

METHOD'S FOR ASSESSING THE LEVEL OF THE ORGANIZATION OF JOINT TRAINING OF DEFENCE FORCES

The need to introduce new approaches to organize the training of the State Defence Forces based on the principles and standards adopted in the Armed Forces of NATO member states is due to the armed aggression of the Russian Federation against Ukraine. This requires a reasonable approach to the issues of improving their training system, which is impossible without the use of an appropriate scientific and methodological apparatus to assess the level of organization of their joint training.

The article proposes a methodology for assessing the level of organization of joint training of defence forces, which allows to take into account the influence of subjects of training on the conduct of training by training objects. Indicators that have a direct impact on the level of the organization of joint training of defence forces include: the level of joint training planning, the level of comprehensive provision for joint training and the level of joint training management.

The assessment of the level of joint training planning is calculated by the dependence, which takes into account the number of planned joint training activities in each of the components of the defence forces, taking into account the level of the event to the total number of military organizational structures determined for the acquisition of joint capabilities.

The assessment of the level of comprehensive provision for joint training is calculated according to the dependence, which takes into account the adequacy of the provision of joint training of defence forces with training material and technical base, logistics and financial support.

The assessment of the level of joint training management is calculated according to the dependence, which takes into account the activities of subjects of training to provide practical assistance to objects of training and implementation of the best practices of joint training into the practice of subordinate military organizational structures.

This technique allows you to quantify the level of organization of joint training of defence forces, to identify problematic issues in the activities of objects of training, to provide sound proposals to the Commander-in-Chief of the Armed Forces of Ukraine to decide on organization of joint training.

Keywords: *organization of joint training, assessment indicators, influence of subjects of training, defence forces.*

Introduction

Problem statement. The experience of using the defence forces of Ukraine during the anti-terrorist operation, the Joint Forces operation and the armed aggression of the Russian Federation shows that their successful implementation of combat missions depends on the level of their combat capability. The combat capability of the state defence forces directly depends on the level of preparedness. It is precisely to achieve a high level of preparedness of the defense forces that the joint training is aimed, carried out with the aim of their readiness for joint actions as part of the corresponding grouping.

The training of the defence forces is carried out in an appropriate system, which is a set of interrelated elements that ensure the achievement of the purpose of training. The main elements of the training system are: subjects and objects of training and the means that ensure the organization and conduct of training. The influence of subjects on the objects of training is

carried out through the organization of training.

Qualitative organization of joint training is one of the most difficult tasks of training subjects, which requires knowledge of the guiding documents on training of defence forces, timely setting of tasks for its organization, flexible and realistic planning, timely and comprehensive provision of joint training and creating favorable conditions to ensure the full implementation of plans for the preparation and acquisition of certain capabilities by the defense forces.

This encourages the search for and implementation of new approaches to the organization of joint training of defence forces developed on the basis of the principles and standards adopted in the armed forces of NATO member states. Therefore, there is a need for a scientific basis for assessing the level of the organization of joint training of defence forces. This indicates the relevance of the topic under consideration.

Analysis of recent research and publications.

Analysis of previous research and publications in this area [1-6] shows that there is no single method of assessing the level of organization of joint training of defence forces. The approaches that exist concern mainly some components of the organization of training of the Armed Forces of Ukraine and they do not take into account the changes that have occurred in the system of training of defence forces with the introduction of new doctrinal documents [7-8].

Thus, in the previous article of the author [1] the approach to assessing the level of organization of combat training of the artillery brigade was considered. This approach does not take into account the influence of training management. In [2] the method of estimating the organization of training of a separate brigade of territorial defense was considered. The analytical dependences proposed in article [3] allow to assess the quality of the program of individual training of servicemen of artillery units, in [4] - the state of the training material and technical base of a separate mechanized brigade, which is staffed by servicemen under contract. In the previous article of the author [5] the approach to estimation of a level of resource maintenance of measures of combat training of military units was defined. In [6] the methodical approach to assessing the level of readiness of the educational institution for military training of citizens according to the program of reserve officers was considered.

