

THE IMPACT OF THE CONFLICT IN UKRAINE ON THE DEVELOPMENT OF THE HIGHER UNIVERSITY MILITARY EDUCATION PROCESS – ADAPTING MARITIME OPERATIONAL ART TO THE DYNAMICS OF MODERN MILITARY ACTIONS –

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DOI: 10.55535/RMT.2022.4.16

Observing the evolution of military actions in the Ukraine conflict, one feels the need to capitalise on the lessons identified as a result of the innovative ways of applying the principles of military art, in the conditions of real war. Thus, within this approach, I set out to identify how the evolution of the conflict in Ukraine influenced military art in general. In essence, this approach is a corollary of the results obtained as a personal contribution to the development of knowledge in the field of military sciences.

Analysing the existing situation, following evaluations of the potential national response capabilities in the event of an armed conflict in the vicinity of the Black Sea, I identified didactic ways to update the doctrinal contents. The didactic approach was based on the handiest research validation tool, the war game, by testing some tactical scenarios, experienced in the Russian-Ukrainian conflict.

From a didactic point of view, the result was useful for updating the analytical programs in the master’s degree programs, however, the benefit from this research comes from the action-structural field, regarding the ways of responding in the maritime environment with existing capabilities or identifying the capability requirements, emphasising the importance of military services and branches cooperation during the joint coastal defence operation.

Keywords: doctrines; concepts; maritime operational art; analytical programs; command master’s degree;

INTRODUCTION

In this paper, I set out to identify how the evolution of the conflict in Ukraine influenced military art in general, emphasising doctrinal adaptation and educational content in particular. In essence, this approach is a corollary of the results obtained as a contribution to the development of knowledge in the field of military sciences, looking at how to apply the principles of military art in relation to the evolution of the conflict in Ukraine.

As a professor, I followed the evolution of military actions from the conflict in Ukraine, capitalising on the usefulness of the lessons identified as a result of the innovative ways of applying the armed combat laws, in real war conditions.

Starting from this framework, I found the need to adapt doctrinal concepts to the dynamics of contemporary military actions. This aspect determined the updating of the analytical programs for the training of future military leaders in the inter-arms command master’s degree for naval forces. The updating of the educational contents was, however, a long-term process, based on the experience gained during the educational processes, mainly during the applied studies, exercises, and war games carried out within the military art disciplines in the “Carol I” National Defence University.

Following the mode of action of the military forces involved, I noticed the use of classic military tactics under the conditions of modern threats, by adapting them to the evolution of the characteristics of the theatre of operations. The military response solutions were structured on the three levels of military actions – strategic, operational, and tactical. These military options represented models of analysis in this endeavour.

Using these models, analysing the existing situation and the effects, I considered it appropriate to translate into hypothetical situations ways of action of some national capabilities in relation to the identified threats. Following methodologies for evaluating the potential of national response capabilities in the event of an armed conflict in the vicinity of the Black Sea, I have identified didactic ways of updating the doctrinal contents. The didactic approach was based on research methods adapted

to the field of military sciences, using the handiest research validation tool – the war game (Scipanov, Totir, 2022), by testing some tactical scenarios, experienced in the Russian-Ukrainian conflict.

The research results gained scientific value through the originality of the conclusions, structured according to the field of application. From a didactic point of view, the result was useful for updating analytical programs in the master's degree programs. During the educational process, I constantly intervened to refine the educational contents, the effect being the efficiency of the educational process in relation to the evolution of military art. From the point of view of military art, the result is useful for updating doctrinal concepts and validating some theories by adapting to the dynamics of the operational environment. With this, I consider that I have contributed to the adaptation of the maritime operational art to the dynamics of modern military actions.

The novelty of the research is in the action-structural field. I have identified new tactical and operational ways of responding with strategic-level effects, adapted to the maritime environment. I capitalised on the combat potential of existing naval capabilities or identified the needs of capabilities through which the naval component contributes to military actions, emphasising the importance of the cooperation of the military services during the joint coastal defence operation.

Capitalising on the results from applying maritime operational art in the educational process, I contributed to the development of knowledge in the field and the adaptation of military art to the evolution of military science in relation to the events in the proximity of the Euro-Atlantic border, this knowledge being translated into the skills of graduate students.

UPDATING THE EDUCATIONAL PROCESS TO THE EVOLUTION OF MILITARY ART

In this approach, I will start from the premise that the educational process in the “Carol I” National Defence University permanently ensures a complete and complex training of military specialists, by consolidating knowledge in the field of national security, capitalising on the existing potential within the types of forces from the military services.

