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BASIC CHARACTERISTICS OF ETHNOSOCIAL AND CULTURAL COMPETENCE OF
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Key words: physical upbringing of students, general education in the sphere of physical culture, teaching the subject “Physical culture”, physical culture.

Annotation. In the context of a personality physical culture formation as an integrated human measurement in unity of intellectual, social – psychological and motion components, the process of students’ general education in the sphere of physical culture realization becomes very important. The increase of the lessons educational orientation on the subject “Physical culture”, its real and competent projection according to modern tendencies of educational system development demands the essence specification of the content “students’ general education in the sphere of physical culture” and its place among such notions as “teaching the subject “Physical culture””, “physical upbringing”, “physical culture”.

Research methods: scientific literature and normative documents analysis, synthesis and summarizing, pedagogical observation.

Research results. The essence of the notion under study, observed by V.P. Luk’yanenko and others, is revealed as the process and the result of the intellectual component of a personality physical culture formation, not as an end in itself, but as an important condition providing an effective physical development. This physical development is a material base which conditions the opportunity to fulfill educational, pedagogical influence, a deserving personality formation. The essence of the notion under study, in our opinion, is revealed in formation of intellectual and motional components of a personality physical culture in balanced correlation or integrity. These components are directed at teaching physical self-perfection during all one’s life. On this basis personality worldview, motivational - value attitude to sports self-perfection are formed. Students’ general education in the sphere of physical culture is a process and the main result of teaching the subject “Physical culture”. Its realization in a topped kind in an educational process decreases the quality level of physical upbringing and doesn’t provide personality physical culture formation.

Conclusion. The essence of students’ general education in the sphere of physical culture is specified its role in the process of physical upbringing. The received results help to project a purposeful process of students’ general education in the sphere of physical culture realization in terms of teaching the subject “Physical culture”.

Scientific – pedagogical literature analysis, observations and carried out by us sociological and pedagogical researches in higher educational establishments in the republic of Udmurtia show that in practice of students’ physical upbringing only strictly utilitarian approach is realized [1]. It is connected only with the organization of students’ motion activity and support of a definite health and physical fitness level. At the same time it is known that the parameters of these categories become worse during the study in a higher educational establishment (V.I. Il’inich, 2004). It is considered that two lessons a week are not enough to eliminate hypodynamia after-effects which
students have during the study. V.I. Grigor’ev, D.N. Davidenko, S.V. Malinina in 2010 mention that according to data of the State committee on statistics of the Russian Federation 80% of students have hypodynamia, more than 50% have poor health. Moreover, the results of the sociological research on the basis of some higher educational establishments show that after having the course on the subject “Physical culture” students don’t possess enough theoretical and methodical knowledge and skills to organize and fulfill independent physical exercises [1]. More than 90% of students stop using systematically physical exercises and don’t understand their role in supporting mental and physical efficiency during the study and in the process of professional activity [1]. These results correspond with the research results of other scientists (L.I. Lubysheva, G.M. Gruznykh 1990; D.N. Davidenko, 2006 and others).

Understanding of the essence of physical culture from the viewpoint of philosophical and culturological approach (Y.M. Nikolaev, 1997, 1998, 1999, 2011; V.I. Stolyarov, I.M. Bykhoivskaya, L.I. Lubysheva, 1998) shows that a physical culture of a personality is a specific element of personality spirituality which characterizes the attitude to sports perfection. As mentions L.I. Lubysheva [8], the content of physical upbringing includes three main directions: intellectual, social – psychological and motion (bodily) upbringing which provide the formation of personality physical culture as an integrated human measurement. That is why a traditional methods spectrum in the process of physical culture formation should be enlarged. In this case priority get the aims of a practical realization of the subject “Physical culture” in which the aims, means, methods and forms of pedagogical process organization would be concentrated in order to provide an integrated unity of effects on physical and spiritual sides of a personality.

In our opinion, the way out of this situation in the system of students’ physical upbringing is in necessity to increase an educational orientation of the lessons, in its real and competent projection and realization in the context of modern tendencies of educational system development.

In accordance with an approximate curriculum on the subject “Physical culture” for higher educational establishments, recommended by the Ministry of Education and Science of the Russian Federation, for the realization of the educational aims there is a lecture section on compulsory themes, 18 hours, which forms the world outlook system of scientific – practical knowledge, attitude to physical culture, and a methodical – practical section, 22 hours (compulsory themes), directed at mastering the methods and ways of sports perfection. However, as the observations show, in a traditional practice of physical upbringing most educational establishments don’t pay much attention to the process of general education realization in this knowledge domain, realizing it insufficiently. At the same time specialists training of a non - sports profile, who possess a sufficient level of general education in the sphere of physical culture and who are able to improve their health independently, to organize creative sports self-perfection is one of the most urgent problems of a modern Russian society. In particular, the necessity to increase the degree of awareness and knowledge level on the questions of physical culture, sport and a healthy way of life of the population is stated in “Strategies of physical culture and sport development in the Russian Federation for the period till 2020”. Increase of the educational aspect of the educational process on physical culture is one of the strategic directions of its content development. It is reflected in conceptual terms of content formation of the subject “Physical culture” of schoolchildren as well as students (V.P. Luk’yanenko, 2005; V.I. Stolyarov, V.K. Bal’sevich, V.P. Mochenov, L.I. Lubysheva, 2009; L.I. Lubysheva and others 1993, 1996, 1997).

Before carrying out further research it is necessary to define the essence of the notion “general education in the sphere of physical culture” and its role in conceptual -categorical apparatus of physical upbringing.

The research showed that the problem under study has strong interconnection with the condition of the whole terminological apparatus of the scientific field of physical culture theory, because to define the essence of the notions of more private order it is necessary to understand the correlation of basic notions of the given scientific field.
Many scientists mention unsatisfactory state of the terminological apparatus in the sphere of physical culture [4, 9 and others]. In particular, V.K. Bal’sevich and V.P. Luk’yantenko (2008) say that its state in a scientific field of physical culture theory is far from being satisfactory. For example, the notion “physical culture” has more than 20 definitions [6]. Plenty of definitions, their ambiguity, careless use of the notions, invention of new notions which are not based on pedagogical realia, as fairly mentioned [10], all these suspend the development of science and complicates mutual understanding and objectivity of some research works.

The use of the terms reflecting the process and the result of general education in the sphere of physical culture is frequent in scientific literature. Different authors have different understanding of this notion and sometimes the meaning of the notion changes in the course of time. All this creates confusion in understanding the essence of general education in the sphere of physical culture and its results. Ambiguity of the opinions puts obstacles in the way of practical realization of the process of general education in the sphere of physical culture.

Carried out by us essence analysis of the process under study is based on a sufficient examination and summarizing of the most important research works of domestic scientists on this problem. The analysis of different terms use, connected with students’ general education in the sphere of physical culture, showed that different authors tried to define the essence of the notion under study and each scientist introduced his own understanding. The meanings of the definitions are different: in some cases very specific, in some cases too general. That is why it is possible to state that this notion has many definitions and is vaguely determined. It is possible to define three kinds of meanings, given by different scientists, which reflect the meaningful essence of the processes and the results of getting general education in the sphere of physical culture.

Some authors connect this process with the dominating development of only motional component of a person’s physical culture. In this case the term “Physical education” is used. It is based on getting necessary fund of motional abilities and skills and connected with them knowledge (P.F. Lesgaft, 1888; L.P. Matveev, 1984; B.A. Ashmarin, 1990; and then Z.K. Khloilov, V.S. Kuznetsov, 2003). In our opinion and as some scientists think, such an understanding of general education in a given knowledge domain, which is limited only to motional abilities and skills formation, physical abilities development makes its meaning primitive. As a result in practice general education in the sphere of physical culture comes to motional training. Moreover, such kind of approach to problems solution of general education in the sphere of physical culture, as the scientist mentions [10], leads to “complex of inferiority” of the subject “Physical culture” in relation with other subjects. Unreasonable use of the notion “physical education” nowadays happens because this term is used in specialists training in the sphere of physics [8, 10]. Other reason of its unreasonable use is a wider notion “education” which means influence on spiritual and intellectual parts of a person not on physical part. In addition, when we speak about knowledge formation we use word-combination “physical culture knowledge” but not “physical knowledge” [10].

Other authors use the notion under study to identify it in the content of general secondary education at school or general higher education in a higher educational establishment on the subject “Physical culture” (R.A. Abzalov, 2002; Y.D. Zheleznyak, V.M. Minbulatov, 2004; N.A. Karpushenko and others 1993; A.V. Lotonenko, 1998; V.V. Prikhod’ko, 1991; V.I. Grigor’ev and others 2000). For this purpose the following terms are used: “physical culture education”, “education on physical culture”, “general secondary physical culture education”, or “non-special physical culture education”, which define the notion under study as a process directed at personality physical culture formation solving all educational – directive, health-improving – recreational, pedagogical – developmental problems. Though, as mentioned V.P. Luk’yantenko, education content in this case becomes dimensionless and amorphous. This group of authors thinks that education on physical culture has the main role in the process of personality physical culture formation.
More concrete and sensible is interpretation of the third group of authors (V.M. Vydrin, 1995; L.I. Lubysheva, 1996; V.N. Kurys', L.N. Sledneva, 2002, 2004; V.P. Lyk'yanenko, 2005, 2008; N.I. Sokolova, 2006; L.B. Lukina, 2007) who consider the essence of general education in the sphere of physical culture to be a process of knowledge digestion and the ways of its use while affecting corporality. According to this approach authors use the terms: “physical culture erudition”, “physical culture competence”, “educational orientation in the sphere of physical culture”, “intellectual upbringing”, “general education in the sphere of physical culture”. During the influence on the motional part of a person, first of all, intellect is used. As fairly mention these authors, in particular N.I. Sokolova (2006), “… such an educational influence is carried out not as an end in itself and even not for the sake of knowledge diversification, expansion of one’s horizons and intellect development. It is necessary to give a person a powerful tool which provides effective corporal development representing material base conditioning the possibility for self-determination, in solving the problems of ways of cognition formation, creation and realization of physical self – development programs” [15, p. 22]. Thus, the result of general education in the sphere of physical culture is, first of all, intellectual component formation of a personality physical culture. As some authors [9, 10, 15] we understand that knowledge itself or motion activity itself doesn’t guarantee necessary level of a personality physical culture formation. At the same time, these elements are the components of an educational process on physical upbringing in practical activity and they allow to control its effectiveness. It is necessary to mention one more time that the level of personality physical culture is determined by the structure and the orientation of a person’s physical activity motivations which are based on physical culture erudition [6, 7, 9, 10].

The analysis of the notion “general education in the sphere of physical culture” formation in the theory of physical culture, which was recently formed in a conceptual apparatus of a science theory and physical upbringing methodology, revealed some its peculiarities.

1. **Historical conditionality of the notion formation.** It is necessary to mention historical conditionality of the process of establishment and understanding of the essence of the notion “physical culture education” in connection with the historical development of education and pedagogical paradigms change in the physical culture upbringing systems. As V.A. Slastenin and others state “education content has a historical character because it is defined by the aims of education on this or that stage of society development. It means that it changes under the influence of life, industry and the level of scientific knowledge development” [11, p.140].

From the very beginning accent in understanding the essence of physical culture education was revealed in formation of the motional component of a personality physical culture, as a result the term “physical education” was used. The notion “physical education” was introduced by the founder of the doctrine about physical education of schoolchildren, a famous Russian scientist P.F. Lesgaft. He considered this notion to include the idea of motional actions teaching.

It is important to mention that later this view of the role of physical culture, as a dominating influence on a motional part of a person, determined the slogan about a harmonious person upbringing, a person who has spiritual wealth, moral purity and physical perfection. Physical perfection was defined as a harmonious physical development and universal physical fitness (Y.M. Nikolaev, 2003). That is why many theorists and practitioners, in Y.M. Nikolaev’s opinion, considered the process of personality physical culture formation to be more biological [13].

At the end of 1970s the leading role of the educational orientation of the subject “Physical culture” became obvious. In the middle of 1980s the re-orientation of physical culture into educational - directive was also obvious [5, 6, 10]. The main factor was data of researches on the basis of school physical culture, which showed that a lesson compensates in average 11% (maximum 40%) of schoolchildren’s need for activity. It was discovered that even having everyday physical culture lessons at school it is impossible to eliminate “motional hunger” that schoolchildren have. That is why the subject “Physical culture” not only organizes motional activity but, first of all, provides education on this subject and forms the skills to do physical exercises.
independently [6,10]. Acknowledgement of educational orientation of physical culture doesn’t mean a neglect of its health-improving, developmental and pedagogical orientation.

2. The second peculiarity of its formation is connected with the rethinking of the notion “physical culture”. First physical upbringing was directed at assistance in universal and harmonious development of a personality, was considered to be training means of a person’s social duties fulfillment (to work and defense), but then its rethinking from the position of philosophical – culturological approach led to appearance of a new aim – personality and society physical culture formation. Now the essence of the notion “physical culture” (in a wide sense) – is a special kind of personality and society general culture, one of the spheres of a specific social activity the result of which is a union of material, intellectual and spiritual values created by a society for physical perfection of people [8]. Thus, the result of personality and society physical culture formation is not only a person’s corporality but his inner world (sociocultural component). Now physical culture obtains “humanistic measurement” [14], that means it is defined not only by physical qualities and motional abilities development but also by specific element of its spirituality. So the notion “Physical culture of a personality” was created. It is an element of a person’s general culture, characterized by a definite level of special knowledge, motivational – axiological orientations and motional training [10]. Physical culture in this case becomes truly cultural phenomenon, creates unity between intellectual and motional components, spiritual and physical development of those who train. Its role in universal and harmonious development of a personality increases.

For carrying out further valid research on the problem of general education in the sphere of physical culture the authors [6,7,9,10] try to comprehend not only the essence of the notion but also its correlation with such notions as “teaching on the subject “Physical culture””, “physical upbringing” and “physical culture”.

For this purpose, first of all, it is necessary to reveal the essence of most general notions – pedagogical categories: “teaching”, “upbringing”, “education” and define their correlation. In our opinion, it would be reasonable to give only one definition which fully represents the essence of the categories under discussion. “Teaching” – the main way of getting education, two mutually conditioned kinds of activity (teaching is a teacher’s activity, study is students’ activity) directed at educational problems solution, and as a result students master knowledge, abilities, skills of thematic activity and develop their personal qualities, including the ability of self-training” [14, p.30]. So, we can say, that the main function of teaching is to provide the system of scientific knowledge, abilities, skills for students and their use in practice [11]. In spite of all discussions on the content of the subject “Physical culture” teaching, its content as a general subject becomes clear.

Taking into account everything said above, the notion “teaching on the subject ‘Physical culture’” becomes wider. V.P. Luk’yankenno (2008) defines not only “motional” teaching, the function of which is to increase physical power, but also “cognitive” teaching directed at increase of intellectual strength of a personality. This subject content creates conditions for getting general education in the sphere of physical culture and facilitates balanced influence on motional and intellectual components formation of physical culture.

The content of the notion “education” as a pedagogical category was formed in accordance with domination of one or another pedagogical paradigm during a definite period of historical development of a society. Recently educational system development is characterized by changing from knowledge – oriented paradigm to competence one. Nevertheless the main essence of the notion “education”, in our opinion, is in the following definition [12, p. 25]: “Education is a result of teaching, the range of systematized knowledge, abilities and skills, ways of thinking which the student has mastered”. The main criterion of education is a system of knowledge and thinking. An important role in mastering knowledge, mental development of a personality belongs to self-education. In this context the content of general education in the sphere of physical culture includes cognitive and motional teaching on the subject “Physical culture”. V.P. Lu’yanenko (2008) on the scientific basis, comes to the conclusion that “general education in the sphere of physical culture” should be regarded as the process and the result of intellectual component formation of a
personality physical culture, which is not end in itself but an important condition providing effective corporal (physical) development and which presents a material base giving an opportunity to produce educational, pedagogical effects, worthy personality formation.

We reveal that the notion “teaching the subject “Physical culture” is not identical with the notion “general education in the sphere of physical culture”, the latter goes beyond pedagogical process and includes the notion self – education.

Analyzing the category “upbringing” we should mention that there are no its well-defined interpretations in textbooks on pedagogics. In our opinion, the most precise definition (N.V. Bordovskaya, A.A. Rean 2006) is the following: “Upbringing as a social phenomenon, in general notion, is a passing of historical and cultural experience from generation to generation” [3, p. 25]. Experience is considered to be knowledge, skills, ways of thinking, moral, aesthetic, legal norms, in other words, everything created in the process of historical development, spiritual mankind heritage [12]. In more narrow sense upbringing is a purposeful and organized process of personality formation [12]. The result of upbringing is the development of qualities of a personality, shown in actions. These qualities characterize not only a person’s worldview but also social and moral positions, individual aspirations. In general, the process of upbringing is directed at a universal development of personality including his or her ability to creative self – development. “Upbringing”, as a universal category, historically included “teaching” and “education” [3]. Thus, the main results of upbringing are the qualities of a personality characterizing his or her worldview, social and moral aims and personal interests, historical and cultural experience. It is important to mention that upbringing is realized at school, in a family, during the whole life and in a society. Taking into consideration all said above, it is possible to conclude that the process of physical upbringing is directed at the development of a physical culture of a personality. It is an inner quality of a personality which is revealed through a physical self – development and is seen in formed scientific – practical knowledge, motional skills and abilities of physical self – development, in formed worldview and motivational - value paradigms. The content of the notion “physical upbringing” is wider than the notion “general education in the sphere of physical culture”.

On the basis of mentioned above theoretical - methodological theses, from the point of view of general pedagogics and didactics, correlation between the defined pedagogical notions in the sphere of physical culture can be presented in a scheme (picture 1).

![Picture 1](image.png)

**Picture1.** The place of students’ general education in the sphere of physical culture in the process of physical upbringing
As the scheme shows, these notions are the source – basis for the following notion and broaden the previous one. Correlation of the presented categories reveals the correlation of the following general pedagogical categories: “teaching”, “education”, “upbringing” and “development” [12]. These ideas are in line with the ideas of other authors [6, 7, 9, 10]. First two notions reflect mostly educational work on the subject. The third (“physical upbringing”) includes extracurricular activity, family and yard forms and kinds of doing physical exercises. All notions are directed at understanding and augmenting physical culture values or at creative self – development in physical perfection [2].

Thus, we come to the conclusion that:

1. The study of students’ practice of physical culture actualize the necessity of competent projection and realization of students’ general education in the sphere of physical culture process, taking into account modern tendencies of the educational system development.

2. The essence of the notion, connected with the process and the result of a general physical culture education, is characterized by different ambiguous interpretations.

3. According to scientific elaborations of a definite group of authors, from the position of the presented theoretical – methodological basis, the structure of the content of general education in the sphere of physical culture includes two blocks: educational block and the block of a motional perfection. This structure is caused by the objects of influence: on the intellect and a physical part of a person which demand absolutely different means, methods, forms of lessons organization. Educational block means the formation of special physical culture knowledge of general theoretic, methodical, and highly specialized character belonging to different kinds of exercises, methodical – practical skills and abilities which form intellectual and methodical base of physical self – perfection. Integrated realization of educational and motional blocks in an educational process provides the formation of worldview in this sphere and motivational – axiological attitude to sports self – perfection. This structure of general education observes the main principle of personality physical culture formation, which is the principle of worldview, intellectual and corporal components unity.

4. General education in the sphere of physical culture is mainly realized in the process of teaching the subject “Physical culture”. Its realization in a topped kind or absence in an educational process shows the quality level of physical upbringing and physical culture formation of a personality because there is no other alternative of getting systematical education in this sphere.

Bibliography


IDENTIFICATION AND REALIZATION OF EFFICIENCY INCREASE CONDITIONS OF THE QUALIFIED BOXERS' COMPETITIVE ACTIVITY

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Keywords: boxing, youth of 15-17 years old, technical readiness, thought processes, pedagogical conditions.

Annotation. The Russian boxers gained big authority on the international scene, however growth of martial artists' skill from many countries determines need of competitive activity efficiency increase new ways continuous improvement

Research methods: analysis and generalization of scientific and methodical literature, testing, pedagogical experiment, methods of mathematical statistics.

Research material. Attention to importance of the thought processes' formation providing active participation of athletes in search and realization of new approaches to creation of training process is paid attention in this article. The importance of identification and realization of the conditions providing growth of qualified boxers' sports skill is opened. The technique of technical readiness increase developed by the author is based on use of these conditions; methods of each condition application boxers of EG competitive activity presented in it, that significantly increases efficiency of training process and productivity.

Results. Results of pedagogical experiment showed the big importance of identification and realization of the conditions increasing productivity of qualified competitive activity boxers. The technique developed by us on the basis of these conditions use and focused on realization of this approach, shows prospects of boxers' sports skill offered direction improvement

Conclusion. The revealed conditions considerably expand possibilities of boxers' kinesiology potential realization, show the big importance of thinking powers development providing formation of skills of the objective analysis of own actions and receptions, carried out by the opponent that considerably increases opportunities for search of self-improvement ways by means of the chosen sport.

The big state importance of development of the elite sport and mass sports found the reflection in the federal law of the Russian Federation of 4.12.2007 No. 329-FV "About Physical Culture and Sport in the Russian Federation" ("All Sports agency). Boxing is one of the most popular sports, drawing attention of many teenagers and youth. There are own traditions of boxers of world class training in Russia. Their successes and achievements are recognized around the world. However constantly increasing level various countries boxers' sports skill the, the information support, new scientific data on improvement of a technique of their technical and tactical preparation, emergence of modern technologies cause need of continuous search competitive activity and optimization of the training ways providing increase in its productivity.

The purpose of this work is theoretical and methodological justification of the identification importance and realizationsports skill increase of conditions.

Objects:
1. To define the leading conditions influencing stability and reliability of attacking and protective actions of the boxer.
2. To develop a technique boxers' sports skill improvement of on the basis of the revealed conditions and to check its efficiency during pedagogical experiment.
Modern boxing is characterized by high dynamism, increase in speed of difficult sensomotor reactions, need of individual improvisation of movements depending on a situation on a ring, manifestation of ability to extrapolation of motive actions, an objective assessment of technical and tactical readiness of the opponent. Boxers of high qualification have to be able to use the left and right hand skillfully; at a high technological level to own all ways of movement on a ring at interaction with the opponent; effectively to combat on near, average, long and over the long distances.

Specialists in boxing Y.V. Verkhoshansky, P.Y. Galkin, 2002; A.G.Kiselyov, 2006; I.S.Kolesnik, 2010, etc. note that many boxers of the a world class differ in insufficient variety of tactical receptions of conducting fight, inability to tactics change under pressure of the opponent, to forecasting of its actions.

Many coaches seek for use model of the training process providing high level of high-speed and power qualities, an aggressive manner of interaction with the rival, formation of skills of carrying out serial attacking actions. However results of scientific researches of V.E.Koteshev (1998), testify to expediency of a view of boxing as on the activity providing constant readiness of the athlete to emergency influences of external and internal irritants (a knockout or a knock-down, concentration of strong-willed efforts for overcoming a painful or emotional stress, etc.).

The tendency of high-speedleading role views change and power indicators along with development of muscular force and speed of movements gains strength; specialists in boxing admit the big importance of formation of special dexterity of the martial boxer, increase of stability of a body, mobility, accuracy of attacking actions [10] admit. It fills modern boxing by the new contents, significantly expands its opportunities for individual improvisation of movements; variabilities of the motive actions, the best orientation in space and time.

Sports skill growth of the boxer determines need of the constant analysis of their actions. After the termination of a boxing duel it is important to restore in details interaction process with the opponent, mentally to reproduce nature of shock performance and protective actions, their choice and ways of carrying out depending on behavior of the rival; efficiency of the undertaken attacks [6, 9, 11]. It makes much demandto the memory which development should pay much attention.

Ability to storing, preservation and reproduction at the right time contents of fight with the opponent, creates conditions for an objective assessment of the technical and tactical actions, madesome mistakes. Storing of situations in which the athlete feels uncertainly, losing an initiative, causes timely correction of the content of training occupations, search of effective ways of improvement of all-physical, technical and tactical, psychological readiness; accumulation of personal experience of competitive activity.

Reproduction accuracy in memory of motive actions nature of boxers during fight is caused by levelof the thought processperception formation providing adequacy of reflection in consciousness of various forms and types of surrounding reality. If the perception is more accurate and brighter, it is better postponed in memory and reproduced more precisely observed images and the phenomena.

One of the important thought processes allowing the boxer to catch the opportunity of of the direction and the content of motive action change change of its existential and spatial and power parameters, the attention which versions considerably define degree of sports skill of the boxer is. Necessary level of thinking formation (logical, quick, tactical, creative) allows in due time to use truly the most effective way of attacking or protective action performance

Materials of our research testify that formation of memory, perceptions, attention and other informative processes has to take an important place in sports preparation of the boxer. The analysis of scientific and methodical literature on a subject the researches obtained by us experimental data showed that leading conditions of boxerscompetitive activity efficiency increaseare:
- identical level of right hand and techniques left performance and;
- continuous maneuvering with use of various ways movement on a ring;
- application of all distance types in the course of interaction with the opponent;
- development and improvement of thinking processes, along with increase of physical, technical and tactical and moral and strong-willed preparation.

We developed the boxers productivity competitive activity increase technique on the basis of realization of these conditions. For performance of techniques with identical level of skill the left and right hand, athletes were offered to carry out on one training occupation all motive tasks from the left hand, including: all-developing exercises on boxing shells, together with the partner, etc.; on the following training – the same motive actions were carried out, by the right hand. The same demand was made to movements by feet.

During sparrings, educational fights - during all process of interaction with the partner in one fight - actions begin with the left hand, when carrying out attacking and protective actions the emphasis is placed on movements by the left hand. In the following educational fight or the sparring the main attention is paid to movements by the right hand. In outdoor games, the game instants also leading situation is allocated for serially right and left top extremity.

Interaction with the partner was carried out at continuous maneuvering with use of all ways of the movement which choice was defined by an objective, a concrete distance, a choice of the moment of carrying out attack, etc. It is thus important to understand that from various ways of movement: sliding step, pace step, shuttle movement, jumps, etc., each of them possesses various level of power expenditure. In this regard the maintenance of the technique offered by us is the exact choice of the moment of change of one way of movement (less expensive) on more vigorous, providing successful carrying out attacking reception.