At the same time, the scientific and methodological apparatus developed by its predecessors is a basic basis for further improvement and can be used in part when assessing the level of organization of joint training of defence forces.

The aim of the article. The aim of the article is to improve the existing scientific and methodological apparatus for assessing the level of organization of joint training of defence forces.

Statement of the main material

It is proposed to assess the level of organization of joint training by an indicator that takes into account the activities of training entities aimed at planned, systematic and comprehensive training of personnel, coordination of military organizational structures of defence forces. The most important measures for the organization of joint training of defence forces are the planning of joint training, comprehensive provision of joint training and management of joint training.

Thus, the indicators that characterize the level of organization of joint training of defence forces should include: joint training planning, comprehensive provision of joint training and management of joint training.

Given that these indicators have a slight correlation, to calculate the level of organization of joint training of defence forces $K_{OP}(t)$ it is suggested to use additive aggregation:

$$K_{OP}(t) = C_{ПЛ}(t) \cdot q_{ПЛ} + C_{БЗ}(t) \cdot q_{БЗ} + C_K(t) \cdot q_K, \quad (1)$$

where $C_{ПЛ}(t)$ is the indicator that characterize the

level of planning of joint training at time t ;

$C_{БЗ}(t)$ is the indicator that characterize the level of comprehensive provision of joint training at time t ;

$C_K(t)$ is the indicator that characterize the level of joint training management at time t ;

$q_{ПЛ}; q_{БЗ}; q_K$ are weighting coefficients of indicators of planning of joint training, of comprehensive provision of joint training, of joint training management.

Assessment of the level of joint training planning $C_{ПЛ}(t)$ is proposed to be determined by the dependence, which takes into account the level of training planning in each of the components of the defence forces. As the planning of training in each department of the defence forces does not depend on the planning of others, and therefore their indicators are independent of each other, it is proposed to use additive aggregation to assess the level of joint training planning $C_{ПЛ}(t)$:

$$C_{ПЛ}(t) = \sum_{i=1}^I M_i(t) \cdot q_i, \quad (2)$$

where $M_i(t)$ are indicators that characterizes the level of training planning in the i -department components of the defence forces at time t ;

q_i are weighting coefficients of indicators $M_i(t)$;

I is the number of department components in the defence forces.

The level of training planning in the i -department components of the defence forces $M_i(t)$ characterize by the completeness and quality of the Training Plan in the part related to joint training events.

It is proposed to calculation it according to the dependence, which takes into account the number of planned joint training events, taking into account the level of the event to the total number of military organizational structures determined for the acquisition of joint capabilities:

$$M_i(t) = \frac{\sum_{n=1}^N U_{nj} \cdot q_j}{L}, \quad (3)$$

where N is the number of planned military organizational structures of the department for joint training events;

L is the total number of military organizational structures of the department determined for the acquisition of joint capabilities;

q_j are weighting coefficients importance j -event joint training;

U_{nj} index of the availability j -event joint training in the n -military organizational structures.

$$U_{nj} = \begin{cases} 1, & \text{yes} \\ 0, & \text{not} \end{cases} \quad (4)$$

Assessment of the level of comprehensive

provision of joint training $C_{B3}(t)$ is proposed to be determined by the dependence, which takes into account the adequacy of the provision for joint training of defence forces with training material and technical base, logistics and financial support.

As the provision of training material and technical base does not depend of logistics and financial support, and therefore their indicators are independent of each other, it is proposed to use additive aggregation to assess the level of comprehensive provision of joint training:

$$C_{B3}(t) = B_H(t) \cdot q_H + B_{Jl}(t) \cdot q_{Jl} + B_{\Phi}(t) \cdot q_{\Phi}, \quad (5)$$

where $B_H(t)$ is the indicator that characterize the level of provision for joint training of defence forces with training material and technical base at time t ;

$B_{Jl}(t)$ is the indicator that characterize the level of provision logistics for joint training of defence forces at time t ;

$B_{\Phi}(t)$ is the indicator that characterize the level of financial support for joint training of defence forces at time t ;

$q_H; q_{Jl}; q_{\Phi}$ are weighting coefficients of indicators of provision for joint training of defence forces with training material and technical base, logistics and financial support.