In light of the events in Ukraine, there is a need to update the educational content, capitalising on the lessons learned and the military experience of our neighbours. The maritime domain has been at the attention of the Naval Forces Department of the Command and Staff Faculty of the “Carol I” National Defence

University since the beginning of the regional divergences, the Crimea annexation in 2014, and continued with the evolution of events in the vicinity of the Black Sea (Totir, Scipanov, 2022).

Based on scientific and legislative foundations, the teaching staff's approach was aimed at permanently updating the university curriculum, especially for the master's degree program, where the future leaders of the Naval Forces are trained. Moreover, following the observation of the evolution of the ongoing conflict, but also of the way the main actors involved reacted, a series of conclusions could be drawn which were illustrated in the results of research in the maritime security field.

From a didactic point of view, based on the profile of the graduate established by the main beneficiary (Defence Staff), new learning outcomes were established, in relation to the skills (ESDC, 2021) that we aim to obtain through the range of disciplines managed within the master's degree program.

Following the methodology required for using the principles and norms of military command at tactical inter-arms, operational/joint level and strategic level, in times of peace, crisis and war, we became aware of the need to reorganise the educational contents of the existing command master's degree program, by shifting to a new paradigm of the profile of the command master's graduate. Thus, according to the concept of modernisation of military education, we challenged the teachers to outline a new educational content, based on principles that are tailored to the new challenges of regional security, meeting the request of the main beneficiary, the Defence Staff, to train fighters in modern war conditions.

Starting from combat functions, specific to different operating environments, in relation to the types of threats, the purpose of the action, the specific tasks of each structure involved, on the national command and control/C2 relationship, the future master's graduate should be able to identify the means necessary to fulfil the assigned mission, by evaluating and comparing the planned effects with the obtained ones. Moreover, knowing the particularities of the types of forces assigned to an operation, the graduate should be able to apply national and allied procedures in operations in which the components and structure of the assembled forces are involved. Applying the principles of operational art in current and future operations, up to the management of strategic crisis response options, is a task of our students, as well as a concern of the teaching staff, as objectives of the teaching-learning process.

The competencies we aim to develop belong to the tactical, operational, and strategic levels, with an emphasis on the first two at an above-average level of performance and the introduction of the basic elements for the third one, the strategic level. Thus, the development of the following skills is aimed at:

- understanding the specific procedures of the operational field;
- applying the planning processes specific to some headquarters;
- integrating the planning procedures at tactical and operational levels;
- applying the specific procedures for the decision-making process;
- applying the fundamentals of military art in maritime operations;
- creatively applying lessons learned in the maritime operations planning process;
- developing the ability of master's degree students in applying maritime combat space management procedures;
- knowing and applying the targeting principles;
- applying the elements of maritime operational art;
- using critical thinking;
- applying leadership principles.

From the point of view of the educational content, using scientific tools adapted to the concerns of teachers, as well as to the needs of our students and the expectations of the Romanian Naval Forces, the teachers from the Naval Forces Department of the Command and Staff Faculty within the "Carol I" National Defence University developed the existing doctrinal framework in the field of littoral combat (Scipanov, Nistor, 2020), in enclosed and semi-enclosed seas (Nistor, Scipanov, 2021), in leadership (Cioranu, 2021, pp. 1-6), multidomain operations (Chiorcea, Cucinschi, 2022), military command (Chiorcea, Cioranu, 2021, pp. 125-135) and in other areas of interest.

Even though now we are in an extensive digitisation process aimed at modernising the IT infrastructure and introducing specialised programs for carrying out the teaching-learning-evaluation process specific to the national security field, the research using classic methods in the field of military sciences (Scipanov, 2022, pp. 1-100) continues, for the benefit of education and the improvement of the doctrinal contents of the beneficiaries. Thus, today we can list a series of research results in the field, mainly those obtained inside the melting pot of the Naval Forces Department, a structure within the university specialised in the maritime field.

ADAPTING THE MARITIME OPERATIONAL ART TO THE DYNAMICS OF MODERN MILITARY ACTIONS

Starting from the triptych on which the national defence strategy is based, means-ways-ends (Scipanov, 2020, pp. 68-87), different tactical and operational scenarios were debated and analysed, based on the principles of armed combat and in accordance with the general laws of war, as they were applied in the war in Ukraine.

Thus, the principles of war in the maritime environment were approached from two perspectives:

1. The naval assets required to accomplish an established mission or contribute to the conduct of an established mission, depending on the response option or desired purpose.
2. The Romanian Naval Forces contribution to the joint operation, depending on the purpose established by the common mission.

From the objectives point of view, the military response options were analysed and translated into the military actions in the maritime environment, for which the ways of implementation were identified based on the principles of maritime operational art.

Thus, it was necessary to introduce some naval capabilities that respond to the threats of the operational environment in the scenarios simulated in the war games. That meant introducing some modern technical means in the database of war games proposed for purchase or which were already used by allied fleets.

