The effectiveness of additional classes in physical education among young males in an educational institution

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Abstract. The purpose of the article is to develop and practically implement the pedagogical technology of additional classes in physical education on the basis of a free and informed choice of forms and types of motor activity. The formation of a healthy lifestyle, a conscious attitude to one's own health and physical fitness at all stages of personality development becomes a socially significant and urgent task of society. This problem is solved by new approaches to the system of physical education, the effective implementation of its valeological foundations.

Materials and methods. The study was conducted with youth graduates of the Chelyabinsk municipal educational institution with similar age and anthropometric data. Pedagogical testing was carried out to obtain objective information about the level, structure and dynamics of students' physical and functional fitness during the academic year. We used control exercises and functional tests, which are widely used in scientific research and practice both in our country and abroad. Results. The paper considers the methodology of additional classes for students based on the free and informed choice of forms and types of motor activity, taking into account the individual characteristics of their physical development and fitness. The indicators of physical fitness in young males are presented. Conclusion. Individually selected additional classes for youth graduates increase the physical potential of students.

Keywords - physical fitness of young men, physical potential, differentiation of additional classes.

I. INTRODUCTION

Human life in modern socio-economic conditions is characterized by increasing intellectual, emotional and mental stress with a sharp decrease in the motor functions of the body, which reduces the physical potential of both an individual and society as a whole. Therefore, the socially significant and urgent task of society is the formation of a healthy lifestyle, a conscious attitude to one's own health and physical fitness at all stages of personal development [4]. This problem should be solved through new approaches to the system of physical education, the effective implementation of its valeological foundations. At the same time, the socially determined need for targeted improvement of human health should today be transformed into a cultural need, a norm of life.

The main goal of modern education is the realization of personal interests and needs, a free and informed choice of forms and types of motor activity [1].

Under these conditions, the development of values of physical education becomes a powerful incentive for the self-realization of the human personality, primarily through new opportunities based on a high level of functional and psychological abilities acquired in the process of implementing a personality-oriented educational content.

The leading factor in youth physical activity should be a conscious need for mastering the values of physical education, which is stimulated by a sense of pleasure from physical activity, the growth of one's own physical abilities, increased vitality, capacity for work, increased authority and respect from others [2].

Interest in physical education is formed on the basis of the natural (primary) needs of the individual in movements, new impressions, new information. As a result of this, new motives and interests can be formed (to achieve better results, become more attractive, slimmer) for maintaining physical fitness and, finally, being constantly healthy.

Interests, activity and needs determine the attitude to physical education. show that at present the society is not satisfied with the educational activities.

Currently, the level of physical fitness of students and especially young males is assessed as extremely unsatisfactory. One of the reasons for this is the extremely weak orientation of educational institutions on the formation and development of students' individuality, abilities and interests.

Thus, the current situation is characterized by a number of contradictions:

- between public awareness of the urgent need to maintain health through the development of physical education and the insufficient degree of use of adequate socio-pedagogical conditions for its formation;
- between the level and volume of social experience in the improvement of personality and the degree to which the
potential of physical development is realized in the vast majority of students.

II. MATERIALS AND METHODS

The following research methods were used: theoretical analysis, generalization, anthropometry, pedagogical observations, pedagogical testing, forecasting, pedagogical experiment, mathematical and statistical processing of the data obtained.

In order to determine the impact of various organizational and pedagogical conditions on the formation and preservation of health, and on increasing the level of physical development, motor and functional fitness in young males, a study of graduates of secondary schools was conducted (Table 1).

The study involved 59 young males from various municipal educational institutions of Chelyabinsk. The participants were divided into two groups - CG-1 and EG-1.

For 9 months, CG-1 participated in the classes based on the traditional school program in physical education and contained traditional sports - various types of athletics, team sports, gymnastics, cross-country skiing, etc.

The traditional content of physical education classes in EG-1 was changed by elective courses suggesting a free and informed choice of forms and types of physical activity in the amount of 2 hours a week.

When implementing additional physical education classes, the following were taken into account:
- the focus of extracurricular activities associated with the development of various physical qualities;
- the students’ ability to use various systems and types of physical exercises in independent physical education classes that have a health-improving, recreational and conditioning focus;
- individual level of physical and functional fitness.

The practical part of the elective courses consisted of a methodology for developing leading physical qualities, the main muscle groups and the basic body systems while taking into account the age-gender characteristics of students. The experiment was conducted under constant pedagogical supervision. All necessary measurements were performed every two months.

