ACTUALIZATION OF PHYSICAL EDUCATION SYSTEM IN REGIONS OF THE RUSSIAN FEDERATION: EXPERIENCE OF SOUTH URAL

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Abstract

Background: Physical education (PE) is an educational course related to keeping fit through physical activity and exercises. It is taken during primary and secondary education and encourages psychomotor learning in a play or movement exploration setting to promote health.

According to the President of the Russian Federation (RF), development of domestic PE and sports is a collective task which is beyond the scope of just one body, whether it is the Ministry of Education, the Ministry of Public Health, or the Ministry of Sport. The solution should involve local authorities as well as mass media support. Regional law-making in the RF is now oriented to the enhancement of PE and sport management.

The aim of our research was to estimate the main tendencies characterizing changes in the RF regional system of PE in general and in individual structural components (organizational, regulatory, theoretical, methodical, and conceptual) and to compare these tendencies with global trends.

Materials and Methods: We reviewed literature, documentary, and regulatory sources and used general logic methods of data analysis and synthesis. We also estimated special-purpose programs implemented under the patronage of regional ministries of PE, sport and tourism: “Development of information society and formation of digital government in Chelyabinsk Oblast”; “Regional special-purpose program of preliminary military training of youth in Chelyabinsk Oblast”; and “Social support of physically challenged people in Chelyabinsk Oblast in 2011-2016”.

Results: The law #329-FZ “On physical education and sports in the Russian Federation” enacted in 2007 initiated changes of some local laws in several regions of the RF, but the overall situation is still ambiguous. We assessed the key accomplishments of individual regions and performed critical analysis of activity of regional ministries of PE, sport and tourism based on the evidence of Chelyabinsk Oblast. The revealed positive tendencies include the growing number of people engaged in PE and sport, annual regional and local budgeting and funding of additional contracts for head coaches of sports schools and children’s sports clubs, and a well-formed complex system of sport event organization for various groups of population.

Conclusions: On-going transformations of main structural components (organizational, regulatory, theoretical, methodical, and conceptual) of the Russian PE system may become a precondition for positive changes in the functioning of this system in regions of the RF. The key point is that these transformations are consistent with global tendencies and complement them bringing in specific regional and national aspects.

Keywords: Physical education system, regional special-purpose programs.

1 INTRODUCTION

Physical education, also known as Phys Ed., PE, Gym or Gym class, and known in many Commonwealth countries as physical training or PT, ([1]) is an educational course related to maintaining the human body through physical exercises (i.e. calisthenics). It is taken during primary and secondary education and encourages psychomotor learning in a play or movement exploration setting to promote health ([2]).

The President's Message to the Federal Assembly of the Russian Federation (2006) states that one of the most pressing issues in the country is the demographic situation, which means that several measures have to be taken including the reduction of death rate. The Message says that "... as a result, our work should make the young generation realize the necessity of a healthy living, physical education, and sport". According to the President of the Russian Federation (RF), development of domestic PE and sports is a collective task which is beyond the scope of just one body, whether it is
the Ministry of Education, the Ministry of Public Health, or the Ministry of Sport. The solution should involve local authorities as well as mass media support ([3]).

Regional law-making in the RF is now oriented to the enhancement of PE and sport management. This initiative actually began in 1999 after the second Federal Law "On physical education and sports in the Russian Federation" had been issued.

Regional laws (Moscow, Moscow Oblast as well as Kaliningrad, Omsk, Chelyabinsk and Tyumen Oblasts, Tatarstan, Bashkortostan, Buriatia, Perm Kray etc.) were amended and supplemented with original provisions and standards expanding and improving legal relations and protection of citizens' interests in the field of physical education and sport including the aspect of youth sports.

When the Federal law of December 4, 2007, № 329-FZ "On physical education and sports in the Russian Federation" was issued several regions started law-making activities aimed to adjust the regional laws to a current situation.

Now the overall state of things in different regions is ambiguous. The sphere of physical education and sport is most supported by regional leaders in such republics as Tatarstan, Udmurtia, Mordovia, and Perm Kray.

The aim of our research was to estimate the main tendencies characterizing changes in the RF regional system of PE in general and in individual structural components (organizational, regulatory, theoretical, methodical, and conceptual) and to compare these tendencies with global trends.

