

Ways to Improve Radiotelephone Procedures Training for the Navy

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ABSTRACT: Every type of training can be improved. Trying to find ways to do so is a continuous process. The identification and implementation of the most effective of those can only be adequate to the changing environment in case of objective review, comparison and analysis. This paper discusses some approaches whose adoption can lead to the enhancement of the training for radio operators for working in tactical networks for the Navy. It also shares some experience from the implementation of such methods when training cadets at the Bulgarian Naval Academy.

1 INTRODUCTION

Retrospectively, the education and training of personnel to provide the information exchange in the radio networks of the Navy of the Republic of Bulgaria can be reviewed in two directions – before and after the country's preparation for and accession to NATO. It is well known that before the political changes the training of radio operators was aimed not only at learning the rules for telephone exchange but also at the acquisition of skills for using Morse code telegraphy. In those conditions there was a relative balance of the allotted time for the two types of training. Of course, theory was supported in accordance with the communication procedures uniform for the Bulgarian Armed Forces, whereas the exchange in the tactical radio networks of the Navy mainly involved tactical messages from the signal code also adopted for use by the countries that were Bulgaria's partners at the time. This unification also facilitated the training due to the significantly higher number of classes in the curriculum at *Nikola Vaptsarov* Naval Academy compared to today's programme, and the provided conditions for work in

specialized classrooms ensured the required results. It is important to point out that in the late 90s of the previous century this process was influenced by a number of factors, for example the reduction of the share of Morse code telegraphy in communications as opposed to the increase of English-language voice exchange. In result of the occurring changes a great deal of effort was directed at learning the procedures and rules for radiotelephone exchange in English, initially as a partner, and subsequently as a full-fledged NATO member country. Even back then the necessity to adapt to the new realities of the training in radiotelephone exchange rules and procedures had no alternative. One of the reasons for this still continues to lie in the ever-increasing requirements with regard to the skills for voice exchange in English language, including in a national format. It should be noted that the naval education system responded adequately to the occurring changes, but the adaptation to the contemporary requirements and conditions can be defined as a dynamic process which demands continuous renovation both in terms of training materials and with regard to methodology.

2 WAYS TO IMPROVE RADIOTELEPHONE PROCEDURES TRAINING FOR THE NAVY

According to the curricula effective at the Bulgarian Naval Academy, studying radiotelephone procedures and rules is an integral part of the training of the cadets from the course *Organisation and management of military units on the tactical level*, specialising in *Military communications and radio systems* and *Navigation*. One of the learning objectives set for the disciplines that include the study of communications and information support is for the students to be able to conduct radiotelephone exchange. The methods of training laid down in these curricula include the delivery of lectures and practical workshops. As a result of this the training in this respect allows the future commanding personnel to build the foundation required for the successful radio communication in the tactical networks of the Navy. However, as already mentioned, the occurring changes and the continuous search for new approaches to improve this training is an important step towards the adaptation of the educational process to the new realities.

There are a number of ways capable of ensuring the enhancement of the preparation of communications specialists for the Navy. One of the tasks of this paper is to identify, compare and select those of them whose application could lead to a higher efficiency and expediency of training.

Among the ways to improve the training of cadets in the area in question, the following can be identified:

2.1 *Development of a contemporary methodology of training based on the experience of allied countries and design of an up-to-date student text*

The currently existing methodology of preparation for the use of radiotelephone procedure and rules in Bulgarian language is only relevant for communications in a domestic format. Therefore the development of a methodology for training for operation in an allied and coalition format of activities with the participation of the Bulgarian Navy is necessary, whereas this, of course, would be most rationally accomplished on the basis of the experience of partner countries.

The Combined Communications-Electronics Board (CCEB) and particularly its work group tasked with developing and updating the allied communications publications provides the opportunity for the NATO member countries and the partner states to obtain interoperable C4 capabilities, primarily in the area of information exchange. The methodology detailed in the CCEB publication, ACP-125 *Communication Instructions Radiotelephone Procedures*, enables the acquisition of the voice procedures and rules adopted by the Alliance. The adaptation of this methodology in consideration of the extant environment and factors indubitably facilitates the enhancement of the effectiveness of training of communications specialists for the Navy. Designing of a student text would come as a natural continuation of this publication, which, while conformable to the education and future realization of the cadets, would also be usable by communications personnel from the Navy. Thus,

profound training would be provided not only in theoretical aspect, but also within workshops in specialised simulation facilities.

