics operations. Therefore, this research is aimed aims to address this gap in training process by designing, implementing, and evaluating a developed methodology to enhance the training of future SBGSU officers in providing logistics support.

2. Literature Review

The professional training of future military officers has been extensively studied both in Ukraine and abroad. Scholars like Anishchenko, Brizhaty, Stavytskyi highlighted the necessity to enhance various aspects of the professional training of future officers using certain methodological approaches. Artyushyn, Ishchenko, Kozyar, and Rudenko revealed the specifics of formation and development of professionally essential properties and abilities of officers. The historical and comparative principles of professional training of officers for operational and search activity were covered in the publications of Balendr, Kabachynskyi and others. However, these studies often lack specificity as for those professional competencies that are required for logistics within a border security context.

Speaking about the contemporary state of the logistics science development, Alicke et al. (2021) argue that modernization of logistics chains due to technological innovations facilitated the development of specific skills among specialists of various spheres. So, managing logistical operations professionally can help to guarantee considerable savings, as well as enhance service quality. The researcher Goel (2022) highlighted the importance of investing in logistics training that can ensure high-quality professional duties of personnel and optimized operational efficiencies. The study conducted by Anand (2022) revealed the key role of soft skills and leadership competence, as well as team-building efforts to enhance the general effectiveness of logistics.

We agree with Karthigeyan (2024) that "logistics skills training have a positive impact on organizational productivity, leading to better supply chain management, reduced costs, greater operational efficiencies. Additionally, the study examines the potential economic benefits of increased productivity in the logistics sector, such as job creation, increased trade facilitation, and overall economic growth. Abdillah (2025) studied the modern state of digital logistics education, with special attention to implementation of advanced technologies such as virtual reality and artificial intelligence. The purpose of the study is to examine the impact of these technologies on learning outcomes and to identify the barriers that limit their effectiveness. In general, these studies collectively establish the importance of logistics training for various specialists, but they do not address its application within the constrained, challenging

circumstances of a military organization in times of war.

Since the beginning of the full-scale invasion to Ukraine, the scientists have researched problematic issues and various challenges in the sphere of logistics. Lytiuha and Morozhyk (2023) analyzed the critical role of logistics for enterprises operating under martial law and proposed key logistic chains and transformation priorities in logistics systems.

Also, Peshko and Zaverbnyi (2022) investigated how wartime conditions reshape supply chains. They offered a methodical framework for optimizing logistics chains amid uncertainty, highlighting strategic directions for enhancing logistics in Ukraine. They analyzed the trends of the logistics industry of Ukraine during martial law, the state of alternative supply chains, the situation at the beginning of the war, and at the present time, offering the prospects for the logistics industry in the post-war period. The authors established that minimizing losses during war is possible only through the collaboration of the state and business and the use of new approaches to designing and supporting logistics chains. The theoretical and practical aspects of applying a systematic approach in forming the readiness of future Armed Forces of Ukraine officers for professional activity were the subject of attention of Didenko and Ryzhykov (2021). The peculiarities of restructuring logistics in conditions of martial law were considered by Hryniv and Ravlikovska (2022). In particular, modern infrastructural changes in transportation (closing of airspace, blocking of ports, transport inaccessibility to temporarily occupied territories) were studied in detail. Dyczkowska et al. (2023) explored the transformation of logistics under martial law within the context of Ukraine's European integration, determining infrastructure damage, legislative and security constraints, and offering short and long-term enhancement programs. Meanwhile these studies describe processes at a macro-level, leaving a gap in research on effective pedagogical methodologies for training future officers to provide tactical logistics support.

At the same time, the scientific task of training future officers to organize logistics support has not been the subject of a scientific study.

The article highlights the results of an experimental study of implementing the methodology to train future officers to provide logistics support in the military units of the State Border Guard Service of Ukraine.