2 METHODOLOGY
The main methods of our research included the review of literature, documentary and regulatory sources as well as general logic methods of data analysis and synthesis.

3 RESULTS
The Strategy of social and economic development of Chelyabinsk Oblast for the period until 2020 determines the importance of physical education and sports for a human potential of society, its mental and physical health. Functioning within the legal framework the Ministry of Physical Education, Sport, and Tourism of Chelyabinsk Oblast cooperated with other executive bodies of Oblast, municipal entities, and non-governmental organizations to provide further progress in the field of physical education, sports, and tourism. The positive trend of this year is the growing number of people engaged in physical education and sports – namely, 758 thousand people, which is 21.8 percent of the regional population (the whole Russian level is 18.8%). Number of people attending sports schools and local sports clubs has increased to 76.3 and 63.7 thousand, respectively; the total number of coaches, instructors and other related personnel is 3.2 thousand.

The increasing effectiveness and quality of educational process, introduction of new forms of extracurricular work with adolescents involving physical education and outdoor activities are possible due to annual allocation of budgetary funds for new positions of senior coaches in local sports clubs and schools. Organization of leisure time for children and adolescents also includes their attraction to community-based sports clubs and groups the number of which is 269 in the region. The total percentage of pupils and students practicing physical education and sports is 43.5%, and by 2018 this indicator will allegedly reach 60%.

Currently Chelyabinsk Oblast has a formed multi-level system of sports events for various groups and categories of population. The integrated regional schedule comprises over 3,000 events in 105 kinds of sport; taking into account competitions in municipal entities the total number is over 7,000.

In Oblast there are 9.6 thousand employed specialists in physical education and sports; 89.9% of them have a special vocational education. Annually, over 550 people improve their skills, about 300 specialists get their new qualification grades, and approximately 700 experts take part in research conferences and seminars. At the same time, in Oblast there are only 552 specialists affiliated to enterprises and organizations, 713 specialists working in community-based clubs and centers, and 63 specialists working with physically challenged people. The main loads associated with sports groups are carried by teaching coaches and PE teachers who are 4.1 thousand in numbers. In this respect, allocation of Oblast budgetary funds for supplementary positions of sport group heads for children's clubs, sports and comprehensive school at a sum of 7 million roubles annually is a stimulating factor
for co-funding of this activity by municipal entities. The increase of the targeted funding volume will increase the number of people engaged in physical education and sports ([4]).

3.1 Special-purpose programs

The systematic work of the Ministry of Sport of Chelyabinsk Oblast in cooperation with executive bodies of Oblast and municipal entities and non-governmental organizations within the framework of "Strategy of development of physical education and sports in the Russian Federation for the period until 2020" approved by the Government of the RF on 08.07.2009 (№1101-r) provided the dynamic and pronounced progress of this industry in Chelyabinsk Oblast.

Oblast authorities pay a careful attention to construction of sports objects. Along with large buildings and stadiums, school- and community-based complex sports grounds and courts are being built. At the same time, considering that the percentage of regional sports objects is less than 30% of the planned number the construction task is prioritized, but the solution requires some time.

The Ministry of Physical Education, Sport, and Tourism of Chelyabinsk Oblast implements the following regional special-purpose programs:

1. Regional special-purpose program "Development of information society and formation of digital government in Chelyabinsk Oblast". Within this program the information-analytical monitoring system for physical education, sports, and tourism in Chelyabinsk Oblast will be introduced at the cost of 1.5 million roubles assigned from the Oblast budget.

2. Regional special-purpose program of preliminary military training of youth in Chelyabinsk Oblast. The program implies the enhancement of citizens' physical fitness and readiness for military service, attraction of youth to military applied and technical sports, improvement of military-patriotic education, and increase of young people's motivation for military service. The role of military faculties of classical universities in formation of applied military and sporting competences in youth cannot be overestimated. Applied military training of South Ural State University (SUSU) students implies the complex interaction of the Military Faculty, the Department of Physical Education and Health, and the Center for Operational Evaluation in SUSU, which resulted in a unique program that made it possible to keep on gradually improving applied military and sporting competencies in over 500 full-time students during a two-year period (9).