The indicator "provision of training material and technical base" $B_H(t)$ characterize the capability of training objects (areas, landfills) and training military property to ensure the preparation of military organizational structures to perform tasks (training-operational, training-tactical, special). It is proposed to calculation it according to the dependence, which takes into account their available number from the total number determined by the relevant regulations:

$$B_H(t) = \frac{\sum_{d=1}^{D_H} H_d(t) \cdot q_d}{\sum_{d=1}^{D_3} H_d(t) \cdot q_d}, \quad (6)$$

where $H_d(t)$ are indicators that characterizes d -training objects and training military property of training material and technical base at time t capable of ensuring the preparation of military organizational structures to perform tasks;

q_d are weighting coefficients d -training objects and training military property of training material and technical base;

D_H is the number of training objects and training military property of training material and technical base capable of ensuring the preparation of military organizational structures to perform tasks;

D_3 is the total number of training objects and training military property of training material and technical base determined by the relevant regulatory documents.

The indicator "provision logistics" $B_{Jl}(t)$ characterize by the provision of weapons, military

equipment and logistical means allocated for joint training of defence forces. It is proposed to calculation it according to the dependence, which takes into account weapons, military equipment and logistical means used during the joint training of defence forces with their necessary needs, taking into account the importance of the x -type of weapons, military equipment and logistical means:

$$B_{Jl}(t) = \frac{\sum_{x=1}^{X_H} Q_x(t) \cdot q_x}{\sum_{x=1}^{X_{II}} Q_x(t) \cdot q_x}, \quad (7)$$

where $Q_x(t)$ are indicators that characterizes x -type of weapons, military equipment and logistical means at time t ;

q_x are weighting coefficients x -type of weapons, military equipment and logistical means;

X_H is the number of weapons, military equipment and logistical means used during the joint training of defence forces;

X_{II} is the number of weapons, military equipment and logistical means necessary for the quality of joint training activities in accordance to the norms of provision.

The indicator "financial support" $B_{\Phi}(t)$ characterize sufficiency provision of expenditures for joint training activities. It is proposed to calculation it according to the dependence, which takes into actual financing of expenditures on articles for joint training from their necessary needs:

$$B_{\Phi}(t) = \frac{\sum_{v=1}^{V_{\Phi}} Z_v(t) \cdot q_v}{\sum_{v=1}^{V_3} Z_v(t) \cdot q_v}, \quad (8)$$

where $Z_v(t)$ are indicators that characterizes v -articles of expenditures for joint training at time t ;

q_v are weighting coefficients v -articles of expenditures for joint training;

V_{Φ} is the number actually funded articles of expenditures for joint training;

V_3 is the total number articles of expenditures for joint training.

Assessment of the level of joint training management $C_K(t)$ is proposed to be determined by the dependence, which takes into account the activities of subjects of training to perform the main tasks of joint training management. It is proposed to calculation it according to the dependence:

$$C_K(t) = S_c(t) \cdot q_c + S_y(t) \cdot q_y, \quad (9)$$

where $S_c(t)$ is the indicator that characterize the level of activities of subjects of training to provide practical assistance to objects of training at time t ;

$S_y(t)$ is the indicator that characterize the level of implementation of the best practices of joint training into the practice of subordinate military organizational

structures at time t ;

$q_c; q_y$ are weighting coefficients of indicators

provide practical assistance and implementation of the best practices.

The indicator "provide practical assistance" $S_c(t)$ characterize by systematic participation of subjects of training in providing practical assistance to objects of training. It is proposed to calculation it according to the dependence, which takes into account j -activities of joint training in which subjects of training provided practical assistance to objects of training against their total number, taking into account their importance:

$$S_c(t) = \frac{\sum_{j=1}^{J_H} Y_j(t) \cdot q_j}{\sum_{j=1}^{J_3} Y_j(t) \cdot q_j}, \quad (10)$$

where $Y_j(t)$ are indicators that characterizes j -activities of joint training at time t ;

q_j are weighting coefficients j -activities of joint training;

J_H is the number activities of joint training in which subjects of training provided practical assistance to objects of training;

J_3 is the total number activities of joint training.