According to the aim, the following tasks of the research were defined:

- analyze peculiarities of professional readiness formation of future officers to provide logistics support;

- design the scientific apparatus and stages of the pedagogical experiment, select the participants of the control and experimental groups;

- evaluate, according to the proposed criteria and indicators, the current level of formation of professional readiness of future officers to provide logistics support;

- implement the methodology to train future officers to provide logistics support and perform an experimental evaluation of the methodology's effectiveness.

3. Methodology of the Research

The main method chosen was a pedagogical experiment, which was conducted after a theoretical analysis of the research issues and the definition of the corresponding conceptual apparatus. This method provided an opportunity to trace the cause-and-effect relationships in the process of forming professional readiness for logistics management, to understand the features of its formation of the future Border Guard officers, to establish the effectiveness of certain methods, techniques, forms of education and training in order to obtain scientific facts and establish objective laws of the training process.

The pedagogical experiment on the formation of professional readiness of future border guard officers for logistics management was conducted in two stages: confirmatory and forming. The purpose of the confirmatory stage of the experiment was to clarify the baseline of professional readiness of future officers for logistics management in the State Border Guard Service of Ukraine units, to study the specifics of professional training, as well as the curricula at the Department of Logistics of the NASBGSU. This stage of the pedagogical experiment was attended by 145 cadets of the 2nd year of the Faculty of State Border Security.

The forming stage of the pedagogical experiment took place in the real educational environment at the NASBGSU. The aim of the stage was to test the effectiveness of the methodology for training future officers to ensure logistics support within the SBGSU. 118 cadets of the 2nd year of the Faculty of State Border Security took part in this stage of the experiment. The reliability of the results obtained was verified using mathematical statistics methods, in particular the Kolmogorov-Smirnov criterion.

Random assignment at the individual level was not feasible due to the cohort-based structure of the NASBGSU. Instead, intact groups were assigned to control group (henceforward – CG) or experimental group (henceforward – EG) conditions. To ensure group equivalence, a pre-test homogeneity check was performed. An independent samples t-test revealed no statistically significant difference ($p > .05$) between the CG and EG in their pre-test scores across all measured criteria (motivational, cognitive, operational, personal), as well as in age, gender, or their previously obtained learning outcomes.

The intervention in the EG included implementation of the experimental methodology, based on substantiated pedagogical conditions for training future officers to perform logistics in the border guard units, meanwhile in the CG training continued using traditional, lecture-based methods. There was no targeted work on forming the professional readiness of future officers to conduct logistics; training was carried out using traditional methods, without the use of a specially developed methodological teaching aid.

The experimental methodology was operationalized through a specially designed course "Organization and Implementation of Logistics Support in SBGS Units," and utilized the academy's facilities (e.g., warehouses, refueling stations) for practical exercises. The intervention lasted for one 16-week academic semester.

3.1 Data Collection and Analysis

The methods used were the following: observation of the process of forming the professional readiness of future officers to carry out logistics activities in SBGS units, interviews with teachers and commanders of cadet units, testing, questionnaires, and studying the professional experience of the teaching staff of the academy.

A comprehensive diagnosis of professional readiness was conducted using established instruments:

Motivational Criterion: Rean's "Motivation for Success and Avoidance of Failure" test.

Cognitive Criterion: Author-developed test on "Comprehensive Diagnostics of Knowledge of Military (Ship) Economy".

Operational Criterion: Practical exercises assessed by experts.

Personal Criterion: "Diagnosis of Leadership Abilities" (Zharikov & Krushelnytskyi), "Diagnostics of Communication and Organizational Aptitudes" (KOS-2), and a "Method for Determining the Level of Stress Resistance".