Boxing skill of the boxing duel model development, the providing moment of a choice of the most effective way of movement taking into account use of the basic, intermediate or movement around depending on an objective was formed.

In the analysis of a boxing duel after competitions efficiency of application of every way of movement taking into account the concrete situation arising in the course of interaction with the opponent was analyzed. It allowed to form skills of a choice and application of the most productive way of movement for the concrete moment and to enrich personal competitive experience in this direction. One of conditions of boxers competitive activity productivity increase of is use of all four distances.

The technique of the qualified boxers competitive activity efficiency increase developed by us set a task of productive use of each distance which choice during a boxing duel was defined by height and weight parameters of the opponent, length of his top and bottom extremities. The rival with an insignificant length of extremities, as a rule, prefers fights on a short distance that caused expediency of primary use of a long and over the long distance [1, 3, 4, 8].

Formation of motive memory and other thought processes has the great importance for formation, expansion and enrichment of personal experience of competitive activity that considerably raised level of boxers sports skill [2, 5, 7, 12]. Consolidation of skills of the constant analysis, comparison and assessment of own motive actions and techniques of the opponent stimulates improvement of analytical skills, logical, operational and tactical thinking that is very important for competitive activity of productivity increase and realization of kinesiology potential.

Pedagogical experiment was made for checking of the developed technique efficiency by us in which 42 boxers of 15-17 years (the I category and KMS) took part. Two groups were organized: control (KG) - 20 persons, EG - 22 persons. Before pedagogical experiment testing for the purpose of identification of level of physical readiness was held. The following control exercises for this purpose were used: run of 30 m (c), run of 100 m (c), run of 3000 m (min.); broad jump from a place (cm), pulling up in hanging (a quantity of times); shot put (4 kg) right and left hand.

The analysis of initial indicators of physical readiness didn't reveal essential distinctions of boxers of KG and EG (р>0,05). Level of technical readiness was determined by quality of performance of attacking and protective actions for which assessment special criteria were developed. So, the equipment of a direct stroke performance was estimated at a trunk on the
clearness of movements of performance algorithm, their unity, an optimum combination of attacking and protective actions.

First reception: direct stroke left in a trunk with a step forward.

Criteria of an assessment:
5 points - movements begin with a push a sock of the right foot and at a slow pace left, with the subsequent inclination of a trunk forward-to the right. The hand sharply becomes straight and the glove in the shortest way goes to the purpose. The right hand the boxer protects the head, and an elbow and a forearm - a trunk.
4 points – movements are carried out together, the attacking blow is carried out with the set existential and spatial and power parameters, an insufficient inclination of a trunk forward-to the right;
3 points – the correct algorithm of motive actions performance, rather strong attacking left-hand blow, negligent performance of protective actions;
2 points – insufficient unity of the movements, late protective actions;
1 point – a pause after each structural element of the complete motor act. Absence of movements sharpness by an attacking hand and protective receptions.

Second reception: stroke left from below head. Accuracy of carrying out blow, rationality of performance of the preparatory action, correctly executed rack of the boxer, combination of attacking and protective receptions were estimated.

Criteria of an assessment:
5 points – attacking actions are carried out after preliminary assignment of a glove up and simultaneous bending of a hand in a radiocarpal joint; at the time of attacking action the right hand protects the head from possible blow of the opponent;
4 points – excessive assignment of a shock hand up, at full unity of attacking and protective receptions;
3 points – insufficient assignment of a shock hand up, excessive bending of a hand in a radiocarpal joint, overdue protective action by the right hand;
2 points – separate performance of the attacking reception phases, insufficient force of shock action, a mismatch of attacking and protective receptions;
1 point – absence of preliminary action, sharpness of attacking blow, the wrong rack of the boxer.

Third reception. Direct stroke right into the head from the left-side rack. Rationality of this reception equipment, combination of attacking and protective action is estimated.

Criteria of an assessment:
5 points – a push of a sock of the right foot, a body move forward with simultaneous turn from right to left and shock action in the head, the left hand carries out protective action;
4 points – insignificant lateness of a body turn from right to left;
3 points – a pause between body turn from right to left and attacking action in the head;
2 points – faltering performance this motor act of actions, lack of protection against blows of the rival;
1 point – lack of a rational rhythm of the motive action, attacking blow is carried out after a stop with insufficient muscular tension; weak carrying out protective reception.

The analysis of technical actions performance technical actions showed lack of intrinsic distinctions on technical readiness of boxers of KG and EG (p>0,05). Training occupations in KG were carried out by a traditional technique according to the program of the sports training approved by the Russian Federation of boxing. In EG the technique developed by us based on realization competitive activity productivity conditions of increase was used. After the end of pedagogical experiment results improved in both groups: KG and EG, at considerable advantage of boxers of EG.
Repeated testing of physical readiness indicators testifies that in KG at basic data in run on 30 m – 5,35±0,34 with to completion of pedagogical experiment the gain of indicators made 3,1% (p>0,05), in EG at basic data 5,34±0,29 about improvement of results occurred for 6,3% (p>0,05). In run on 100 m in KG at basic data 14,17±0,89 with to completion of pedagogical experiment indicators improved for 4,11% (p>0,05); in EG, respectively, at basic data 14,19±0,77 about improvement of results occurred for 6,3% (p>0,05). In run on 3000 m in KG at basic data of 14,29±1,13 m to completion of pedagogical experiment indicators improved for 6,43 % (p>0,05); in EG, respectively, at basic data of 14,32±0,93 min., the gain of results made 10,36% (p>0,05). In a broad jump from a place in KG at basic data of 197,22±10,31 cm, to the end of pedagogical experiment improvement of indicators happened for 5,24% (p>0,05); in EG, respectively at initial results of 195,88±13,41 cm the gain made 11,48% (p>0,05). The similar tendency of indicators improvement in EG was revealed on other control exercises.

The analysis of the indicators characterizing level of technical readiness also showed that positive dynamics of results is characteristic boxers of KG and EG, however in EG level of technical readiness was much higher. So, in KG when performing a direct stroke in a trunk the initial assessment made 3,24±0,20 points, to completion of pedagogical experiment of the technician of this reception improved for 8,91% (p>0,05); in EG, respectively, at basic data 3,38±0,26 points the assessment for equipment of performance of this reception improved for 22,95% (p>0,05).

In KG at an initial assessment when performing stroke left from below in the head - 3,19±0,24 points to the end of pedagogical experiment the assessment for equipment of performance of this attacking action improved for 9,66% (p>0,05); in EG, respectively, at basic data 3,27±0,20 points the gain of results made 23,72% (p>0,05).

When performing a direct stroke right in the head the initial assessment in KG made 3,41±0,25 points of a left-side rack (p>0,05); to completion of pedagogical experiment indicators increased for 11,64% (p>0,05); in EG, respectively, at basic data 3,39±0,22 points the assessment improved for 27,53% (p>0,05).

Thus, results of pedagogical experiment showed the big importance of identification and realization of the conditions increasing productivity of competitive activity of qualified boxers. The technique developed by us on the basis of these conditions use and focused on realization of this approach, shows prospects of the offered direction of boxers sports skill improvement. The revealed conditions considerably expand possibilities of realization kinesiology potential importance boxers providing, show the big development of thinking formation powers of skills of the objective analysis carried receptions and actions of own, out by the opponent that considerably increases opportunities for searching of self-improvement ways by means of the chosen sport.

Bibliography


STRENGTH AND VARIABILITY OF THE MOTOR SKILLS AS THE FACTOR OF SPORTSMANSHIP IMPROVEMENT

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Keywords: boxing, qualified boxers, a technique, pedagogical experiment, physical and technical readiness.

Annotation. Modern system of highly qualified boxers training provides the increase of their technical-tactical readiness level by development of their speed-power qualities, aggressiveness; formation of their volitional qualities. At the same time other factors which provide the increase of the training level are not taken into consideration. Boxing is known for high dynamics, constantly changing situation during the interaction with the opponent on the boxing ring, great amount of onrushing and defensive actions and the ways of their fulfillment. The choice of the most effective technique is conditioned by many factors: ability to use the left hand during the combat as effectively as the right hand; ability to maneuver using different ways of movements: pacing, sliding step, jumps and others; ability to prognose the kind, direction and the content of the opponent’s defensive action.

Research methods: scientific and methodical literature analysis and summarizing, testing, pedagogical experiment, methods of mathematical statistics.

Materials. The article reveals the role and the place of strength and variability of the motor skills formation as one of the main conditions for the stability and reliability of the competitive activity. The author suggests the methodology of boxers’ sports training directed at strength and variability of the motor skills formation in case of mastering onrushing and defensive actions.

Results. The results of the pedagogical experiment showed that it is necessary to form strength and variability of the motor skills which provide the boxers’ sportsmanship improvement. The application of the methodology creates necessary conditions for motor experience enlargement, efficiency increase in difficult conditions of interaction with a highly qualified opponent. Strength and variability of the motor skills provides great stress resistance, raises self-reliance, readiness to act in difficult conditions preserving easiness of movements, control over the situation, timely initiative interception.

Conclusion. The application of the given methodology provides revelation of extra resources of the organism; understanding of the importance of different factors and conditions which improve sportsmanship.

Boxing is known for high dynamics, constantly changing situation during the interaction with the opponent on the boxing ring, great amount of onrushing and defensive actions and the ways of their fulfillment. The choice of the most effective technique is conditioned by many factors: ability to use the left hand during the combat as effectively as the right hand; ability to maneuver using different ways of movements: pacing, sliding step, jumps and others; ability to prognose the kind, direction and the content of the opponent’s defensive action.

In case of fixed technique the boxer successfully orients in spatial-temporal and spatial-power-operated parameters. Formed individual rhythm of movements defines the level of effectiveness and economy of motor actions. Motor skills formation happens on the basis of the
mastered earlier movements. For a direct blow with the left hand into the body with the step forward it is important to know a boxer’s stand, possible ways of defense, motional actions fulfillment from different distances, to define timely the necessary distance, the point for a blow, the magnitude of muscular exertion and etc. For mastering a difficult skill, including new elements, special preparatory exercises are necessary [1-3].

In case of well mastered motional action the boxer uses it successfully in sparrings, training fights with the partner. However in terms of competition interacting with a strong opponent, when the probability of strong pain and trauma is high, the process of irradiation appears which has negative influence on sportsmen.

The aim of the research work is theoretical and methodical substantiation of the importance of motor skill strengthening as the factor of competitive activity effectiveness increase.

Problems: 1. To define the conditions of motor skills strengthening in stress situations.
2. To create the methodology of boxers’ motor skills strengthening and variability, to check its effectiveness during the pedagogical experiment.

The same techniques in boxing are characterized by differences conditioned by genetic and phenotypic peculiarities, individual indices of height and weight correlation, length of upper and lower extremities, speed of motion reaction, the development level of muscular power, speed of movements, endurance, specificity, dexterity, body stability and others.

In the process of mastering the technique of difficult onrushing and defensive actions form the conditioned reflexes of second-order with a new form of movements. In motor skills conditional reactions of two types: develop sensory and operant. Sensory reactions are characterized by appearance of temporal connections between indifferent for a boxer stimulus and further activity under the influence of the first and the second signal systems. Operant conditional reactions have a specific display of motor and vegetative function.

The individual style of behavior during the combat is determined by the complexity of techniques and different forms of involving afferent and efferential functions into relative reflex connection. I.M. Sechenov, a person who stated the reflective nature of motor actions, defined the leading role of the brain in the mechanism of motional actions. Conditional reflective character of physical exercises was substantiated by I.P. Pavlov. He created the doctrine of higher nervous activity. Technically difficult motional action should be defined as the product of concerted activity of the complex of motional, visual, vestibular, kinaesthetic and other analyzers. Depending on the situation on the boxing ring during the combat the leading can be one analyzer.

Motor skills as difficult systems of conditioned reflexes are formed in case of concerted activity of different functional systems of the organism with the leading role of cerebral cortex as a result of work of different sectors of a brain. Under the influence of the complex of different external and internal stimulus appears the dynamic stereotype. During the interaction of the boxer and his opponent conditions for long-term exposure of the constant stimulus system develop. At the same time only one agent is enough to involve the whole system into vigorous activity and this proves the economy of the dynamic stereotype.

The following factors influence the character of a boxer’s activity: the level of the opponent’s sportsmanship, the experience of his competitive activity, spectators’ reaction, the state of own fitness level before the combat and other stimulus. In the process of the competitive activity wrestlers interact with different stimulus and this creates conditions for dynamic stereotype formation which provides motor skills strengthening and the appearance of new motor acts [4 - 6].

For motor skills formation temporal connections of higher order are very important. They appear during the influence on the first and the second signal systems. That is why optimal combination of graphic and practical teaching methods and training with words is very important.

It is necessary to form boxers’ clear idea of training means influence mechanism on the organism, the conditions of rational technique mastering, its adaptation to individual skills as the base for individual style of combat conduct formation, explanation of preparatory and training
exercises importance, importance of the succession of this exercises, determination of their connection with the main motional actions.

Motor skill strengthening is done on the basis of the systematic exercises which provide understanding of the technique essence. For this purpose it is reasonable to use cogitative images which help to master the peculiarities of a difficult technique content. The creation of a cogitative image demands literate retroplogy, precise comparisons, metaphors and provides cognitive process activation, understanding of the importance of technically difficult onrushing actions and conditions analysis as they can influence the increase or decrease of effectiveness.

Sufficiently difficult motional actions have the form and the content which are characterized by a specific structure. While practicing the same technique different boxers of the same weight category and equal physical fitness indices and technical – tactical readiness have differences (magnitude of the angles between the sections of the upper extremities during onrushing and defensive actions; movement amplitude, direction, speed, muscular tension and others).

These changes are conditioned by the specificity of involved muscle groups work: order of separate muscles inclusion into work, the level of their activity; the speed of quick fibers contraction and others. This proves that while mastering new technical actions it is necessary to create the conditions for the dynamic stereotype formation in case of basis of motional activity realization. At the same time for mastering the details it is necessary to create conditions for individuality demonstration. The revelation of reproduction feature of a difficult motor act is done during the fulfillment of different variants of a technique in different conditions of motional activity: during interaction with the opponent who is higher and who prefers certain distances and the ways of movements; in case of initial motional rhythm change (increase of motion frequency and decrease of motion frequency); in case of tiredness.

The ways of motional exercises fulfillment, which provide higher effectiveness, is reasonable to define as individuality demonstration which should be developed in the process of sportsmanship improvement. If we know the mechanism of motor skill formation, the conditions of its strengthening and variability, it is possible to provide a boxer’s high sports results over a short period of time in case of energy expenditures decrease.

To check this statement a pedagogical experiment was carried out. 42 people took part in the experiment. The experiment was carried out among 15-17 year old boxers of the 1st class and candidates of master of sports. The control group (CG) consisted of 20 sportsmen, the treatment group (TG) included 22 people. Before the pedagogical experiment initial level of the boxers’ physical fitness was defined. The following exercises were taken as control ones: 30 meters and 100 meters distance race; 3000 meters distance race, standing long-jump; shotput (4 kilograms) with the right and the left hand; pull-up in hang position (quantity). Data handling didn’t show considerable differences between the boxers of the control group and the treatment group on the level of physical fitness ($p>0.05$).

The level of technical readiness was evaluated while fulfilling onrushing and defensive actions using created by us criteria. The research materials analysis also didn’t show considerable differences on the boxers’ technical readiness from the control group and the treatment group ($p>0.05$). In the control group the training lessons were held on the traditional methodology according to the program recommended by the Boxing Federation of Russia. In the treatment group created by us methodology was used. The training lessons in this case were directed at motor skills strengthening and variability. The methodology content provided fulfillment of motional exercises according to existing motion experience. Using the structural base of earlier mastered techniques the boxers from the treatment group fulfilled more difficult variants of the exercises with application of all distances. Difficult kinds of movements were used: with two partners simultaneously; at high rate on the restricted area; with the partners replacement who differ in height and weight, speed of motor reaction, mobility of neural processes.

At the same time the importance of motional exercises was explained to the boxers. Mastering these motional exercises was the main condition of their technical readiness.
improvement. In the process of a new technique fulfillment each athlete’s abilities to increase effectiveness level of mastering onrushing and defensive actions, taking into consideration the distance, were defined; ability to prognose opponent’s motional actions judging by his first preparatory movements.

In suggested by us methodology great attention was given to individual motional rhythm formation which provides high efficiency for a long period of time. In the process of training lessons in the treatment group individual features were revealed during fulfillment of onrushing and defensive action’s details. It allowed to create some advantage of a boxer who has an opportunity to realize his natural inclinations and abilities.

In the final phase of motor skills strengthening specially created pedagogical situations were used:
- training combat with the sportsman having higher tempo of motional activity;
- sparrings with the boxer with the left-side motional preference;
- having a round of a training combat with a weighted belt, weighted jogging shoes and etc.

Each task was accompanied by explanation of the aim and the problems, necessity to increase the level of complexity of the exercises for the increase of the general and special endurance indices, confidence in one’s skills, psychological barrier removal in case of combat with the boxer who has higher qualification and more experience in competitive activity. Motor skill strengthening was done with the use of different ways of studied onrushing actions fulfillment; the most acceptable for the boxer’s individual preferences was defined. Then co-operative efforts of a coach and a boxer were directed at revelation of the conditions of the given technique effectiveness increase.

After the pedagogical experiment the second testing of physical fitness indices was held with the help of the same control exercises: in the control group with the initial data in 30 meters distance race – 5,35±0,34 seconds to the end of the pedagogical experiment had the growth of 3,1% (p>0,05), in the treatment group with the initial data of 5,34±0,29 seconds the results became better for 6,3% (p>0,05). In 100 meters distance race in the control group with the initial data of 14,17±0,89 seconds to the end of the pedagogical experiment the indices became better for 4,11% (p>0,05); in the treatment group with the initial data of 14,19±0,77 seconds the growth was 7,02% (p>0,05). In 3000 meters distance race in the control group with the initial data of 14,29±1,13 minutes to the end of the pedagogical experiment the indices became better for 6,43% (p>0,05); in the treatment group with the initial data of 14,32±0,93 minutes the growth was 10,36% (p<0,05). In standing long-jump in the control group with the initial data of 197,22±10,31 centimeters to the end of the pedagogical experiment the indices increased by 5,24% (p>0,05); in the treatment group with the initial data of 195,88±13,41 centimeters the growth was 11,48% (p<0,05). The same tendency of the indices increase in the treatment group was revealed with the help of other tests which characterize the indices of physical fitness.

The level of technical readiness was defined according to criteria which help to evaluate the strength of motor skills formation and the boxer’s ability for variability of motional actions in different conditions of their fulfillment.

The criteria of motor skills strength evaluation:
5 points – accuracy of onrushing technique fulfillment in accordance with its spatial – temporal and spatial – power-operated parameters, optimal individual motional rhythm;
4 points – insignificant deflection from stated parameters of motional activities;
3 points – recurring motional rhythm disorder during the given technique fulfillment;
2 points – significant deflection from spatial – temporal and spatial – power-operated parameters of a motional action; absence of motional rhythm;
1 point – ability to fulfill a technique slowly.

The criteria of motor skill variability evaluation. Boxer’s readiness to fulfill mastered motor skill in different conditions of interaction with the opponent.
5 points – high level of the given technique fulfillment in difficult conditions of motional activity: being tired, in case of interaction with more experienced opponent;
4 points – technically correct fulfillment of the given technique in case of constant control of consciousness in different conditions of competitive activity;
3 points – high level of performing mastery in case of optimal conditions of holding a boxing combat;
2 points – deflection from spatial – temporal and spatial – power-operated parameters of a technique in case of tiredness;
1 point – absence of readiness to fulfill the mastered onrushing action in case of interaction with a stronger opponent.

After the end of the pedagogical experiment the results improved in both groups with higher indices in the treatment group. In the control group during the fulfillment of the mastered onrushing and defensive action in different conditions of the training and competitive activity, in case of initial evaluation of the strength of a motor skill formation of 3,17±0,24 points at the end of the pedagogical experiment the indices increased to 7,31% (p>0,05); in the treatment group in case of initial data of 3,21±0,27 points the growth of results was11,38% (p<0,05), which is connected with the orientation of the training process to achievement of a motor skill strength with the help of a special, created by us methodology.

In the control group in case of initial evaluation of the technique endurance variability of 3,24±0,9 points at the end of the pedagogical experiment the indices became better for 6,19% (p>0,05); in the treatment group with the initial data of 3,27±0,26 points the results improved for 14,79% (p<0,05). The improvement is conditioned by the use of special exercises system in different conditions which impose high demands on boxers’ physical and technical readiness.

Thus the results of the pedagogical experiment showed that it is necessary to form strength and variability of the motor skills which provide the boxers’ sportsmanship improvement. The application of the methodology creates necessary conditions for motor experience enlargement, efficiency increase in difficult conditions of interaction with a highly qualified opponent. Strength and variability of the motor skills provides great stress resistance, raises self-reliance, readiness to act in difficult conditions preserving easiness of movements, control over the situation, timely initiative interception.

Bibliography
MANAGEMENT OF MOVEMENTS IN SPRINT

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Keywords: technical readiness, pedagogical experiment, control technique.

Annotation. The problem of movements increase effective management in sprint draws attention of many experts in this type of sports activity. Correction of mistakes in a technique of running represents the difficult and long process demanding specially organized pedagogical conditions and the subject of pedagogical influences. Speed of sprint is defined by many factors among which important value has rational distribution of parts and body links in space and time, and also elimination of fluctuations of the head and a humeral belt in the front and back, lateral and vertical direction.

Research methods: analysis and generalization of scientific and methodical literature, testing, pedagogical experiment, methods of mathematical statistics.

Research material. In this article the technique of the head movements control developed by the author in the vertical direction is offered when performing various running exercises, and also during running on a competitive distance.

Results. Results of pedagogical experiment confirmed efficiency of the technique offered by us and expediency of its application in training process of runners on short distances, showed that application of the head movements control technique developed by us during running on various pieces of a distance, led to considerable decrease in amplitude of fluctuations in the vertical direction that caused improvement of results in running.

Conclusion. The technique this device use offered by us is directed on consolidation of parts and body links rational distribution skills in space and time; elimination or decrease in amplitude of the head fluctuations in vertical situation that increases profitability of movements, increases their ease and freedom.

Sprint speed is defined by many factors among which important value has rational distribution of parts and body links in space and time, and also elimination of fluctuations of the head and a humeral belt in the front and back, lateral and vertical direction.

The individual technique of sprint has various features that is caused phenotypical, height-weight, and also indicators of physical and special running preparation. The most widespread errors of sprinters running technique are considerable oscillating motions.

The purpose of this work is theoretical and methodological justification of various deviations identification importance identification of from a rational technique of sprint and search of their elimination ways.

Objects: 1. To develop a technique of the head movements control in the presence of performing special running exercises and also overcoming a competitive distance.

2. To check efficiency of this technique in the course of carrying out pedagogical experiment.

In sprint the optimum ratio of length and frequency of running steps is only one of the factors defining a gain of speed during competitive activity. Growth of sports skill of the sprinter is defined by a complex of the neurophysiological and biochemical processes submitting to the
general regularities which realization provides improvement of a technique and a gain of sports results [2, 8]. Assimilation of a rational technique of running steps is connected with identification and timely correction of the individual mistakes caused by performance races as a natural locomotion, providing a comfortable condition of an organism.

Modern achievements of sprinters reached such level that the style of running created during individual life demands serious correction according to the neurophysiological mechanism of running taking into account its biomechanical parameters [2, 5, 6]. Speed of the runner is defined by nature of the peripheral device activity which efficiency is defined by difficult central mechanisms of management the movements located at various levels of the central nervous system.

The central mechanisms include the motive touch and vegetative centers defining efficiency of motor activity in the structure.

Psychological installation on result improvement at unavailability of difficult central mechanisms of movements management to the optimum coordinated activity leads to the excessive neuromuscular tension, untimely redistribution of muscular efforts, decrease in supervising function of character and coherence a body separate parts and linksof work [1, 3, 7]. It leads to emergence superfluous, unjustified, from the point of view of biomechanics, movements in the form of the top part of a trunk rocking in the lateral or front and back direction; head fluctuations in vertical and horizontal situation. All excessive motive actions are connected with additional expenditure of energy that reduces productivity of running on a competitive distance. Correction of mistakes at the reached consolidation of motive skills is the long and difficult process demanding new nonconventional approaches to the organization of runners on short distances sports preparation system. The analysis of special literature testifies to insufficient attention of scientists and coaches to the solution of this problem [9].

The device, simple on a design and application in practical activities by means of which it is possible to introduce in due time necessary amendments in an individual technique running of the sprinter is offered by us.

![Fig.1. Technique of the head movements control during sprint.](image)

1 - elastic band  
2 - semicircle from a cardboard strip  
3 - marker  
4 - place of fastening of the basis of a marker to an elastic band  
5 - junction of a strip of a cardboard with an elastic band

The technique of the head movements control developed by us in the vertical direction represents the device consisting of an elastic band 2,5-3,0 cm wide which the sprinter puts on the head. To forward part of an elastic band the strip of a white cardboard which gradually increasing in width fastens, reaches to the center of the greatest size - to 5-7 cm.
Between the elastic band and wide part of a white cardboard there is a marker which the basis fastens to an elastic band, and the sharp painting end rests against a cardboard. Marker length \( \approx 2 \text{ cm} \), at a rational technique of running, an optimum arrangement of parts and body links in space and time, lack of oscillating motions of the head in the vertical direction - on a strip of a white cardboard remains a point.

Oscillating motions of the head in the vertical direction leave the line which length corresponds to the size of amplitude of movements of the head on a strip of a white cardboard. It provides obtaining urgent information on this parameter of running and allows to develop a technique of head movements management during sprint. The maintenance of a technique provided performance of the various running exercises included in sports training with installation on an exception of oscillating motions of the head in the vertical direction. For this purpose during performance of preparatory running exercises readiness of an organism was provided at running loading to find a visual reference point on the line of eyes and to running distance pieces, keeping a head in standard position.

