

SUBSTANTIATION OF THE APPROACH TO THE FORMATION OF THE CREWS IN ROWING

Iakovenko O.O.

National University of Physical Education and Sport of Ukraine

Annotation. The principles of the selection of athletes for the crews' formation in foreign countries were considered, and the most informative criteria for the selection of rowers from one team were identified. The analysis of regulatory documents of rowing teams in foreign countries was conducted. In the course of this analysis were detected the top countries in this kind of sport and found that it is fundamentally important for a comprehensive approach to the selection of athletes for the formation of the crew. It is noted that the use of the principle of comprehensiveness is a key factor in the selection system and contributes to the achievement of high results in the international sports arena. A system of selection in terms: the result of competitive activity in the smaller classes of vessels, functional, technical and physical performance.

Keywords: rowing, formation, crews, system, selection.

Introduction

Increased rivalry in the competitive arena has set additional requirements for trainers in preparing and recruiting teams in rowing. With the search for best methods of technical and physical preparations has increased the necessity of looking for ways to improve the effectiveness of athletes' interaction that make up a crew.

The results of competitive activity in rowing associated with the use of control means of sport condition. These means are providing coincidence phase of the fitness dynamics with so that all members of the crew at the right time were about the same readiness. Not always preparing rowers in the same crew is synchronized with dynamics of their sport condition. Achieving high efficiency of competitive actions and training influences on the temper of the team, on the microclimate in a crew, a creates conditions of saving the crew for the long preparation period, is a condition of continued success of joint activity [2, 4, 6, 9].

First of all, the existence of differences in team and single rowing technique and a list of some socio-psychological characteristics that has rowers of large crews leads to the concept of a "team rower". Possible to assess mastery of each rower separately, although it is a team sport, opens the way for assessment of fundamentally different strategies of crew's training: either preparation in small boats, where individual successes and shortcomings are obvious, but still is a fear mismatch of rowing in bigger boats, or preparation in big boats, where rhythmic inconsistencies are more noticeable, but the assessment of the individual contribution of each rower in the cumulative force is problematic [3, 4, 6]. Faced with this dilemma, development of the methods to ensure mastery, its evaluation and prediction of individual performance seems quite relevant.

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Purpose, tasks of the work, material and methods

The goal of the research - to justify the approach to the selection of athletes for the formation of rowing crews on the basis of the experience of foreign countries.

Research methods. The research was conducted by studying the literature and documentary materials, analysis and synthesis of the obtained information.

The results of the research.

In this research, we investigated and analyzed the criteria for the formation of crews in the leading countries in rowing (Table 1). The criteria include a number of indicators which, in the opinion of specialists in these countries, are the most informative and effective in the formation of the rowing crews [5, 10].

As can be seen from Table 1, most countries in their selection system using several criteria for the formation of crews. Almost all countries use the criterion of the athletes' competitive activity.

Table 1

The criteria and indicators used in the selection of athletes for the crews' formation in foreign countries

Country	Criteria	Indicators
Australia	competitive functional	- results of competitive activity in 1x, 2 - (2 km, 5 km) - functional indicators
Great Britain	physical functional morphological	- indicators of physical preparedness (strength, endurance) - functional indicators - morphological parameters
Germany	competitive technical	- results of competitive activity in 1x, 2 - (2 km, 6 km) - technical indicators
Italy	competitive technical	- results of competitive activity in 1x, 2 - (2 km) - technical indicators
Canada	competitive functional technical physical	- results of competitive activity in 1x, 2 - (2 km) - functional indicators - technical indicators - indicators of physical preparedness
New Zealand	competitive	- results of competitive activity in 1x, 2 - (2 km) - the result of competitive activity on the rowing ergometer (2 km, 5 km)
Russia	competitive morphological	- the result of competitive activity on the rowing ergometer - morphological parameters
USA	competitive	- the result of competitive activity on the rowing ergometer (6 km) - results of competitive activity in 1x, 2 - (2 km)

But, despite this, when recruiting large crews you can't be focused only on the performances in small classes of boats, as the requirements for training of rowers seated in the large boats are significantly different. This is due to biomechanical characteristics. As the team classes of boats has much higher forward speed, so the stroke rate is higher too. With the change of these parameters there are additional requirements to the development of power component of the work, and increasing the load on the functional systems of the athlete's body. That is why, leading rowing countries, except the competitive criteria, include functional, and sometimes physical, and technical criteria in their systems of rower's selection.

Thus, based on these results, we have identified several approaches to the formation of crews in rowing. These approaches can be divided into several groups by usage of any indicators (Fig. 1).