In this respect, we can mention the use of naval platforms, frigates, and corvettes with modern capabilities, naval and coastal missile systems of short and medium range, autonomous or unmanned vehicles, surface or submarine systems, which the Romanian Naval Forces would need to increase their contribution to maintaining regional security.

As a result of the lessons identified and learned from the Ukrainian conflict, an important aspect, resulting from the analysis of the contribution of the naval forces in the actions developed at the littoral, is identifying the land forces capabilities that could supplement or even replace the naval forces capabilities in order to limit the use of the sea.

In this context, the need to develop a new concept, multi-domain operation (Cucinschi, 2021, pp. 140-151) appeared which, in the conditions of hybrid warfare, realises the asymmetry in engaging an adversary with superior technological or numerical capabilities, offering advantages in defensive conditions.

In conclusion, the educational programs were permanently adapted to these situations, some predicted and tested before the start of the war, others being identified and validated during its gradual progression.

Results were obtained in the theoretical and practical fields, as follows:

In the theoretical field:

- doctrinal adaptation and development of maritime operational art-specific concepts;
- validation of some naval tactics under the conditions of the use of modern vectors that employ artificial intelligence, through war games and assisted simulation;
- development of maritime awareness and organisational leadership;
- actual identification of the Romanian Naval Forces' contribution to the littoral operation.

In the actional field:

- optimisation and adaptation of response procedures to multiple threats in the maritime theatre of operations;
- identification of employment rules in concrete situations;
- development of decision-making skills in specific situations;
- validation of scenarios based on real threats to maritime security;
- acquisition and application of operational planning principles.

It was possible to identify the role and place of the capabilities of the current Romanian Naval Forces in the military actions carried out in enclosed and semi-enclosed seas, especially the role of having a fleet that can restore and maintain maritime communication lines immediately after the end of the conflict. This aspect was sometimes lost sight of even by the decision-makers; however, with the action in Ukraine, the potential of the Romanian Naval Forces to ensure the safety of navigation was reaffirmed and requires a separate debate.

THE APPLICATION OF MARITIME OPERATIONAL ART RESULTS IN THE EDUCATIONAL PROCESS.

DOCTRINAL AND ACTIONAL-STRUCTURAL SOLUTIONS

Emerging from my personal experience and the results obtained following the application of the principles of maritime operational art, I further want to present some results of the analysis regarding the mode of action of a fleet in enclosed or semi-enclosed seas. Some didactic objectives were refined from the conceptual/doctrinal point of view, given the evolution of the war in Ukraine,

through which we recommended the achievement of new learning outcomes, in relation to the needs of the beneficiary in the maritime field, namely the Romanian Naval Forces. Thus, together with the group of professors' staff, and students from the inter-arms master's degree program, we applied the principles of operational art in simulated military actions in relation to the real threats in the Black Sea, which is characterised as a semi-closed sea (Nistor, Scipanov, 2021).

The conclusions drawn from the results of the war games and based on some action decisions observed as a result of the war in Ukraine allowed the validation of specific concepts for amphibious, riverine, joint, multi-domain, and hybrid actions, which were in the attention of the Naval Forces Department of the "Carol I" National Defence University.

From an actional point of view, the results obtained led us to the identification of necessary capabilities that respond to threats from different spectrums in the maritime environment or that contribute to countering these threats.

The necessary capabilities, intended for response options for different types of threats, resulted from the application of some principles of use in combat of the different types of forces, but also of a *modus operandi* identified in the war in Ukraine.

The identified capabilities are:

- coastal missiles;
- mine dams.

The actions identified are from the perspective of the joint actions, as follows:

- the combined action of naval and land forces on the coast;
- the use of tactical and operational drones;
- surveillance/recognition actions;
- real-time mutual information.

The actional-type conclusions were obtained as a result of applying maritime operational art, consisting of validating or adapting existing tactics to the capabilities of the Romanian Naval Forces or those in the process of being procured. The factors that influenced the action decision were:

- the action environment (surface, air, or submarine);
- the limiting use of sea with coastal support actions;
- naval platforms;
- the vectors/armament used;
- the surprise;
- the joint action;

- targeting;
- combined strikes from the sea and the littoral;
- efficiency/effectiveness assessment reports;
- estimated effects/observed effects.

Among the most effective contributions of the Romanian Naval Forces to the joint action, there are the measures to limit the use of the sea (Sea Denial), such as:

- achieving the recognised maritime operational pictures (RMP);
- providing real-time information;
- deterring by naval presence;
- managing maritime operational actions and enemy losses;
- laying mines; this action provides a number of estimated effects such as:
 - delaying;
 - channelling;
 - destroying/neutralising/eliminating from battle;
 - choosing other courses of action;
 - deploying additional mine-keeping forces and force protection.
- management of maritime operational actions and enemy losses.