Control of running steps existential parameters accuracy was exercised by use of the design offered by us. The same approach was applied in the course of special running exercises performance: tripping running, overlapping shins, with a high lifting of a hip, jump running, from accelerations on various pieces of a distance other. After each running the trace left a marker on a strip of a white cardboard was checked; length of the line left by it which was stuck with a rectangle of a white paper then this technique of the head control movements was used again and was measured.

For check of the technique efficiency developed by us pedagogical experiment in which 23 sportswomen specializing in sprint - 1 category took part, by KMS and MS of 18-24 years was made. Two groups were organized: control (KG) - 11 people, and experimental (EG) - 12 people.

Before pedagogical experiment initial level of all-physical and special running training with application of a complex of control exercises was revealed: races on 60 m from high start; running of 150 m distance piece from high start; broad jump from a place; threefold and tenfold standing jump, shot put of 3 kg. The analysis of testing results didn't reveal essential distinctions on indicators of all-physical and special running readiness of runners of KG and EG (\( p > 0.05 \)). Measurement of the head movements size amplitude during the running of a competitive distance was carried out by means of the control technique developed by us. Processing of the obtained data didn't reveal essential distinctions on this parameter for examinees of KG and EG (\( p > 0.05 \)).

In KG training classes were given according to a traditional technique of sports training of sprinters on the basis of the program recommended by the Russian Federation of track and field athletics. In EG the technique of the head movements control developed by us was used during running on short pieces of a distance.

After the end of pedagogical experiment the repeated testing which results showed was held that improvement of running training happened in both groups: KG and EG, however in EG indicators were significantly higher. So, at initial results of a broad jump from a place of 2,71±0,21 cm to the end of pedagogical experiment results increased in KG for 3,50% (\( p > 0.05 \)); in EG, respectively, at initial indicators of 2,72±0,18 cm the gain made 7,50% (\( p > 0.05 \)). Measurement of the head movements size amplitude during the running of a competitive distance was carried out by means of the control technique developed by us. Processing of the obtained data didn't reveal essential distinctions on this parameter for examinees of KG and EG (\( p > 0.05 \)).

Application of the technique of the head movements control during a running of short distance pieces allowed sportswomen of EG to reduce considerably amplitude of its fluctuations in vertical situation that promoted increase in speed of running on various pieces of a distance. So, in KG in running on 30 m from high start at initial indicators 4,30±0,53 with to completion of pedagogical experiment results improved for 1,87% (\( p > 0.05 \)); in EG, respectively, at basic data 4,31±0,27 about a gain I made 5,44% (\( p > 0.05 \)).
In KG in running on 150 m from high start at initial indicators 17.88±0.36 to the end of pedagogical experiment results increased for 3.52% (p>0.05); in EG, respectively, at basic data 17.79±0.69 the gain made 10.65% (p<0.05). The similar tendency of indicators improvement in EG was revealed on other pieces of a distance.

Thus, results of pedagogical experiment showed that application of the technique of the head movements control developed by us during running on various pieces of a distance, led to considerable decrease in amplitude of fluctuations in the vertical direction that caused improvement of results in running. The technique of this device use offered by us is directed on consolidation of parts and body links rational distribution skills in space and time; elimination or decrease in amplitude of the head fluctuations in vertical situation that increases profitability of movements, increases their ease and freedom.

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INTEGRATIVE-DEVELOPMENTAL APPROACH AS A BASIS OF PROFESSIONAL COMPETENCE DEVELOPMENT OF THE SPECIALIST IN THE SPHERE OF PHYSICAL TRAINING

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Key words: supplementary education of adults, structural-functional model, the content of professional-pedagogical training, course tuition.

Annotation. The problem of professional competence development of the physical culture specialist caused a number of publications and works directed at understanding and theoretical formation of the contents of “the public order” content development of the competence in unity with professional and communicative activity. For understanding of a studied problem the views of the scientists on general-pedagogical and pedagogical aspects of a competent personality are important.

Research methods: the analysis of the philosophical, the psychological, scientific -methodical, methodical - educational literature, electronic information resources on a studied problem; design and modeling; conversation, questioning, interviewing, didactic testing, self-assessment, pedagogical supervision, analysis of educational activity products of the experts in the sphere of physical culture; synthesis of experience and practice of teaching in the system of course training; laboratory, stating, forming and estimated experiments on detection of efficiency of an offered technique; methods of mathematical statistics for the assessment and substantiation of the research results.

Research materials. The efficiency of professional competence development of physical culture specialist is shown in the article on the basis of integrative developing approach. The structurally functional model of professional competence development of the teacher-trainer in the conditions of sports and training activity is given.

Results. On the basis of integrative - developmental approach and research results on psychology and pedagogical features of the personality professionalizing of the structurally functional model of professional competence development of physical culture specialist is developed. As the generalizing result of course training research of the specialists in physical training the changes of the indices of the specialists’ tendency to cooperation or antagonism before and after the training on interpersonal communication are presented (in % from total number of participants of the training, n=46).

Conclusion. Professional competence development of the specialist in the sphere of physical culture is reasonable to fulfill out of the main pedagogical activity using integrative – developmental approach, self – education and pedagogical interaction. The peculiarities of the professional competence development of the specialists in the sphere of physical culture are caused by the specificity of the physical culture system, by the content of supplementary education, by the professional education, different motivation for pedagogical activity, by the success in the preceding professional activity and orientation to success in modern sports – training activity.
Modern dynamic character of life demands from the physical culture specialist such qualities, as competence, communication skills, ability to adapt quickly in group, ability to work in constantly changing conditions, ability to govern human relations in the course of joint activity. The specialist of sports institution should be able to work in command for the general sports result, to participate in making rational decisions, to accept the point of view of the colleagues, publicly to represent results of the sports and training activity, to consider substantial practice [2, p. 73]. As for the priorities of professional competence development of the expert in physical culture, they can be correctly understood only on the basis of the structurally functional model developed in research.

**Research relevance.** The problem of professional competence development of the physical culture specialist caused a number of publications and works directed at understanding and theoretical formation of the contents of "the public order" content development of the competence in unity with professional and communicative activity.

The views of the scientists are important for understanding of a studied problem on general-pedagogical and pedagogical aspects of the competent personality of A.Y. Nayn, S.D. Neverkovich, V.V. Serikov, A.N. Tubelsky, I.D. Frumin, etc. The works of V. A. Belikov, G.D. Bukharova, M.Y. Vilensky, E.F. Zeer, A.M. Kuzmin, Z.M. Kuznetsova are devoted to professional competences.

For the solution of a studied problem of professional competence development of the teacher-trainer concerning the aims of pedagogical management of sports establishment the researches, conducted by E.N. Mazhor, S.M. Tumanov, M.A. Shamsutdinov, V.V. Kuzin, A.A. Gorelov, and others have considerable value.

However, paying attention to research works of the scientists who reveal the essence of professional competence, its different types, ways and conditions of its development, it should be noted that there are insufficiently studied questions of professional competence development of experts in physical culture on the basis of integrative developing approach.

The analysis of above-mentioned research works, objective conditions of educational process in establishments of a sports profile allowed us to formulate obvious contradictions between:

a) the need of sports society for the social and active identity of physical culture specialist with obviously expressed communicative qualities, on the one hand, and on the other hand an insufficient theoretical and practical readiness of a problem of professional competence development on the basis of integrative developing approach;

b) the need for training of physical culture specialist who possesses the ability and readiness to solve new educational problems, to create conditions for pedagogical creativity and development of variability of sports education, to stimulate educational initiatives in the mechanism of sports establishments development and a certain lack of knowledge structuring this process and giving it the qualities of self-control and self-development.

**Research purpose**: taking into consideration the integrative - developmental approach and relying on the results of the research of psychological and pedagogical features of personality professionalization, develop structurally functional model of professional competence development of physical culture specialist.

**Research materials and methods.** The theoretical and empirical methods are used in the work including, in particular: the analysis of scientific works, for the purpose of identification of the questions relating to an object of research; the analysis of philosophical, psychological, scientific - methodical, methodical - educational literature, electronic information resources on a studied problem; design and modeling; conversation, questioning, interviewing, didactic testing, self-assessment, pedagogical supervision, analysis of products of educational activity of experts of physical culture; synthesis of experience and practice of teaching in the system of course training; laboratory, stating, forming and estimated experiments on detection of efficiency of an offered technique; methods of mathematical statistics for an assessment and justification of research results.

The peculiarities of professional competence development of physical culture specialist are caused by specificity of the system and the maintenance of adults’ additional education. Physical
culture specialist often has vocational not pedagogical training – owns basic subject preparation at theoretical and practical levels (there is no serious psychological and pedagogical - social preparation); having pedagogical education the available basic subject preparation is focused on state standard of the general secondary education that is insufficient for the system of adults’ additional education. The peculiarity of professional competence development of the sports institution specialist is in the fact that it occurs after entry into professional activity within additional professional education or through self-education [1; 5; 6; 8].

On the basis of integrative - developmental approach analysis to the concept "professional competence of the expert in physical culture", domestic and foreign educational theories of the personality professional competence development, interdisciplinary connections of personality development psychology, age - related psychology, work psychology, andragogics and acmeology, conclusions that educational - informative and metaprofessional qualities allow to the specialist of physical culture to carry out productively the activity on a modern level were received. Professional competence development of the specialist in sports institution in the conditions of course retraining is carried out by us in the direction of professional knowledge, abilities, professionally important personal qualities development on the basis of available basic education and with a support of integrative - developmental approach. This approach as a backbone element and a condition of professional competence, metacompetence, is the main mechanism of professional competence development of the expert in physical culture. Reflexive abilities of the teacher of physical culture provide possibility of his professional competence development at various levels of professional activity, prevention of professional stagnation, professional deformations, emotional burning out [4; 7; 8]. Thus there is an enrichment and emergence of new professional experience, opportunity to achieve professional tops [3, p. 219-220] is created.

The definition of integrative - developmental approach expresses its contents and the main function. The integrativity reflects: firstly, tendencies of society development on a way of social and economic transformations, entries into market economy; secondly, the processes at school which are shown in strengthening of interdependence of higher education institutions and other systems of society, in the need for the specialists’ training who are capable to work professionally and develop in constantly changing conditions; thirdly, creative character and the administrative and pedagogical content of work of the expert of physical culture assumes integration of administrative, pedagogical, psychological, culturological, natural-science training; at last the integrativity reflects specifics of the administrative and pedagogical disciplines which are integrated in essence [11, p. 169-170].

The main function of integrative - developmental approach consists in the professional competence development of the expert in physical culture to creative administrative and pedagogical activity on the one hand, formed readiness for continuous self-development, on the other hand, promoted self-realization of the personality in sports and training activity.

Integrative - developmental approach received its definition also because it incorporated the best sides of many scientific approaches. The most productive and therefore basic competence-based approach which includes complete personal - activity, optimizing, technological and synergetic aspects [4; 9; 10].

Based on the integrative - developmental approach, structurally functional model of professional competence development of physical culture specialist is created in this research (picture 1).

The social order – professional competence development of the specialist of the sports institution demanded on a labor market

The purpose is to reveal a complex of the pedagogical conditions providing efficiency of development of professional competence of the specialist of sports institution.
Continuous development of professional competence of physical culture specialist is based on the professional activity of basic competence created prior to the beginning of implementation.

Main objectives:
- supply of the specialist of physical culture with corresponding theoretical and practical knowledge necessary for successful performance of professional activity;
- development of the skills which reveal the content part of professional competence of the expert in physical culture;
- development of communicative personal qualities, abilities and skills

Basic principles of training:
- informative activity and consciousness of being trained;
- continuity and multilevel character;
- variability and education practice orientation;
- continuity and professional expediency

Indices of professional competence development of physical culture specialist

Speech:
- abilities to listen and hear the interlocutor;
- development of communication skills;
- achievement of speech logicality and

Motivational:
- self-assessment of abilities to self-education and self-development;
- existence of communicative abilities;
- existence of administrative

Content:
- ability to empathy (empathy);
- ability to control the behavior in conflict situations;
- mastering bases of

Pedagogical conditions of professional competence development

1. The content and form of the process organization of continuous professional competence development of the specialist of sports institution are defined by the level of activity of the expert (reproductive, creative, heuristic), reflection development of a teacher’s vitagen experience.
2. The model of professional competence development constructed on the basis of integrative - developmental approach, is caused by the content of motivation, the valuable bases and personal qualities of the teacher’s vitagen experience, conditions of self-education and pedagogical interaction.
3. Communication oriented practice is carried out on the basis of interrelation of subject matters (variable courses), the use of methods of active training and integrative - developmental approach.

Result – high level of professional competence development of physical culture specialist

Picture 1. Structurally functional model of professional competence development of physical culture specialist

Continuous development of professional competence of physical culture specialist is based on the professional activity of basic competence created prior to the beginning of implementation.
The main feature of this model is its competence-based content and a support of vitagen experience. We consider development of professional competence to be the independent educational activity which is carried out with the primary pedagogical activity. Self-management on the basis of reflection result is positioned as a didactic development tool of profession.

The problems arising in pedagogical activity of the specialist in the sphere of physical culture, are transferred to problems of own educational activity. With support of integrative-developmental approach the training material is reconstructed at abstract level, search of the reasons and means of the arisen problem solution is carried out. Educational activity thus becomes sphere of creation of own new forms of professional competence, and directly their approbation and introduction happens in activity itself.

Thus, the developed structurally-functional model is an initial theoretical construction in design of educational process of professional competence development. For its practical embodiment in the educational process on the courses of professional retraining and professional development of workers in the sphere of sports education and further transformation it demands educational-methodical and organizational support.

In process of course preparation, for self-realization physical culture specialist applies technology of self-management and develops his skills in subject domain; carrying out methodical function, transfers to colleagues and students the experience of professional achievements; strengthens his health and develops communicative abilities for prevention of professional deformations. Self-education and familiarizing with cultural values prolongs the period of creative and professional activity of the teacher [5, p. 119-120]. A new pedagogical experience of being the mentor, increase of reflexive abilities level and making administrative decisions on rather high level provide achievement of professional tops and self-realization.

The author's technique of professional competence development of the sports institution specialist is based on a number of key messages: a) educational activity is substantially determined by temporary, spatial, common, professional, social factors which, either limit, or promote the training process; b) the training process is organized in the form of joint-cooperation of the teacher and the student at all stages of realization, estimation and correction; c) an adult is trained for the solution of an important problem and achievement of a specific goal; the main role in the technology of experts of physical culture training belongs to the adult himself; experience of the adult is a source of training for him and his colleagues; d) independent determination of parameters of training, search for necessary knowledge, formation of abilities, skills and qualities becomes the main characteristic of the training process; e) students want to apply knowledge and abilities at once, immediately, to become more competent in the solution of educational problems to work more effectively.

Results and their discussion. The experimental work had some stages: stating, forming, logical judgment and improvement stage. The purpose of the stating experiment was studying of the objective characteristics, which allow to define the level of professional competence development of the experts in physical culture, the ways of its further increase, and also the analysis of conditions for its effective development.

The main objective of the forming experiment was in approbation of pedagogical conditions. During realization of the first pedagogical condition, we carried out a methodical work on correction of educational material content of the lectures and seminars. Professional-situational nature of the lessons was taken into consideration the readiness for sports activity implementation in concrete professional situations and is connected with kinds of activities in a concrete profession. During the lessons, taking into account vitagen experience of the listeners, the information on professional competence was connected with the personal qualities of the expert which allowed him to organize optimum activity in a wide context and successfully solve arising problems with high level of self-control, self-reflection, self-assessment, showing fast, flexible and adaptive reaction to dynamics of circumstances understanding personal responsibility for the activity results.
Experimental check of the second condition assumed confirmation or statement denial of that professional competence efficiency of physical culture specialist if the model of the professional competence development is based on integrative - developmental approach, is caused by the content of motivation, the valuable bases and personal qualities of the expert of physical culture, vitagen experience, conditions of self-education and pedagogical interaction.

To check this condition we developed the author's technique which realization on a practical training revealed specifics of physical culture specialist activity in the field of physical culture to realization of youth physical training.

The third pedagogical condition is a communicative practice which is carried out on the basis of interrelation of the subjects (variable courses), use of active training and integrative developing approach methods. It was approved during the entire period of experimental work.

Development and approbation of this condition on the basis of integrative - developmental approach demanded exarticulation of set of basic positions – postulates which characterize strategy of physical culture specialist pedagogical activity in interactive training, and form necessary and sufficient base of professional competence effective development of the head of sports establishment.

Results of the experimental work (table 1) testify that each of pedagogical conditions provided high-quality increase of professional competence development level of the head of sports establishment. Their complex realization provided achievement of the final goal – formation of the studied quality of the expert in physical culture.

The results of self-estimation and expert assessment of physical culture specialist’s readiness to work in innovative educational institution shows that more than a half of the heads of sports establishments (52,4%) before the forming experiment had a low level of professionally important qualities development included into the module of integrative forms of professional activity. At the final stage of forming experiment the number of experts in physical culture with low level of competence on this module decreased to 23,9%, i.e. almost twice in comparison with the initial data. Physical culture specialist with high level of

### Table 1

<table>
<thead>
<tr>
<th>Content of questions of a test questionnaire</th>
<th>Number of affirmative answers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>before the training</td>
</tr>
<tr>
<td>1. Tendency to cooperation</td>
<td></td>
</tr>
<tr>
<td>I always try to avoid troubles</td>
<td>61,2</td>
</tr>
<tr>
<td>Disagreements excite me</td>
<td>51,0</td>
</tr>
<tr>
<td>I try to keep good relations in all cases</td>
<td>55,1</td>
</tr>
<tr>
<td>I consider that it is always possible to find the compromise</td>
<td>73,4</td>
</tr>
<tr>
<td>I always try to understand position of the other person</td>
<td>59,2</td>
</tr>
<tr>
<td>I try to find cooperation points</td>
<td>75,5</td>
</tr>
<tr>
<td>I don't I am absolutely right</td>
<td>77,5</td>
</tr>
<tr>
<td>I always try to understand others</td>
<td>53,1</td>
</tr>
<tr>
<td>I am inclined to the change of the position</td>
<td>55,1</td>
</tr>
<tr>
<td>0 I constantly follow the opponent’s idea to correct my own</td>
<td>51,0</td>
</tr>
</tbody>
</table>
integrative forms of professional activity before the forming experiment had 23.8% of total number. At the experiment final stage this group of experts increased and was 47.3% of total number of physical culture specialist taking part in the experiment.

With the initial data of 41.2% of the sports establishments heads had low level of professional knowledge and abilities included into the information - analytical module. At the final stage of the forming experiment their number reduced to 22.9%, and number of experts in physical culture having high level of adults professional knowledge and abilities, included into the information - analytical module increased from 17.5% to 37.2%.

Considerable shifts were observed in professional knowledge and abilities included into the normative - distributive and organizational- executive modules. Before the forming experiment 25.3% and 22.7% of experts, had a low level of professional competence. Before the forming experiment 29.1% and 30.4% of teachers had a high level of competence.

CONCLUSION

Professional competence development of the specialist in the sphere of physical culture is reasonable to fulfill out of the main pedagogical activity using integrative – developmental approach, self – education and pedagogical interaction. The peculiarities of the professional competence development of the specialists in the sphere of physical culture are caused by the specificity of the physical culture system, by the content of supplementary education, by the professional education, different motivation for pedagogical activity, by the success in the preceding professional activity and orientation to success in modern sports – training activity.

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THE HEALTH OF YOUNG SPORTSMEN AS AN OBJECT OF
PURPOSEFUL PROFESSIONAL ACTIVITY OF THE SPECIALISTS IN THE
SPHERE OF PHYSICAL CULTURE AND SPORT IN THE REPUBLIC OF
MARIY El

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Keywords: health-saving, sports training, health-protecting competences.

Annotation: Nowadays one of the most burning issues in Russian society is the problem of
physical fitness of children. This problem is discussed on all levels of the government and in the
context of the national educational initiative “Our new school” [8] where among six priorities is
schoolchildren’s health. In the Epistle of D.A. Medvedev to the Federal Assembly it is mentioned
that “the health of a person is formed while studying at school for the rest of the life” [7].

Nevertheless the last statistical reports show that the health state of a young generation
doesn’t correspond to the demands and potency of a modern society. In recent years there is an
increase of children who have poor health or unsatisfactory mental development.

Research methods: scientific and pedagogical, educational and methodical literature
analysis and summarizing, survey among the specialists, questionnaire survey among students,
methods of mathematical statistics.

Research materials. The article gives the development and the substantiation of the
hypothesis about the possibility and expediency of health-saving aims formation and, as a result,
health preservation and strengthening of the teenagers who go in for sports. The level of health-
protecting competences development of the specialists’ in the sphere of physical culture and sport
was examined in the Republic of Mariy El. The results of the research are presented in the article.
The main aim of the research work is to pay attention to the necessity of the training process
reconsideration among young sportsmen who have inadequate physical activity.

Results. The survey among 98 future and active sports specialists of the Republic of Mariy
El showed extremely low level of health-protecting competence formation and the absence of
health-protecting technologies and measures in the professional activity of coaches – teachers.
Carried out questionnaire survey among the students of the physical culture, sport and tourism
department on the specialty 050100.62 showed that there is no a definite idea of the problem of
personal health protection and knowledge, abilities and skills of keeping students’ health.

Conclusion. The main accent, in our opinion, should be made on a full development and
elaboration of health-saving technologies during the study in a higher educational establishment. It
will help to organize the training process competently taking into consideration the individuality of
each sportsman and his psychic - morphologic - physiological state. To achieve this aim we should
rationalize sports activity searching for optimal and adequate to the athlete’s health methods and
forms of sports activity organization and speaking about positive examples of health saving by
famous people in the sphere of sport and a healthy personality of a coach. All mentioned above
factors will help to form a teenager’s axiological orientations to a healthy life style and will provide
the protection of young sportsmen personal health.
Introduction. Nowadays one of the most burning issues in Russian society is the problem of physical fitness of children. This problem is discussed on all levels of the government and in the context of the national educational initiative “Our new school” [8] where among six priorities is schoolchildren’s health. In the Epistle of D.A. Medvedev to the Federal Assembly it is mentioned that “the health of a person is formed while studying at school for the rest of the life” [7].

Nevertheless the last statistical reports show that the health state of a young generation doesn’t correspond with the demands and potency of a modern society. In recent years there is an increase of children who have poor health or unsatisfactory mental development. T.G. Pestovaya mentions that many factors influence children’s health: life level decrease, poor state of ecology, negative changes in the financial and pedagogical potential of a family and other factors [3].

Research methods and research organization. A.I. Fedorov says that teenagers’ attitude to their health is a difficult social phenomenon and its insufficient study demands further research works directed at revelation and specification of the factors which provide formation of teenagers’ positive attitude towards health. Teenagers’ positive attitude to their health should be formed on the basis of different social institutions interaction: a family, a school, the health system, mass media and state policy in the sphere of health. Physical exercises and mass sport are very important and necessary to improve children’s life quality and to make them happier [4].

Most health professionals think that going in for sport has positive influence on the organism. But we don’t fully agree with this point of view because there is a great percentage of traumatism among the teenagers who go in for sport and in case of failure their self-appraisal decreases, they even may leave the team and lose their friends. This is proved not only by scientific works but also by independent long-term observations among young sportsmen who train at schools for children and teenagers of the Olympic reserve in Yoshkar-Ola.

In one of the interviews the president of the Sports single combats Academy of the Russian State University of Physical Culture, Sport and Tourism A.N. Bleer said: “Children’s sport is our future. It helps to bring up the generation. Children’s sport is the key to solve future criminal problems. It guards children from the streets, helps to develop and grow up normally (especially children from unfavorable family). Sport helped many famous people to become successful” [5].

In the article of the doctor of pedagogics, professor V.V. Kim we see the following idea of health protection in sport: “In the training process of sports reserve appears contradiction between the high demands to young sportsmen readiness, conditioned by the necessity of results improvement, and limited age-specific capabilities of a growing organism” [6].

Going in for sport, undoubtedly, exerts pedagogical, educational and developmental influence on a growing organism. At the same time sports activity sometimes has a negative impact on different sides of an athlete’s life. Unlike physical culture which is not aimed at competitive results, sports training is often characterized by an activity connected with overloads, early sports specialization, dishonest behavior of the opponents, all these has a negative impact on the health of the sportsmen.

Any kind of sport demands great energy and nervous stability from the organism. Very often an athlete has to train in spite of pain and tiredness and this has a harmful influence on a young organism. It often happens in such kinds of sports which demand high level of co-ordination as sport and artistic gymnastics, hockey, boxing and other kinds of wrestling which are highly traumatic. S.P. Zavitaev said: “Traumatic kinds of sport are especially dangerous for children as their organism is not formed yet and they are more vulnerable than adults. All this, undoubtedly, creates necessity of taking measures directed at health protection of young sportsmen in a training process. Speaking about health - protecting sports training, it is necessary to be oriented at sport result achievement in coordination with health protection” [1].

As it is known the agents of socialization, factors which influence the process of personality formation at this age, in A.V. Mudrik opinion, are the contemporaries or close friends [2].

However for young people who go in for sport this agent of socialization is a coach who is the model of moral, spiritual life values. This kind of interrelation forms teenager’s axiological
orientations including the direction at health protection. That is why future specialists in the sphere of physical culture and sport should have high level of mastering health - protecting technologies. To define the level of health-protecting competence formation we carried out a survey among 98 future and active sport specialists of the Republic of Mariy El and it showed extremely low level of mentioned above competence formation and the absence of health - protecting technologies and measures in the professional activity of coaches – teachers.