4. Research Results

Based on the analysis of scientific literature and the peculiarities of professional activity of border guard officers, the professional readiness of a border guard officer to organize logistics support is defined as a professionally important personal ability characterized by a value-based attitude to the effective solution of logistical support tasks of military units of the SBGSU and covers a system of motives, knowledge in the field of economic activity, skills to organize it, professionally important personality traits, which ensure the effective performance of tasks of logistics support in the conditions of operational, service and combat activities. Its peculiarity lies in the fact that it expresses the serviceman's attitude to reality and manifests itself in the readiness and ability to solve logistics support tasks in reforming and optimizing the work of the military units of the SBGSU.

The study of training future border guard officers to organize logistics support was organized to test the hypothesis that such training will be effective if necessary pedagogical conditions are introduced into the educational process of a higher military educational institution.

The study was carried out at the NASBGSU in 2019-2022 and covered three stages: preparatory, main, and final.

At the first *preparatory* stage (September 2019 - August 2020), the initial scientific and methodological positions of the study were determined, the specialized literature on the problem of professional readiness of future officers to organize logistics activities was studied, the scientific apparatus of the study was formed, and the working plan of the experiment was developed. At this stage of the research a confirmatory pedagogical experiment was conducted.

Based on the results of the analysis of scientific literature, research by scholars on the formation of professional readiness and taking into account the structure of this readiness, the structural components of the professional readiness of a border guard officer to conduct logistics support were defined as motivational, cognitive, operational and personal components. Also, four criteria for the formation of this readiness and their indicators were defined, namely: motivational, cognitive, operational and personal criteria.

The indicators of the *motivational criterion* are: the presence of a stable interest in the conduct of logistics support; positive motivation to carry out professional activities in the field of military economy; formation of value orientations

inherent in the logistics and military logistics officer. For the *cognitive criterion*, the following indicators were defined: knowledge of the regulatory framework governing the military and economic activities of the military unit; knowledge of the standardization of material resources according to the nomenclature of logistics services; possession of knowledge of the peculiarities of organization and management of the military logistics support. The indicators of the *operational criterion* are as follows: the formation of skills to successfully apply the necessary knowledge and skills regarding the conduct of logistics support; possession of skills in maintaining and executing documentation on the organization and conduct of military logistics support; formed ability to analyze and predict the state of affairs in the organization of military logistics support. For the *personal criterion*, the indicators are the formation of leadership qualities, communication, and organizational skills, and high-stress resistance.

4.1 Confirmatory Stage Results

The confirmatory stage of the experiment was aimed at finding out the actual state of professional readiness of future officers to carry out logistics activities in the military units, to study the training process, and the curricula designed at the Department of Logistics. The confirmatory stage of the experiment was conducted in April - May 2020. It was attended by 145 cadets of five study groups of the Faculty of State Border Security during their 2nd year of study (IV semester). The main methods at this stage were observation of the process of forming the professional readiness of future officers to carry out logistics activities in SBGSU units, interviews with teachers and commanders of cadet units, testing, questionnaires, and generalization of the experience of the academic staff.

The content of the curricula of the disciplines taught at the Department of Logistics of the academy was studied during the ascertaining stage of the experiment. During the analysis of the curricula for the training future border guard officers, it was found that 2.5-2.7 % of the total number of academic (classroom) hours was allocated for mastering logistics disciplines to implement the professional component of the specialty (elective educational components). The results of the analysis of curricula in the specialties "252 State Border Security", "053 Psychology", "172 Telecommunications and Radio Engineering", and "035 Philology" of the academy show that logistics disciplines as a percentage of the total number of classroom hours are 1.98%. It should be noted that compared to previous years, the number of hours allocated to the Department of Logistics for teaching such disciplines has decreased several times. This cannot but affect the quality of cadets' training in logistics.