2.2 *Creating conditions for putting an emphasis on the training in a simulated environment*

Working in a simulated environment in the modern conditions for the training of maritime personnel is increasing in importance. In broad terms, the users of naval personnel are setting higher and higher requirements to the level of their preparation. Thus, one of the ways for the education system to respond to the new requirements is to create conditions of training as closely approximating those of the real-world environment as possible. Therefore, investing in simulators adequate to the requirements has become an important task, particularly with regard to the acquisition of simulator facilities with a high degree of integration, specifically of the type that integrates groups of modules, such as navigation and communications modules. This would enable students from different academic courses to play through different scenarios, including ones for radiotelephone communications. Here is the place to point out that the Bulgarian Naval Academy, as an example of a maritime education institution, is actively developing its training facilities adequately to the demand, creating favourable conditions for training in the necessary simulated environment.

2.3 *Increasing the requirements to the students' levels of proficiency (SLP) in English language*

It is well established that the successful preparation of students in the use of radiotelephone procedures in English is closely dependent on their level of proficiency in the language. Table 1 shows the share of graduating students of the Bulgarian Naval Academy from the course in *Organisation and management of military units on the tactical level*, specialising in *Military communications and radio systems* and *Navigation*, who have attained level 2-2-2-2 and higher from the English language proficiency test for the Bulgarian Armed Forces in accordance with NATO's standardisation agreement STANAG 6001 over the last six years.

Table 1. The Share of graduating students of Bulgarian Naval Academy, who have attained level 2-2-2-2 and higher from English language proficiency test in accordance with STANAG 6001.

№	Year of graduation	SLP 2-2-2-2 and higher
1.	2016	37,5 %
2.	2015	50 %
3.	2014	50 %
4.	2013	69,2 %
5.	2012	50 %
6.	2011	20 %

The data from the table indicate that although the results are high, only half the students have attained a standard level of proficiency of 2-2-2-2, which somewhat hinders the study of allied publications in the original. This confirms the need to design a

student text for radiotelephone procedure in their native language. On the other hand, it would also be expedient to direct the efforts towards the attaining of a standard level of proficiency in English of 2-2-2-2 by a higher percentage of cadets before their graduation, in order to ensure that the groups to be trained are homogeneous, which would make the training easier, especially with regard to the practice of radio talk.

2.4 *Conducting practical training in conditions where the cadets can witness radio communications*

Another way to improve the training in radiotelephone procedures is to plan for the participation of cadets in training missions within ship formations, as well as to create conditions for their participation in the routine radio drills of the Navy. It is well known that training is more efficient in a real-world environment, but here, of course, balance must be struck between the daily schedule of the students and the available possibilities for going at sea and for practical training in communications and information centres.

3 CONCLUSIONS

The practical training of Bulgarian Naval Academy cadets on Bulgarian Navy ships and in shore-based communications and information centres are indispensable for creating real-life work conditions. Over the last few years, efforts have been directed at ensuring that it is conducted regularly and comprehensively. But here it is impossible to overlook the fact that the practical training is provided mostly in the summer period when the study of the disciplines has finished. In this respect the classes in a suitable simulated environment must strike a balance between theory and practice within the academic year and must lead to the reinforcement of the knowledge of radiotelephone procedures and rules simultaneously with studying them.

Furthermore, the significance of the ability to use English to facilitate talking over the radio cannot be overstated. A possible working solution to this is to create conditions for additional self-study for the students.

The experience at the Bulgarian Naval Academy has shown that the development of a methodology for training in the use of radiotelephone procedures by applying an adaptation of the allied communications publication has the strongest beneficial effect on the training of military cadets. The analysis of the possible ways to improve radiotelephone procedure training has shown that there are different solutions to the issue. Each of them enables the improvement of the results from the training. However, selecting and implementing of a single solution would not be conducive to the achievement of the optimal result. An integrated approach which includes the implementation of a range of ways would lead to the most beneficial solution. Nevertheless, the creation of conditions to enhance the proficiency in English, conducting training at simulation facilities and the practical classes in real-world environment cannot supersede the leading role of the development of radiotelephone procedure training methodology. Such practice-oriented methodology has been designed at the Bulgarian Naval Academy and is already being used successfully for the training of military cadets.

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