



Methods of teaching 200m running technique to students of the Faculty of Physical Culture

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Annotation: The author has studied the complex and diverse process of training athletes. The main parts of the aspects of training process management that are interrelated are identified. The means, methods, values of loads, regulation of training and competitive effects on the athlete's body are selected. Modern sports, and in particular athletics, have been characterized in the last decade by a high intensity of training and competitive processes. It can be assumed that this trend will develop in the future, determining the steady growth of world and national achievements. One of the ways to increase the effectiveness of the training process can be considered the widespread introduction of the results of scientific research and the transfer of relevant activities to the rank of a controlled process. The ideas of managing the training process using the means and methods of pedagogical control were first expressed back in the 50s. In further studies, it was shown that the physical condition of an athlete changes over time and is subject to management, the purpose of which is to achieve high results in the chosen sport on the basis of continuous improvement of physical condition, improvement of athletic performance, improvement in technique and tactics. In all cases, the starting point of management should be the determination of the athlete's condition.

Keywords: method, management, training process, organization, control, functional state aspects, achievements, result, athletes, load, athletics, sports, performance, students, technique, tactics.

Determination of the athlete's condition is possible only if there is a certain control apparatus, that is, pedagogical control. The main meaning of the control is to assess the functional state of athletes, training loads, exercise techniques, features of behavior at competitions, sports results. In all cases, the starting point of management should be the determination of the athlete's condition [1].

- 1. It is advisable to distinguish three types of conditions of athletes (depending on the duration of the time interval required to transition from one state to another):
1. 2. Permanent conditions that persist for a long period of time (from year to year) as sportsmanship increases, depending on the level of fitness, etc.
2. 3. Current conditions that change from day to day under the influence of training loads, depending on their volume, intensity, orientation and other reasons.
3. 4. Operational conditions that change during the training session under the influence of single loads [2].
4. Methods of control of permanent conditions allow to create standards of athletes of different qualifications, to determine the conditions characteristic of the highest sports form, etc. They could also be used in the selection process for the purpose of sports orientation in predicting results.
5. Methods of monitoring current conditions make it possible to make adjustments directly during the training process, vary loads, effectively combine training tools in micro-cycles.
6. Methods of monitoring operational conditions allow you to dose loads during a training session, determine rest intervals between exercises, the length of training distances, the number of jumps, throws, etc.
7. As we can see, the means and methods of their assessment and the composition of control tests in each state, as a rule, turn out to be different. In this regard, it is advisable to distinguish three

Table with 2 columns: Page number (1) and ISSN information (ISSN 2319-2836 (online), Published by ASIA PACIFIC JOURNAL OF MARKETING & MANAGEMENT REVIEW., under Volume: 12 Issue: 02 in February-2023, https://www.gejournal.net/index.php/APJMMR) and Copyright information (Copyright (c) 2022 Author (s). This is an open-access article distributed under the terms of Creative Commons Attribution License (CC BY). To view a copy of this license, visit https://creativecommons.org/licenses/by/4.0/)



forms of pedagogical control:

Step-by-step, the purpose of which is to assess permanent states.

The current one, whose task is to determine the daily changes in the condition of athletes.

8. Operational, allowing to give an urgent assessment of the athlete's condition at the moment.

9. Step-by-step control

Athletes of various qualifications (from beginners to masters of sports) recorded speed and strength indicators, elements of equipment, data on the work of the neuromuscular apparatus, cardiovascular system, anthropometric indicators.

It was found that due to age and qualifications, the functional state of athletes changed. Thus, in athletes, the strength indicators of the flexor muscles of the foot uniformly increased by 64-82% compared to beginners. In parallel, the build-up time of 50% of the force (force gradient) was shortened.

The increase in strength per unit of time ranged from 13 to 37%. The time was shortened in other speed tests, the time of motor reactions, indicators of the frequency of foot movements in running on the spot and with a brush in working on a telegraph key. However, the changes in these parameters were less pronounced. The growth rate here was only 12-13%. These data once again confirm that the speed qualities of a person are less amenable to development during training than strength, endurance, flexibility.

The dynamics of the state of the neuromuscular apparatus was characterized by minor changes in muscle hardness under arbitrary tension and relaxation. At the same time, the amplitude of muscle hardness, characterized by the ability to relax, varied strictly depending on the qualifications of athletes. The difference in performance during tension and muscle relaxation in qualified athletes was 30% greater than in novice runners. Significant changes were also found in the indicators of running technique. The shortening of the time of the reference phases reached 0.024 seconds. (18.2%), the pace of running increased by 0.54 steps / sec., the length of the step increased by 8-12 cm, etc.