During the experiment, a comprehensive diagnosis of the formation of professional readiness of future officers to carry out logistics activities was carried out using methods "Motivation for success and avoidance of failure" by Rean, "Value orientations" by Rokich, "Diagnosis of leadership abilities" (Zharikov, Krushelnytskyi) and "Diagnosis of communication and organizational aptitudes." Zharikov, Krushelnytskyi) and "Diagnostics of Communication and Organizational Aptitudes" (KOS-2); the test "Comprehensive Diagnostics of Knowledge of Military (Ship) Economy" developed by the authors and the "Questionnaire for Determining the Stability of Interest in Logistics Activities"; "Method for Determining the Level of Stress Resistance". The respondents were also given practical exercises where experts assessed the level of their skills and abilities to carry out logistics activities. The results of the confirmatory experiment are presented in Table 1.

Table 1. The Results of the Confirmatory Stage of the Experiment (%), n = 145

Levels of Professional Readiness Formation	Motivational criterion	Cognitive criterion	Operational criterion	Personal criterion	Average value
Sufficient	12,64	11,27	10,58	10,58	11,27
Medium	61,61	52,18	54,48	51,26	54,88
Insufficient	25,75	36,55	34,94	38,16	33,85

According to the results of the confirmatory stage of the experiment, it was found that the majority of cadets participating in the study do not have sufficient interest and motivation to master the components of future professional activity in the field of logistics support, they lack systematized knowledge, formed skills and abilities to carry out this activity. According to the results obtained, there was determined a relatively large percentage of cadets (33.85%) with insufficient professional readiness to carry out logistics activities.

4.2 Forming Stage Results

The results of the analysis of scientific literature on the research problem and the experiment made it possible to identify and substantiate *the pedagogical conditions for training future officers to conduct logistics activity in the units of the SBGSU*:

activation of the value-motivational attitude of cadets to study the organization of logistics support in the units of the SBGSU;

selection and structuring of the content of study material#taking into account the current requirements for the organization of logistics support and foreign experience in the field of logistics; modeling the training of future officers to conduct logistics support on the basis of contextual learning (practical training, daily activities of cadets);

organization of professional development of teaching staff in logistics;

creation of an information and educational environment for the effective formation of cadets' competencies in the organization of logistics support.

To implement the pedagogical conditions, a *methodology* for training future officers to conduct logistics support in the units of the SBGSU has been developed, consisting of three stages: *target, content, and result*. At each of the stages, the methodology provides for effective management of cadets' educational and cognitive activities, a set of measures to achieve the final result - positive dynamics of the formation of future officers' professional readiness to conduct logistics support in the units of the SBGSU.

In the second *main* stage of the study (September 2020 - August 2021), the methodology for training future officers was developed and experimentally tested; the dynamics of changes in the professional readiness of future officers to carry out logistics activities was monitored, and the necessary adjustments were made to improve the level of such readiness. At this stage, a special training course, "Organization and Implementation of Logistics Support in the SBGS Units," and necessary teaching aids were developed.

At first, the goal of the study was determined, which was to enhance the professional readiness of future border guard officers to carry out logistics activities. Based on the goal, the requirements for a border guard officer and the specifics of their professional activity were formulated - obtaining the knowledge and developing cadets' skills to organize and carry out logistics activities.

After that, the main methodological approaches, content, and principles of forming professional readiness were determined for logistics activities. Among the types and forms of organization of the educational process to form the readiness of future officers to carry out logistics activity the most efficient ones are: classroom activities, practical sessions, group work, seminars, individual lessons, training courses, role plays, business games. In addition to the specially created facilities (technical equipment, information stands, models of a military camp with required facilities, etc.), the material base of the academy is also widely used: warehouses (food, clothing, fuel), refueling stations, cadets' canteen, cadets' dormitories, bath and laundry complex.

At the third (*practical*) stage, the level of professional readiness of a border guard officer is assessed to carry out logistics activities using specific criteria and indicators with the possibility of adjusting this process. We consider the achievement of the result to be the positive dynamics of the formation of the professional readiness of future officers to carry out logistics activities in the SBGS units.

Thus, the methodology for training future officers to carry out logistics activity in the border guard units consists of three stages: *target, technological, and result*. At each stage, the methodology provides for effective management and a set of measures to achieve the final result - positive dynamics of the formation of professional readiness of future officers to carry out logistics activities in the SBGS units.