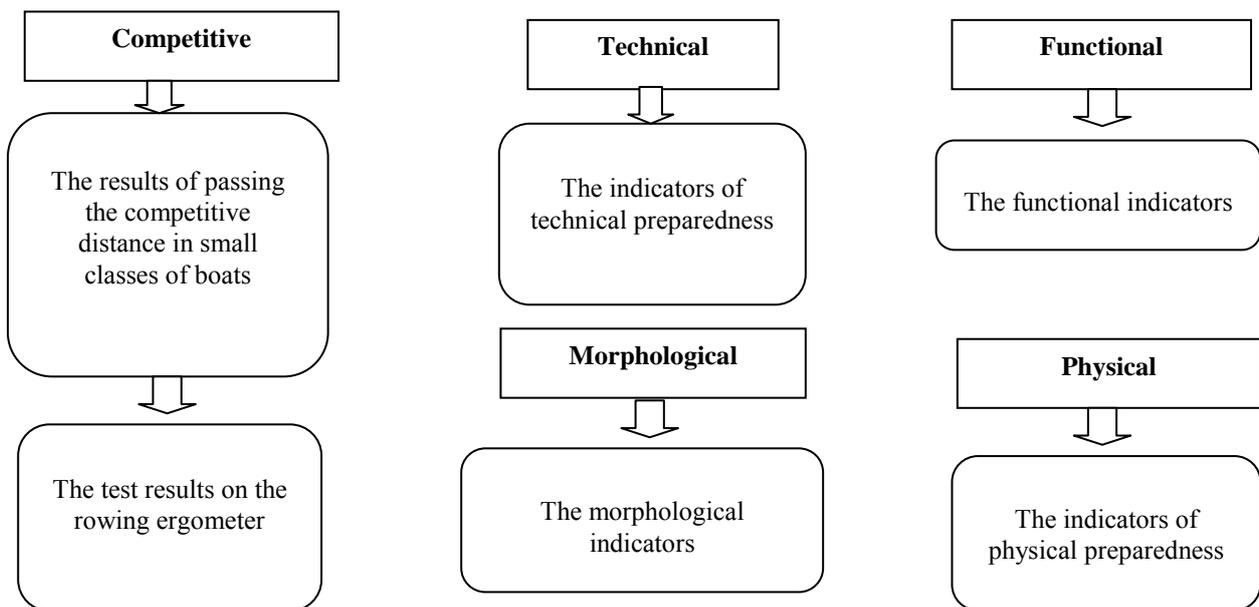


Fig. 1. Approaches to the selection of athletes in team boats and crews' formation in foreign countries

The results of research of foreign countries experience (Table 1) show that the selection of athletes to the team boats are held using two or three criteria, but there is no single approach. The selection system of athletes for the crew's formation is based on a system-integrated approach where the selection is seen as a set of interrelated elements having the goal, resources, communication with the external environment, the feedback. Its sense is in the fact that each object in the research process should be considered as a large and difficult system, and as part of a common system. We are considering the selection of athletes and the formation of crews as a system-integrated aspect, which identifies the elements that forms up this system; and as system-structural aspect that based on determination of the internal relationships and dependencies between the elements of the system and allows you to get an idea of the internal organization of the system [8].

Analysis of the data allowed us to identify in general terms the basic components inherent in the process of the team boat's creation:

- social and psychological patterns associated with the need to create a highly organized small group of that are able to deal effectively with group and individual objectives;
- stages of the crew's formation process (to a specific competition, in the annual training cycle in the course of many years preparation);
- criteria of the team boats formation both at the selection of the rowers in the crew, and when working with already established team;
- ways of assessment of the prepared crew, taking into account all of the criteria in the complex;
- structured system of managing the process of crews formation, consisting in a complex of organizational, educational impacts, in the selection of specific methods, conditions and exercise;
- justification of rowing as a team sport with the features of large rowing teams.

They are interrelated and representing only together a multi-faceted system of rowing crew's formation. Each component of the system will have its subsections, and the factors of its formation, which defines the structure of the system [1].

To make our approach to the selection of athletes for the crew's formation we were founded upon the experience of other countries that are leaders in rowing on the results of performances at the international competitions in 2012 (Table 2). Leading countries are Germany, the United Kingdom, Australia and New Zealand [10].

Table 2

The results of performance of foreign countries in rowing in 2012

	Olympic Games	WC U23	Total medals	Place
Australia	5	5	10	3
Great Britain	9	3	12	2
Germany	3	15	18	1
Italy	1	6	7	5
Canada	2	2	4	7
New Zealand	5	5	10	3
Russia	0	1	1	9
USA	3	3	6	6
South Africa	1	1	2	8

The selection systems in these countries have common and different features at the same time. They all use the competitive and functional criteria, and some of the technical and physical criteria. We can assume that the union of all of these criteria into a single system will enable more accurate and efficient implementation of the selection of rowers to form a successful team that could show good results in the international sport arena. Our proposed approach to the rowing crew's formation is also based on the complexity usage of indicators describing the different aspects of athletes' condition.

Thus, in our proposed selection system are included indicators that would characterize the level of preparedness of the rowers from different sides. There were used such indicators as the result of competitive activity in small classes of boats (1x, 2-), functional, technical, and physical indicators.

These indicators are the scientific rationale for the athletes' selection in rowing [4, 5, 6, 7] and the most informative. Because this kind of sport has cyclical nature of the work in team boats with high intensity and for 6-7 min long, then the main condition for high-performance of rowing crew also is the technical coherence of all team members. Compliance of the level of physical preparedness of rowers from one crew and similar in their values some of the functional indicators (VO₂max, stability of functional systems, anaerobic threshold, the indicator of the work's efficiency, etc.) are the key to achieving high results in the international sports arena by this team.

Conclusions.

The research found that a key point in the selection of athletes for the crew's formation in rowing is integrated usage of indicators describing the different aspects of athletes.

Also, on the basis of international experience were identified the most informative criteria for the formation of rowing crews. The obtained data make it possible to improve the process of crews' formation and increase the effectiveness of the team's performance on the international sport arena.

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Information about the author:

Iakovenko O.O.: ORCID: 0000-0003-2906-8669; burundy4ek@bigmir.net; National University of Physical Education and Sport of Ukraine; Fizkultury str. 1, Kiev, 03680, Ukraine

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