The most active growth rates of running technique indicators were found in representatives of the junior ranks under the age of 17-18 years. At an older age, the growth rates of the corresponding risk indicators decreased in athletes of the first category and higher.

Otherwise, the indicators of cardiac activity changed. According to the heart rate data in a state of relative rest (before warm-up), a significant decrease in pulse was detected only when comparing the indicators of children aged 13-14 years and qualified athletes aged 19-25 years (78.9 ± 2.32 vs. 69.8 ± 2.36; p<0.05).

The standard warm-up caused a significant increase in the pulse rate of all athletes. However, the most pronounced changes were found in qualified athletes with 141.9 ± 2.86 strokes in 1 minute versus 120.5 ± 2.65 in beginners. This allows us to judge a wider range of adaptive reactions of the CCC of qualified runners [3].

Significant differences found when comparing the average values of athletes of different qualifications affected the nature of the relationship of the studied parameters. For example, in athletes of junior ranks, high correlation coefficients were detected by indicators of the strength of the muscles of the plantar flexors of the foot (0.691). As the runners' qualifications increased, the significance of these indicators decreased, and the masters of sports amounted to 0.003. And, conversely, qualified runners found a high correlation of results in running with the duration of the reference and flight phases with the pace of running (0.902; 0.533; 0,924).

For beginners, these indicators to a lesser extent determined the achievements in running. Despite the distinctive differences, in all correlation matrices there was a high correlation between

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the result in running and the indicators of the strength gradient of the flexor muscles of the foot, the duration of the supporting phases, and the pace of running. As shown by the results of factor analysis conducted according to the data of 400 m runners, the sports result of factors. The first of them (34.0–41.8%) is explained as a factor of general motor skills and combines the indicators of the number of steps at a distance, running pace, time of support and flight crossings, which is due to the overall level of speed and strength training and anthropometric data of athletes. The validity of the corresponding indicators was 0.831-0.991, that is, the level of speed and strength training, along with other factors, significantly affects the achievements in running.

The second factor (22.3–23.4%) is identified with the level of development of high-speed endurance. The greatest loads were found in this factor on the indicators registered at 300 and 400 m. This group of indicators included components of running technique, speed, time of reference and flight periods, running pace.

The third factor (10.3–13.7%) is explained as general fitness, depending on the adaptation of the cardiovascular system in accordance with training loads. This includes heart rate recovery indicators for 2 and 3 minutes.

The practical consequence of the conducted research is that due to the constantly changing condition of athletes, due to age and qualifications, the means and methods of step-by-step pedagogical control in order to manage the training process of athletes should be different. For novice athletes of younger age, it is advisable to use indicators of the frequency of movements recorded in laboratory conditions (teping test) and directly in running for 30-60 m, indicators of the strength of the muscles of the plantar flexors of the foot, the average length of the step.

For highly qualified athletes, it is preferable to use indicators that characterize the level of technical readiness: the pace of running, the time of the supporting and flight phases, the hardness of skeletal muscles under arbitrary tension and relaxation (myotonometry). In the set of benchmarks, it is advisable to include data on the pulse "cost" of standard loads when running at 100, 200 or 400 m, and also take into account the rate of heart rate recovery by 2 and 3 minutes after the working period.

The comparison of these data will enable the athlete and the coach to judge the state of fitness from year to year at various stages of preparation of the annual cycle [4].

1. Current pedagogical control.

The research objectives were reduced to solving two questions: selection of the most informative tests and development of methods for managing the training process based on the current pedagogical control.

The studies were conducted with the participation of athletes of the highest ranks specializing in jumping and throwing, who were tested daily for 10 weeks on a large group of indicators characterizing the state of the speed-power components of motor function, neuromuscular apparatus, hemodynamics.

All athletes were found to have multidirectional changes to the same type of loads. In this regard, observations of athletes were duplicated for 10 weeks with strict preservation of the content of training work. The method of duplicating the results of the study with subsequent averaging of experimental data allowed us to identify a general pattern in the dynamics of the motor function of athletes. General development work led to the recovery of athletes' strength, and speed-strength (exercises in jumping with a barbell, etc.) in a small and medium volume with high intensity caused, in its consequence, an increase in the functional state of athletes for the next training session. Thus, the state of motor function changes over time, and the nature of everyday changes is largely determined by the content of training loads.

In order to substantiate the tests suitable for assessing the condition of high jumpers and javelin

throwers in the conditions of current pedagogical control, a series of experiments was conducted, during which the nature of the relationship between various indicators was studied using correlation and factor analysis. On this basis, the selection of the minimum group of the most informative tests was carried out [5].

Summing up the results of several experiments, it can be argued that the dynamics of daily changes in the condition of athletes is determined by the combined influence of several different factors, one of which affects strength indicators, the second on speed, the third on hemodynamic.