To test the methodology's effectiveness for training future officers to carry out logistics activities in the border guard units, a forming stage was conducted with 118 cadets of six study groups of the Faculty of State Border Security of the academy during their 2nd year (IV semester). The main methods used at this stage were questionnaires, expert evaluation, online testing, and self-assessment. At the stage of generalizing the results of the study, theoretical comprehension of experimental data, their psychological analysis, and interpretation with the help of expert evaluation, analysis, generalization of experience, and methods of mathematical statistics were provided.

In order to conduct the forming stage of the experiment, the control group and the experimental group were created with 59 people each. In contrast to the CG, the training in the EG was focused on the formation of the professional readiness of future officers to carry out logistics activities in the border guard units, based on the developed methodological complex focused on the pedagogical conditions for training future officers to carry out logistics activities in the border guard units. While the CG targeted activities on the formation of professional readiness of future officers to conduct logistics, the training was carried out according to traditional methods without using a specially developed methodological complex for the formation of such readiness. The activities of cadets in the conventional

organization of the learning process are focused on the reproductive perception of knowledge outside the personal content of mastering the logistics activities at the SBGS units.

In the CG, at each seminar session, the quality of cadets' preparation for training was checked, theoretical material was surveyed, and a set of professional tasks was offered aimed at developing a particular skill without focusing on a specific professional situation related to the organization of logistics activities in the SBGS units. To ensure the professional readiness of future officers in the EG to carry out logistics activities in the SBGS units, specific ways were introduced to form the professional readiness of future officers to carry out logistics activities. The work on developing the professional readiness of future officers to carry out logistics activities was carried out when cadets studied the following disciplines: "Economics, organization, and planning of food supply", "Economics, organization and planning of clothing supply", "Economics, organization and planning of fuel and lubricants supply", "Military logistics", "Logistics support of border protection".

For diagnostics at this stage of the pedagogical experiment, the same methods were used as at the ascertaining stage. The results of the forming experiment are presented in Table 2.

Table 2. Results of the Forming Experiment, n = 118 (CG - 59, EG - 59)

Levels	Criteria	Control group				Experimental group			
		At the beginning of the experiment		At the end of the experiment		At the beginning of the experiment		At the end of the experiment	
		Quantity	%	Quantity	%	Quantity	%	Quantity	%
Sufficient	Motivational and value-based	8	13,56	10	16,95	9	15,25	21	35,59
Medium		36	61,02	39	66,10	34	57,63	30	50,85
Insufficient		15	25,42	10	16,95	16	27,12	8	13,56
Sufficient	Professional and cognitive	7	11,86	11	18,64	8	13,56	22	37,29
Medium		30	50,85	36	61,02	35	59,32	30	50,85
Insufficient		22	37,29	12	20,34	16	27,12	7	11,86
Sufficient	Professional and operational	7	11,86	9	15,25	9	15,25	19	32,20
Medium		32	54,24	40	67,80	32	54,24	32	54,24
Insufficient		20	33,90	10	16,95	18	30,51	8	13,56
Sufficient	Professional and personal	6	10,17	9	15,25	8	13,56	22	37,29
Medium		30	50,85	38	64,41	30	50,85	29	49,15
Insufficient		23	38,98	12	20,34	21	35,59	8	13,56
Sufficient	Average (averaged) values	7	11,86	10	16,95	8	13,56	21	35,59
Medium		32	54,24	38	64,41	33	55,93	30	50,85
Insufficient		20	33,90	11	18,64	18	30,51	8	13,56

The data presented in Table 2 indicate significant positive dynamics of forming professional readiness of EG cadets for logistics activities. In particular, there is an increase in the sufficient level by 22.03 % due to a decrease in the average level by 5.08 % and insufficient level by 16.95 %. However, in the CG, the level of professional readiness for this activity has increased significantly. This makes it possible to conclude that the methodology for training future officers to carry out logistics activities effectively in the border guard units has enhanced. The reliability of the results of the forming experiment was proved using the Kolmogorov-Smirnov criterion.