**Results and their discussion.** Answering the question about health – saving activity of a teacher and the question “How do you understand health – saving activity? How do you plan your professional activity taking into consideration health – protecting principles?” some coaches (22 people and that is 48 %) tried to characterize the process of training taking into account physiological characteristics of the sportsmen. Other 12 specialists (26 %) see the main health – saving function of their professional activity in the phrase “don’t do harm”. It becomes more urgent in recent years because of frequent checks by public prosecutors of the sports establishments and the process of training itself. These checks are necessary because there are regular accidents all over Russia and their reason, in most cases, is overload, desire of a coach to train a stronger sportsman not taking into consideration his physical state. 11 specialists (24%) refrained from answering the stated questions. To define the future specialists’ in the sphere of physical culture and sport degree of view of health – saving formation we carried out questionnaire survey among the students of the physical culture, sport and tourism department on the specialty 050100.62 and it showed that there is no a definite idea of the problem of personal health protection and knowledge, abilities and skills of keeping pupils’ health. Answering the question about the notion “health” most respondents (88%) said “when you don’t have any pain”. Other 12 % didn’t know what to say. 75% of respondents said that the main factors which influence health state were bad habits. It is necessary to mention that the theoretical questions concerning the category of health are studied by the students on the 1st course of study and that is why such kinds of answers show insufficient knowledge in this sphere. Answering the questions about the ways of health protection most respondents said only about satisfactory state of health support by tempering and physical exercises. Taking into consideration the received data we consider it reasonable to speak about the reconsideration of the system of higher sports training of the future and active specialists in this sphere.

**Conclusion.** Since The Federal State Educational Standard entered into force, the forms of teaching were changed – the process of training division into levels or steps was introduced: bachelors and magistracy. We analyzed the curriculum, educational – methodical complexes on the physical culture department of the Federal State Budgetary Educational Establishment of Higher Professional Education “Mariy State University”. The curriculum includes only the course “The basis of medical knowledge and a healthy lifestyle” the volume of which is 72 hours where 36 hours are devoted to independent work of students. This course doesn’t satisfy the requirements of the Federal State Educational Standard of Higher Professional Education as the finished one and it can’t provide the formation of a health-protecting competence with its components.

Thus we come to the conclusion that the health of young sportsmen directly depends on the level of coaches’ health-protecting competence formation. That is why it is important to pay great attention to the formation of health-protecting directives in the process of higher sports training. The main accent, in our opinion, should be made on a full development and elaboration of health-saving technologies during the study in a higher educational establishment. It will help to organize the training process competently taking into consideration the individuality of each sportsman and his psychic - morphologic - physiological state. To achieve this aim we should rationalize sports activity searching for optimal and adequate to the athlete’s health methods and forms of sports activity organization and speaking about positive examples of health saving by famous in the sphere of sport people and a healthy personality of a coach. All mentioned above factors will help to form a teenager’s axiological orientations to a healthy lifestyle and will provide the protection of young sportsmen personal health.
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METHODOLOGY OF STUDENTS’ TECHNICAL AND TACTICAL TRAINING IMPROVEMENT AS THE FORMATION OF DIDACTIC COMPETENCE CONDITION OF THE FUTURE HOCKEY COACHES

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Keywords: technical and tactical actions, components, competences, training lessons.

Annotation. The article is about the pedagogical technology of didactic competence formation of the future hockey coaches during the educational and training process. The article presents the structural components of an experimental methodology of students’ technical and tactical training improvement, target and content formation of the future hockey coaches’ professional competence on the basis of the students’ technician – tactical training improvement which includes: target, searching - diagnostic, organizational, content, technological, activity - orientation and evaluative - resulting components and realization stages.

Research organization. The experimental work was carried out during the period of 2010 - 2012 in Naberezhnye Chelny branch of Volga Region State Academy of Physical Culture, Sports and Tourism. The students of the specialization "The theory and methodology of hockey" took part in the experiment.

Research methods: analysis of scientific and methodical literature, pedagogical supervision, expert assessment, pedagogical experiment, methods of mathematical statistics.

Research materials. The importance of technical - tactical actions efficiency factors are revealed. These factors helped to choose the directions and approaches in the training process focused on versatile and individual work with emphasis on loading increase in some exercises, the volume increase of exercises of a selective orientation and increase of the volume of specialized exercises, preserving the same level of general loadings.

The content of the educational professional activity included: 1) the didactic actions connected with the creation of the content and process of training; 2) the didactic actions relating to executive part of pedagogical activity: the creation of logical and visual idea of a studied technique through telling and display; through the use of preparatory exercises system of motive ideas of a studied technique; control over the trainees’ sufficient knowledge of the orientation basis content of a studied technique; detection, recognition and correction of typical motive mistakes; assessment of the quality of practical mastering of a studied technique; 3) the motive actions connected with performance of studied techniques.

Educational professional activity was organized on the basis of independent, individual and group work and mutual training of students in replaceable pairs.

Conclusion. The results of the pedagogical experiment show that the formation of professional competence of the future hockey coaches will be productive if we include experimentally reasonable methodologies of technical –tactical training improvement in educational and training process. The experimental methodology included target, searching - diagnostic, organizational, content, technological, activity - orientation and evaluative - resulting components and the stages of their realization.

Urgency of the research work. The analysis and generalization of the scientific and methodical literature and pedagogical practice shows that traditional approaches to vocational
training of experts in physical culture and sport don't provide formation of didactic competence at socially acceptable level, including the training of future hockey coaches [1,2,3,4,5,6,7,8].

Training of specialists in hockey on the basis of modernization of technical - tactical training is considered to be the main condition of high sports results achievement by the athletes and also a basis of professional competence formation of the future hockey coaches.

Research objective: to develop and experimentally prove content and technological support of technical - tactical training and pedagogical conditions of didactic competence formation improvement of the future hockey coaches.

Research organization. The experimental work was carried out during the period from 2009 to 2012 in Naberezhnye Chelny branch of Volga Region State Academy of Physical Culture, Sports and Tourism. The students of the specialization "The theory and methodology of hockey" took part in the experiment. In general 40 people took part in the experiment.

Results and their discussion. In order to form students’ didactic competence we organized educational process in a social and subject context of the future professional activity. We developed a target and content supply of professional competence formation of the future hockey coaches on the basis of students’ technical - tactical training improvement which includes: target, searching - diagnostic, organizational, content, technological, activity - orientation and evaluative - resulting components and the stages of their realization.

The target component assumes formation of professional competence of the future hockey coaches on the basis of students’ technical - tactical training improvement in case of studying at a higher educational institution.

The educational professional activity of students which differs in the degrees of proximity to the future professional activity, in a qualitative originality of means, methods and organizational forms, which provided a subject and social context of the future professional activity.

In order to achieve the aim we developed the experimental methodology which had theoretical and practical sections and included classroom activity and educational - training lessons of the students.

The searching-diagnostic component included the analysis of the tendencies and the direction of students’ technician – tactical skills improvement, determination of the main problems of students’ didactic competence increase.

In this regard at the 1st stage of the methodology realization we defined that the main factor influencing motive readiness of students was technical - tactical training.

The analysis of the received results allowed to reveal the preferences of the experts in mastering the technical - tactical training which are presented in table 1.

Table 1 shows that much attention is paid by the experts to the training for the competitions and that is why they determine the inclusion into the process of competitive exercises preparation as the main factor.

<table>
<thead>
<tr>
<th>Rank</th>
<th>The revealed factors of technical - tactical actions (TTA) efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Competitive and pre- competitive exercises</td>
</tr>
<tr>
<td>2</td>
<td>Increase of the total amount of difficult specialized exercises</td>
</tr>
<tr>
<td>3</td>
<td>Increase of the specialized exercises taking into account the types of TTA</td>
</tr>
<tr>
<td>4</td>
<td>Increase of the total volume of training lessons</td>
</tr>
<tr>
<td>5</td>
<td>Volume of the exercises of a selective orientation</td>
</tr>
<tr>
<td>6</td>
<td>Intensity Increase of training lessons</td>
</tr>
<tr>
<td>7</td>
<td>Increase of the volume of mixed orientation exercises</td>
</tr>
</tbody>
</table>
The second place was taken by the factor of total amount of specialized exercises increase. It is connected with the fact that in hockey it is necessary to be able to switch over at once to another action, to re-form, not to forget the game when attack is over. Even before the throw the hockey player has to estimate the game situation (positions of the partners and the opponents, the speed of the movement, distance to a goal) and depending on it to choose a way and the moment for a throw. These actions of the future coach can be formed only by a repeated performance of a large volume of TTA.

The organizational component includes provision of variable organizational forms of experimental methodology realization, and also pedagogical conditions, the academic lessons, educational – training lessons which were implemented at the 2nd stage.

Content component. The content component included the content of a methodology and the above-presented organizational forms.

Table 2 presents the content of the methodology realized in the course of the pedagogical experiment.

We can see that the methodology includes theoretical and technical – tactical training of the students from the EG. The exercises are divided depending on an orientation of their use. TTA were realized within the improvement of individual, group, team technical – tactical actions, the exercises were used taking into account the role of the players. The volume of the used means was distributed in the EG within an experimental methodology. In the CG the students were training according to the traditional program.

We used gradual and consecutive increase of problematical level of students’ educational -cognitive activity.

The structural unit of the students’ educational - cognitive activity was the solution of educational problems and the problem situations created by the teacher, which provided new knowledge or a way of action. The question is the general logical form of problem expression that is why it is important to state the questions correctly.

### Table 2

The content of students' technical -tactical training in the course of the pedagogical experiment (%)

<table>
<thead>
<tr>
<th>Content and directions</th>
<th>Pedagogical experiment during the academic year</th>
</tr>
</thead>
<tbody>
<tr>
<td>The volume of the training kinds application:</td>
<td></td>
</tr>
<tr>
<td>theoretical</td>
<td>6,0</td>
</tr>
<tr>
<td>technical - tactical</td>
<td>94,0</td>
</tr>
<tr>
<td>Exercises:</td>
<td></td>
</tr>
<tr>
<td>specialized</td>
<td>60</td>
</tr>
<tr>
<td>individual</td>
<td>10</td>
</tr>
<tr>
<td>group</td>
<td>20</td>
</tr>
<tr>
<td>bipartite games</td>
<td>10</td>
</tr>
<tr>
<td>technical - tactical actions:</td>
<td></td>
</tr>
<tr>
<td>Individual technical - tactical actions</td>
<td>38,7</td>
</tr>
<tr>
<td>Group technical - tactical actions</td>
<td>30,3</td>
</tr>
<tr>
<td>Team technical - tactical actions</td>
<td>32</td>
</tr>
<tr>
<td>Role Exercises:</td>
<td></td>
</tr>
<tr>
<td>Individual technical - tactical actions</td>
<td>30,8</td>
</tr>
<tr>
<td>Individual technical - tactical actions in pairs</td>
<td>20,2</td>
</tr>
<tr>
<td>Group technical - tactical actions with the &quot;passive&quot; opponent</td>
<td>25</td>
</tr>
<tr>
<td>Group technical - tactical actions with the &quot;active&quot; opponent</td>
<td>24</td>
</tr>
</tbody>
</table>
Competitive activity:

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unofficial games</td>
<td>20</td>
</tr>
<tr>
<td>Training games</td>
<td>20</td>
</tr>
<tr>
<td>Calendar games</td>
<td>60</td>
</tr>
</tbody>
</table>

For the successful solution of educational problems as the means of educational - cognitive activity organization of we observed the following didactic requirements: 1) the content of an educational problem was formulated taking into account a studied educational material; 2) the result of an educational problem solution were new theoretical and methodical knowledge of hockey; 3) an educational problem had the contradictions which really existed in pedagogical practice; 4) the educational problem corresponded on the complexity with the cognitive facilities of the students; 5) during the formulation of an educational problem the known to students concepts were used which were logically connected with the unknown in the problem.

In an educational - training process of the EG the development and implementation of the training maps was actively used. It was carried out in the form of a problem statement of a training lesson in TTA preparation. Most hockey players usually understand how to act correctly in this or that game situation, but not always make correct decisions. For their formation a target selection of exercises directed at defensive and onrushing tasks solution is necessary. Many techniques have to be carried out automatically and at a high speed. In the process of all techniques improvement the performance of certain training tasks directed at improvement of TTA is necessary. Depending on the purpose set for the students in case of TTA improvement, the mode of performance, improvement of a technique of dribbling, passing, and throwing, first in the simplified conditions, without confrontation of the opponents is selected also.

The technological component included the determination of significant means and techniques of the technician – tactical training, systematization of TTA means (individual – group, team), a choice and use of pedagogical and technological methods. This component was realized at the 3rd stage.

Table 3 presents TTA applied in technological process of a pilot study.

<table>
<thead>
<tr>
<th>Technical - tactical actions of the players</th>
<th>Rank index in the process of realization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technical - tactical training</strong></td>
<td></td>
</tr>
<tr>
<td>Functions of players depending on role</td>
<td>1,0±0,0</td>
</tr>
<tr>
<td>Game tactics in an inequality (in the majority, in minority)</td>
<td>1,8±0,73</td>
</tr>
<tr>
<td>Puck throw-in</td>
<td>2,1±0,01</td>
</tr>
<tr>
<td><strong>Defense tactics</strong></td>
<td></td>
</tr>
<tr>
<td>Individual technical - tactical actions</td>
<td></td>
</tr>
<tr>
<td>High-speed maneuvering, positioning</td>
<td>1,13±0,5</td>
</tr>
<tr>
<td>Guarding</td>
<td>1,6±0,51</td>
</tr>
<tr>
<td>Puck take away</td>
<td>1,3±0,51</td>
</tr>
<tr>
<td>Catching the puck</td>
<td>2,5±0,64</td>
</tr>
<tr>
<td><strong>Group technical - tactical actions</strong></td>
<td></td>
</tr>
<tr>
<td>Supervision</td>
<td>1,2±0,49</td>
</tr>
<tr>
<td>Switching</td>
<td>1,12±0,39</td>
</tr>
<tr>
<td>Take away in pairs</td>
<td>2,4±0,5</td>
</tr>
<tr>
<td>Players Interaction</td>
<td>1,0±0,0</td>
</tr>
<tr>
<td>Interaction with the goalkeeper</td>
<td>2,5±1,06</td>
</tr>
</tbody>
</table>
As table 3 shows, the leading aspect in technical - tactical training (TTT) all experts consider to be the players' functions depending on their role the rank index of which was - 1,0±0,0. The second place takes –“Game with unequal membership” 1,8±0,73. The last priority in TTT improvement is given to technical - tactical technique “A puck throw-in” the rank index of which was 2,1 ±0,01. In defense tactics the leading places in individual technical - tactical actions were given to high-speed maneuvering and positioning of the player (1,13±0,5) depending also on role, further - guarding (1,6±0,5), a puck take away (1,3±0,51) and a puck catching (2,5±0,64). Group tactical actions of players also were ranked. In the tactics of defense the main were supervision (1,2±0,49), the switching (1,12±0,39), take away in pairs (2,4±0,5), players and the goalkeeper interaction (2,5±1,06). In team technical - tactical actions the first was individual protection of the players in various zones of defense (1,6±0,8).

Great demands were made on exercises when hockey players carry out individual TTA in attack and defense with the "active" resistance of the opponent. In such conditions there is an improvement of individual tactical abilities of students in case of rational use of physical and functional abilities. The exercises at the same time provide the development of individual tactical actions both in attack, and in defense. Concrete game tasks are put before the hockey players. Real game situations were created. Actions with the puck, carried out in the conditions of "active" resistance were the most difficult.

For further fixing and improvement of tactical interactions in pairs the exercises similar to previous were used, but with an "active" opponent in the training tasks. In the exercises students have an opportunity to improve a puck designing (1,13±0,4) and groundmoves (1,6±0,8), reception of a puck (1,0±0,0), and also positioning and opening on an empty place. These exercises can be carried out on platforms of the reduced size; it is possible to make some exercises difficult, for example, to increase or reduce the platform sizes, to limit the number of contacts with a puck. All exercises which are carried out in pairs with an "active" opponent, are estimated at five points.
Game exercises are the most effective way for tactical skills improvement of the future coaches. They are more effective when performed on the platforms of the reduced sizes with various restrictions and without them. Their use provides hockey players’ tactical thinking improvement, and also orientation with a big congestion of players on a certain site of a field. Inclusion of various game exercises makes the lessons more interesting, more emotional and gives the chance to carry out them at higher level, allows hockey players to overcome big loadings much easier. Selecting game exercises, it is possible to solve successfully various problems of students’ tactical training in respect of the game organization.

Picture 2 presents the volume of theoretical and technical - tactical training application of the students from the EG and the CG in the course of pedagogical experiment.

Picture 2. The total amount of theoretical and technical - tactical training application of the students in the course of pedagogical experiment, %.

Schematic symbols: 1-theoretical training in the EG; 2 - theoretical training in the CG; 3 - technical - tactical training in the EG; 4 - technical - tactical training in the CG.

In the training process of the students from the EG individual and group exercises on role were used, the exercises were created and realized which include: individual actions without resistance and with the "passive" opponent; individual actions with the "active" opponent; group actions without resistance and with the "passive" opponent; group actions with the "active" opponent. Undoubtedly, team actions also contain actions on role, however individual and group actions have the greatest effect.

The content of students’ TTT consisted of inclusion of individual actions with a puck (attacking and defense) with the "active" opponent: 2 attacks + 3-I attack straight off; carrying out group interactions in pairs (attacking and defense) with the "passive" opponent: 2x1 two attacks; 3x1 – 3x2 two attacks; 4x4 two attacks. Group interactions in pairs (attacking and defense) were carried out with the "active" opponent - 2 attacks + 3-I attack position. The content of TTT in micro cycles was various: 1 attack; 1 attack + 2 attacks position + speeding-up backward; 2 attacks; 2 attacks to all platform + 3 attacks positioning; game in unequal membership – 5x4, 5x3, 4x3; a puck throw-in in the three; mastering the situations by "five" after a puck throw-in; bullets; throws from various distances with tire out of a puck and hindrances, i.e. not only modes of upcoming games, but also game situations were reproduced.

Precompetitive micro cycles were directed at preparation for competitions.

In competitive micro cycles the peak of loading was on games days that is why just before the games the loading was decreased. 2-sided games after calendar games were held in much smaller volume.

According to the content the training lessons in the EG had complex character with a priority on individual technical - tactical actions (ITTA), group technical - tactical actions (GTTA) and 2-sided games. The application of multidirectional lessons in the EG was caused by the fact that the program of separate training lessons was divided into two, and sometimes into three rather independent parts. In some cases in the first part exercises were applied to increase high-speed
The exercises according to game role were included into the training process of the students: individual actions of the defenders and forwards without resistance and with the "passive" opponent; individual actions of the defenders and forwards with the "active" opponent; group actions of the defenders and forwards without resistance and with the "passive" opponent; group actions of the defenders and forwards with the "active" opponent.

Individual and group TTA in micro cycles were improved in close interrelation with game techniques in complex game exercises. The classes were given at first without resistance or with the passive opponent. At the same time the main options of tactical constructions (systems) were used in defense and attack. The students from the EG had a complete and clear idea of the studied system with the help of theoretical lessons and use of various technical means. After that the tactical system is carried out as a whole with gradual increase of counteraction of the opponent. Complex occupations with various, emotionally rich programs and small total loadings were good means of active recreation and were used for acceleration of processes of restoration after games and lessons of a selective orientation, and also figured prominently in the content of recovery micro cycles.

The peculiarities of programs of developing and complex lessons creation in the EG couldn't but affect the efficiency of the training process and increase in positive dynamics of technical - tactical readiness since the review of special literature on the theory and a technique of sports training showed that the athletes training increases in case of their preparation lessons of a selective orientation with the various programs, constructed on the training exercises in modes of various means, methods and forms were applied.

In the training lessons of the CG the following exercises were used: monotonous means, and in the same lessons the training program was stable throughout a certain stage; domination of the competitive exercises; unidirectional training lessons; main use of technical - tactical actions in micro cycles of groups and teams; not many 2-sided games were used in comparison with the EG.

Thus, the developed by us methodology of technical - tactical training of students included consecutive actions in work taking into account productive, leading and informative technical and tactical actions, time of application of groups of exercises corresponding to features of future competitive activity and adequate to features of the training process with emphasis on a game method of training and actions on roles of players.

Activity-orientation component included the feedback organization, correction of work content.

Disorder information was shown to the student, the task was to set for him: to formulate a problem and to find its solution.

During the solution of the theoretical and methodical problems connected with the qualitative biomechanical analysis of hockey techniques students used the knowledge of biomechanics of physical exercises. Taking into account the general biomechanical regularities of the students phase structure of the studied techniques were defined, revealed the external and internal forces defining the most rational ways of the motive tasks solution. To provide successful updating of knowledge, the students worked independently on the instructions of the teacher with the educational literature on biomechanics of physical exercises. This knowledge also was constantly reproduced by the teacher describing the biomechanical requirements to rational ways of performance of certain hockey techniques.

Students revised the knowledge on physiological and psychological regularities and mechanisms of person management with the help of the movements. This knowledge was applied when performing the problem tasks connected with the psychological analysis of hockey techniques.

Great attention was paid to updating of the students’ knowledge on didactics. Students revised earlier studied section of general pedagogics, coming back to studying of regularities and
the principles of the training process, means, methods and forms of educational process organization.

Then the attention of students was paid to a qualitative originality of realization of didactic regularities and the principles of solution of problems of training in motive actions, to features of means, methods and forms of education of hockey techniques.

We also applied organizational structure of a collective way of training, which included independent work, individual and group forms of work. Independent work was carried out on the basis of students work with textbooks and manuals, and also with the Internet. The teacher’s functions was to development and present the system of educational tasks for independent work, providing students with methodical recommendations, the organization of an operating control and estimation of a training material mastering quality.

Taking into account the character of educational tasks two types of individual work were used: 1) the individual – students worked separately over various according to the content tasks; 2) the individual - frontal – all students worked over one educational task.

Individual forms of education were applied on seminars and methodical lessons in order to master theoretical and methodical knowledge, didactic abilities of design and planning (development of the documents of planning), necessary for educational professional activity in the course of mutual training in pairs of replaceable structure.

We widely used group forms of the training process organization when students mastered an identical training material, interacting, cooperated for the solution of the problems.

Within the group work students together with the teacher formulated and solved educational problems connected with hockey techniques training. As the problem tasks it was offered to carry out the qualitative biomechanical and psychological - pedagogical analysis of the studied techniques, to carry out selection of pre - exercises for mastering these techniques, to prove efficiency of their application, to develop planning documents, to find the optimum solution to educational problems formulated by the teacher, etc.

The attention of students during the group work was transferred from results of the educational - cognitive activity to its process, to search of a solution to an educational problem. That is why students showed interest in the process, realized and more deeply understood the essence of the solution.

Group forms of education, as independent and individual work were aimed at training of students for educational professional activity implementation in the course of mutual training in pairs of replaceable structure.

The main in realized by us organizational structure of a group way of training was the mutual training organization in pairs of replaceable structure.

As essential advantage of this form of education organization was the fact that half of school time each student carried out educational professional activity training his partners of communication. Possibility of its implementation was provided by the results of educational - cognitive activity within other forms of education – independent, individual and group work.

Application of this form of education provided intensive interchange of educational information between the students and provided increase in volume of system knowledge and its durability.

Within this form of work students directly used the knowledge in practice, working as the person who gives knowledge. This knowledge was not educational information for the students, but an orientation base of educational professional activity carried out by them. Along with it conditions for immediate feedback about the quality of a training material assimilation were created from the partner of communication, acting as a teacher. Change of pairs of students led to the fact that all students from the group took part in quality control of assimilation of a training material by each student.

This group work developed students’ skills of cooperation, mutual understanding and mutual help.
In mutual training organization in pairs of replaceable structure we observed the following didactic requirements:

1) completeness, orientation to the highest final results. The change of structure of pairs was fulfilled only after the solution of a pedagogical problem – an educational element mastering in the form of knowledge of a way of pre-exercise performance and ability to carry out it without essential motive mistakes. The completeness was provided with continuous immediate quality control of assimilation from all members of group. The essential was the fact that the students, giving educational information, found insufficiency or an inaccuracy of their knowledge and eliminated it with the help of a teacher or the partners of communication.

2) different levels of knowledge and abilities of pedagogical process participants. The students acting as a teacher, differed from other students by the content of the acquired knowledge, skills; they knew and were able to do the things that didn't know and weren't able to do the students whom they trained. This "potential difference" was created in advance, through application of independent, individual and group work, in some cases – through the work of pairs of replaceable structure.

Fulfillment by the students of such pedagogical functions as an explanation of the material, monitoring and estimation of process and results of its assimilation, theoretical substantiation of the ways of educational problems solution connected with the training techniques, provides the students' formation of corresponding didactic abilities and increase of didactic competence.

We, according to G.L. Drandrov's [53] recommendations, used two forms of educational practice organization– in the form of collective mutual training of students and in the form of collective educational practice.

In case of collective mutual training students were provided or developed with the help of a teacher an approximate basis of a studied technical - tactical hockey technique, planned the selection of pre-exercises and trained each other to fulfill this technique, working in pairs of replaceable structure. Within this form of educational practice the teacher gave information on a way of a motive action fulfillment to the students, using verbal methods and methods of presentation (live display).

Then the students formed the pairs and started practical learning of the first pre-exercise.

After that was the change of pairs. The work of a new pair of students began with mutual control of the previous training material assimilation– on the level of knowledge of an approximate basis of the studied pre-exercise and ability to carry it out. If it was necessary the work on mistakes elimination was made by the partner.

Then a new cycle of the next pre-exercise training began.

The quantity of the cycles was adequate to number of pre-exercises, mastering which is necessary for performance of a technique studied by the students at the level of motive ability.

Training was finished with mutual control and mutual assessment by the students of a studied technique on the basis of orientation knowledge and possession of the way of practical fulfillment. The educational group was divided by us into two subgroups, where students, working in pairs of replaceable structure, studied various techniques. For example, one group studied kick by the middle lifting, another – ball stoppage with the sole.

By means of this kind of studying process planning we created “difference of potentials” concerning knowledge, skills and abilities.

It allowed to use the second form of the educational practice organization – collective educational practice. Thus each of educational groups serially acted in a role of “the collective teacher” and “the collective pupil”. Interaction of educational groups was carried out in two variants.

During the first variant one group of students trained another through work in pairs of replaceable structure. The training material was the subject of training which was mastered by the students acting in a role of “the collective teacher” at a previous lesson, held in the form of collective mutual training.
During the second variant the students from the group who taught in terms acted as "the collective teacher", solving one pedagogical task. The first student solved the problems of formation of logical and visual ideas in the group of "pupils" of an approximate basis of a studied technique.

