SUBSTANTIATIONS OF THE DIFFERENTIATED METHOD OF TRAINING STUDENTS IN RUNNING FOR SHORT INTERVALS IN ADVANCED SPECIALIZATION

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ABSTRACT

The article presents experimental data confirming the effectiveness of the developed differentiated method of training sprinters, depending on their individual characteristics.

Keywords: Differentiated techniques, sprint, in-depth specialization, training process.

INTRODUCTION

The continuous growth of sporting achievements and the ever-increasing competition on the world stage make it necessary to further improve the system of training athletes. One of the conditions for the effective preparation of the reserves of athletics sports is a systematic multi-year training, which implies a strict sequence of setting in solving problems, the choice of means and methods, permissible training loads in accordance with age characteristics and the level of preparedness involved.

Further improvement of the effectiveness of the training process and improvement of the system of sports training in athletics, necessitates a systematic analysis of the control of technical and physical fitness and on this basis to individualize the training process at various stages of the annual training cycle. Therefore, in order to further improve the method of training runners for short distances, it is necessary to identify the main factors contributing to the growth of athletic performance at the stage of advanced specialization. However, to date, the software and methodological support of the system of long-term training of athletes, and especially its most important stage - in-depth sports specialization, has significant drawbacks.

MATERIALS AND METHODS

The scientific methodological literature most often covers the development of physical qualities and age features involved (AA Belberov, 1974; M.Ya. Nabatnikova, 1982; VP Filin 1983, NA Knyazeva 1983). Very little attention is paid to the structure of training and competitive loads, the combination of means of versatile and special physical training.

At the same time, there is an insufficient number of studies on the substantiation of a differentiated approach in the preparation of sprinters, taking into account the individual characteristics of athletes. N.A. Sultanov, (1979) differentiated the method of training sprinters on the basis of the revealed differences in physical development, physical and technical readiness of athletes 17-19 years old, specializing in running 100 and 200 meters. However, with students specializing in short distances, such studies have not been conducted for more than 20 years.
The importance of this kind of research is enhanced by the lack of the necessary scientific and practical developments concerning the use of various approaches to the individualization of the training process of sprinters (Ershov V.D.,1988). In this regard, this problem remains open and does not lose its relevance in many important theoretical, pedagogical and recreational areas.

The purpose of the study was to improve the differentiated methodology of the training process on the basis of the identified differences in physical development, physical and technical readiness of distance runners at the stage of advanced specialization.

RESULT AND DISCUSSION

Monitoring individual indicators of speed-strength readiness of short-distance runners makes it possible to identify the regular links between training loads and the immediate, delayed and cumulative effects caused by them. The results obtained make it possible to quantify the magnitude and direction of the impact of physical activity on the physical state of athletes - sprinters, which contributes to the individualization and optimization of the process of modeling micro-, meso- and macrocycles. This will serve as the basis for a targeted increase in special physical fitness and its implementation in major competitions. After an active pedagogical experiment, control over the dynamics of the special performance of athletes participating in the experiment is carried out based on the results of participation in competitions.

Table 1. Dynamics of the level of physical fitness of runners during the pedagogical experiment

<table>
<thead>
<tr>
<th>Control exercises</th>
<th>gender</th>
<th>before the experiment</th>
<th>2nd-testing</th>
<th>3rd - testing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>x ±σ</td>
<td>x ±σ</td>
<td>%</td>
</tr>
<tr>
<td>long jump (m)</td>
<td>M</td>
<td>3,08±0,03</td>
<td>3,08±0,03</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>2,60±0,06</td>
<td>2,62±0,06</td>
<td>1,0</td>
</tr>
<tr>
<td>3 times (m)</td>
<td>M</td>
<td>9,04±0,23</td>
<td>9,12±0,18</td>
<td>0,9</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>7,30±0,28</td>
<td>7,27±0,28</td>
<td>0,4</td>
</tr>
<tr>
<td>10 times (m)</td>
<td>M</td>
<td>30,34±1,12</td>
<td>30,48±0,1</td>
<td>0,5</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>25,40±0,56</td>
<td>25,86±0,62</td>
<td>1,8</td>
</tr>
<tr>
<td>50 m jumps on time (sec)</td>
<td>M</td>
<td>6,70±0,06</td>
<td>6,62±0,17</td>
<td>1,2</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>7,70±0,14</td>
<td>7,55±0,21</td>
<td>2,0</td>
</tr>
<tr>
<td>30 seconds running</td>
<td>M</td>
<td>2,95±0,05</td>
<td>2,93±0,05</td>
<td>0,7</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>3,38±0,06</td>
<td>3,37±0,06</td>
<td>0,3</td>
</tr>
<tr>
<td>150 meters run from the start</td>
<td>M</td>
<td>16,65±0,21</td>
<td>16,55±0,19</td>
<td>0,6</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>18,1±0,21</td>
<td>18,1±0,28</td>
<td>0,3</td>
</tr>
</tbody>
</table>

As is known, in the particular case, the increase in the result in the exercise under exercise is observed after optimal training loads.

The manifestation of this pattern is well illustrated by the following table, in which the dynamics of growth in competition results are shown, shown in May, were recorded at a time...
when the volume of loads reached particularly significant values. Then, due to a decrease in
the volume of workload after an active pedagogical experiment, we observe a steady increase
in the growth of the result of the competition for all subjects. The best results were shown in
June, that is, the period of the most important competitions (Universiade).

