79 - EXPEDIENCE OF APPLICATION MODERN TECHNOLOGIES IN THE SYSTEM OF SCHOOLCHILDREN'S PHYSICAL EDUCATION IN UKRAINE

IVASHCHENKO SERGII NIKOLAYEVICH
Doctor of Medical Science
National University of the Physical Education and Sport of Ukraine
Professor of Theory and Methods of Physical Education
Kyiv, Ukraine
Algis6274@hotmail.com

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INTRODUCTION

Nowadays, many scientists from different countries of the world are working at the problem of improving the system of physical education for all age groups of the population [2].

To ensure full adaptation a person to the living conditions in modern settlements, require high level development of basic physical qualities. Therefore it is extremely important to conduct some scientific investigations, devoted to the process of physical education of pupils in schools and other educational institutions [3, 5].

Thorough analysis of the domestic and foreign scientific literature suggests that in our time many scientists continue to find the optimal ways to improve the system of physical education in schools, and this direction of research work is considered one of the most important in the field of physical culture and sports [1, 7].

Harmonious development of the basic physical qualities of a person in his or her childhood and adolescence is an extremely important not only for adaptation to conditions in modern society, but also to successful performing difficult and responsible work assignments in the future [4].

In the course of most kinds of professional activity, in general, are used such physical qualities, as strength, endurance, agility, flexibility, and many others. So, for the full development of these qualities the process of their formation must be started in childhood and continued for a long period of time [9].

In order to successful implementation modern system of physical training of schoolchildren, designed to develop their basic physical qualities, it is necessary to use such mode of physical loads, which is sufficient for the formation of these physical qualities, but will not harmful for health of all schoolchildren. As a rule, the implementation of this complicated process requires the participation of skilled specialists and large resource of time [6, 10].

The results of research works, carried out in many countries in recent years, strongly suggests, that scientists, working in many different countries of the world, are making significant efforts to create a universal global system of physical, intellectual and spiritual education of the people, aimed at preserving and strengthening their health [8].

METHODS

Subject matter

In the course of this research we used the following methods: analysis of scientific information from domestic and foreign sources; pedagogical supervision; pedagogical experiment; questionnaires, surveys and interviews; testing schoolchildren's health indicators; determination of the level of pupil's physical development; statistical analysis of the data obtained as a result of the experiments.

The main objective of this research was to study the optimal conditions for the application of different kinds of innovative technologies in the system of physical education in Ukrainian schools to optimize the process of schoolchildren's physical development and to preserve and strengthen the health resource of pupils.

Experimental design

This study was conducted in the period from March 2012 to April 2014. To participate in the study were involved in 268 secondary school students from different regions of Ukraine. The study examined changes in characteristics of physical development of pupils at the background of the standard training schemes, as well as through the use of innovative technologies.

Statistical analysis

Statistical processing of the data obtained in the course of this study was carried out with the use of modern computer programs used in the field of medicine and physical training of various categories of the population.

RESULTS

In the course of executing this research work we have sought to obtain information about the regularities of changes the indicators, characterizing the level of development of pupil's physical qualities and state of their health, depending on the application of innovative technologies in the process of schoolchildren's physical education.

To participate in this study, we examined schoolchildren, studying in 24 schools, located in the central and western regions of Ukraine, and selected 268 pupils of them, who have had comparable anthropometric, physical, and other parameters, and which were in comparable amounts in the corresponding age groups.

In the process of physical education of the first part of schoolchildren, selected to taking part in experiment have been used the standard curriculum of school physical training, approved by the Ministry of Education and Science of Ukraine.

During all the period of physical education the second group of schoolchildren, taking part in research, were used some innovative technologies and modern teaching methods. Health status and the degree of development the basic physical qualities of schoolchildren were thoroughly analyzed during the whole period of observation.

The degree of development the basic physical properties of everybody of the surveyed schoolchildrtn was assessed on the basis of the results of performance the relevant special testing physical exercises.

It should be noted, that all applicable testing exercises were fully adapted to the level of potential physical abilities of each of the participants in the experiment.

Conducting the monitoring of all changes in the state of health for everybody of schoolchildren was carried out on the basis of the results the thorough medical examinations that were carried out systematically throughout the all period of providing this research.

It was established, that some of schoolchildren, selected to participate in this study, in their early childhood had some contraindications to certain types of physical exercises, because they had some diseases or any functional abnormalities in the condition of the body systems.

Despite of this fact, many of those schoolchildren usually have successfully coped with most of the typical physical activities, provided by the official program of the physical fitness, designed for the pupils in primary and secondary schools.

For those schoolchildren, who were not able to perform successfully the most common types of physical activity due to the deterioration of their health status, have been attributed to the so-called special medical groups, in which classes were held in a special program.

Some of the results, obtained in the course of this investigation, are presented on the next table (Table 1).

Table 1. The results of schoolchildren's test exercises

Physical tests	The results of the exercises			
	Benchmark data		Outcomes	
	First group	Second group	First group	Second group
Sprint 30 m (sec)	7,5 ± 0,8	7,5 ± 0,8	6,9 ± 0,7	7,1 ± 0,7
Shuttle run 10 x 4 (sec)	12,9 ± 1,2	12,9 ± 1,2	12,1 ± 1,0	12,3 ± 1,1
Lifting the body of a prone position	24,8 ± 2,3	24,8 ± 2,3	32,2 ± 2,8	29,8 ± 2,6
Flexion arms in emphasis lying	17,2 ± 1,3	17,2 ± 1,3	21,5 ± 1,9	19,3 ± 1,4
Standing long jump (cm)	131,6 ± 10,4	131,5 ± 10,3	148,6 ± 11,4	136,6 ± 10,8

The information presented in this table indicates that the initial results of the testing exercise are approximately equal in both treatment groups of schoolchildren.