The next private problem of motive idea of one of the conditions for the correct performance of a certain operation formation included into the content of a technique was fulfilled by another student from the group of "teachers". Thus all students were consistently involved in the process of training from the group of "teachers". At the end of the lesson students together with the teacher carried out the analysis of the didactic activity, revealed methodical mistakes and defined ways of their correction.

**Evaluative – resulting component included** the assessment of efficiency of TTT improvement technique realization according to the criteria and indices of professional competences formation (an assessment of efficiency of TTA, an assessment of TTT formation).

The control over students' technical - tactical readiness was a component of the pedagogical experiment. Objective information on technical - tactical readiness of students after a series of games allowed us to analyze the obtained data and to introduce the corresponding corrections into technical - tactical training. Dynamics of technical - tactical readiness was defined on the basis of expert estimation of individual, group and team technical - tactical actions of students in the competitive activity. The assessment of technical - tactical actions (TTA) was carried out in the form of their stenograph in the protocol by the experts.

Conclusion. The results of the pedagogical experiment show that the formation of professional competence of the future hockey coaches will be productive if we include experimentally reasonable methodologies of technical –tactical training improvement in educational and training process. The experimental methodology included target, searching -diagnostic, organizational, content, technological, activity - orientation and evaluative - resulting components and the stages of their realization.

**Bibliography**

WAYS OF IMPROVEMENT OF INITIAL SPORTS PREPARATION OF 12-14 YEARS BOXERS

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Keywords: boxing, initial preparation, main directions, physical and special readiness.

Annotation. Growth of boxer's sports skill organization efficiency substantially is defined by the sports preparation initial stage. In this regard the big importance is gained by studying various approaches to the maintenance of training initial stage process on boxing; search of ways of improvement of the organization and carrying out the first stage of sports preparation of the martial artists, which quality significantly reduces elimination engaged and formation of steady requirement for mastering by sports skill.

Research methods: analysis and generalization of scientific and methodical literature, testing, pedagogical experiment, methods of mathematical statistics.

Research material. The main ways of 12-14 years boxers' initial sports preparation stage improvement are considered in this article.

The author attaches special significance to need of creation of conditions for identification and development of ability to individual improvisation of performance of acquired techniques.

Result. Results of pedagogical experiment showed that at the organization of a stage of initial sports preparation of boxers of 12-14 years it is necessary to use various ways of improvement of training process among which leaders is the accounting of age features engaged, profound knowledge of specifics of boxing; support on initial positive motivation of occupations by boxing; ensuring versatile physical readiness with primary use of a game method and the moments of competitive activity; providing the maximum defense of hands for decrease in painful feelings of traumatism; creation positive the psycho-emotional atmosphere on training occupations; detection of ability to the individual organization when performing studied techniques.

Conclusion. The practical recommendations developed by the author represent considerable interest for specialists in boxing, they can be used in DYuShOR. The author attaches special significance to need of creation of conditions for identification and development of ability to individual improvisation of performance of acquired techniques.

Boxing is one of the most available sports where receive the teenagers who don't have deviations in a state of health, without restrictions on height-weight indicators, level of the general physical readiness. The school students who have expressed desire to be engaged in boxing, usually have general idea of this sport and psychologically aren't ready to overcoming of the difficulties caused by specifics of boxing. However initial motivation: "boxing is pleasant", "I want to become strong and courageous", "my friends are engaged in boxing, and I decided to try", "the father", etc. brought - demands a reinforcement for preservation of initial interest to training process during which it is necessary to find out, whether are available for the teenager of ability to the chosen type of combat sport.

The purpose of this work is theoretical and methodological justification of approaches to the organization of initial sports preparation of the boxers providing steady interest to the chosen sport.
Objects: 1. To reveal the main ways of improvement of the training process, causing aspiration of teenagers to assimilation of sports skill.

2. To check efficiency of these directions in the course of carrying out pedagogical experiment.

Among different types of combat sports boxing takes a special place: achievement of a victory over the opponent is connected with ability to control of own condition in the conditions of the long stress caused by painful feelings of various character and threat of receiving a serious trauma, and also actions of the opponent which forecasting demands special readiness and motive experience [1, 3, 5, 7]. It causes need of creation of the training occupations directed on ensuring readiness of beginning boxers to overcoming of emotional and painful stresses, connected with bruises, injury of muscles, sheaves and sinews during the work on shells, and also with the partner. The coach needs to provide the maximum defense of hands; gradual and consecutive assimilation of all-strengthening, preparatory and bringing exercises; increase of level of all-physical readiness taking into account age features of young athletes.

The teenage age is characterized by rapid development of an organism, completion of formation of bends of a backbone, increase in muscular weight. Force of a cardiac muscle, shock volume of heart increases, pulse rates becomes rarely. The heart sizes often lag behind the body growth that causes reduction of a gleam of vessels, deterioration of supply of an organism by nutrients and oxygen.

These anatomic features provide need of continuous control of volume and intensity of muscular loading; uses of exercises for strengthening of wide muscles of a back; exceptions of asymmetric movements with weights, sharp unilateral pushes, a hard, considerable load of feet [2, 3]. The rational organization of training process on boxing with teenagers of 12-14 years demands statement of the available purpose, compliance of motive tasks to organism opportunities. Children beginning occupations by boxing, are quickly adjusted on a training load, thanks to high mobility of nervous processes. The mentality of children of 12-14 years is characterized by emergence of "feeling of a maturity", however it is necessary to consider that their claims don't correspond to opportunities of teenagers.

For boxing highly dynamic conditions of performance of motive actions are characteristic; results substantially depend on understanding and the accuracy of performance of the set volume of work; assimilation of physical exercises according to its existential and spatial and power parameters; timeliness of change of muscular tension; abilities to forecasting of actions of the opponent, etc. [6, 8]. All this creates preconditions for a constant emotional stress, however it is necessary to consider that constant psychological tension provides readiness of an organism for effective actions in difficult conditions of counteraction with the opponent.

At the initial stage of sports preparation of boxers of 12-14 years it is necessary to create benevolent, rather comfortable situation for children as one of conditions of formation of steady interest to this sport. The solution of this task is reached:
- novelty of activity on each training occupation;
- distribution of attention to all engaged;
- continuous control of a psychoemotional condition of each teenager;
- application of a game method with elements of competitive activity;
- identification positive in actions of young athletes, distinguishing their achievements on a course of training occupation and after its termination when summing up. Focusing attention on successes of the beginning boxer, the coach notes his weaknesses, failures, the reasons of their emergence and ways of elimination; conditions under which the teenager can achieve considerable results.

Assimilation of basic receptions of attack and defense of the boxer demands optimum for each stage of sports preparation of indicators of motive and coordination qualities. It determines need of statement of one of leading problems of initial preparation - achievement of necessary level of physical readiness. Occupations by boxing provide impact on all groups of muscles; formation of
skills of continuous control of a situation; estimates of motive actions of the opponent, timely proper response; intense analytical activity; preservations of composure, endurance, persistence. It puts forward in number of paramount problems of initial sports preparation - education of strong-willed qualities: will powers, courage, diligence, self-discipline, patience, persistence, etc.; creation of conditions for spiritual and moral development on the basis of fixing of positive lines of the personality: honesty, perceptions of the athlete as the opponent only on a ring during competitive activity; aspiration to win against the opponent due to agility, flexibility of mind, resourcefulness difficult situations of a boxing match without aggression; aspirations to strike excessive painful kick [4, 6].

Boxing demands much of psychophysiological processes; to level of formation of perception, attention, memory, thinking and the analytical skills, allowing to realize offered motive tasks, the mechanism of their impact on an organism, success of the solution of an objective. Optimum for this age informative processes allow to form skills of creation of model of behavior of the opponent in reply to the attacking actions; systematic analysis of own algorithm of movements and its comparison to the program of action of the opponent; necessary level of formation of memory allows to remember the similar situations demanding certain receptions of attack and a defense, etc.

One of leading problems of a stage of initial sports preparation of boxers of 12-14 years is creation a condition for activity manifestation. So, at assimilation of a stance of the boxer other position of the hands, differing from shown by the coach, on ahead and behind standing foot not always it is necessary to regard distribution of weight of a body as result of a carelessness or negligence of performance by the teenager, and, most likely, as one of signs of individual performance of a motive task.

Various ratios of height-weight indicators, manifestation of speed of motive reaction, creation of a motive image of studied physical exercise cause certain deviations from the set sample. The beginning boxer from the first training occupations perceives each preparatory or special exercise and carries out in own way: without straightening up to the end a hand, takes an additional step, uses semi-turn, etc. If thus finishing phase of a technique turns out successful, these deviations from the set existential and spatial and power parameters of motive actions need to be considered as identity manifestation. At achievement approximately identical level of sports skill the victory remains for the boxer capable to improvisation of ways of performance of attacking receptions applied by all athletes. Identity prompts to the athlete not how to carry out attack and when, at what moment to strike kick to the opponent.

The analysis of scientific and scientific and methodical literature, materials of own researches testify that the main ways of improvement of initial sports preparation of boxers of 12-14 years are:

- need of fixing of positive motivation of teenagers to occupations by boxing;
- creation of the training occupations providing readiness of beginning athletes to overcoming of emotional and painful stresses, caused by bruises; injuries of muscles, sheaves and sinews during the work with the partner;
- providing the maximum defense of hands;
- statement is more whole than the sports preparation corresponding to age and readiness of the engaged;
- providing a positive psycho-emotional background of training occupations;
- orientation on development of informative processes;
- detection of specific features from the first training occupations.

For check of efficiency of these directions of improvement of initial sports preparation of 12-14 years pedagogical experiment in which 32 teenagers took part was made. KG and EG, in everyone on 16 people were organized. Before pedagogical experiment testing for the purpose of identification of initial indicators of physical and special readiness was held. The following control exercises were for this purpose used: run of 30 m (c), 100 m (c), 3000 m (min.); broad jump about
places, pulling up on a crossbeam (a quantity of times); shot put of 3 kg by the right and left hand (m).

Processing of materials of research didn't reveal essential distinctions on level of physical readiness of KG and EG ($p > 0.05$).

Level of special readiness was determined by number of the acquired attacking and protective receptions. The analysis of materials of research also didn't reveal essential distinctions at teenagers of KG and EG ($p > 0.05$). In KG training classes were given in the standard technique according to the program of sports preparation of boxers approved by federation of boxing; in EG the ways of improvement of initial preparation of boxers of 12-14 years revealed by us were used. After the end of pedagogical experiment the repeated testing which has shown was held that results improved in both groups: KG and EG, however, at boxers of EG results were significantly higher. So, in run on 30 m at basic data $5.51 \pm 0.43$ with to completion of pedagogical experiment results increased in KG for $1.7\%$ ($p > 0.05$); on 3000 m in KG at basic data of $14.69 \pm 1.32$ m to the end of pedagogical experiment results increased in run for $2.73\%$ ($p > 0.05$); in EG, respectively, at basic data of $14.63 \pm 1.08$ m indicators improved for $7.12\%$ ($p > 0.05$); in a broad jump from a place in KG at basic data of $191.14 \pm 14.52$ cm improvement of indicators happened for $4.91\%$ ($p > 0.05$); in EG, respectively, at basic data of $189.42 \pm 13.82$ cm the gain of results made $11.23\%$ ($p < 0.05$). The similar tendency of improvement of indicators in EG was revealed and in other control exercises.

The analysis of indicators of special readiness also testifies to higher rates in EG. So, boxers of KG during carrying out pedagogical experiment acquired the main options of performance by the left and right hand of a direct strike in the head, in the bottom jaw, in a trunk; long and short kicks in the head and in a trunk. Boxers of EG acquired some options of performance of a direct strike the left and right hand in the head: on a place, in movement, in combination with defense receptions; kicks by the left and right hand sideways and from below; on a place and in movement; in the bottom jaw and in a neck; in a trunk: in edges and in a solar plexus, and also in combination with actions of the defense.

Thus, results of pedagogical experiment showed that at the organization of a stage of initial sports preparation of boxers of 12-14 years it is necessary to use various ways of improvement of training process among which leaders is the accounting of age features engaged, profound knowledge of specifics of boxing; support on initial positive motivation of occupations by boxing; ensuring versatile physical readiness with primary use of a game method and the moments of competitive activity; providing the maximum defense of hands for decrease in painful feelings of traumatism; creation positive the psycho-emotional atmosphere on training occupations; detection of ability to the individual organization when performing studied techniques.

Bibliography


THE LEGACY OF SUMMER OLYMPIC GAMES IN 1980

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Keywords: the first Olympic Games, Olympic flame, politics had.

Annotation. The decision on the capital of the Olympic Games 1980 was made by the International Olympic committee in October, 23, 1974 in Vienna during the 75th session.

For the first time the idea to hold the Olympic Games in Moscow was suggested by the president of the Sports committee of the USSR Sergeі Pavlov in April 1969 but that time Montreal was chosen (the Olympic Games - 1976). Some years later Sergeі Pavlov persuaded the government to nominate Moscow one more time. Owing to his international authority, great interest to the USSR and its sportmen, friendship with the members of the International Olympic committee, especially with the baron Eduard von Falz-Fein (Liechtenstein) and Willi Daum (Federal Republic of Germany), Moscow was chosen. On the last stage of voting the members of the International Olympic committee were to choose Los Angeles or Moscow and finally Moscow was chosen with the ratio of 39 votes versus 20 votes. In March 1975 the Organizing committee “Olympiad- 80” was created under the direction of IgnatiNovikov to whom the Olympic committee of the USSR gave the rights and functions on the Olympic Games organization. The 79th session of the International Olympic committee (June 1977, Prague) adopted the program – schedule of the competitions of the Games of the XXII nd Olympiad in Moscow.

Research methods: historical literature and archaeological material analysis, method of historical analogy.

Research materials. On the basis of the historical – theoretical research the chronology of heritage Summer Olympics games in 1980 years is depicted.

Results. Thus summer Olympic Games 1980 were the first games in the history held on the territory of Eastern Europe and the first Games held in a socialistic country – this way the political legacy of the Games was emphasized.

Conclusion. From the political point of view the Games in Moscow as the Games in Los Angeles were a vivid example of the Olympic sport use as the instrument of “”, further antagonism intensification between the political systems. Concerning the organization the Games in Moscow showed an increased authority of the International Olympic committee, federations and the National Olympic committees, their ability to make independent decisions and resist political leverage.

Summer Olympic Games 1980 (legal name is the Games of the XXII nd Olympiad) were held in Moscow, the capital of the USSR, from July, 19 till August, 3 1980. These were the first Olympic Games on the territory of Eastern Europe and the first Games held in a socialistic country.

Some competitions of the Olympiad- 1980 were held in other towns of the USSR: the sailing regattas started in Tallinn; preliminary games and the quarter-finals of football matches were held in Kiev, Leningrad and Minsk; competitions on shooting were held on the shooting-ground “Dinamo” in Mytishchi near Moscow.
The Games are famous for the fact that they were put under boycott by more than 50 countries because of introduction of Soviet troops into Afghanistan in 1979 [3] [4] [5]. Some sportsmen from the countries which boycotted the Games, nevertheless, came to Moscow and competed under the Olympic flag. [1] This boycott was one of the main reasons why the USSR and some its allies boycotted next summer Olympic Games in Los Angeles in 1984. [4] It was a negative heritage of the Olympic Games imposed by the politics.

The symbol of any Olympiad is the Olympic flame. In June, 19 1980, a month before the opening of the Games, the Olympic flame was lit in Olympia according to the tradition. The general length of the race was 4992 kilometers. The length of the race on the territory of Greece was 1170 kilometers (Olympia, Athens,Delphi, Larisa, Veria, Seres, Promakhoi). On the territory of Bulgaria the race was 935 kilometers (Sofia, Plovdiv, Shipka, Pleven). The length of the race in Rumania was 593 kilometers (Bucharest, Ploesti, Focsani, Jassy).

On the 5th of June 1980 the flame was on the territory of the USSR near the village Leusheni in the Moldavian Soviet Socialist Republic. On the territory of the USSR the race was 2294 kilometers. In the Moldavian Soviet Socialist Republic the flame was in Kishinev, Beltsi, Edintsi and other towns. In the Ukrainian Soviet Socialist Republic the route was through Chernovtsi, Vinnitsa, Zhitomir, Kiev, Poltava, Kharkov. In the Russian Federation the race was through Belgorod, Orel, Kursk, Tula, Chekhov, Podolsk. In Moscow, where the race was 54 kilometers, the torch was met on the road junction of Minsk and Mozhaisk highway, then the flame was brought through the Triumphal arch on Kutuzovski avenue. The solemn ceremony with the members of the International Olympic committee, sports federations and Moscow administration was held on the square of 50 years to October. The night before the opening the flame was in the building of Moscow Soviet of People’s Deputies on Gorki street. On the opening ceremony the fire was brought through Marks avenue, Volkhonka, Metrostroevskayastreet, Komsomolski avenue and after that the torch carriers went to Luzhniki.

The route of the Olympic flame in Moscow

1. June, 21 – Athens (Greece)
2. June, 26 – Sofia (Bulgaria)
3. July, 1 – Bucharest (Rumania)
4. July, 5 – Leusheni (the Moldavian Soviet Socialist Republic), the fire crossed the border of the USSR
5. July, 6 – Kishinev (the Moldavian Soviet Socialist Republic)
6. July, 11 – Kiev (the Ukrainian Soviet Socialist Republic)
7. July, 13 – Kharkov (the Ukrainian Soviet Socialist Republic)[8]
8. July, 18 – Moscow (Russian Soviet Federative Socialist Republic)

In our opinion the race of the Olympic flame is an immaterial heritage of the symbols which leaves its imprint on the hearts of people.

In 1975 – 1980s in the context of preparation for the Olympic Games and in accordance with the general plan of Moscow (Leningrad, Kiev, Minsk and Tallin) development, 20 sports and other buildings were built and reconstructed for the Olympic Games. Among them are the following: Sports complex “Olympic”, V.I. Lenin Central Stadium (now Luzhniki stadium), airport Sheremetyevo -2, S.M. Kirov Stadium in Leningrad, Republican stadium in Kiev, Stadium Dinamo in Minsk, television tower in Tallin. The material heritage of the Olympic Games is presented by the infrastructure of the host towns.

For the propaganda of the Olympic Games and the Olympic movement in general on the territory of the USSR and in order to get extra-budgetary resources for the competitions organization the Organizing committee created the program of the Olympic lotteries, edition of sports literature, the series of sports stamps, pins, posters and souvenirs.

The talisman of the Olympiad in Moscow became the Olympic Bear. The author of the emblem was Moscow illustrator of the books for children Viktor Chizhikov.

The talisman of the yachtsmen competitions in Tallinwas a fur seal Vigri.
The author of the emblem (five crossed Olympic rings and lines going up which symbolize sports tracks with a star overhead – stylization of the Kremlin Spasskaya Tower) was V. Arsent’ev, the student of the Stroganovskicollege. The emblem was updated by V. Akopov and V. D’yakonov. V. Arsent’evas’authorship was contested by Viktor Nikitchenko. Thus the symbolic heritage of the Olympic Games was presented in Moscow.

In general 78 establishments were built for the Olympiad (the material heritage of the Olympic Games) among which are the following:

- sports complex “Olympic”;
- Krylatskoe (rowing canal);
- Krylatskoe (cycle track);
- sports horse complex in Bitsevski park;
- Dinamo (sport palace) Lavochkin street;
- reconstruction of V.I. Lenin Central stadium;
- the 2nd terminal of the airport Sheremetyevo;
- hotel “Kosmos”;
- Olympic village;
- a new building of the television centre Ostankino – OTRC (the Olympic television and radio complex);

Sports heritage of the Olympiad was presented by the following kinds of sport:

- Rowing
- Basketball
- Boxing
- Wrestling
- Cycle racing
- Volleyball
- Handball
- Rowing on kayaks and canoe
- Judo
- Equestrian sport
- Athletics

- Sailing sport
- Swimming (including diving and water polo)
- Modern pentathlon
- Artistic gymnastics
- Archery
- Shooting
- Weightlifting
- Fencing
- Football
- Field hockey

The competitions were held on 21 Olympic kinds of sport:

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In general 203 sets of medals were raffled. 150 of them were raffled in personal disciplines, 53 in team competitions. In comparison with the previous games, new disciplines were adopted in Moscow:

- athletics – walking for the distance of 50 kilometers (returned into the Olympic program);
- weightlifting – the 1st weight category, the most light in weight;
- judo – during the previous games the competitions were held in 6 weight categories, starting from the Olympic Games in Moscow in 8 weight categories;
- field hockey – tournament of female teams;
- sailing sport – regatta of yacht class “Zvezdni”.

The greatest number of the medals was raffled in athletics – 114 and swimming – 78.

In consequence of political conflict between the countries of Warsaw Pact and the countries of North Atlantic Treaty Organization (NATO), conditioned by introduction of Soviet troops into the territory of Afghanistan, some countries boycotted the Games. The sportsmen from 65 countries boycotted the Games including the USA, Canada, Turkey, South Korea, Japan, Federal Republic of Germany, whose sportsmen are traditionally strong in summer kinds of sport. China also was going
to take part in summer Games (in winter 1980 Chinese took part in the Games in Lake Placid) for the first time during several decades but then boycotted the Olympiad. [6] Some sportsmen from Great Britain, France and Greece came to the Games individually receiving permission from their Olympic committees, but the teams of Great Britain and France were not big as usual. Therefore the biggest team from Western Europe became the team from Italy though the military sportsmen from Italy didn’t come. On the opening and closing ceremonies 14 teams (Australia, Andorra, Belgium, Great Britain, the Netherlands, Denmark, Ireland, Italy, Luxembourg, Portugal, Puerto Rico, San Marino, France and Switzerland) were going not under their national flags but under the flag of the International Olympic committee. At the same time sometables which were carried before the flags had the names of the National Olympic committees instead of the names of the countries, for example, the National Olympic committee of Italy; Great Britain had the tablet “British Olympic delegation”. [4]

The team from New Zealand also didn’t have the national flag but the flag of New Zealand Olympic and Commonwealth Games Association, NZOCGA, which was black with white Olympic rings [7]. The team from Spain also had a white flag with a small emblem of the National Olympic committee of Spain in the middle with the Olympic rings and a Spanish flag under them. When the medals were given to the sportsmen from these countries the anthem of the International Olympic committee was heard.[6] National flags had only the teams from Austria, Greece, Malta, Finland, Sweden.

In an American town Philadelphia in June, 16, three days before the opening of the Olympiad, started so called “Olympic Boycott Games” (officially – Liberty Bell Classic), in which took part the athletes from 29 countries boycotting the Games in Moscow including the USA, China, Canada, Egypt, Thailand, Federal Republic of Germany, Kenya, Sudan. [6] Four years later during the boycott of the Olympiad in Los Angeles by the countries of the socialistic camp the same competitions called “Friendship - 84” were held.

On the other hand, this negative moment was accompanied by a positive one. 24 countries of the African continent which boycotted the Olympiad in Montreal returned to the Olympiad. Politics had a negative influence on the Olympic Games forming their negative heritage.

Solemn closing ceremony was held in August, 3 on V.I. Lenin Central stadium. A white Olympic flag was pulled down under the sounds of the Olympic anthem. The girls in tunics came up to the bowl with the Olympic flame and made a composition which reminded an ancient Greek fresco. The Olympic flame in the bowl went out.

At the end of the closing ceremony there was a surprise for the guests and the television viewers and it is still remembered. A huge bear was brought into the middle of the stadium with the song “Good bye, Moscow” (composer –AlexandaPakhmutova, poet – Nikolai Dobronravov). The bear waved its hand and started to rise above the stadium and then disappeared in the sky.

During the song listening many audience were crying. The closing ceremony of the XXII nd summer Olympic Games is still considered to be the best in the history of the Olympiad and this symbolic heritage was left in the hearts of people.

In spite of the absence of a great number of highly qualified sportsmen, from the countries which boycotted the competitions, there were a lot of records on the Olympiad. During 14 days of the competitions the sportsmen, presenting 5 continents, held 74 Olympic, 39 Europe and 36 World records:

- the youngest sportsman (in accordance with the official document) was 13 years old swimmer from Angola George Lima (was born in July, 13, 1967), who participated in preliminary races on the distance of 100 and 200 meters freestyle and 100 meters backstroke and took the last place. Moreover Lima participated in the race 4x100 meters freestyle and took the last place in the preliminary race; [5]
- the oldest sportsman (in accordance with the official document) was 70 years old yachtsman from Bulgaria KrasimirKrystev (was born in January, 10, 1910). It is
interesting to note that for Lima and Krystev the Games in Moscow were the only in the career. [5]

The gold medals in Moscow got the athletes from 25 countries. The representative from 36 states became the prize-winners of the Olympiad. [5] The sportsmen from the USSR got 80 gold medals and the sportsmen from the German Democratic Republic got 47 gold medals. Other countries didn’t win even 10 gold medals.

The sportsmen from Poland are also worth mentioning as from 32 received medals only 3 were gold. Some East Europe countries received most of all medals in their Olympic history, for example Bulgaria (41) and Poland (32). The Brazilian first time in their history received more than one gold medal (2 medals in sailing sport). The sportsmen from Zimbabwe won their first gold medal. The sportsmen from Spain won their first gold medal on summer Games in 1928.

The program contained 21 kinds of sport in which were raffled 203 sets of medals – 150 in individual competitions, 53 in team competitions. Within the period from 1975 till 1980 in Moscow and in other towns where it was planned to hold the competitions Tallin – regatta; Kiev, Leningrad, Minsk – preliminary football matches, were built or reconstructed necessary sports objects. All of them were equipped with modern technical facilities by the most powerful organizations of the USSR and foreign firms. For the first time the Olympic Games were held in a socialistic country. Successful organization of the Olympiad was to raise the prestige of the USSR that is why all arrangements were financed by the state. The prestige was more important than money. Security measures in Moscow were unprecedented. During the Olympiad entrance to Moscow was limited.

The USSR and its allies boycotted the next Olympiad -84 in the USA. This way the politics influenced the destiny of many sportsmen and the sportsmen of the USSR later lost their leading positions. This is a negative sports heritage of the Olympic Games.

