MINISTRY OF EDUCATION

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TRAINING MANAGEMENT IN THE NAVAL PENTATHLON

ABSTRACT

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INTRODUCTION

Through this thesis we aimed first of all a detailed and in-depth knowledge of the field, for which it is necessary to carry out scientific studies that include the preparation for all the tests of the naval pentathlon.

Based on the results obtained, we have developed a training strategy that will take into account the management of the entire system of resources we have at our disposal, the elimination of negative factors and the maximum efficiency of the factors favoring the performance.

Our intention to participate in the European and World Naval Pentathlon Championships requires the selection and preparation of a team, based on a performance model, which can be obtained based on the analysis of performance at the international level.

The performance level corresponding to the model, thus obtained, will be related to the potential of our team, to the real conditions of preparation and recovery, from a material and financial point of view, all this requiring a careful management of the training.

The scientific approach to training, the establishment of a unitary conception, as structure and content, with the Euro-Atlantic military structures in terms of training athletes and establishing a performance model is a necessity for the evolution of naval pentathlon at a higher level.

The lack in the literature of methodical materials for the selection and training of athletes in the naval pentathlon is a good reason for the development of this research paper.

KEY WORDS: naval pentathlon, management, training, selection, coaching

PURPOSE OF THE RESEARCH

The aim of the research is, first of all, to bring more knowledge in the field of sports and naval pentathlon. The aim is to better understand the organizational aspects of specific training and the promotion of naval pentathlon among all military educational institutions. The theme of this paper addresses the issue from a theoretical and practical point of view of aspects related to selection, organization and regularization of training, ensuring and efficient use of all time resources, human and material, necessary to obtain and maximize performance in the naval pentathlon team of the Naval Academy.

STRUCTURE AND CONTENT OF THE THESIS

PART I contains the theoretical substantiation of the research, with aspects related to the connection between military training for combat and sports training. We can say that most elements of physical, theoretical, technical, tactical and mental training, specific to combat actions, can be achieved and verified in specific training and also in sports-application competitions, on the stable foundation of a well-trained fighter.

The training management system requires an effective and efficient management of the resources necessary to achieve the set objectives. According to the opinions of specialists (R. Griffin, 1990), these resources used can be of material, financial, human or informational category, and ensuring the quality and efficiency of training requires their analysis in all managerial functions.

In the military field, the sports competition aims to capitalize on and evaluate the training achieved through training and education, stimulating athletes to obtain the optimal adaptation needed in the military training process, psychological training and facilitating integration into the military environment.

Coaching is a defining process for improving the quality of training and maximizing sports performance. The efficiency of the training process requires as an essential condition, the use of methods of awareness, responsibility and motivation of athletes, applied individually. These, along with the development of initiative, creativity and communication skills, are elements strictly necessary to optimize the training process and maximize sports performance, characteristic of a complex process, called by specialists "coaching".

From the analysis of the specialized literature carried out mainly in the field of sports training, we can conclude that without a planning and scheduling of training it is not possible to discuss performance.

Achieving sports performance, which interests us and is also the main goal in any sport, requires, in addition to optimal planning and scheduling of training, effective management of all factors that, in various forms, influence the evolution of the athlete.

Maximizing performance requires a correct and efficient management of the entire training, materialized in the following actions of the coach:

- ✓ Detailed analysis and proper management of all performance factors;
- ✓ Scientific planning and programming of training;
- ✓ Optimal counseling and guidance of athletes in training and competitions.

The coach's activity to manage sports training in the naval pentathlon is a difficult activity, whose complexity results from the need to maximize the potential of athletes for all five events, in a time limited by the program of military athletes.

Making a comparison between sports training and preparation for combat, or between the performance athlete and the professional fighter, highlights again the need to manage as efficiently as possible the resources used in training.

Sports training for naval pentathlon competitions of students from the Naval Academy and successful participation in competitions are the basis for the preparation for combat of future professional soldiers.

PART II of the thesis contains the preliminary research in which, through general and specific motor tests, we tried to show that a very good physical training is not enough to achieve performance in naval pentathlon. The importance of a selection based on aptitude criteria and a good organization of training will be the first step towards achieving performance.

Most of the time the naval pentathlon competition can have moments with a high level of complexity. The optimal management by the athlete of the factors that generate these moments determines the performance level of the athlete.

The research started from the premise that the application of an effective management of training in naval pentathlon, starting from a scientifically based selection and proper management of training resources can lead to improvements in the performance behavior of athletes.

Purpose and objectives of the research:

Our research is defined by the optimization of the selection and training process of the naval pentathlon team. Based on this reason for the research, we propose the following objectives:

- ✓ Identification of efficient selection criteria based on the knowledge of the subjects in all aspects that can influence sports performance;
- ✓ The realization of a training planning model that allows to obtain the planned performances without negatively influencing the professional activity of the athletes.