The expenses for implementation of the program carried by the Oblast budget are 5,706.1 thousand roubles annually; they are aimed at development of military applied and technical kinds of sport, adoption of knowledge of military service basics, organization of competitions, and participation in all-Russian and international events.

3. Social support of physically challenged people in Chelyabinsk Oblast in 2011-2016. The program includes organization and implementation of training camps for physically challenged athletes – members of Russian national teams – before international competitions, and assistance for the leading physically challenged athletes in university studies.

3.2 Structure of the physical education system

The information stated above indicates that today both federal and regional government and chief magistrates make considerable efforts in order to alleviate the critical situation observed in the domestic system of physical education (PES). However, these efforts are often either declarative, or ineffective. What do experts think about problems in the modern PES, and what prospects and perspectives may be seen here?

Based on the second dialectic law and systemic approach fundamentals, the condition of PES is determined by its structure and effectiveness of each inherent element.

To understand the reasons of the decreased efficiency in attaining the goals of physical education in the modern society we shall discuss the structure of this system, its genesis and actual performance.

Any system is characterized based on its composition, structure, function, development, and existence. Any existing system has the following main characteristics:

- unity of elements (elimination of an element may lead to destruction or modification of the system);
Our idea of the PE system structure conforms to concepts by physical education theoreticians Kholodov, Kuznetsov, and Kuramshin and is shown in Fig. 1.

Seeking for structural analogy between existing PE systems we should distinguish the differences – mainly, in the notional fundamentals – expressed in targeting provisions, principles and other basic ideas which are to be implemented by the given system in the society.

The PES functioning is provided by a whole complex of special conditions: staff training, special information system, facilities and resources etc. The organizational power of the system depends mostly on the assistance and role of the government and other leading social forces in its formation, functioning, and development.

3.2.1 Conceptual structural component

Speaking about effectiveness of the PE functioning in the period from the late 90's till the beginning of the 21st century we should note that crisis phenomena in the system among other reasons were associated with inchoateness of the substantial content of its components (see Fig. 1).

For instance, the content of "conceptual" structural component that is a bulk of views and ideas determining the essence of human activity may not be implemented in the modern society because it does not include the idea of health formation.

According to the state educational standards and actual rules and regulations concerning physical education and sports, the most essential governmental task in the field of PE of younger generation is the improvement of children and adolescents' physical fitness. The related tasks are fulfilled during the school-based PE classes.

At the same time, multiple surveys of parents on priorities of educational subjects show that physical education as a discipline is at the end of the list – though close to subjects dedicated to development of aesthetics, spirituality and culture.

Analyzing the structure and content of "physical education" values, authors of learning guides in theories and principles of physical education use the outdated concept, in our opinion. For instance, the Soviet methodology of "physical education" origin and its use in a social practice mentioned two groups of values: "spiritual" action and "material" application. However, this classification does not
allow the proper understanding of students' regressive attitude to physical exercising. We believe that the classification of physical education values based on the works by Lubysheva ([5]) and Vizitei ([6]) (see Fig. 2) is more appropriate. It determines the conditions for PE via the effects of intellectual, motor, mobilizing, and intentional values as well as via means of pedagogical technologies.

![Figure 2. Axiological model of physical education.](image)

### 3.2.2 Theoretical and methodical structural component

In our opinion, the content of "theoretical and methodical" structural component of the PES should be reviewed, reconsidered, and specified as the analysis of the works by distinguished domestic experts shows that the conceptual field of the discipline "Theories and principles of physical education, sport training, health-promoting and adaptive physical education" lacks the universal understanding of the content element of physical education process ([7]). Approaches to formulation of the term of physical education presented in books by Novikov, Ashmarin, Kholodov, Matveev, Suleimanov, Menkhin, Ponomaryov, Kuramshin, Leontiyev, and Moskvichyov are ambiguous.

Understanding of the considered educational process and its practical implications is also aggravated due to advent of new terms such as "physical instruction", "sports education", and "sports-oriented physical education" which if misunderstood by PE teachers may distort the essence of PE process.