The Olympiad in Moscow was held on a high level and several facts prove it. First of all 36 World records were held. In Montreal only 34 World records were held, in Munich 23 World records were held, in Mexico 28 World records were held. The sportsmen who won 70 % of gold medals on the previous Olympic Games participated in the Games. The absence of the sportsmen from the USA, Federal Republic of Germany and other countries almost didn’t influence on the rivalry in most kinds of sport.

In August, 3 1980 there was a closing ceremony in Luzhniki which didn’t contain two rituals: according to the decision of the International Olympic committee there was no flag passing to the organizers of the next Olympic Games and the anthem of the USA was not performed. A sad heritage of the Olympic Games.

**Conclusion.**

Thus summer Olympic Games 1980 were the first games in the history held on the territory of Eastern Europe and the first Games held in a socialistic country – this way the political heritage of the Games was emphasized.

The material positive heritage of the Games was in the fact that 78 establishments were built for the Olympiad among which are the following:

- sports complex “Olympic”;
- Krylatskoe (rowing canal);
- Krylatskoe (cycle track);
- sports horse complex in Bitsevski park;
- Dinamo (sport palace) Lavochkin street;
- reconstruction of V.I. Lenin Central stadium;
- the 2nd terminal of the airport Sheremetyevo;
- hotel “Kosmos”;
- Olympic village;
- a new building of the television centreOstankino – OTRC (the Olympic television and radio complex);
In the infrastructure of the Games there were no useless objects all buildings still function. Sports heritage of the Olympiad was presented by the following kinds of sport:

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<th>The competitions were held on 21 Olympic kinds of sport:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rowing</strong></td>
</tr>
<tr>
<td><strong>Basketball</strong></td>
</tr>
<tr>
<td><strong>Boxing</strong></td>
</tr>
<tr>
<td><strong>Wrestling</strong></td>
</tr>
<tr>
<td><strong>Cycle racing</strong></td>
</tr>
<tr>
<td><strong>Volleyball</strong></td>
</tr>
<tr>
<td><strong>Handball</strong></td>
</tr>
<tr>
<td><strong>Rowing on kayaks and canoe</strong></td>
</tr>
<tr>
<td><strong>Judo</strong></td>
</tr>
<tr>
<td><strong>Equestrian sport</strong></td>
</tr>
<tr>
<td><strong>Athletics</strong></td>
</tr>
</tbody>
</table>

In general 203 sets of medals were raffled. 150 of them were raffled in personal disciplines, 53 in team competitions. In comparison with the previous games, new disciplines were adopted in Moscow:

- athletics – walking for the distance of 50 kilometers (returned into the Olympic program);
- weightlifting – the 1st weight category, the most light in weight;
- judo – during the previous games the competitions were held in 6 weight categories, starting from the Olympic Games in Moscow in 8 weight categories;
- field hockey – tournament of female teams;
- sailing sport – regatta of yacht class “Zvezdni”.

The greatest number of the medals was raffled in athletics – 114 and swimming – 78.

In consequence of political conflict between the countries of Warsaw Pact and the countries of North Atlantic Treaty Organization (NATO), conditioned by introduction of the Soviet troops into the territory of Afghanistan, some countries boycotted the Games. The sportsmen from 65 countries boycotted the Games including the USA, Canada, Turkey, South Korea, Japan, Federal Republic of Germany, whose sportsmen are traditionally strong in summer kinds of sport. China also was going to take part in summer Games (in winter 1980 Chinese took part in the Games in Lake Placid) for the first time during several decades but then boycotted the Olympiad. [6] Some sportsmen from Great Britain, France and Greece came to the Games individually receiving permission from their Olympic committees, but the teams of Great Britain and France were not big as usual. Therefore the biggest team from Western Europe became the team from Italy though the military sportsmen from Italy didn’t come. On the opening and closing ceremonies 14 teams (Australia, Andorra, Belgium, Great Britain, the Netherlands, Denmark, Ireland, Italy, Luxembourg, Portugal, Puerto Rico, San Marino, France and Switzerland) were going not under their national flags but under the flag of the International Olympic committee. At the same time some tablets which were carried before the flags had the names of the National Olympic committees instead of the names of the countries, for example, the National Olympic committee of Italy; Great Britain had the tablet “British Olympic delegation”.

On the other hand, this negative moment was accompanied by a positive one. 24 countries of the African continent which boycotted the Olympiad in Montreal returned to the Olympiad. Politics had a negative influence on the Olympic Games forming their negative heritage.
However if we put the emotions aside and make a serious analysis we will come to the following conclusion. From the political point of view the Games in Moscow as the Games in Los Angeles were a vivid example of the Olympic sport use as the instrument of “”, further antagonism intensification between the political systems. Concerning the organization the Games in Moscow showed an increased authority of the International Olympic committee, federations and the National Olympic committees, their ability to make independent decisions and resist political leverage.

**Bibliography**

5. Barysas M. Aidi
8.
DEVELOPMENT OF CULTURE OF HEALTH AND PHYSICAL EDUCATION OF STUDENTS IS A PRIORITY GOAL OF EDUCATION SYSTEM

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Keywords: pedagogical phenomenology of health, physical health of children, healthy lifestyle traditions, school physical education.

Abstract. Physical culture, as a part of the general culture, reflects human activities as development, improvement, health protection, physical improvement of a man and his self-realization and helps to achieve personal and social significant results. Evolution of the idea of children health preservation through physical education (from folk traditions to the present day) reveals the main features of physical culture of an individual that are formed on the basis of the unities of knowledge, motives, attitudes and activities.

Methods: analysis of psychological and educational literature, comparative analysis

Materials. Analyzed scientific literature, including monographs, articles, dissertations of recent years, international and Russian regulatory legislation, best practice of health and physical education culture development of pupils make relevant scientific basis to justify the research problem from its priority perspective in the modern education system of.

Results. Axiological, hermeneutical, ethnopedagogical approaches that stipulate target activities of the school community and all participants in the educational process, are taken as the basis of students' culture of health and physical education development. The problem analysis in historical perspective allows us to see general and specific in determining the content and goal-setting of studied process in modern conditions. In accordance with this, the idea of development of students' culture of health and physical education, backed with legislative acts, as well as existing traditions of children physical education in society, can be a priority task of the education system development.

Conclusion. Historical, socio-cultural and pedagogical ground of development of students' culture of health and physical education as an overall process is submitted and reflects its reasoning, structural substantial bases and management mechanisms. The analytical approach to the problem allows to develop students' culture of health and physical education in today's educational institutions and gives it the priority activity status.

The problem of health preserving as the main basis of humanitarian values and the well-being of every person has been regarded as a priority one by the society and the state at all times.

Thus, Geneva Declaration of the Rights of the Child (1924) states: a child must be given the necessary means for the normal development, both physical and spiritual.

In Declaration of the Rights of the Child (1959) Principle 4 establishes the right of every child for healthy growth and development.

The Preamble to the Convention on the Rights of the Child (1989) states: "with due regard to the importance of traditions and cultural values of each nation for protection and harmonious development of a child." And Article 29 states that "States Parties agree that the education of a child shall be directed to:
a) the development of the personality, talents, mental and physical abilities to their fullest potential ...

These provisions became an international basis for the development of national and regional acts and laws governing activities of states, communities that aimed at ensuring the rights of every child to develop essential forces in accordance with the health capacity and natural inclinations also health promotion, providing strength and endurance, fortitude and intellectual potential. They assume a high physical activity and physical perfection as a condition of life optimism and an important factor in the quality of life improving.

The international community recognizes the two above mentioned documents: the Declaration and the Convention on the Rights of the Child as the main base for working out strategies, concepts and programs to develop students' culture of health and physical education.

For Russia, the problem of health preserving of children and young people, development of culture of health and physical culture of an individual is particularly acute concerning school-age children. There is the fact proving that by the end of school less than 10% of children are considered healthy and the term "school diseases" has appeared. The progress, covering all socio-economic spheres, unfortunately does not help to preserve the nature of the man, the harmony with nature and the universe. This directly relates to children, whose daily routine physical activity is very low, and, as the psychologist D.I. Feldstein noted: "follow-up of children physical development showed a tendency to a progressive reduction in the rate of longitudinal growth, rise of body asthenia, lag in the growth of muscle strength" [7, 194]

There is a need to solve the problem of the preservation and gain in school health, of development their health culture and physical culture in the school.

World Health Organization (WHO) defines health as "a state of complete physical, mental and social well being and not merely the absence of disease or infirmity". Following this definition we can see the interpretation of the concept "culture of health:
- an area of culture associated with social transformation and preservation of human health, including the social reality that exists in the forms and methods of health promotion, as well as qualitative aspects of behavioral relations and human relations, which determine the realization of the potential of one's individual health and health of the nation [2];
- set of values and norms implemented through appropriate activities that provide the necessary prerequisites and conditions (economic, social, ideological, etc.) to develop the needs of the individual and the possibility of the implementation [5];
- complex concept that includes theoretical knowledge about the factors that are conducive to health and practical skills of their intelligent use in life, and also following principles of active stabilization of health, i.e. improvement [4].

Physical culture is seen as a component or a part of the general culture of the individual and society:
- a part of the general culture of the society, one of the spheres of social activities aimed at improving the health, development of physical abilities (Reference Dictionary).
- a part of the general culture of society, aimed at improving the health, development of physical abilities, achievements in sports, etc. (Encyclopedia Britannica).

In general, physical culture can be treated as a part of overall culture that reflects human activities to develop, improve, protect the value of health, physical perfection of a man and self-realization that helps to achieve personal and socially-significant results.

Thus, the culture of health and physical education of a pupil, by definition, is a socially significant phenomena and becomes a concern for parents, schools and society surrounding each pupil.

The school at all times was such a learning environment where the child's health, physical and mental condition determined his or her academic achievement and general intellectual and physical harmony.
For example, in ancient Greece, the purpose of education was to develop a harmoniously developed personality, physically healthy. Traditions of physical education that developed strength, endurance, agility and discipline, included a variety of exercise and cold training that’s important for today's children. Here you can talk about Spartan culture of health. Physical development of children played a huge role in Athenian schools. It was getting more complicated in task assignments and physical training.

The great ancient philosophers gave a great role to the physical development of children. Aristotle advocated the observance of the laws of physiological development of children who exercised up to 7 years. Generally, in Ancient Greece human physical perfection had to be in unity with aesthetic education and mental development.

The guidance for young people in the Middle Ages were the postulates about health written in verse by an educator, doctor, writer and philosopher Arnoldo de Villanova in his "Salerno Health Code":

"If you want to get good health and have no diseases,
Avoid worries and do not be angry,
Dine modestly, forget about wines,
Do not consider useless to be awake after eating,
If you do not have a doctor - let the three be your doctors:
Cheerful character, peace and moderation in food " [6, 127].

The idea that everyone must take care of preservation and strengthen of health lies in these words.

If you glance at least once at the great paintings of Leonardo da Vinci, you understand that the genius of Renaissance art paid much attention to the appearance of the person, his physical appearance and painted the ideal of physical health, proclaimed the triumph of unity of material and spiritual. His life principle was in the words: "Learn to preserve your health."

Analyzing the statements of great philosophers, thinkers of that time about the role of health in human’s life as an integral part of the perfection, we can conclude that they reflect the common features of that era (regarding the cultural layer of the population and education of children and youth):

- cultivation of different approaches and different ways of preserving physical and mental health of the students;
- providing students with initial medical knowledge;
- attention to fulfillment basic hygiene facilities;
- the use of different exercise systems, aimed at the preservation and promotion of health;
- promotion a healthy lifestyle and the first studies how to do it.

Antiquity and the Middle Ages laid the foundations of younger generation healthy lifestyle education, understanding the role of physical culture.


The principles of humanism and democracy are to be in the heart of education according to N.I. Pirogov, great Russian physician. In that case the school can provide personal development

The great Russian writer, teacher L.N. Tolstoy health issues directed to the physical education of children from an early age. In his Yasnopolyansoy school he developed programs, pedagogical guidance, noted a huge role in improving physical qualities of children and the need to introduce children to the cold treatment of the body. The great role of nature as an important factor of education (moral, aesthetic, intellectual, physical) justified the development of physical qualities through folk games, preferably outdoor ones.

K.D Ushinsky considered as the basic pedagogical principle – the teaching principle requiring teachers to guide and consider the age and psychological characteristics of children, health capabilities, suggesting consistency in training.
The physician and educator, P.F. Lesgaft believed that a cultural and well-bred person should be wise about their health. He put forward before an educator the requirement of knowledge of the physiological features of the human body periodization and act depending upon human development.

Directly related to the preservation of the health of children was an article by a great Russian neurophysiologist V.M.Bekhterev "Protecting children's health". It's the program of health of school pupils, in which he outlined the need of hygiene, medical-biological, social and psychological interventions aimed at preserving the physical and mental health of children.

One of the vivid examples of the formation of human culture, endowed with the ability to develop the essential powers, the spiritual and corporeal essence were teaching activities of Ivan Yakovlevich Yakovlev - the great educator of Volga region and the Chuvash people.

In his teaching organizational activity I.J. Yakovlev thought that the basis of the educational process had to be according to the nature of a child (it connects with the teaching and doctrine of Ushinsky and Leo Tolstoy). These basic ideas came from the folk traditions of education, where education according the nature favors the natural lifestyle and continuity between generations (at least in the three-generational families of Chuvash). Yakovlev believed that folk traditions of education have important and useful functions in any historical period in the life of people.

People created and developed the culture of parenting in the family, community throughout the history. The integral part of it was the physical culture understood as culture of health and healthy lifestyle. The culture of health concerned everyday rituals and procedures - nature-and ethno-food and clothing, work and rest, hygiene and cold treatment (not specifically designed, but given to a child at the early age the child), in general, all life was in work and in activities. These traditions, passing from generation to generation, became an educational force that united children and adults about values of culture of healthy lifestyle, becoming physical education and physical culture of one's personality and of society as an integral part of the entire spiritual culture of the nation.

If we talk about the great importance and meaning of the pedagogical system I.J. Yakovlev, we see that folk traditions were main and basic principles in the educational process. No wonder that the great educator pointed on impropriety of diverting students from their native soil, from their native land, where they grew up, and where they would work as teachers-educators in future. Folk traditions which are time-tested and are a kind of standard to which a person takes cue from in the process of formation and development.

Therefore, the basis of aims of education and schooling has been updated in the educational process with traditional values people, in particular, the commandment centered on the value of health.

Among the Seven Precepts of Chuvash health is considered one of the most important one. It is illustrated by sayings: "Good health is above wealth", "Health is a blessing that money cannot buy", "Health is the most precious thing", or by lines of a folk song:

Paper is valued in Kazan-city
Belt is valued in Simbirsk-town
What is valued in the whole world?
Virtue and health is valued very much!,
Or by fairy tales.

Legends of Ulypstellabout Chuvash heroes whose strength and powerful spirit saved Chuvash from different hardships and helped them in life. The heroic power of Ivan-Batyr, kindness and generosity, a fine sense of beauty of hero Azamat, martial prowess of defender of Chuvash land, of heroChemen appear before the children in fairy tales: "Chemen", "Azamat’s Bridge", "Ivan-Batyr,» «Land of Ulyp».

Health was considered the main value in human life, thus, as was noted by Academician Volkov G.N., the phrase "ырлăх-сывлăх" in the Chuvash language has always been associated with
a wish of good: "ырлăх-сыывлăх сунатăп" - "I wish all the best". According to folk beliefs health was considered to be the greatest wealth and the way to the true happiness.

Chuvash literature masterpiece is considered to be the poem "Narspi", written by Konstantin Ivanov. In the lines of the poet the beauty of girl Narspi, the ability to sing is associated with health:

Her face is beautiful,  
Like a wild field. 
Eyes - like black agates -  
Are shining like fire. 
When she sings in the circle dance -  
She is like a nightingale; 
When she laughs, everyone will say:  
There is no girl healthier!

Health concerns of school students in Simbirsk Chuvash teaching School was the most important task of the teaching staff. The guidance in this work was the edification of I.Y. Yakovlev, "Ways of healthy and long life," which reprinted many times, and when the students returned after graduation to his native village to teach, they have integrated the provisions of the "Guidance" in their educational practice. Key provisions sounded like a requirement for the organization of the pedagogical process:

1. Compliance of the day regimen. 
2. Compulsory walks during breaks, before/after dinner and before bedtime. 
3. Traveling, walking tours.

Yakovlev family and especially his wife, Ekaterina Alekseevna, looked closely after the pupil’s health. Students, with weak health, when this was a necessary, were taken with them to the country, to the riverside to get some fresh air.

In Simbirsk Chuvash teaching school physical education was exemplary, including compulsory for everyone morning exercises, for the majority cold training and swimming, recreational and special exercises.

Because of his insistence Yakovlev achieved that in schools (which were predominantly village schools) were integrated lessons or special classes, where students were doing different physical exercises. On these lessons children were differentiated by groups:

- Boys and girls separately; 
- Physically development children and children with poor health separately;  
- Age groups (simple physical exercises were oriented for younger children, for the middle age children - exercises on strength and speed, for the older children - on strength, stamina, speed and with higher physical exercise stress).

Yakovlev thought that physical exercises provoked interest and were attractive to students, it was necessary to integrate acrobatics, wrestling, gorodki, swimming, skiing, competitive running, weight lifting, pole climbing, competitions in riding, fencing, boat race for adolescence. For middle and younger age attractive and useful from the point of view of the complex nature of the movements and development of passion for sports and a friendly competitiveness, gaming types of physical exercises (ball game, jumping rope, sledding, etc.) were prescribed.

Differentiated approach, general school regime in combination with physical exercises according to Yakovlev, creates favorable conditions for the development of a healthy person who is ready for the adult life and work [1]. We would like to point out that such organization of physical education of children can be useful for the modern system of physical education in schools, that is aimed at development of the culture of children's health.

According to the doctrine of National Education in the Russian Federation valid until 2025 school aims to provide:

- Development of culture of peace and interpersonal relationships; 
- Development of self-educational skills and skills of self-realization; 
- Development of motivation to work and active life position;
- Promotion of national traditions while working with gifted students;
- Promotion of a healthy lifestyle, development of children and junior sports;
- Resisting negative social processes.

These aims justify all the milestones of the school community, including teachers, children, parents, all participants of the educational process. Their aims represent the broad spectrum of issues related to students’ health strengthening (and, unfortunately, saving) as the main human life source.

The main approaches to the construction of the educational process in modern school, oriented to solve the above mentioned problems are:

- Axiological approach that emphasizes educational process as a public (social) and individual (personally meaningful) values of health and physical education. In the implementation of axiological approach we must proceed from the fact that a healthy lifestyle is a unity of physical, mental, spiritual and moral health of schoolchildren, which reflects the quality of life itself. Value systems oriented to health and physical education of the student "regulate the behavior, provide ways to achieve the goals of his life, shaping his attitude toward the world, himself, his behavior, his way of life" [3];

- Hermeneutic approach that emphasizes explanation and identification of deep meanings of the process of building a culture of health and physical culture. The physical culture is seen as a philosophy of life, it brings up the questions and gives it the answer: "What is the meaning of life?" The answer will probably be the following - in constant motion of thoughts and body. And for that person must be in good shape and feeling healthy;

- Ethnopedagogical approach that orients teachers to the integration of national traditions of healthy lifestyles, physical education of the younger generation, including the folk and ethnic ones, into the educational process. Any nation has massive sports events that gather people of all ages - from young to old. In fun individual and group competitions the joyful feeling of health and "I can do everything!" is born. These popular competitions of demonstration of strength and agility, quickness and wit, generosity and mutual aid are extremely educational for children. Not by chance, both in rural and urban festivals, for example on Chuvash Akatui, viewers become participants no matter the age or gender. Democracies, non-regimentation, absence of formal frameworks create an atmosphere of friendship and common joy. Feeling of pleasure from dialogue with national traditions makes this experience of involvement in students of the modern system of physical education. The power of the folk pedagogy lies in naturalness, succession, spirituality, collective and creative nature, coherence. It always promotes such traits as industriousness, courage and fortitude, patriotism, and also demands respect for the person, honesty, commitment by word and deed, by personal example to establish moral values. We can see a grain of moral constant of formed physical culture of the pupil in it.

The development of the culture of health and physical education of the student is determined by creation of proper conditions for mass involvement of children and young people in physical culture activities and sports.

Prerequisites for the creation of such conditions are:
- Active promotion of systematic physical culture exercises and sports among children in preschool and general school education;
- Students` participation in traditional sports competitions and physical culture public events held in the republic: All-Russia mass ski race "Ski Track of Russia" Russian street basketball competitions "Orange Ball", All-Russia day of sport running "Cross of Nations", athletic runs, republican festival "Sports family" for the prizes of the Head of the Chuvash Republic and comprehensive sports events.

The following project streams are defined in this work:
- The change of the content and forms of physical education and its transformation into an effective measure of saving and improving health of school children;
- Improving the status of physical education lessons in secondary school;
- Realization of the personal and individual-typological approaches to the child in the process of his physical development and improvement;
- The creation of new forms of organization of physical education of children on the basis of modern informational technologies;
- Development and improvement of youth sport;
- The increase in the efficiency of the work of teachers, coaches, trainers, physical culture instructors through the development of scientific information and methodological support, introduction of new advanced technologies.

Expected results:

- Development of students' motivation for physical exercise, perceived need to learn the importance of health, physical culture and sports;
- Increase in children's knowledge of personal hygiene;
- The annual increase in the number of children who regularly engaged in physical culture and sports;
- Increase in the number of children and adolescents aged 6-15 years attending sports schools;
- Increase in the number of athletes with mass categories;
- Student-athletes to take medal places, including disabled children of the republic, at national and international competitions for children and youth;
- Formation of a system of monitoring of the level of physical fitness and physical health of children;
- Attracting investments in the education system for the development of physical culture and sports.

Thus, the consideration of contemporary realities and trends in education allows us to solve the priority task of the educational institution - the development of culture of health and physical culture as part of the general culture of the individual among students.

**Literature**

THE RESULTS OF THE EXPERIMENTAL STUDY THE SOCIAL TOURISM SPHERE FUTURE EXPERTS STANDARD AND LEGAL CULTURE FORMATION AND ITS REALIZATION IN HIGHER EDUCATION INSTITUTION OF PHYSICAL CULTURE AND SPORT

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Upon termination of the experiment forming stage we carried out the sphere of social tourism future experts standard and legal culture formation diagnostics. The same techniques, as at the stating investigation phase were for this purpose used.

These testing showed that the greatest number of students (49,2%) in the experimental group at level above an average, in the control group the number of students (39,2%) have low level of formation of standard and social and legal knowledge. In the experimental group such students are only 10,1%.

![Figure 1 – Distribution of the experimental group students on levels of standard and legal culture of the cognitive component formation](image)

The data presented in the figure 1, show that in the experimental group the number of students having level above an average and high level of standard and legal culture cognitive component formation considerably grew.

Diagnostics of the sphere of social tourism future expert standard and legal culture emotional and estimated component formation in the control investigation phase showed that in the experimental group of the students having high level, is twice more, than in the control, and having the low – is 4 times less (tab. 1).
Levels of social tourism sphere future experts standard and legal culture emotional and estimated component formation in the experimental study
control stage

<table>
<thead>
<tr>
<th>Levels</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute quantity</td>
<td>%</td>
</tr>
<tr>
<td>high</td>
<td>43</td>
<td>22,8</td>
</tr>
<tr>
<td>Above average</td>
<td>90</td>
<td>47,6</td>
</tr>
<tr>
<td>average</td>
<td>39</td>
<td>20,6</td>
</tr>
<tr>
<td>low</td>
<td>17</td>
<td>9,0</td>
</tr>
</tbody>
</table>

Research showed that 28,1% of the experimental group is the sphere of social tourism students of future experts standard and legal culture axiological component the control stage (table 2) showed have such important valuable orientation as social useful activity. We are ready to bring to society or concrete group the activity benefit, to be active in the general activity. In the control group the number of such students are twice less.

Levels of the sphere of social tourism in the control stage of the experimental study future experts standard and legal culture axiological component formation

<table>
<thead>
<tr>
<th>Levels</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>absolute quantity</td>
<td>%</td>
</tr>
<tr>
<td>high</td>
<td>53</td>
<td>28,1</td>
</tr>
<tr>
<td>average</td>
<td>115</td>
<td>60,8</td>
</tr>
<tr>
<td>low</td>
<td>21</td>
<td>11,1</td>
</tr>
</tbody>
</table>

60,8% experimental group of students and 45,9% – control group understand the importance of socially useful activity and are ready to give some part of the time and forces, but not always it becomes the result of their personal initiative and independence. These students are in the average level of standard and legal culture of the axiological component formation.

Personal important component of standard and legal culture is tolerance. In the control stage its level was again revealed. Data are generalized and presented in table 3.

Levels of the social tourism sphere tolerance of the future experts in the control stage of the experimental study

<table>
<thead>
<tr>
<th>Levels</th>
<th>Experimental group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>absolute quantity</td>
<td>%</td>
</tr>
<tr>
<td>high</td>
<td>91</td>
<td>48,2</td>
</tr>
<tr>
<td>average</td>
<td>93</td>
<td>49,2</td>
</tr>
<tr>
<td>low</td>
<td>5</td>
<td>2,6</td>
</tr>
</tbody>
</table>

High and average levels of tolerance (48,2% and 49,2% respectively) have almost equal number of experimental group students and only low level of tolerance is found in 2,6% of respondents.

In the control group 36,6% of students have low level 43,3% - average and 20,1% – have high level of tolerance.
For identification of social tourism sphere future experts standard and legal culture formation full picture personal component at the control stage of the pilot study we defined level students legal installations formation. The generalized data are presented in table 4.

**Table 4**

<table>
<thead>
<tr>
<th>Levels</th>
<th>Experimental group</th>
<th>control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute quantity</td>
<td>%</td>
</tr>
<tr>
<td>high</td>
<td>83</td>
<td>43,9</td>
</tr>
<tr>
<td>average</td>
<td>94</td>
<td>49,7</td>
</tr>
<tr>
<td>low</td>
<td>12</td>
<td>6,4</td>
</tr>
</tbody>
</table>

In the experimental group high and average levels of legal installations formation have almost equal number of students: 43,9% – high and 49,7% – average, low level have 6,4% of students. In the control group half of social tourism sphere has low level of legal installations formation, 33% – average and only 16,5% – high.