The indicator "implementation of the best practices" $S_y(t)$ characterize by activities of subjects of training to summarize the best practices of joint training and its implementation in the practice of subordinate military organizational structures. It is proposed to calculation it according to the dependence, which takes into account the number of military organizational structures in which the best practice have been introduced from their total number:

$$S_y(t) = \frac{W_B}{W_3}, \quad (11)$$

where W_B is the number of military organizational structures in which the subjects of training have been introduced the best practice;

W_3 is the total number of military organizational structures identified for the acquisition of joint capabilities.

The calculation of weighting coefficients of indicators of all levels is carried out by the method of expert evaluation.

Conclusions

Thus, in the article the authors developed a methodology for assessing the level of the organization of joint training of defence forces which takes into account the influence of subjects of training on the conduct of training by the training objects. The presented method is based on the choice of a set of indicators characterizing the level of joint training planning, the level of comprehensive provision of joint training and management of joint training.

This technique allows you to quantify the level of organization of joint training of defence forces to identify problematic issues in the activities of objects of training to provide sound proposals to the Commander-in-Chief of the Armed Forces of Ukraine to decide on organization of joint training.

The results of the study can be used in assessing the level of organization of joint training in military organizational structures of defence forces as well as during further research on this issue in scientific institutions.

Prospects for further research in this area are to substantiate the recommendations for the organization of joint training of defence forces.

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МЕТОДИКА ОЦІНЮВАННЯ РІВНЯ ОРГАНІЗАЦІЇ ОБ'ЄДНАНОЇ ПІДГОТОВКИ СИЛ ОБОРОНИ

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Необхідність впровадження нових підходів щодо організації підготовки сил оборони держави, на основі принципів та стандартів прийнятих у збройних силах держав-членів НАТО, зумовлено збройною агресією Російської Федерації проти України. Зазначене вимагає обґрунтованого підходу до питань удосконалення їх системи підготовки, що не можливо без використання відповідного науково-методичного апарату з оцінювання рівня організації їх об'єднаної підготовки.

У статті запропонована методика оцінювання рівня організації об'єднаної підготовки сил оборони, яка дозволяє врахувати вплив суб'єктів підготовки на проведення навчання об'єктами підготовки. До показників, які здійснюють безпосередній вплив на рівень організації об'єднаної підготовки сил оборони віднесено: рівень планування об'єднаної підготовки, рівень всебічного забезпечення об'єднаної підготовки та рівень керівництва об'єднаною підготовкою.

Оцінка рівня планування об'єднаної підготовки розраховується за залежністю, яка враховує кількість спланованих заходів об'єднаної підготовки у кожній із складових сил оборони з урахуванням рівня заходу до загальної кількості військових організаційних структур визначених для набуття об'єднаних спроможностей.

Оцінка рівня всебічного забезпечення об'єднаної підготовки розраховується за залежністю, яка враховує достатність забезпеченості заходів об'єднаної підготовки сил оборони навчальною матеріально-технічною базою, логістичним та фінансовим забезпеченням.

Оцінка рівня керівництва об'єднаною підготовкою розраховується за залежністю, яка враховує діяльність суб'єктів підготовки щодо надання практичної допомоги об'єктам підготовки та впровадження передового досвіду об'єднаної підготовки у практику діяльності підлеглих військових організаційних структур.

Дана методика дозволяє отримати кількісну оцінку рівня організації об'єднаної підготовки сил оборони, виявити проблемні питання в діяльності суб'єктів підготовки, надати обґрунтовані пропозиції Головнокомандувачу Збройних Сил України для прийняття рішення на організацію об'єднаної підготовки.

Ключові слова: організація об'єднаної підготовки, показники оцінювання, діяльність суб'єктів підготовки, сили оборони

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