At the end of this approach, structuring the results obtained following those presented in relation to the levels of military art (strategic, operational, tactical), some aspects relevant to the coastal action in the conditions of a semi-closed sea can be presented. In other words, the result of the analysis within this approach is also based on the lessons learned following the military actions carried out in the western proximity of the Black Sea. If we also emphasise the fact that these actions influenced the response of the Romanian Naval Forces to threats in the maritime environment, we find that the approach is gaining its fundamentals, according to the considerations revealed below:

❖ *strategic point of view:*

The role of submarines, maritime aviation, and obtaining real-time information can be emphasised. By applying the warfare principles specific to the submarine's uses in specific environments, surveillance, friendly forces information, and secrecy of action are the greatest advantages offered by this capability.

Aviation can provide a degree of airspace control that allows naval forces to provide a minimal degree of maritime space control, thus forcing the enemy to change its response options. In addition, at this level, the action of aviation in the maritime space provides tactical-operational advantages for the naval and land forces in coastal defence.

The information advantage allows the representation of the reality of the non-maritime operations area by creating the Recognised Maritime Picture/RMP and positive identification of naval targets.

❖ *operational point of view:*

The existence of submarines in the area of operations forces the enemy to pay more attention to this type of submarine threat and to deploy additional forces to search for, discover, and neutralise the threat. The means deployed are specialised ships (frigates and corvettes), anti-submarine aviation, submarines, and anti-submarine surveillance systems.

These results increase the role of land-based air forces, which can engage the adversary's operational naval groups during formation, crossing, and approaching the littoral. Moreover, maritime aviation represents the greatest threat not only to naval groups at sea or in ports, but also to port objectives and maritime communications.

The role of the land forces is amplified, as they can take up a series of essential tasks of the naval forces, under the conditions of duplicating some operational capabilities on the coast.

However, in the maritime field, the most important aspect at the operational level is the mines-laying action, which is the most accessible action of a force assembled to defend the coast and to limit the use of the sea by a numerically superior enemy. All types of naval, air and land forces with littoral combat capabilities must contribute to this complex operation, which requires a joint coordinated approach/execution.

❖ *tactical point of view:*

The role of non-homogeneous naval groups, designed to carry out complex missions with a wider range of specific tasks, is increasing.

Tactical advantages are provided to land forces in littoral defence through real-time information, providing time to reorganise the littoral defence disposition.

Delaying, channelling, and diminishing opposing forces by capitalising on the effects of sea-use limitation measures means transferring a weakened enemy to our littoral defending land forces. In these conditions, unfavourable areas for landing can be chosen, where the channelled enemy encounters problems during the coastal force projection.

CONCLUSIONS

Considering what has been presented, it can be concluded that the events in Ukraine and the military actions carried out in the conflict zone, especially those in the maritime environment and on the coast, have influenced the approach to some didactic aspects. Thus, the approach emphasises how these military actions have influenced the educational contents, the files of some subjects, and, implicitly, the analytical curriculum of the *Inter-Arms Master's Degree Program*.

It can be considered that the approach of the teaching staff from the Department of Naval Forces was useful in the direction of updating the subject matter in the field of military art, in general, and maritime operative art, in particular, a specific field for the inter-arms master's degree program for naval forces. As a result, during the teaching-learning process, there was a permanent intervention to refine and optimise the educational content, the main result being the adaptation of the educational process in relation to the evolution of military art.

From the military art perspective, the result was useful for updating some doctrinal concepts and validating certain theories, which, through the clever application of some principles of military actions, reaffirmed critical thinking as a decision-making tool for future military planners. I believe that, by carefully observing the way of action of the actors involved in the conflict in Ukraine, we were able to adapt some classic naval tactics to the dynamics of the operational environment, reaffirming the role of operational art in the higher military educational process. Through this, I consider that I have contributed to the adaptation of maritime operational art to the dynamics of modern military actions characterised by principles of joint action.

From the operational perspective, applying the principles from the range of maritime operational art allowed the identification of the most effective contributions of the Navy to the joint operation, under the conditions of its deployment on the coast. Moreover, the experience in the field allowed the identification of these contributions in relation to the characteristics of the Black Sea, as a semi-enclosed sea. The result obtained reaffirmed the dual role of research in the field, using tools from the field of military sciences, considering the fact that the contributions of naval capabilities to the joint operation, as well as the need for capabilities that make the military response in the maritime field more efficient were exactly identified.

At the end of this endeavour, I can conclude by pointing out the determining role of research for the benefit of higher military education, which, through the continuous observation of the events in Ukraine, has led to doctrinal, educational, and actional adaptation.

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