For increase of reliability future experts legal culture formation process results assessment standard in the sphere of social tourism and an assessment of efficiency of our pedagogical impact on this process we used χ – criterion.

In our case the variable P received the following values:
– in the control group – 9,8%; 43,3%; 46,9%;
– in the experimental group – 10,0%; 39,7%; 50,3%.

The variable V received values:
– in the control group – 13,4%; 44,8%; 41,8%;
– in the experimental group – 38,6%; 45,0%; 16,4%.

The number of m is equal to three.

Having substituted all data in the formula, we determined its size:
– for the control group: χ = 1,9;
– for the experimental group χ = 105,3.

The values received by us in the control group much less, and in the experimental – much more the corresponding tabular m-1=2 value freedom degrees, making 13,82 at probability of admissible mistake it is less than 0,001.

Therefore, the hypothesis of significant changes which happened in the level of the social tourism sphere future experts standard and legal culture formation, being trained in experimental group, as the result of carrying out forming experiment.

Skilled and experimental work in the social tourism sphere is proved carried out on the basis of the Naberezhnye Chelny branch of Federal Public Budgetary Educational Institution of Higher Education "Povolzhskaya State Academy of Physical Culture, Sports and Tourism", and legal culture of future experts consisted of three main stages: stating, forming and control.

Definition of the social tourism sphere students – future experts standard and legal culture formation initial level became result of the stating stage. Average data on both groups (1,62 points in the control and 1,59 points in the experimental) showed that level of standard and legal culture formation is low.

The forming stage of skilled and experimental work was directed to the verification of the theoretical concept developed by us and model of social tourism sphere future experts standard and legal training, and also experimental justification of the pedagogical conditions promoting efficiency of students – future experts standard and legal culture formation in the social tourism sphere.

The experiment showed that the assumptions made by us are right as level of standard and legal culture of the experimental group significantly raised (an average value is equal 2,22 points)
and reached the average level. In the control group there were changes, however they don't differ the reliable importance, as below the corresponding tabular value \( \chi \) – the criterion making 13,82 at probability of an admissible mistake less than 0,001.

CONCLUSION

The analysis of the theory and practice of the problem studied by us allowed to draw certain conclusions:

1. Theoretical and methodological prerequisites of social tourism sphere experts standard and legal culture formation are results of scientists researches on problems formation of standard and legal culture, sense of justice, legal competence, legal education in the course of vocational training of experts for various branches of economy (in them the essence and specifics of the listed phenomena are defined; their structure comes to light, the set of components is defined; models are offered, to technology, systems of formation of these phenomena and pedagogical conditions of their realization).

2. Complex research of the problem of social tourism sphere experts standard and legal culture formation in higher education institutions of physical culture and sport was carried out in 4 stages. The maintenance of the first stage (propaedeutic) was theoretical-methodological justification of the problem of at experts in the sphere of social tourism standard and legal culture formation.

   The maintenance of the second stage (search) was detection of the intrinsic and substantial characteristic of social tourism sphere experts standard and legal culture formation process.

   Creation sphere of social tourism future experts standard and legal training conceptual model was the maintenance of the third stage (design) pedagogical research.

   The maintenance of the fourth stage (technological) pedagogical research was development social tourism sphere experts standard and legal culture formation technology and its realization in physical culture and sport higher education institution.

3. Standard and legal preparation is considered in research as the most essential part vocational training of the expert of the sphere of the social tourism, integrating other its components and representing continuous operated process of formation of standard and legal culture of the personality. Standard and legal training of the expert of the sphere of social tourism assumes a combination of a basic basis, a federal component to the high school component considering features of a sociocultural situation in the concrete territory.

   The model social tourism sphere of future experts formation standard and legal culture at of the in physical culture and sport higher education institutions, constructed taking into account features of professional activity of experts of the sphere aimed at providing the quality standards and standards of safety of complex tourist service of low-protected segments of the population, is reflected in logic of process (a phasing – propaedeutic, diagnostic-predictive, forming-productive, estimated and total) and modular structure. Modules: the methodological; target (professional and educational reference points of standard and legal training of future experts of the sphere of social tourism); diagnostic (identification of level of formation of standard and legal culture at future expert of the sphere of social tourism); predictive (representation of expected results); substantial (professionalize maintenance of subject matters, elective and facultative courses, disciplines of specialization of a legal orientation); praxiology (formation of system of legal knowledge and social and legal competence of various kits of classroom and out-of-class work, differentiation and activization of self-educational activity due to use of set of interactive, design, model, position professional and educational technologies; accumulation of social and legal manifestation experience competence in different types of practice); organizational (administrative and organizational, didactic-technological, social and pedagogical conditions); productive (concrete level of the graduate standard and legal culture formation).

4. Mechanisms of the social tourism sphere future experts standard and legal culture, formation confirmed efficiency of this process, are technology of social tourism sphere future experts standard and legal culture formation in higher education institutions of physical culture and
sport and set of pedagogical conditions: updating in the content of invariant disciplines of standard and legal regulation questions preparation in the sphere of social tourism; inclusion in variable part curricula of training of future experts of the sphere of social tourism of disciplines "Legal bases of social tourism", "Standard and legal culture of experts of the sphere of social tourism", "Standard and legal bases of the organization of the barrier-free environment", "Norms and rules of behavior and communication with physically disabled people", "Relief and dot system of Braille the alphabet", "The sign speech"; use in standard and legal preparation of the active and interactive forms of education modeling real conditions of professional activity in the sphere of social tourism; inclusion of students in the various socially significant useful activity which is carried out on the basis of a free choice of the student as it is independent and with active participation of others (teachers and students).

bibliography

FORMATION OF STUDENTS’ COORDINATION ABILITIES AT THE LESSONS OF PHYSICAL CULTURE

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Keywords: complex of exercises, physical qualities, classical dance.

Annotation. Formation of coordination abilities of students happens in the course of classes in physical culture, polytechnical university which include the whole complex of special exercises of the classical dance helping development of coordination and promoting formation of the main physical qualities. One of the most important qualities of any student – agility, large role in development is played by possibilities of the central nervous system, cardiovascular system which are the major factors giving an idea of coordination development level and, as a result, have special value at an assessment of its coordination ability.

Research methods: analysis of scientific literature, tool and pedagogical methods, testing.

Research materials. Coordination ability of students is estimated by means of control tests which help to define various coordination qualities formation levels. Series of control tests are chosen according to the purposes, readiness level, a floor, level of physical readiness of students and other factors.

Conclusion. The article reveals the content of polytechnical university students’ coordination abilities formation process at the lessons of physical culture. The author focuses the main attention on the use of choreography opportunities during the lessons of physical culture in order to form students’ coordination abilities.

Introduction. In diverse situations of production increased requirements to coordination of movements [1-9] are shown. The most effective and available way of movements coordination formation at physical culture classes are revealed, defined and proved by means of classical dance for development of students’ coordination abilities [6]. The process of students’ coordination abilities formation at the lessons of physical culture at Perm National Research Polytechnical University was carried out under the following conditions:

- definition of students’ movements coordination development essence at the lessons of physical culture as harmonious combination of the vestibular analyzer sensitivity to balance maintenance (in a static and dynamic position), balance preservation in static poses (static coordination), traffic control in three-dimensional space (spatial coordination), fast and timely motive reaction in the course of the motive act (reflexometry) implementation;
- application of classical dance means for development of students’ movements coordination at the lessons of physical culture;
- efficiency of coordination abilities development for a body control in space in five active points of a body anthropological structure;
- combination of theoretical knowledge and means of classical dance in educational and training process of students for the solution of various motive tasks.

Methods and research organization. According to it the following problems were solved:

1. Definition of the essence, structure and the maintenance of students’ coordination abilities at the lessons of physical culture.
2. Research of the pedagogical opportunities of classical dance in formation of students’ coordination abilities at the lessons of physical culture, comparing motive readiness and a functional condition of the students from the control and the experimental groups.

3. The experimental technique substantiation of classical dance pedagogical opportunities realization in formation of students’ coordination abilities at the lessons of physical culture.

4. Efficiency of classical dance means influence on coordination abilities of students.

Theoretical research works of scientists and practitioners [1-9] on physical culture in education and sports were thus applied; the empirical: supervision, questioning, interviewing, testing, individual and group conversations on a technique of movements control in future profession and life, students’ individual interests in sports, fulfillment of research - educational tasks and exercises during educational and experimental process with an assessment of their high-quality achievements in formation of motive functions and in individual work according to the principle of feedback (the teacher - the student).

Results. The system of classical dance means, possessing coordination by a developing orientation, and the technique of educational and training lessons providing effective formation of coordination abilities in pedagogical process of students’ physical training were developed. Inclusion of the choreographic exercises which are fulfilled with opened and closed eyes into physical training of students provides high level of coordination and physical abilities formation at the lessons of physical culture. Pedagogical opportunities of classical dance in students’ coordination abilities formation are defined. In educational and training process natural communication is revealed: effective positive influence of exercises from funds of classical dance on students’ coordination abilities formation in pedagogical experiment that is a basis for inclusion of classical dance exercises into the process of physical training for realization of students’ coordination abilities formation at the lessons of physical culture.

The practical importance of the research work is in the following: 1. Means and a technique of students’ coordination abilities formation are developed. 2. The analysis of the research results allows to recommend the developed means and a technique as effective in physical training of students at the lessons of physical culture, including them in contents of the training program and sports lessons. 3. The received results can be also used in the establishments of vocational education for development of the professional skills, special physical qualities directed at increase of applied physical readiness.

For determination of coordination abilities identity and physical readiness of observed groups of students, and also for adequacy of methodical receptions the stating experiment was carried out. The results are presented in table 1.

**Table 1**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>ControlGroup (CG) (n = 50)</th>
<th>ExperimentalGroup (EG) (n=50)</th>
<th>П</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICA (the integrated indicator), mm</td>
<td>24,83±0,73</td>
<td>26,20±0,97</td>
<td>&gt;0,05</td>
</tr>
<tr>
<td>ICA with open eyes, mm</td>
<td>14,76±0,98</td>
<td>17,90±1,18</td>
<td>&lt;0,05</td>
</tr>
<tr>
<td>ICA blindly, mm</td>
<td>33,56±1,66</td>
<td>30,69±1,85</td>
<td>&gt;0,05</td>
</tr>
<tr>
<td>ICA after standard loading with open eyes, mm</td>
<td>19,74±1,28</td>
<td>19,60±1,17</td>
<td>&gt;0,05</td>
</tr>
<tr>
<td>ICA after standard loading blindly, mm</td>
<td>29,98±1,49</td>
<td>33,11±1,86</td>
<td>&gt;0,05</td>
</tr>
<tr>
<td>Static coordination (SC), (Romberg’s test)</td>
<td>84,36±0,30</td>
<td>83,74±0,35</td>
<td>&gt;0,05</td>
</tr>
<tr>
<td>Sensitivity of the vestibular analyzer (SVA), (Yarotsky’s</td>
<td>82,08±2,32</td>
<td>76,60±3,11</td>
<td>&gt;0,05</td>
</tr>
</tbody>
</table>
Apparently, the parameters of spatial and static coordination, sensitivity of the vestibular analyzer, a reflexometry and jump height among the students of the CG and the EG didn't differ (P>0.05).

Distinction was significant only in long jump and PKSO indicators (with open eyes) at P<0.05 (table 2). Taking into account stating experiment two equivalent groups were created: the control (CG) and the experimental (EG). The functional model and the main pedagogical conditions of an experimental technique creation on formation of students’ coordination abilities (CA) are designated.

Results of the main experiment (table 2) confirmed efficiency of the used choreographic exercises in development of KS and students’ physical qualities at the lessons of physical culture.

First of all, in the EG a considerable (P<0.001) improvement of the integrated indicator parrying clearness of all touch systems and levels of boundaries interaction with intramuscular coordination of the motive device is revealed. Thus the narrowness of communication was calculated by the correlation analysis increases. If prior to experiment of size of dependence were in limits: r = 0.157-0.238 (p>0.05), at the end they made 0.264-0.562 (p>0.05–p<0.05). The general improvement of quality was 28.0% (p<0.001).

Similar indicators after standard loading increased significantly in the same group (EG) (to 21.1%; p<0.001) but not in the control group. After standard loading improvement of this indicator in comparison with the initial level was 28.3% (P<0.001). Sensitivity of the vestibular analyzer in the EG before the experiment differed for 13.28% (P<0.001), in the control group - for 5.5% (P<0.05), with the smallest efficiency of this quality development. Speed of motive reaction in the EG improved for 15.85% (P<0.001). In the control group there were no essential changes (P>0.05).

### Table 2

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Experimental Group (EG – 50 per.)</th>
<th>Control Group (CG – 50 per.)</th>
<th>Distinction of the end results between EG and CG</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICA (the integrated indicator), mm</td>
<td>26.20±0.97</td>
<td>18.84±0.7</td>
<td>28.0%&lt; 0.01</td>
</tr>
<tr>
<td>ICA with open eyes, mm</td>
<td>17.90±1.18</td>
<td>14.68±0.85</td>
<td>17.9%&lt; 0.01</td>
</tr>
<tr>
<td>ICA blindly, mm</td>
<td>30.69±1.85</td>
<td>22.75±1.38</td>
<td>25.8%&lt; 0.01</td>
</tr>
<tr>
<td>ICA after standard loading with open eyes, mm</td>
<td>19.60±1.17</td>
<td>15.46±0.75</td>
<td>21.12</td>
</tr>
<tr>
<td>-------------------------------------------</td>
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<td>------</td>
</tr>
<tr>
<td>ICA after standard loading blindly, mm</td>
<td>33.11±1.86</td>
<td>23.73±1.26</td>
<td>28.32</td>
</tr>
<tr>
<td>Static coordination</td>
<td>83.74±2.46</td>
<td>89.14±0.85</td>
<td>66.44</td>
</tr>
<tr>
<td>Sensitivity of the vestibular analyzer</td>
<td>76.60±3.11</td>
<td>86.78±1.4</td>
<td>13.28</td>
</tr>
<tr>
<td>Reflexometry, cm</td>
<td>19.30±0.49</td>
<td>16.24±0.43</td>
<td>15.85</td>
</tr>
<tr>
<td>Standing jump height, cm</td>
<td>52.7±1.19</td>
<td>57.78±1.03</td>
<td>9.63</td>
</tr>
<tr>
<td>Standing jump length, cm</td>
<td>211.14±2.21</td>
<td>219.10±2.06</td>
<td>33.77</td>
</tr>
</tbody>
</table>

\[(X1-X2 \text{ in } \%, \text{ EG}=50 \text{ per.}; \quad X3-X4 \text{ in } \%, \text{ CG}=50 \text{ per.})\]

Symbols: 1 – ICA – the integrated indicator, mm; 2 – ICA – with open eyes, mm; 3 – ICA – blindly, mm; 4 – ICA – after standard loading with open eyes, mm; 5 – ICA – after standard loading blindly, mm; 6 – SC – statistical coordination, with; 7 – SVA – sensitivity of the vestibular analyzer, with; 8 – reflexometry, cm; 9 – height of a jump, cm; 10 – jump length, see.

The total analysis of the final results of the experimental and the control groups of students on PKSI revealed development of high extent in the EG at t 6,16 (p<0.001). The most difficult conditions of coordination of movements blindly – ICA and ICA – after standard loading at t 4,43 (p<0.001); t 3,82 (p<0.001) and 3,27 (p<0.01) confirmed with p high level of improvement in development of touch (sensitive) and precision motive functions in students of experimental group. (без русского перевода не понятно)

**CONCLUSION**

1. The analysis of scientific and methodical literature and the materials of the preceding research, showed that in practice of physical training of students from polytechnical university there are no scientific and reasonable approaches to use of classical dance and the optional exercises which are effective in formation of coordination abilities, a number of motive qualities, physical readiness as a whole.

2. Data of the stating experiment testify to the level of physical readiness identity and students’ coordination abilities from the control and the experimental groups. The exception is made for the parameters with open eyes and sensitivity of the vestibular analyzer. The received results forma base for development of the experimental technique defining structure and the maintenance of classical dance means in physical training of students.

3. The system of classical dance means and optional exercises, the technique of their application which provides a positive impact on development of coordination abilities and...
physical qualities of students in the course of training in higher education establishment the lessons of physical culture are developed.

4. The functional model of development and assessment of coordination abilities by means of which purposeful formation of motive and functional potential of students is provided is created.

5. High efficiency of used means and methods of an experimental technique in physical training of students is revealed.

Bibliography


METHOD OF INTERVAL EXOGENOUS RESPIRATORY HYPOXIC TRAINING

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Keywords: artificial hypoxia, athletes, specializing in middle distances running, hypoxicator "Peak", diaphragmatic mask "Elevation training mask", the system "Garmin Forerunner 310XT".

Annotation. The article deals with the problem of the application of different hypoxic systems in the training process of athletes, specializing in middle-distance running. Many researchers and practitioners affirm that the athletes, along with the physical exercise, should pay considerable attention to the use of additional means and methods of training as integrative components of impact on the functional processes.

Research methods: scientific-methodical literature analysis and summarizing, pedagogical testing, sports documentation analysis, the method of express diagnostics of functional state and reserve capacity of the organism «D & K Test» by S.A. Dushanin, pedagogical experiment, the methods of mathematical statistics.

Materials: The characteristics and methodological features of hypoxic and information methods application are presented: hypoxicator “Peak”, diaphragmatic mask “Elevation training mask”, the system “Garmin Forerunner 310XT”, pulse oximeter “Oxy-Pulse” and the system of received information analysis “Garmin Connect”. Hypoxicator "Peak" realizes exogenous type of hypoxia and consists of related to each other mask, frame (filled with absorber of carbon dioxide) and a breathing bag. To monitor the training process the method of obtaining information by means of the wireless handheld system “Garmin Forerunner 310XT” was used. Diaphragmatic mask “Elevation Training Mask” was used during the second training session in an interval mode.

Results: The leading experts in the field of middle-distance running participated in the survey on the question of hypoxic means application in the training of athletes, specializing in middle-distance running. A weekly micro cycle of hypoxic systems use in the training process of runners is presented.

Conclusion: On the basis of a survey among the coaches and athletes the main areas of hypoxic means application in the training of athletes, specializing in middle-distance running, are identified. The methodology of interval exogenous - respiratory hypoxic training is developed on the basis of a complex application of the devices which realize exogenous and respiratory hypoxia.

Introduction. The use of experimentally substantiated pedagogical technologies and methods in a modern training process can help to broaden the range of adaptive potential of the athletes’ organism with the achieved volume and intensity of the training loads (E.P. Gorbaneva, 2012;).

New possibilities should provide intensity of the training process, individualization on the basis of the athletes’ reserve capacity revelation, selection of the training means taking into account the readiness in order to develop to the maximum total functional efficiency (V.N. Platonov, 1997; A.I. Shamardin, 2000;).

Along with physical exercises application many specialists pay great attention to the use of extra means and methods of training as integrative means of purposeful influence on functional processes (S.S. Ganzei, 2011; S.L. Gritsenko, 2012). One of such kind of methods is training in
case of hypoxia imitation. (A.Z. Kolchinskaya, 2003);

The results of the scientific research works show that different variants of artificial and natural hypoxia were used in the training of the sportsmen in different kinds of sport (M.M. Bulatova, 2008).

Everything mentioned above actualizes the problem of extra hypoxia means application, in particular different types of artificial hypoxia during the training process of the athletes.

To achieve the aim and to solve the stated problems the following research methods were used: scientific-methodical literature analysis and summarizing, pedagogical testing, sports documentation analysis, the method of express diagnostics of functional state and reserve capacity of the organism «D & K Test» by S.A. Dushanin, pedagogical experiment, the methods of mathematical statistics.

Results and their discussion. To substantiate the methodology of interval exogenous - respiratory hypoxic training a survey was held. The coaches and the sportsmen from the picked teams, the heads of the federations, the coaches of the republic and regions of the Russian Federation and others took part in the survey. In general 20 specialists and 50 sportsmen specializing in middle-distance running were asked. The specialists mention that they use only some traditional means of hypoxic influence. More often (almost 100% cases) are mentioned the conditions of middle altitude mountains (Kislovodsk). It is necessary to mention that the range of the used means of hypoxic influence of some athletes differs and depends on the level of training, material – technical conditions. 85 % of the respondents mentioned the necessity to plan the application of different hypoxic impacts in the micro cycles in a circannian cycle of training. According to the specialists the preparatory stage should include 8 micro cycles.

The specialists define the importance of the training loads and different hypoxic impacts combination during a preparatory stage (81% of the respondents). Among the hypoxic measures, offered to the sportsmen, 87.3% of the respondents mention the conditions of middle altitude mountains; 9.3% of the respondents define the devices providing the air with a low level of oxygen; 3.4% of the respondents mention the hypoxic tents. Speaking about the hypoxic measures, offered to the athletes by the coaches, 74.3% of the respondents mention the conditions of middle altitude mountains; 15.3% define the application of different hardware-based methods; 10.0% of the respondents mentioned other means (tents, altitude chamber). While analyzing the question of the hypoxic measures which influence the success of the performance the following results were received: 73.0% of the respondents mentioned being in the conditions of natural hypoxia; 16.7% of the respondents mentioned being in the conditions of artificial hypoxia; 10.3% of the respondents mention the sleep in the conditions of hypoxia.

The methodology of interval exogenous - respiratory hypoxic training includes the application of hypoxic and information means: hypoxicator “Peak”, diaphragmatic mask “Elevation training mask”, the system “Garmin Forerunner 310XT”, pulse oximeter “Oxy-Pulse” and the system of received information analysis “Garmin Connect”.

The hypoxicator "Peak" realizes exogenous type of hypoxia and consists of related to each other mask, frame (filled with absorber of carbon dioxide) and a breathing bag. During one breathing cycle (3-5 minutes) the amount of oxygen in inhalant gaseous mixture decreases from 21% of the volume to 12-14% and this provides necessary physiological effect. The diaphragmatic mask “Elevation training mask” realizes a respiratory type of hypoxia. The mask allows to model different high altitude conditions. “Resistance of inhalations” are the simulators of different altitudes and the amount of oxygen which is possible to inhale at once. Different altitudes were simulated: 3,000 foot, 6,000 foot, 9,000 foot, 15,000 foot, 18,000 foot. The concentration of oxygen in blood was examined with the help of pulse oximeter “Oxy-Pulse”. To monitor the training process the method of obtaining information by means of wireless handheld system “Garmin Forerunner 310XT” was used.

On Monday in a developmental micro cycle during the first training diaphragmatic mask was used in an interval mode. The percentage of the training exercises fulfillment in a mask was 10
%. The first mouth-piece was used. The intensity of resistance was 25%. In general there was only one cycle.

The hypoxicator "Peak" was used in 40 minutes after the first training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air also lasted 5 minutes (1 cycle). In general there were two cycles. The total time of a hypoxic training was 20 minutes. Saturation of oxygen in blood was 85 - 90 %. The hypoxicator "Peak" was used 45 minutes before the second training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air also lasted 5 minutes (1 cycle). In general there were four cycles. The total time of a hypoxic training was 40 minutes. Saturation of oxygen in blood was 85 - 90 %. The diaphragmatic mask “Elevation training mask” was used during the second training in an interval mode. In general there were two cycles (10% and 10%). The percentage of the training exercises fulfillment in a mask was 20 %. The second mouth-piece was used. The intensity of resistance was 50%.

On Tuesday the diaphragmatic mask was used during the first training in an interval mode. In general there was one cycle (10%). The percentage of the training exercises fulfillment in a mask was 10 %. The second mouth-piece was used. The intensity of resistance was 50%. The hypoxicator "Peak" was used in 40 minutes after the first training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air also lasted 4 minutes (1 cycle). In general there were three cycles. The total time of a hypoxic training was 27 minutes. Saturation of oxygen in blood was 85 - 90 %. The hypoxicator "Peak" was used 50 minutes before the second training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air lasted 3 minutes (1 cycle). In general there were four cycles. The total time of a hypoxic training was 28 minutes. Saturation of oxygen in blood was 85 - 90 %. The diaphragmatic mask was used during the second training in an interval mode. In general there were two cycles (10% and 15%). The percentage of the training exercises fulfillment in a mask was 25 %. The third mouth-piece was used. The intensity of resistance was 75%.

On Wednesday the diaphragmatic mask “Elevation training mask” was used during the first training in an interval mode. In general there were two cycles (5% and 5%). The percentage of the training exercises fulfillment in a mask was 10 %. Using the second mouth-piece the intensity of resistance was 50%. The hypoxicator "Peak" was used in 40 minutes after the first training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air also lasted 5 minutes (1 cycle). In general there were three cycles. The total time of a hypoxic training was 30 minutes. Saturation of oxygen in blood was 85 - 90 %. The hypoxicator "Peak" was used 50 minutes before the second training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air lasted 3 minutes (1 cycle). In general there were four cycles. The total time of a hypoxic training was 32 minutes. Saturation of oxygen in blood was 85 - 90 %. The diaphragmatic mask was used during the second training in an interval mode. In general there were two cycles (15% and 7%). The percentage of the training exercises fulfillment in a mask was 22 %. The third mouth-piece was used. The intensity of resistance was 75%.