Research hypotheses

- ✓ Performance in objective competitions in the naval pentathlon can be improved if the following criteria are added in the selection of military athletes: the athlete's motivation and attitude for performance;
- ✓ Efficient management of resources in training planning contributes to increasing sports performance.

Applied research methods

The method of studying the specialized bibliography - through which we realized the theoretical and methodological substantiation in order to identify the sources of information necessary to approach the research.

The observation method was applied to follow the obvious changes in the psychomotor behavior of athletes.

The method of the questionnaire survey, by which we established the criteria used in the selection of athletes for the pentathlon group by the other foreign Naval Academies, participating in

the competition. Through the survey method, we also made a selection of the experimental group based on an opinion questionnaire, with closed questions.

The experimental method, used to demonstrate the effectiveness of the training sessions on solving certain problems that prevent the achievement of the established objectives and to demonstrate the efficiency of the management applied to the naval pentathlon training.

The statistical-mathematical method approached in our research the statistical program for the processing of the registered results and for the realization of the training and competition model of the athlete from the naval pentathlon.

The graphical method was used for the presentation of statistical data and the quick and obvious visualization of the variation of the results obtained by the subjects subjected to the study through diagrams and graphs.

The measurement and testing were performed by applying anthropometric and functional measurements and an assessment of general and specific motor capacity.

During the research, the following measurements were performed: height (waist), weight and heart rate.

The tests within the evaluation of the general motor capacity were: running on the distance of 800 m., speed running on the distance of 100m., rowing at the rowing boat 500m., free swimming on the distance of 100m.

In order to evaluate the specific motor capacity, tests specific to the moments of the competition were elaborated, as follows: moment 1 of the "*amphibious cross-country*" test; paddling with a single paddle in the inflatable boat; moment 3 of the "*amphibious cross-country*" test; *obstacle course* (standard route); sensor motor testing specific to the "*seamanship"* test; testing the specific coordination of the "*utility swimming*" test; testing the specific coordination of the "*life saving*" test.

The research took place in the sports complex of the Naval Academy "Mircea cel Bătrân", and the subjects of the research were military students with accommodation and meals in the academy.

During the preliminary research, we performed an analysis of the resources of the training process in order to know the concrete possibilities of applying sports training strategies. This stage was achieved by applying the tests and questionnaires developed for the selection of research subjects, the knowledge of the coach, the evaluation of the material, financial and time resources that we have at our disposal.

During the preliminary research, we designed and applied the training plan for a macro cycle, for the period 01.11.2019 - 15.05.2020.

Results and conclusions

The comparative analysis of the results, based on the statistical-mathematical and graphical methods, reveals significant increases of the performances registered in the final testing stage, in favor of the experiment group.

The dynamics of the results demonstrates a significant evolution of the results of the experiment group, achieved during the training program carried out according to the designed model, which confirms the efficiency of the application of the training program.

The statistical calculation of the correlations between the performances of the subjects registered in the morph functional, general and specific motor tests showed significant positive links in the case of five of the analyzed correlations (* r-0.937 between the motor capacity at the selection level and the results of opinion polls, * r-0.479 between the 800m flat running and the obstacle course, * r-0.691 between performance testing in utility swimming and lifesaving, * r-0.917 between utility swimming and 100m freestyle swimming, * r-0.636 between lifesaving and 100m freestyle swimming.).

The designed training plan contains training lessons optimized for the usual conditions of the educational process in the naval academy and with the existing resources in this situation.

The performance differences between the initial testing and the final testing, confirmed as significant by the application of statistical methods, demonstrate the efficiency of the training plan designed on managerial principles.

The comparative analysis of the statistical results between the experiment and control group shows significant increases in favor of the experiment group, which certifies that the selection methods applied, are adequate and contribute to the optimal improvement of the sports performance of the representative group of the Naval Academy.

PART III of the thesis is represented by the experimental research, carried out during a macro cycle, period in which coaching was implemented as an element of the training process.

In this part of the research, through general and specific motor tests, we will try to demonstrate that the implementation of coaching in specific naval pentathlon training can optimize training and contribute to maximizing sports performance.

Maximizing the performance objectives of the naval pentathlon requires major changes in the attitude of the coach and athletes, an efficient managerial behavior by choosing the optimal solutions in planning and scheduling training.

Purpose and objectives of the research:

Our research is defined by maximizing the potential of each athlete in goal competitions by successfully applying the specific means of coaching.

Based on this reason for the research, we propose the following objectives:

✓ Identification of internal factors that condition the performance of each subject

✓ Identification and optimal application of coaching methods for awareness and accountability of athletes;

✓ The realization of a training planning model, for a period of 57 weeks, which would allow the achievement of the planned performances without negatively influencing the professional (educational) activity of the athletes.

Research hypotheses

✓ Implementing coaching sessions in the training process, can improve competitive performance by streamlining the training effort and optimizing the individual resources of athletes;

✓ The rationalization of the means of general training will ensure the development of specific motor skills, demonstrating the efficiency of the training program through the existence of correlations between the variables of general motor capacity and those of specific motor capacity.