Table 2 The individual dynamics of the results of the competition participants
pedagogical experiment

<table>
<thead>
<tr>
<th>Name</th>
<th>Gender</th>
<th>best result last season</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>X1</th>
<th>X2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.S.</td>
<td>f</td>
<td>11,9</td>
<td>12,22</td>
<td>11,98</td>
<td>11,7</td>
<td>11,9±0,29</td>
<td>11,6±0,14</td>
</tr>
<tr>
<td>F.L.</td>
<td>f</td>
<td>11,9</td>
<td>12,0</td>
<td>11,8</td>
<td>11,5</td>
<td>11,7±0,29</td>
<td>11,5±0,3</td>
</tr>
<tr>
<td>S.T.</td>
<td>m</td>
<td>11,0</td>
<td>11,0</td>
<td>10,7</td>
<td>10,6</td>
<td>10,7±0,32</td>
<td>10,6±0,11</td>
</tr>
<tr>
<td>A.G.</td>
<td>m</td>
<td>10,7</td>
<td>10,8</td>
<td>10,6</td>
<td>10,5</td>
<td>10,82±0,15</td>
<td>10,52±0,18</td>
</tr>
<tr>
<td>T.R.</td>
<td>m</td>
<td>10,9</td>
<td>10,64</td>
<td>10,6</td>
<td>10,7</td>
<td>10,6±0,14</td>
<td>10,5±0,2</td>
</tr>
<tr>
<td>D.A.</td>
<td>m</td>
<td>10,7</td>
<td>10,6</td>
<td>10,4</td>
<td>10,2</td>
<td>10,4±0,22</td>
<td>10,3±0,3</td>
</tr>
</tbody>
</table>

Note: The main distance is 100 m, X1 is the average group indicator of the results in the 100
m race last season;
X2 is the average group indicator of results in the 100m race after the experiment.

Differentiated approach to the training process involves taking into account the characteristics
of each athlete in terms of the optimal use of its capabilities and accumulated experience. In
particular, his knowledge, abilities, skills, level of physical and technical preparedness, habits,
emotional expression, life positions and various types of activity. Thus, the study of the specific
features of the student is greatly facilitated, the possibilities of using non-traditional forms of
training are expanded, and the intellectual development of athletes is ensured. And, which is
very important, the zone of their close development of sports achievements is revealed.

The differentiated method has certain advantages.
1. Creates the possibility of leveling (pulling up) involved, the level of fitness which does not
meet the requirements of sports standards sprint disciplines;
2. Provides an opportunity for a coach to pay attention to poorly performing students, to help
them in mastering the technique of sprinting;
3. Increase the general level of physical fitness;
4. Successful (gifted) short distance runners train more intensively;
5. It helps the athletes to develop self-esteem, confidence in their abilities, and for the poorly
performing athletes, to raise their spirits and mood, to eliminate their off-sets, to awaken the
desire to equal themselves with other guys.

In order to increase the efficiency of the process of developing motor skills and speed running
skills, it is advisable to take into account the individual features that we have identified. Based
on the data obtained, it was revealed that the increase in the effectiveness of technical training
processes in sprint is due to the use of a differentiated approach in training and improving
technology, depending on the age and level of preparedness of the sprinter at all stages of long-
term training. The evaluation of the technical preparedness of the sprinter is carried out on the
basis of the analysis of the time biomechanical characteristics of the running step, and the level
of preparedness is determined by the result of a 30 m run from a high start or 10 m on the move.
To improve the technique, the use of motor tasks gives positive results, the main content of which is to selectively influence the length and frequency of the step by shifting the focus of movement to the corresponding driving element of the running step.

Pedagogical control over the level of efficiency of the leading elements of the technique is promoted by the “hard” and “easy” jogging exercises, where high demands are placed on the qualitative side of such elements as moving the fly foot forward in the support period and “biting” bending of the tibia at the beginning of the flight with the active legs forward. The first task helps to increase the step length, and the second - the frequency of steps. Apply motor tasks should be all the way to improve technology. At the initial stage, they expand the stock of technical abilities of sprinters, contribute to the determination of individual characteristics of the step, serve as a good foundation for increasing the maximum running speed. During the in-depth work on the technique, additional reserves appear in the realization of the motor potential, the interaction between the driving elements of the technique and the individual components of these elements is refined and improved.

CONCLUSION

The use of special strength exercises becomes more focused. If you focus on the lagging link in the technique of running. This opportunity is provided when comparing the results of the implementation of motor tasks and the “normal” version of running with maximum speed. It is advisable to use special strength exercises all year round. At the early stage of the preparatory period, four classes per month should be allocated for this. It is more expedient to use the funds in the following order.

In the preparatory period:
- at the basic stage of preparation, preemptive use of running with resistance and additional local loads of 30% of the total running volume and 90% of the running volume on segments over 80 m with an intensity of 100-91% of the maximum speed is used.

In the competitive period:
- the predominant use of running athlete with the course of the movement, with a decrease in volume by 40% of the amount of running, performed in the preparatory period.

In order to improve the quality and effectiveness of the methodology for training qualified 400 m runners, it is advisable to use a diverse method of varying the development of special endurance with differentiating the basic means of running training in order to emphasize the development of lagging physical qualities.

REFERENCES