At the third and *final* stage of the study (September 2021 - August 2022), the main provisions of the study were adjusted, its materials were summarized and systematized, conclusions were formulated and analyzed in qualitative and quantitative aspects, the scientific results obtained were summarized, and methodological recommendations were developed for the teaching staff to train future officers to carry out logistics activities in the military units.

5. Discussion

Our research found that introduction of the proposed methodology has led to a considerable and statistically reliable increase of the professional readiness of future officers. The 22.03% increase in cadets achieving a sufficient level in

the EG, compared to only a 5.09% increase in the CG, gives grounds to speak about effectiveness of the proposed pedagogical conditions.

The most telling improvements were noticed in the motivational and personal criteria. In our opinion this is because contextual learning approach (using real-world scenarios and the academy's facilities) allowed for a more engaging and relevant logistics tasks. This facilitated a value-motivational attitude and developed leadership critical for an officer's position. This aligns with the principles of the student-centered approach, where a positive learning environment contributes to personal and professional growth (Androshchuk, 2010).

The results of our study corroborate but also specify the findings of international research. In the context of our study, the scientific achievements of T. Garmash are essential, as in her dissertation, she examines the essence of the concept of "logistics" and explores its historical formation. She identified the primary purpose of a logistics specialist. In her opinion, this is the search for optimal options for making decisions on managing material flows related to information and finance (Garmash, 2018). An analysis of the state of development of the problem of training future officers to conduct logistics activities in the units of the SBGSU in pedagogical theory and practice shows that the available scientific research on this issue is mainly general and does not take into account the peculiarities, structure, and capabilities of the border guard units. It is found that there is no comprehensive study of the content, forms, and methods of improving the training of border guard officers for logistics activities today, and the issue of training in the organization of logistics in the SBGS has not been studied at all (Balendr et al., 2023; Bondarenko et al., 2022).

A modern logistics officer performs managerial activities as a head of a unit of the Armed Forces of the Republic of Bulgaria and must possess the following qualities: managerial competence in various economic and legal issues, sociability, tolerance, constructiveness, responsibility, that is, a number of qualities that define him as a "manager", "leader" and "officer". The professional activity of a logistics officer is determined by its goals. A logistics officer prepares orders and activity plans of superiors and commanders; forecasts the terms, methods and assets for the implementation of the tasks assigned to him; formulates and specifies the obligations of subordinates, etc. The result of these actions is the provision of appropriate conditions for the active work of the headquarters (Michevich et al., 2019).

Thus, the internship of future officers in military units is one of the most important steps for their development as logistics specialists. This type of educational activity provides cadets with the opportunity to test and consolidate knowledge of logistics in the management of military units, thereby forming competence in the organization of logistics support. Practical training of logistics management issues by cadets takes place during current practical classes, joint exercises, tactical training, as well as in the process of studying the methodology for conducting tactical classes.