An objective assessment of the daily condition of athletes in the conditions of current pedagogical control is possible only with a separate assessment of the strength and speed components of motor function using appropriate tests.

The conducted research makes it possible to recommend the following sets of tests for the practice of current pedagogical control.

Jumpers have the strength of the foot of the push leg, the hardness of the flexor muscles of the foot under arbitrary tension, a jump from a place up with a weight of 20 kg.

Throwers have muscle strength in the position of the final thrust, the hardness of the corresponding muscles under arbitrary tension, the time of the final movement with a load equal to the weight of the projectile (core, spear, etc.) [6].

Operational pedagogical control The criteria for the reliability of tests in the conditions of operational pedagogical control were chosen indicators of the reliability of differences in average values for each indicator registered in the state of relative rest of athletes and after each next metered load (for runners at 100 and 200 m). Thus, the data obtained from athletes before running, at certain sections of the distance, at the finish and in the recovered period (for 400 m runners) were compared. And in this case, the justification of the means and methods of operational pedagogical control was carried out on the basis of studying the nature of the main biological and biodynamic reactions of the body to standard metered loads, and also took into account the nature of the relationship of the studied indicators and their factor validity.

The training load for athletes specializing in 100 and 200 m running included three parts. The first included a warm-up run for 800 m, a set of general developmental exercises, acceleration for 60-80-90 m. The second part of the load was aimed at developing speed and consisted of repeated running at maximum speed from a low start at distances of 30 and 60 m. Repeated running of distances was carried out in the phase of rapid decrease of the pulse to 110-115 beats per minute. The third part of the load was aimed at developing high-speed endurance, and running work was carried out at distances of 80, 200, 150, 100 m with rest until the pulse rate was restored to 120-130 beats per minute.

It was found that the load aimed at the development of speed and high-speed endurance had a different effect on the state of motor function and parameters of athletes' running technique. The load aimed at a correct decrease in the strength of the muscles of the plantar flexors of the foot, a decrease in the speed of individual movements, an auditory motor reaction and an increase in running time. The ability of the central nervous system to frequency activity remained quite high. In general, the level of motor function of athletes decreased, and its integral criterion-running time – increased due to the deterioration of most biodynamic indicators. For example, the running time of junior-level sprinters increased by 0.39 sec., for qualifying - by 0.014 and 0.009 sec. and the pace of running decreased by 0.21 and 0.18 steps/ sec.

The changes in the motor parameters of the more qualified sprinters were less pronounced, which indicated a high degree of mastery of motor skills and optimization of all motor activity.

The results of the correlation analysis show that the athletic performance in running among junior-level sprinters after both types of training load was determined by the influence of a large number of indicators, which included strength and speed-strength indicators, as well as indicators of running technique.

A distinctive feature of the reaction of the body of older athletes was a decrease in the number of indicators correlated with the results in running. Significant coefficients in the matrices of qualified sprinters were obtained only in terms of running pace and duration of the reference and flight phases.

Thus, with the improvement of the sprinter's qualifications, the nature of the relationship changed in terms of reducing the number of indicators correlating with the results in running. At the same time, the validity of the indicators increased.

For example, if the beginners' running results correlated with the time of the reference phases at the level of 0.641, then the coefficients for qualified athletes were 0.923, etc.

According to the research results, the majority of the studied indicators decreased in 400 m runners, regardless of their qualifications, by the time of finishing. However, statistically significant changes were found only in terms of the length and frequency of steps, the time of the support and flight periods, the strength of the flexor muscles of the foot, the hardness of the muscles under arbitrary tension and relaxation, the amplitude of the hardness of the muscles and the weight of the lower leg.

In the implementation of propaganda work aimed at increasing the legal consciousness and culture of the population in the protection and provision of the rights, freedoms and legitimate interests of the child in society, strengthening legality and further strengthening the reliable protection of the rights and freedoms of children.

The results of factor analysis allow us to assume that the fatigue fluttering in the process of running at 400 m can be objectively assessed only with the help of at least three groups of indicators. These indicators reflect the factor structure of athletes' special fitness and may consist of the following tests. Firstly, tests characterizing the speed and strength capabilities of athletes by changing the length and frequency of steps and compiling these parameters at the beginning of the run and at the finish. Secondly, tests characterizing the speed capabilities of runners in relation to running 400 m, that is, indicators obtained as a result of comparing the speed of running, the duration of reference and flight periods at the beginning and end of the distance. Thirdly, with the help of indicators characterizing the processes of restoring cardiac activity in the post-working period. It is logical to consider the heart rate indicators for 2-3 minutes as the most informative. recovery period [7].

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