For each of the physical qualities, load components were proposed: speed of execution, duration of exercises, number of repetitions, intervals and nature of rest.

In the experimental group, physical load was distributed as follows:
- by the involvement of muscle groups: global - 70%, local - 30%;
- by nature: standard uniform - 70%; alternate - 30%;
- by the duration of rest: complete recovery - 70%, incomplete - 30%;
- by the type of energy supply: anaerobic alactate (speed - strength) - 15%, anaerobic glycolytic (speed - endurance) - 15%, aerobic (general endurance) - 70%.

III. RESULTS AND DISCUSSION

A comparative analysis of indicators of the physical potential of young males revealed significant differences in the studied parameters in the control (CG-1) and experimental (EG-1) groups. Indicators of the physical potential of young males from the experimental group significantly exceeded those of the control group (Table 1).

In the experimental group, the following indicators were statistically significant:

- speed-strength indicator (standing long jump, shuttle run 4x9 m);
- general (1000 m running) and special endurance (pull up bar exercise, sit ups);
- functional indicators (lung capacity, Gench test, Stange’s tests).

TABLE 1. INDICATORS OF PHYSICAL DEVELOPMENT AND FUNCTIONAL FITNESS OF GRADUATES

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Results (X±m)</th>
<th>Significance</th>
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<tbody>
<tr>
<td></td>
<td>CG-1 (n = 31)</td>
<td>EG-1 (n = 28)</td>
</tr>
<tr>
<td>Body length, cm.</td>
<td>175.2±4.2</td>
<td>178.9±3.7</td>
</tr>
<tr>
<td>Body weight, kg.</td>
<td>62.4±8.6</td>
<td>70.6±6.3</td>
</tr>
<tr>
<td>Chest circumference (pause), cm</td>
<td>82.6±2.9</td>
<td>91.5±5.1</td>
</tr>
<tr>
<td>Shoulder circumference (tension), cm</td>
<td>28.6±1.7</td>
<td>32.4±2.5</td>
</tr>
<tr>
<td>Standing long jump, cm</td>
<td>217.1±15.6</td>
<td>251.3±19.2</td>
</tr>
<tr>
<td>Shuttle run 4x9 m, s</td>
<td>9.66±0.38</td>
<td>9.20±0.4</td>
</tr>
<tr>
<td>Sit ups per 1 min, number</td>
<td>36.1±5.3</td>
<td>49.8±4.7</td>
</tr>
<tr>
<td>Push-ups, number</td>
<td>37.6±9.1</td>
<td>46.2±9.7</td>
</tr>
<tr>
<td>Pull up bar exercise, number</td>
<td>7.8±3.2</td>
<td>15.7±3.4</td>
</tr>
<tr>
<td>1000 m running, min.s</td>
<td>3.58±9.7</td>
<td>3.16±9.1</td>
</tr>
<tr>
<td>Tapping test</td>
<td>37.2±3.6</td>
<td>39.4±4.8</td>
</tr>
<tr>
<td>Wrist dynamometry, kg</td>
<td>43.8±4.2</td>
<td>49.4±4.6</td>
</tr>
<tr>
<td>Sitting forward bend, cm</td>
<td>6.2±4.4</td>
<td>13.6±2.6</td>
</tr>
<tr>
<td>Vital capacity, ml</td>
<td>3238±310</td>
<td>4692±214</td>
</tr>
<tr>
<td>Stange’s test, s</td>
<td>41.7±18.2</td>
<td>92.5±18.7</td>
</tr>
<tr>
<td>Gench test, s</td>
<td>30.1±9.4</td>
<td>62.8±12.3</td>
</tr>
</tbody>
</table>

IV. CONCLUSION

The pedagogical technology of additional classes in physical education based on a free and informed choice of forms and types of physical activity is created in compliance with two conditions:
- the content of physical education, forms and methods of educational and extracurricular activities contributed to the satisfaction from both the process and the result of training;
- information support of the educational process made it possible to determine the features of individual physical fitness and prospects for its further development for each student.

The scientific results obtained in the pedagogical experiment confirm the hypothesis about the positive impact of conducting additional classes in physical education based on the free and informed choice of forms and types of motor activity.

During the study, the relationships between the leading and associated with them physical qualities were identified, which made it possible to determine that with an increase in the leading quality, the associated quality also increases.
ACKNOWLEDGEMENT

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