Based on the analysis of scientific literature (Borovyk et al., 2023; Borysiuk, 2018) and the specifics of the professional activities of military logistics specialists in Ukraine and abroad, it has been determined that the professional readiness of a border guard officer for conducting logistics activities is a professionally important personal ability characterized by a value-oriented approach to effectively solving the tasks of material and technical support for units responsible for state border protection. So, in the context of the study, it was found that it is necessary to apply a systematic approach that considers the process under study as an integral system in the totality of relations and connections between them; that is, it makes it possible to assess the formation of professional readiness for logistics activities as a model of a system for training future border guard officers for this type of activity (Katerynchuk et al, 2024; Ryzhykov and Didenko, 2021). According to the student-oriented approach, "the individual is seen as a product of self-education, as a self-developing system, and ideally, as a self-realizing system" (Androshchuk, 2010). A positive attitude toward others is essential for developing a personality, especially for its development in professional activity. In her dissertation, O. Androshchuk cites the opinion of K. Rogers, which is essential for our study, that "the positive attitude of others turns into a positive attitude of a person to himself, into belief in himself and contributes to the convergence of the real and ideal self of the individual" (Androshchuk, 2010). The activity-based approach assumes that essential factors in personality development are activities and the interaction of subjects during these activities. During the activity, a person is formed and develops by assimilating human experience. On the other hand, a person's assimilation of social experience and the development of their personality takes place in the context of their joint activities with more experienced members of society and under their guidance, which, as the individual develops, should enable him or her to act more and more independently. The competency-based approach ensures cadets master the system of professional competencies, guarantees a high level and effectiveness of their training, and enhances their practical orientation in the organization and implementation of logistics activities in the SBGS units (Islamova et al., 2023). The main principles of the contextual approach are shifting the emphasis to the cognitive activity of the student, their activity, and creativity; "dialogic interaction in the teacher-student system based on mutual understanding,

openness, trust, stimulation and support of cognitive, creative activity and the process of formation of professional personal traits and qualities; providing psychological and pedagogical conditions, forms and methods of educational activities that contribute to the formation of professional competencies, general and professional abilities, social qualities of the student (Kapinus, 2019). The advantages of contextual learning are: "the student's active position; assimilation of knowledge in the process of analyzing and solving professional situations specially modeled by the teacher; a combination of individual and collective forms of work; gaining experience in using educational information as a means of regulating their activities, which ensures its transformation into personal meanings; the focus of the educational process on the personality and individuality of the future specialist, which is the real "humanization of education" (Bratko et al., 2021; Didenko, et al., 2023).

However, our research occurred in times of a full-scale invasion. Therefore, our findings suggest that practice-oriented training of future officers in logistics is not just a training enhancement but directly contributes to operational resilience. The ability to manage logistics under combat conditions, a competence measured by the personal criterion, becomes a key one.

6. Conclusions

The research revealed the importance of a structured methodology for training future officers in logistics support within the border guard agency of Ukraine. The findings highlight the need for improving the training process to ensure that future officers are well-equipped to meet the logistical demands of combat operations.

The study revealed that the formation of professional readiness of future officers to carry out logistics support is a complex process influenced by various factors, including motivation, knowledge, skills, and personal attributes. The analysis highlighted the need for a struct ured approach to enhance these components, ensuring that cadets are adequately prepared for the demands of logistics activities in military contexts. A well-structured scientific apparatus was developed, comprising distinct stages of the pedagogical experiment. Participants were carefully selected from both control and experimental groups, allowing for a robust comparison of training methodologies. This design facilitated a systematic evaluation of the training process and its outcomes. The evaluation revealed that many cadets exhibited insufficient readiness in key areas, particularly in motivation and cognitive understanding of logistics support. This baseline assessment underscored the necessity for targeted interventions to improve training outcomes. The experimental evaluation demonstrated that the newly implemented methodology for training future officers significantly enhanced their professional readiness to conduct logistics activities. The results indicated a marked improvement in the levels of readiness among cadets in the experimental group compared to those in the control group. This positive outcome validates the effectiveness of the pedagogical conditions and instructional strategies employed in the training process.

A comparative analysis of the formation of future officers' professional readiness for logistics in the military units in the experimental and control groups after the experimental activities using the Kolmogorov-Smirnov criterion showed the effectiveness of the pedagogical conditions and methodology. After the forming stage of the experiment, the experimental group showed an increase of 22.03% in the number of cadets with a sufficient level due to a decrease in the average level (by 5.08%) and insufficient level - by 16.95%. Significant changes related to an increase of the cadets' sustained interest in logistics, their awareness in this area, their ability to successfully apply the acquired knowledge and skills, and their ability to analyze and predict the state of affairs in the logistics of a military unit.

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