We believe that new terms appear because of the search for innovative ways of PE organization in educational institutions. Analyzing the target designation of each novel term we may say that it is vague. The features are the specifics of activity organization, its conditions and methods. The uniting component is still the perfection of physical fitness via physical exercises used in certain conditions.

This principle may also be seen in global tendencies. Physical education trends have developed recently to incorporate a greater variety of activities besides typical sports. Introducing students to activities like bowling, walking/hiking, or frisbee at an early age can help students develop good activity habits that will continue into adulthood. Some teachers have even begun to incorporate stress-reduction techniques such as yoga, deep-breathing and tai chi. Tai chi, an ancient martial arts form focused on slow meditative movements is a relaxation activity with many benefits for students. Studies have shown that tai chi enhances muscular strength and endurance, cardiovascular endurance, and provides many other physical benefits. It also provides psychological benefits such as improving general mental health, concentration, awareness and positive mood ([8]). It can be taught to any age student with little or no equipment making it ideal for mixed ability and age classes. Tai chi can easily be incorporated into a holistic learning body and mind unit. Teaching non-traditional sports to students
may also provide the necessary motivation for students to increase their activity, and can help students learn about different cultures. For example, while teaching a unit about lacrosse in, for example, the Southwestern United States, students can also learn about the Native American cultures of the Northeastern United States and Eastern Canada, where lacrosse originated. Teaching non-traditional (or non-native) sports provides a great opportunity to integrate academic concepts from other subjects as well (social studies from the example above), which may now be required of many PE teachers. The four aspects of PE are physical, mental, social, and emotional. PE is very important to students health and overall well-being. The Centers for Disease Control and Prevention stated that over the past three years obesity in children (ages 2–5) and adolescents (ages 12–19) has doubled because of lack of activity and diet. Quality Physical Education programs will benefit the lifestyle of young people and in many cases already has. Good Physical Education programs Provide Structure for students to improve students' fitness, positive choices, and setting and reaching goals ([9]). SHAPE America's National Standards & Grade-Level Outcomes for K-12 Physical Education define what a student should know and be able to do as result of a highly effective physical education program.

Lately, multiple publications by different experts have indicated the low effectiveness of lesson-based curricular organization of PE at school, which is also mentioned in the works by PE theoreticians (they argued mainly the necessary number of classes). The review of innovative forms and directions of lesson organization given in the studies by Balsevich, Markov, Korunets, Progonyuk, Chedov, Kondratiev and many others proves the applicability of "sport training" technology in the in-school PE system and, in our opinion, should be included in the content of discipline "Fundamentals of PE organization in educational institutions". This will allow to-be teachers to broaden their occupational horizon and start a creative search for new effective forms of PE process organization.

Very promising is the fact that in order to improve the so-called third PE lesson and to enhance its attractiveness the Ministry of Education and Science of the RF in 2011 worked out the agreements with the Russian Federation of Free Calisthenics, Russian Football Union, National Badminton Federation of Russia, and Fitness Aerobics Federation of Russia.

New technology in education is playing a big role in classes. One of the most affordable and effective is a simple video recorder. With the use of a video recorder students can see the mistakes they're making in things such as a throwing motion or swinging form. Studies show that students find this more effective than having someone try to explain what they are doing wrong, and then trying to correct it. Educators also found the use of other technologies such as pedometers and heart rate monitors very successful, using them to make step and heart rate goals for students ([10]).

Other technologies that can be used in a Physical Education setting would include video projectors, GPS and even gaming systems such as Kinect, Wii Fit and Dance Dance Revolution. Projectors can be used to show students things such as proper form or how to play certain games. GPS systems can be used to get students active in an outdoor setting and active exergames can be used by teachers to show students a good way to stay fit in and out of the classroom setting ([11]).

Another type of technology that is commonly used in Physical Education is the use of pedometers. Pedometers do not necessarily track how far a person is going, but it lets them know the number of steps they are making. It will let them know how many steps on average they are making.

Russia tries to keep up with global trends and tendencies. In 2011 the Expert Council of the Ministry of Education and Science of the RF on the improvement of physical education system in education institutions recommended to use the PE programs based on the stated kinds of sport. In 2012-2016 the educational process was supplemented with test PE programs based on rugby, tennis, and golf.