However, the results of the re-run the same physical tests after providing the course of physical training (with and without the use of innovative technologies) between schoolchildren of first and second groups are differed significantly.

The level of enhancement the results of control physical tests was significantly more substantial in the first group of schoolchildren, where have been applied some modern innovative technologies in the course of physical training.

Also, in the first group, where have been applied some innovative technologies, the degree of growth the indicators, which are characterizing the level of physical development of schoolchildren, was significantly higher, than in another group, where were used the standard technologies of schoolchildren's physical education.

An objective analysis of the results, obtained in the course of our study, showed, that the most perceptible results in the deal of optimization the process of development all basic physical qualities of schoolchildren, were obtained in those cases, where certain modern innovative technologies, practically applied in the process of physical education of pupils were used absolutely correctly, wisely and under holding continuous medical supervision.

The results, obtained in the course of our investigation, confirmed the view of many scientists, working in the field of physical education and sport, that every child has his own individual and unique set of physical, mental and moral qualities.

And all of these qualities are usually dynamically changing during the long and complicated process of natural age-related development of the children's organism.

It was confirmed, that pretty much the nature and character of most changes in the physical qualities of the schoolchildren's organism in the process of his natural individual development depends on the nature and character of pupil's impellent activity in this period of his life.

Thus, by means of affecting the character and style of any child's impellent activity, we can to influence the process of development of his major impellent qualities in the period of the active developing of his organism.

As has been proven by results of studies, provided by many prominent scientists around the world, working in the sphere of physical education and sport, there is a relationship between the degree of optimality the level and character of impellent activity of any child and the level and character of his organism's physical development.

In addition, in the course of those experiments have been fixed several cases, where the fact of application some innovative technologies in the process of physical education, led to appearance the specific effect of accelerating the process of developing the main physical qualities of pupil's organism (effect of acceleration).

DISCUSSION

The results, obtained in this study, strongly suggest that the correct application of some innovative technologies in the process of physical education in primary and secondary schools helps to optimize the process of developing the main physical qualities of schoolchildren.

In order to improve the physical condition of schoolchildren and to increase the effectiveness of the system of their physical education usually are use special educational-training programs, based on the principle of applying some innovative technologies.

One of the main advantages of these special programs is that, their practical utilization in practice not only contributes the development of basic schoolchildren's physical qualities, but, also, just as importantly, contributes to the preservation and strengthening of their health.

It should be noted that for the proper application of such special programs requires great experience, exceptional patience and a very high level of professional skill of all physical education specialists, teachers and coaches.

But in order to achieve the desired result in schoolchildren's physical development, it is often not enough to have only high-skilled physical education professionals, but it is required the proper using of special equipment and specific training techniques.

Given the fact that in many countries around the world, scientists are working to improve educational programs in physical education, it can be assumed that most of these programs will be used by the latest innovative technology to significantly improve the efficiency of the educational process of young people.

Given the fact, that in recent years have been conducted a lot of scientific studies, that was focused on the investigation the impact of modern educational and training programs on the health of schoolchildren in primary and secondary schools, it can be assumed, that the widespread adoption in the practice the best of these programs will not only contribute the further improving the level of physical development of spupils, but also enhance their health.

It is well known fact, that the optimization of the nature and mode of schoolchildren's impellent activity is one of the

most effective ways to maintain an optimal state of their health, as well as to improve the state of their mental and emotional condition.

Furthermore, the results of many scientific studies have confirmed the assumption that reducing the violation and the nature of physical activity of schoolchildren can play the role of one of the most dangerous factors, giving rise to pathological conditions, such as functional disorders of the organs of the cardiovascular system, diabetes, obesity, disorders metabolism and others.

It should be noted, that information, obtained in the course of our research, can be successfully used for the grounding and development some special educational and training programs, designed for the physical training of schoolchildren, having pathological changes in their health statuswith and engaged in physical training in special medical groups.

This direction of research-scientific work can be considered as the most promising direction on the possibility of further improvement the system of physical education in schools in order to solving two very important tasks: to ensure optimal way of development main physical qualities of schoolchildren, as well as protection and preservation their health.

CONCLUSIONS

So, based on the results of the research, we can draw the following conclusions:

1.The application in the system of physical education of schoolchildren in primary and secondary schools special educational-training programs, based on applying innovative technologies, helps to streamline the style of their impellent activity, provides the optimal development of their physical qualities and creates favorable conditions for preservation of their health resource.

2.One of the main conditions for the correct application of modern educational-training programs, based on the use of innovative technologies, requires an extremely high level of qualification all specialists, working in the sphere of physical education and sport, as well as constant monitoring any changes in the state of schoolchildren's health.

3.The scientific information, obtained in the course of this study, can be successfully used to grounding and development new educational-training programs, based on the application of innovative technologies, and intended for schoolchildren of different age categories, the main purpose of which is to optimize the process of development the main pupil's physical qualities while maintaining and strengthen their health.

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