The applied research methods were: the study of the specialized bibliography, the observation, the experiment, the statistical-mathematical method and the graphic method.

Research stages

✓ Elaboration of the training plan during a training macro cycle
(May 18, 2020 - June 23, 2021)

✓ Applying an effective model of coaching sessions during sports training for a period of 21 weeks, between June 22 and November 13, 2020

✓ Evaluation of the efficiency of the training model in the testing of athletes and analysis of the dynamics of results (initial testing - March 2020, final testing 09-13 November 2020.

Organizing and conducting research:

The coaching sessions took place daily, after training, with one topic, so that for each of the athletes an individual session was planned at an interval of 15 days of training (three weeks of training).

Research tasks:

✓ Design and implementation of the training plan for a period of 57 weeks;

✓ Establishing operational and performance objectives;

✓ Designing coaching sessions, applying them and centralizing the results (subjects' answers);

✓ Application of the test model established in the preliminary research, for the control and experiment group:

- Initial testing of subjects (final test results from the preliminary research were used March 2020);
- Final testing of subjects - November 2020.

In designing the training plan we established the frequency of coaching sessions and performed an analysis of the need for training for the specific skills required, based on the concrete resources of time to the date of the competition and the potential of each athlete.

At the same time, in the content of the training plan, tasks and objectives for the athlete and coach were outlined, specific to each mesocycle.

The coaching sessions with the athletes of the representative team took place in compliance with a structure with four distinct stages: G.R.O.W. (Goals, Reality, Options and Will).

Together with the athlete we established during the coaching sessions, the performance objectives and the operational objectives, specific to each sports event.

After an analysis of the existing reality, the established objectives were subsequently adjusted, depending on the individual potential (initial testing) compared to the average performance of foreign athletes in the questionnaire. From a managerial point of view, the necessary steps were taken to ensure the necessary resources for training and to optimize the training conditions. The questions from the coaching sessions aimed at directing the athlete towards choosing the objectives, elaborating and choosing the optimal solutions in achieving the objectives, without making suggestions in this regard (Whitmore, 2019).

The sessions were established individually for each athlete in the experimental group, with a frequency of one session, 45 - 60 min. at three weeks. The main purpose of the sessions was to optimize and maximize performance in training and competitions, by "awareness and accountability of the athlete."

At the same time, the aim was to maintain an optimal motivation in carrying out the trainings and to maximize the potential of the athlete.

Following the direct observations associated with the tests and the opinion questionnaire applied in the preliminary experiment, we identified different aspects of the motor behavior of the subjects in the experimental group, especially the strengths. These were topics for building the questions in the coaching sessions.

The sets of questions were oriented towards identifying as many efficiency solutions as possible and choosing the most appropriate one by the subject. The essential condition in the efficiency of the solution is that the subject is aware of these aspects in advance, as being likely to impede its performance evolution.

Results and conclusions

The comparative analysis of the results, based on the statistical-mathematical and graphical methods, reveals significant increases of the performances registered in the final testing stage, in favor of the experiment group.

The dynamics of the results demonstrates a significant evolution of the results of the experiment group, made during the training program carried out according to the designed model, which confirms the efficiency of the application of the training program with the implementation of coaching sessions.

The statistical calculation of the correlations between the performances of the subjects registered within the morph functional, general and specific motor tests demonstrated significant positive connections in the case of ten of the analyzed correlations.

The designed training plan contains training lessons optimized for the usual conditions of the educational process and with the existing resources within the *Mircea cel Bătrân* Naval Academy from Constanța. The statistical results confirm a very good evolution of the results for most motor tests.

Compared to the training period carried out in similar conditions during the preliminary research, we found an increased efficiency in the coach-sports communication, greatly facilitated by the operation in good condition of the online platform used at the institution.

The performance differences between the initial testing and the final testing, identified as significant by applying statistical methods, demonstrate the efficiency of applying the training plan designed on managerial principles and also the coaching program which *confirms the hypothesis that the implementation of coaching sessions in the training process improve competitive performance by streamlining the training effort and optimizing the individual resources of athletes.*

The application of the *sets of questions*, within the coaching sessions, designed to maximize the performances within the training process and in the competition, had an important role in preparation, by mobilizing the resources of the athletes during the sustained effort, optimizing the coach-sports communication and efficient individualization training.

Statistically significant correlations recorded for some components of general motor skills and those of specific motor skills, respectively *swimming - utility swimming * r -0.811, swimming – life saving * r- 0.781, simulator rowing - rowing in an inflatable boat * r-0.744, 800m running - obstacle course * r-0.83, shooting - throwing grenade * r-0.716*, validates the second hypothesis of the research, *the rationalization of general training means will ensure the development of specific motor skills demonstrating the efficiency of the training program training.*