3.2.3 Regulatory structural component

The analysis of "regulatory" structural component shows that the regulatory basis of age-related assessment of school children suggested in the 80's does not provide an objective view of qualitative development of personal morphofunctional systems.

The critical analysis of modern in-school PE programs as a part of complex entities and results of physical and motor fitness testing applied to comprehensive school leavers indicate that the volume of basic and variable parts approved by the Ministry of Education of the RF is insufficient for the set goals concerning the formation of physically perfect people. Apparently, the weekly volume of lessons should be re-considered and adjusted, and the content of educational means should be differentiated.
The major principles of a new federal educational standard in the modern school are the principles of consistency and development. The standard of each stage of the comprehensive education includes a personal guiding landmark – the profile of a school leaver for each corresponding stage. Consistency and development are realized in requirements for adoption of main educational programs. The standard provides the transition from adoption of compulsory knowledge minimum to individual maximum achievements. Thus, socially determined goals of education are transformed into requirements for results and, after they are specified and processed, into expected results ([12]).

Issues of compulsory education system improvements including the competence-based approach implementation at school are also reflected in the National Doctrine of Education in the Russian Federation for the period until 2020, the priority national project "Education", and the Conception of spiritual and moral personal development of Russian citizens involving the change of system education routes. These documents mean that the educational system tasks include not only the adoption of skills, knowledge and competences providing the instrumental basis of a student's academic activity, but also personal development, formation of moral, social, and family culture, and adoption of state and personal values.

At the same time, literature does not give a distinct idea of sporting, health-forming, or health-promoting competences of youth, which means that mechanisms and technologies for control and assessment of education results are not described.

3.2.4 Organizational structural component

The fourth PES component – "organizational" structural component – is seen by the majority of researchers as an entity which should be reformed. For example, experts believe that this component should be made up and represented by governmental and social non-governmental forms of organization, management and control.

The governmental aspect means systematic and compulsory physical exercising classes in preschool facilities (daycare or kindergarten), comprehensive schools, institutions of secondary special and higher education, army, and healthcare facilities. Such classes and sessions will be organized according to the schedule under the guidance of full-time specialists (PE personnel). Organization, implementation, and results are a subject of control of the Ministry of Physical Education, Sport, and Tourism of the RF as well as corresponding departments of the Ministry of Education and Science of the RF.

At the same time we agree with researchers who think that the questions of strategy and governmental patronage related to PE are to some extent paradoxical. On the one hand, the PE process is a part of education in general, so it should be controlled and managed by the Ministry of Education. At the same time, until recently the governmental structure of the Ministry did not comprise an appropriate authority or a structural unit responsible for PES development. On the other hand, the Ministry of Health which is in charge for health indicators in school children is now not involved in the PES coordination. We believe, that the progressive health deterioration observed in school children means that it is necessary to delegate the PES control functions to the Ministry of Health at the national level.

The social non-governmental aspect means that physical exercising should be organized in non-commercial sports societies and youth sports schools. The duration of exercising session depends mainly on individual attitude, personal predisposition, and real spare time. Unfortunately, economic collapse and denationalization in our country resulted in disappearance of many sports societies as well as sports schools and clubs. The staff pattern in comprehensive education institution no longer included the position of supplementary sport teacher, and even working gyms and sports grounds had to stay idle as there were no coaches or instructors for children. Thus, the principle of PE persistency was jeopardized, and the physiological effects of exercising on young students were affected.

In accordance with an accepted conception of Russian education modernization, the system of supplementary education including PE is now being a subject of optimization. However, actual economic situation means that federal, regional, and local law-making and executive bodies have to search for considerable finances in order to implement the stated conception.

In our opinion, up to the early 21st century the industry of physical education and sports had to struggle through adverse economic and bureaucratic conditions. The first governmental council on PE and sports issues established in 2002 pre-determined the beginning of the progressive epoch for PE theory and practice. This may be seen from examples of youth sports development in several regions
(Saint-Petersburg, Omsk, Voronezh, Saratov, Chuvashia, Tatarstan, Bashkortostan, and Komi) where enthusiasts working in few sports schools and groups rejuvenate national sports and games and support Olympic sports.

The Ministry of Sport of the RF as an executive body responsible for the federal policy in the field of youth sports also made a contribution. Particularly, since January 2006 its subordinate organizations have been elaborating systemic suggestions providing PE modernization in comprehensive schools.

First of all, the work in Russian regions started from testing multiple models of PE organization that had proved to be effective as a result of multi-year innovative activity of several scientists. The models are as follows:

- "Sport-oriented physical education of school children".
- "Integration of core and supplementary sporting and health-promoting education" (introduction of extra classes for children in sporting health-promoting groups of sports schools).

According to the authors who developed these models the implementation may result in new regulatory forms in educational institutions within the actual legislation:

- "School sports club",
- "Educational center".

As physical education is now being oriented to sports education the Ministry of Sport of the RF suggested introducing and establishing several types of sports institutions: youth sports school; Olympic youth sports school; specialized youth sports-technic school; specialized adapted sports school; inter-school sports club; school sports club. Professor Lubysheva reports that the latter type may provide vast opportunities for comprehensive educational institutions ([13]).

At the same time, the PES transformation requires considerable changes in training (or retraining) of specialists as well as making the profession of PE teacher more prestigious as its reputation has been falling, according to the Public Opinion Research Data. Along with that, tuition fee for bachelor's program in "Physical education" in 2016-17 is 135,400 roubles (about 2,150 dollars) per year, and there are only few state-funded places. Professional PE education is the most expensive like high-technology engineering specialties: architectural and aerospace! Meanwhile, young specialist's salary (for example, the salary of school PE teacher) is only about 12,000-14,000 per month (approximately 200 dollars).

In regional centers the aspect of PE and sports management is relatively well developed, but in local municipal entities the situation is much worse. In the end of the 20th century, Professor Rasin conducted the analysis of PE and sports committees in municipal units and revealed that, in spite of new laws regulating their activity, methodology and technology of related activities were not improved to a proper extent ([14]). Lack of necessary scientific, methodological, regulatory, and informational support as well as measures determining qualitative changes in regional PE and sports management prevents the effective realization of legislative, social, and economic initiatives aimed to reform the PES ([15]).

On March 24, 2014, the President of the RF issued the decree №172 "On All-Russian sporting complex Ready to Labor and Defense (GTO)". This complex is meant to increase the effectiveness of physical education and sports for health promotion, harmonious and full development of personality, patriotic education, and assurance of physical education consistency.

State requirements for physical fitness level at reaching qualifying standards are approved by the Ministry of Sport of the RF in agreement with the Ministry of Education and Science of the RF, the Ministry of Defense of the RF, and the Ministry of Health of the RF.

Trials (tests) and standards include:

a) trials (tests) assessing levels of physical qualities and applied motor skills;

b) standards assessing scope (harmony) of main physical qualities and applied motor skills in relation to gender and age features of an individual.

Trials (tests) are classified into compulsory trials (tests) and elective trials. Compulsory trials (tests) in accordance with grades of the All-Russian sporting complex are divided into following groups:

a) trials (tests) assessing speed capability;
b) trials (tests) assessing endurance;

c) trials (tests) assessing strength;

d) trials (tests) assessing flexibility.

Elective trials (tests) in accordance with grades of the All-Russian sporting complex are divided into following groups:

a) trials (tests) assessing speed-strength capability;

b) trials (tests) assessing coordination capability;

c) trials (tests) assessing applied skills.

People who manage to reach the qualifying standards of the given grades of the All-Russian sporting complex are awarded a merit badge (GTO Pin) that has a form and description approved by the Ministry of Sport of the RF. The procedure of awarding and conferring of qualifying athletic titles is approved by the Ministry of Sport of the RF. Unfortunately, Chelyabinsk Oblast was not included in the list of testing sites for the complex. The national introduction of the complex is planned on 2017. Chelyabinsk Oblast provided 60 special facilities where any citizen having registered on the complex web-site can try to reach a qualifying sport standard in accordance to the age category.

4 CONCLUSIONS

Thus, emerging transformations conformable to global trends are observed for the following structural components of the physical education system in Russia: organizational, regulatory, theoretical, methodical, and conceptual. These transformations may become a precondition for positive changes in the functioning of the PE system in different regions of the RF.

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