On Thursday the diaphragmatic mask was used during the first training in an interval mode. In general there was one cycle (10%). The percentage of the training exercises fulfillment in a mask was 10 %. Using the first mouth-piece the intensity of resistance was 25%. The hypoxicator "Peak" was used in 40 minutes after the first training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air also lasted 5 minutes (1 cycle). In general there were three cycles. The total time of a hypoxic training was 30 minutes. Saturation of oxygen in blood was 85 - 90 %. The hypoxicator "Peak" was used 50 minutes before the second training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air lasted 10 minutes (1 cycle). In general there were two cycles. The total time of a hypoxic training was 30 minutes. Saturation of oxygen in blood was 85 - 90 %. The diaphragmatic mask was used during the second training in an interval mode. In general there were two cycles (7% and 7%). The percentage of the training exercises fulfillment in a mask was 14 %. The first mouth-piece was used. The intensity of resistance was 25%.
On Friday the diaphragmatic mask was used during the first training in an interval mode. In general there were two cycles (10% and 10%). The percentage of the training exercises fulfillment in a mask was 20%. Using the first mouth-piece the intensity of resistance was 25%. The hypoxicator "Peak" was used in 40 minutes after the first training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air lasted 3 minutes (1 cycle). In general there were three cycles. The total time of a hypoxic training was 24 minutes. Saturation of oxygen in blood was 85 - 90%. The hypoxicator "Peak" was used 50 minutes before the second training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air also lasted 5 minutes (1 cycle). In general there were three cycles. The total time of a hypoxic training was 30 minutes. Saturation of oxygen in blood was 85 - 90%. The diaphragmatic mask was used during the second training in an interval mode. In general there were two cycles (15% and 10%). The percentage of the training exercises fulfillment in a mask was 25%. The second mouth-piece was used. The intensity of resistance was 50%.

On Saturday the diaphragmatic mask “Elevation training mask” was used during the first training in an interval mode. In general there was one cycle (10%). The percentage of the training exercises fulfillment in a mask was 10%. Using the first mouth-piece the intensity of resistance was 25%. The hypoxicator "Peak" was used in 40 minutes after the first training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air lasted 5 minutes (1 cycle). In general there were four cycles. The total time of a hypoxic training was 40 minutes. Saturation of oxygen in blood was 85 - 90%. The hypoxicator "Peak" was used 50 minutes before the second training. The breathing through the hypoxicator lasted 5 minutes and the breathing atmospheric air also lasted 5 minutes (1 cycle). In general there were two cycles. The total time of a hypoxic training was 20 minutes. Saturation of oxygen in blood was 85 - 90%. The diaphragmatic mask was used during the second training in an interval mode. In general there were two cycles (10% and 10%). The percentage of the training exercises fulfillment in a mask was 25%. The second mouth-piece was used. The intensity of resistance was 50%.

**Conclusion.** Thus scientific-methodical literature analysis on the problem of interval hypoxic training application in different kinds of sport showed that there are no clear aims, objectives, principles, content and organizational – methodical peculiarities of an interval exogenous - respiratory hypoxic training application in a training process of the athletes specializing in middle-distance running. Nowadays the use of hypoxic measures in the pre-season very often means the conditions of middle altitude mountains that is why it is necessary to develop the system of hypoxic means use on the basis of hardware-based and informational methods realization. The methodology of interval exogenous - respiratory hypoxic training of the athletes, specializing in middle-distance running, was substantiated, developed and experimentally checked on the basis of the carried out research results. The methodology includes the use of hardware-based and informational methods such as hypoxicator “Peak”, diaphragmatic mask “Elevation training mask”, the system “Garmin Forerunner 310XT”, pulse oximeter “Oxy-Pulse” and the system of received information analysis “Garmin Connect”.

**Bibliography**


DEVELOPMENT OF ENVIRONMENT STATE PERCEPTION AS A FACTOR ECOLOGICAL PROFESSIONAL PEDAGOGICAL EDUCATION IMPROVEMENT OF THE FUTURE TEACHERS

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Keywords: ecological professional - pedagogical education, perception, students, means and forms of lessons, methods, criteria of assessment, pedagogical experiment.

Annotation. The central link of the united system of continuous ecological education are pedagogical higher educational institutions as the leading role in formation of ecological outlook, ecological consciousness, ecological thinking and ecological upbringing belongs to a teacher. The problems of a complete system of the encyclopedic knowledge formation which is based on nature savings are set for comprehensive school causes need of acquisition of abilities, skills, experience of independent activity and a personal responsibility of pupils for

Research methods: analysis and generalization of scientific and methodical literature, testing, pedagogical experiment, methods of mathematical statistics.

Research material. The model of perception formation for the future teachers which includes statement of specific tasks is developed; choice of means, methods and new forms of the organization of the occupations allowing considerably to raise level of their ecological education. With its help the image of studied natural object is reproduced, being guided on which, future teacher can develop individual model and the program of the forthcoming ecological professional and pedagogical activity.

Result. During perception and other thought processes improvement there is fixing of forecasting and extrapolation of similar situations skills that allows to take necessary measures for decrease of negative consequences of an ecological situation. Experimental check of the model efficiency showed expediency and productivity of this approach which has caused activization of students creative potential in the sphere of nature and resources use, environment protection.

Conclusion. Pedagogical process development and improvement of the environment state objective perception has a complex content and structure which is defined by various factors among which the leading place is taken by increase of ecological competence-based professional pedagogical education.

The central link of uniform system of continuous ecological education are pedagogical higher educational institutions as the teacher possesses the leading role in formation of ecological outlook, ecological consciousness, ecological thinking and ecological education. Problems of formation of complete system of the encyclopedic knowledge which are based on nature savings that causes need of acquisition of abilities, skills, experience of independent activity and a personal responsibility of pupils for a condition of habitat [2] are set for comprehensive school.

The organization of the educational process which meet the requirements of a new paradigm, is connected with basic change of its structural contents, beginning from statement of the purposes, development of new forms of lessons and before the search of more perfect universal pedagogical technologies providing formation of united conceptual representations and methodological approaches, raising productivity of ecological education.

Increase of the educational process organization efficiency of the directed at improvement of ecological professionally-pedagogical competence of the future teachers, determines need for
transformation of all organizational and administrative activity of a higher educational institution, focusing it a continuous self-development by reconsideration of the necessary personal qualities which define the formation of competence. It provides creation of the ecology-educational space providing harmonious development of intellectual qualities, promoting the maximum realization of available potential for the solution of ecological tasks [1, 3-8].

The purpose of this work is theoretical and methodical justification of the importance of formation perception skills of observable natural phenomena as the leading quality of intellectual preparation of the future teachers.

The ideas of the training process organization with a support on available experience drew attention of teachers since the beginning of the XX century, however Belkin A.S. and his pupils it was begun studying of opportunities of use of experience being trained in educational process. It is known that life experience is formed as a result of development of fundamental intellectual qualities: perceptions, attention, memory, thinking and analytical skills depending on which extent of development there is a formation of individual experience of future expert and which he uses it in the course of acquisition of the special knowledge making a basis for formation of ecological professional and pedagogical competence of future teachers. Therefore, basis of ecological professional and pedagogical competence of graduates of higher education institution are indicators of development of their intellectual qualities.

The leading mental properties of the personality in the sphere of rational environmental management and resource-saving, and protection of habitat is perception, attention, memory and thinking. The importance of perception – the intellectual quality defining the degree of manifestation of attention, memory, etc., is that with its help the image of studied natural object is mage, being guided by which, the future teacher can develop individual model and the program of the forthcoming ecological professional and pedagogical activity.

Realization of the analytical qualities is defined by the level of perception, formation considered as ability to differentiation, distinction of specific signs, properties, parameters of studied subjects and the environment phenomena. Adequacy of perceived natural object is provided by functions of sensory-based systems, and also by the character of relationship between excitative and brake processes the cortex of big hemispheres.

The level of perception is caused by sensory, motive and speech mechanisms and depends on quality of ecological education, experience of ecology-pedagogical activity, clearness of the formulated tasks on studying and identification of a condition of interesting natural object.

The objects of perception in ecological activity are:
- formation of the skill consideration of complete natural object as a set of its separate parts;
- development of ability to allocation of the main signs among a large amount of features having different degree of values;
- abilityto see complete in specific and in general (picture 1).

Ecological education provides need of development and use of a special technique of development and the perception improvement which indicators of development should be considered as the necessary prerequisite for the analysis and generalization of the observed natural phenomena.

Development of ability to analyze is based on formation of skills of identification of the separate elements the set of which allows to give a character assessment of character occurring or occurred before events: to provide accurate distinction of components, to establish nature of communications existing between them; to reveal necessary proofs of the main signs existence indicate integrity the occurring natural event.

The technique of natural objects perception formation of includes the fulfillment of system special tasks in the course of which comparisons with the known earlier facts of change of natural objects are use. Thus the great value has an explanation of the importance of the received tasks fulfillment for improvement of ecological education.
One of important problems of preservation of habitat is realization of the tasks all collecting, storage, processing of the industrial and household wastes. The solution of this problem provides a normal state of habitat. This problem demands carrying out the preliminary work connected with collection of information on activity of the industrial enterprises as a result of which waste as an inevitable product of technological processes is formed. For performance of an objective it is necessary to reveal in due time quantity and structure of streams of waste; to establish the most effective methods of their utilization which are carried out by sampling, sorting according to categories, etc.

Other, more effective approach to the solution of this problem is realization of the research results conducted earlier. For this purpose it is necessary to study the best practices generalizing conducted researches, to establish, in what region they were carried out; to compare possibilities of the region on geographical and economic conditions that will allow to make use of the saved up experience with a minimum of ecological organizational expenses on use of work of the experts occupied in this sphere of production.

All preliminary actions on establishment of character of interrelations between various technological processes; possibility of exact and accurate forecasting of volume and versions of industrial and household wastes, their objective assessment, and also possibility of experience application in this direction demand skills of the analysis, generalization and extrapolation that is connected with a perception level of development. It testifies to identification of existing communications between a level of development of the leading intellectual qualities of the individual and the indices of ecological professional and pedagogical readiness.

Important feature of ecological perception is need for comparison of key parameters of a condition of natural factors: air, waters, lands, etc., with the characteristics inherent in them during various temporary periods (five, ten, fifteen years, etc.). Other criterion of counting of time for identification of dynamics of these in can be the beginning of the functioning the industrial enterprise with which commissioning the condition of habitat changed. For example, the operating pulp and paper mill on the bank of Baikal caused essential pollution of water that caused concern and alarm not only in Russia, but also abroad.

Sharpness and character of perception of a concrete ecological situation are considerably caused by degree of formation ecological outlook, ecological consciousness and ecological thinking the level of development which defines ability to accurate forecasting of further events in the environmental management and resource-saving sphere that is inaccessible to people with insufficient level of ecological culture. Level of perception of a condition of surrounding environment depends on objectives at which decision it is necessary to keep the protocol of scientific research; to describe in detail the characteristics of this object in a certain sequence with forecasting the possible further succession of events in short-term and long-term aspect, with the conclusions, generalizing offers and recommendations.

Quality of perception is defined considerably by scientific interests of the expert, degree of his interest in change of the situation which provides restoration of destroyed natural object to level of self-regulation. Objectivity, clearness and completeness of perception are determined also by experience of practical activities by studying the states of natural landscapes, application of methodical receptions and the approaches approved by other researchers-ecologists and shown efficiency.

The mechanism of perception formation is based on trace processes (Sechenov I.M., Pavlov I.P.), occurring in the central nervous system. Each subsequent influence of observed object leaves a trace in the form of hypererethism. During research, according to the set program, the trace phenomena are formed and, reaching critical level, cause the corresponding reaction testifying to readiness of the individual to adequate action.

Efficiency of perception improvement technique formation significantly improves when performing the system of special tasks, each of which has speech maintenance: commenting, explanation, discussion, etc. It allows to provide an accurate orientation of perception on the
solution of specific objectives, as a result the individual acquires certain personal experience of the natural phenomena perception, skills of its realization are formed when performing task without the assistance of the qualified experts.

Significant methodical development method ecological perception is the use of comparisons with results of the observations made by other researchers of various qualification, experience of professional activity and an orientation of research work.

Criteria of assessment of level formation are:
- quantity of noted signs allowing comprehensively to characterize a condition of the observed natural phenomenon or object;
- ability to interpretation of the revealed signs; accuracy of definitions, concepts, the formulations, used terminology;
- application of analogs for more objective characteristic of the observed natural phenomenon;
- adequacy of generalizations and conclusions, their compliance to objectives.

Use of the perception technique of creates objective prerequisites for increase of level of ecological professional pedagogical education. Development and application of new technologies of training have natural character and are connected with collection of information on industrial enterprises work as a result of which wastes as the inevitable product of technological processes is formed.

Even never undeveloped question in the sphere of competence-based ecological professional pedagogical education is the need for the leading intellectual qualities development which define theoretical, methodological and practical readiness to the solution of ecological problems. Being the specific sphere of human activity, the ecology makes own demands to development and use of perception, attention, analytical skills and other intellectual properties of the personality for the solution of environmental problems.

An important link of the education system is school, urged to systematize and deepen special knowledge in the field of ecology, nature and resources use; to create the skills of receiving, analysis and use of new information in the field of scientific knowledge; formation of a deep belief in responsibility of each person for the state of the habitat which defines the quality of life of the individual; abilities to discussion of environmental problems on the basis of own judgments, conclusions as result of knowledge in questions natural and resource use; formation of skills of preparation of the written report (paper) with its protection at competitions and conferences.

The main forms of classes in education of ecological culture are scientific circles, round tables on environmental problems, release of special bulletins on global problems of a state of environment, preparation of "fighting sheets" with the facts of rough violation of the principles of environmental management; thematic excursions and campaigns for the purpose of studying of an ecological condition of a concrete zone or a site in the territory of this settlement; maintaining the Diary of "the young naturalist", supervision over a condition of the surrounding nature with the subsequent synthesis of records in the form of total performance at school thematic conference.

Efficiency of this form of the lessons directed at formation of ecological culture, is defined by level of professional and pedagogical training of a teacher, his competence, ability not only to impart knowledge in this sphere, but also to make deep impact on students spiritual and moral state, to cultivate feeling of compassion to destructive processes in environment, a measure of personal responsibility for the state of environment. The activity of each teacher in the sphere natural and resource use, environment protection should have a research focus.

For verification of mentioned above positions the pedagogical experiment was carried out with participation of 52 students from different faculties in number of 52 people. Were organized control (KG) and the experimental groups (EG) were organized contained each, in everyone on 26 students. In KG was engaged by a traditional technique according to the curriculum approved by the Ministry of Education; in EG students prepared for activities for ecological education of pupils of an average and the advanced school age. For this purpose they visited special course occupations
"Formation of skills natural and resource-saving as a structural component of vocational training of future teachers". In the course of a seminar and practical training on a special course for students of EG the business games directed on increase of level of professional and pedagogical preparation were held; the pedagogical situations demanding manifestation of powers of thinking, assimilation of various methods of increase of informative activity of engaged, various methods of training, application of various forms of ecological education, etc. were created.

For identification of level formation perception by means of defined of quantity of the revealed signs of observed object by the group of experts, consisting of 5 people, the qualified ecologists with a wide experience of practical activities, the following criteria of assessment were used:

5 points – the maximum quantity of signs of essential deterioration of the river water are revealed which the for , caused need of strengthening of activity of the relevant organizations (a water utility, etc.); the additional measures demanding acceptance connected with material inputs on its cleaning; some of the parameters characterizing the state of water, making it unsuitable drinking and bathing;

4 points – the main signs of the observed phenomenon are established, deterioration of biological and chemical parameters of the water, not allowing to use it are noted;

3 points – are revealed insufficient quantity of the signs complicating an objective assessment of this ecological situation;

2 points – the insignificant part of signs of the observed natural phenomenon is established; some characteristics testifying to impossibility of river water use without its profound cleaning are noted;

1 point – the separate signs complicating complete perception of an ecological situation are revealed; essential difficulties with establishment of concrete parameters of pollution of the produced for the needs of the population of the city.

At detection of the ability to interpret results research, readiness of the individual for an exhaustive explanation with use of existing theories, provisions, the conclusions of experts in the sphere of ecology which, allow to give an objective information having considerable value was estimated.

Criteria of assessment:

5 points – are revealed optimum quantity of signs on the basis of regularities, principles, ideas, views use making essence of ecological researches and allow to obtain objective data;

4 points – accounting of some regularities and approaches by consideration and an assessment of typical ecological situations;

3 points – insufficient communication with existing ideas and views of the leading experts where define requirements to the interpretation of received scientific results;

2 points – inability to apply known theories, laws and approaches to an assessment of various environmental problems;

1 point – no idea of existing approaches to the theoretical analysis of various ecological situations; one-two signs are established.

An ability to use comparisons and analogs as one of criteria of perception formation assessment of was defined by means of detection of the future teachers readiness to establishment of the general properties and signs at the ecological situations arising in various districts of the city and the region with application of the following criteria:

Criteria of assessment:

5 points – the ability to establish quickly the general parameters of an ecological situation arising in various places; their comparison, identification of general reasons, and establishment of similar consequences;

4 points – the skills of comparison formation of a studied environmental problem with existing in other regions; carrying out not always exact analogs;
3 points – use of comparisons and analogs in the ecological situations having considerable distinctions;
2 points – essential difficulty when using comparisons and analogs with similar ecological situations; inability to address to own experience of ecological activity;
1 point – inability to find the general by consideration of the leading parameters characterizing essence of an ecological situation.

Readiness for adequate generalizations and conclusions by results of research of a concrete ecological situation was defined by a way of detection of compliance of a theoretical statement of a problem to character of destructive consequences and their assessment leading experts.

Criteria of assessment:
5 points – generalization and conclusions have sufficient theoretical justification, correspond to features of an ecological situation and forecasting of its consequences;
4 points – prevalence of descriptive character in generalization and conclusions;
3 points – generalization and conclusions not fully correspond to the character and features of an ecological situation;
2 points – superficial approach to an assessment of the considered ecological situation, not providing adequacy of generalizations and conclusions;
1 point – essential difficulties in preparation of generalizations and conclusions.

Application of these criteria of an assessment for perception allowed to increase efficiency of pedagogical technology of perception development and improvement - the fundamental intellectual quality defining productivity of all thought processes.

The pedagogical technology is urged to provide:
- the structuring of an educational process providing need for achievement of a set goal as the conditions of its efficiency increase;
- implementation of indices dynamics diagnostics (initial level and after completion of training);
- creation of the conditions for the development of the algorithm of necessary knowledge system assimilation of knowledge;
- formation of specific skills of the organization of ecological activity;
- design and forecasting of results.

Marks of the perception indices of future teachers in given field of knowledge were put by a group of independent experts from among teachers of other chairs in number of 5 people (on five-point system). Processing of materials of research didn't reveal essential distinctions on level of perception of students from the CG and the EG, ($p>0,05$).

After the end of the pedagogical experiment the expert group in the same structure repeatedly estimated perception indices on the more time. The analysis of the results research showed that the level of perception raised in both groups, however in EG indicators were significantly higher. So, at initial level of an assessment 2,81±0,22 points after completion of pedagogical experiment results increased in KG for 23,65% ($p<0,05$), in experimental group with the basic data 2,78±0,25 балла after the pedagogical experiment indices increased for 34,28% ($p<0,05$).

The gain of the indices perception occurs more actively in the course of the analysis of parameters of observed natural object; during the generalization directed at identification and establishment of interaction character between the separate characteristics of the natural phenomenon that also demands an optimum level of perception development. In the process of thought processes perception improvement there is fixing skills of new similar environmental problems of possibility forecasting; there are possibilities of extrapolation of similar situations that allows to be ready and take necessary measures to decrease negative consequences of an ecological situation.

So, perception formation is a long and difficult process which is expedient to consider as a significant structural component making the content of competence-based ecological professional
and pedagogical training of the future teachers. The technique of perception formation of provides development and use of objective criteria of assessment of the indicators characterizing the degree of this personal quality formation. As one of such the indices it is possible to consider quantity of the revealed signs testifying to destructive processes, accompanying a concrete natural landscape. Establishment of characteristic signs depends on level of theoretical and practical readiness of future teacher, existence of a certain complex of knowledge in the sphere of ecology and other factors. Optimum indicates of perception formation provide the greatest productivity of a concrete type of ecological activity.

Thus, pedagogical development and improvement of objective perception of a condition of surrounding environment has the complex content which structure is defined by various factors among which the leading place is taken by increase of ecological competence-based professional pedagogical education.

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ROLE AND PLACE OF ECOLOGICAL SELF-EDUCATION
INECOLOGICAL PROFESSION PEDAGOGICAL COMPETENCE
IMPROVEMENT OF FUTURE TEACHER

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Keywords: vocational training, nature saving, environmental management, criteria of assessment.

Annotation. In the course of intensive activity people influence the surrounding nature in order to achieve cultural and material values, without predicting consequences of the not always thought-over intervention and disregarding the fact that the habitat also adequately influences nature of development of society. As a result of the irrational, consumer attitude to person to the nature there is a critical situation which has put the population of the Earth on the edge of survival. One of the directions to normalize the relations of people and nature is the organization of ecological education process result is highest kit – the ecological self-education allowing society to establish interdependence of impact of the population on habitat and the impact of nature on people.

Research methods: analysis and generalization of scientific and methodical literature, testing, pedagogical experiment, methods of mathematical statistics.

Research material. The understanding of people and nature interference is formed in course of ecological self-education, the contents structure, role and place of is increase of ecological professional pedagogical competence is considered in this article.

Result. Pedagogical experiment showed that the process of ecological self-education is long and difficult. Its efficiency is defined by the organization of ecological education; continuity, orientation, variety of ecological activity; extent of impact on ecological consciousness. The difficult structure of ecological self-education includes a number of components: belief in the importance of ecological activity for creation of comfortable life conditions for people; skills the of ideas statement on to the solution of environmental problems, etc.

Conclusion. The level increase of ecological self-education provides improvement of ecological professional - pedagogical competence by means of deepening and expansion of system of special ecological knowledge; the skills the practical ecological activities connected with development of programs of an exit from an ecological situation; theoretical model of the solution of the specific ecological program.

The formation of planetaryanthropogeocenosisis, excessive pollution of the habitat, sharp increased in consumption of non recoverable natural resources actualize the problem of the research work. By the end of the XX century local ecological crises were replaced by global, universal ones. Now the ecosystem is in a condition of deep social risk caused by degradation of the main life supporting systems, economic liberalization, negative consequences of national use of minerals, the consumer attitude to environment. The created situation threatens mankind existence. For life preservation on the Earth it is necessary to substitute the consumer attitude to nature to for nature protection approach. The solution of this extremely complex challenge is connected with
realization of such basic components of social-ecological development, as education, and upbringing, focusing society on a koevolutionalway of development.

The result of ecological education today, according to Paputkova G.A. (2008) is distribution of ecological knowledge in different links of educational system: preschool, secondary school and higher educational institutions, etc. However the problem of ecological outlook and ecological consciousness as basis of the ecological education defining behavior and acts of people at interaction with the nature, still demands the decision.

The purpose of this work is the theoretical and methodological substantiation of ecological self-education importance as component of ecological professional and pedagogical competence of future teacher.

Objects: 1. To reveal the role and the place of ecological self-education in ecological professional and pedagogical competence improvement of a future teacher.

2. To check the influence of ecological self-education on level of ecological professional and pedagogical competence during pedagogical experiment.

One of the fundamental regularities of pedagogic consists in unity of educational and upbringing processes. Getting the ecological education, forming a certain system of knowledge about the influence of the person on the surrounding nature and, respectively, of habitat on people, the individual understands the dependence on the outside world. So, emissions of waste of industrial and agricultural production in the atmosphere and hydrosphere; exhaust gases of motor transport, etc. cause water and air pollution that negatively influences health. Smoking in the field, in the wood; cultivation of fires, firing of a dry grass – the most common causes of forest fires. Many people know about it, however a low level of responsibility, self-discipline, self-checking; not formation skills of forecasting of the actions and acts, testify to lack of ecological self-education.

The need for modernization of the enterprises of industrial and agricultural production by equipment of modern powerful cleaning constructions is realized by many people. But in case of lack of personal responsibility for own health and health of surrounding people, consciousness, an initiative, activity it is undertaken nothing is done to solution for the solution of this problem. It also grows out of underestimation of the importance of ecological education and ecological self-education.

The law of unity of training and education is put at the heart of the principle of bringing-up educational process. High level of moral, responsibility, organization – considerably increases efficiency of assimilation of necessary knowledge, ability to critical evaluation of the behavior outdoors, forecasting of consequences of rash actions and acts. Ignoring of unity of education and education led to sharp decrease in moral of younger generations that was one of the reasons of the consumer relation to the nature, a determinant of global ecological crisis [1, 4, 5].

Conceptual bases of ecological education are based on the following:

- in case of organization of industrial and agricultural production it is necessary to consider the degree and character of its influence on natural processes. Negative impact on habitat is a for liquidation of this enterprise;

- the laws of rational activity of society have to provide optimum character of its interaction with habitat;

- sustainable economic development of the country can be reached by establishment of unity of societies interests with preservation of nature integrity of the nature [2]. Implementation of these provisions provides such organization of ecological education and education which causes increase of ecological professional and pedagogical competence of future teacher defining nature protection and nature protective nature of its relationship with habitat.

Ecological education is urged to establish norms and rules of communication with the nature, providing its normal functioning. Ecological self-education is the regulator of behavior outdoors, exercising continuous control of degree of its compliance by the received society to
interaction standards with the outside world providing harmonization of the relations of the person with the nature.

The special importance of ecological education consists in formation of practical readiness of the individual to nature protection and nature protective activity. Ecological self-education concretizes, specifies the content of ecological activity, provides its compliance to the established algorithm of implementation of the specific program, preservation of key parameters of habitat (purity of water, air, food, etc.), and also valuable natural objects.

Ecological self-education, thus, significantly supplements, expands and deepens theoretical and practical readiness to the organization of rational interaction with habitat, to assimilation of its regularities; ability to distribute ecological knowledge, information about condition.

In order to identify the role and the place of ecological education in ecological professional and pedagogical competence of future teacher pedagogical experiment was carried in which students of 1-3 courses of natural and geographical faculty, and also faculty of technology and design in number of 112 people took part was made. Were organized the control group (CG) – 56 students, and experimental (EG) – 56 people. Before pedagogical experiment to identify initial indices of ecological self-education ormination of we developed the following criteria of an assessment:

- formation of belief in the importance of ecological activity for self-realization positions;
- ability to the formulation of ecological ideas, assimilation of concepts, basic provisions, terms;
- development degree of informative abilities in the ecology sphere;
- understanding of cultural and material values of the surrounding nature;
- need for active ecological activity.

For each criterion the five-point system of an assessment was used. So, the degree of formation of belief in the importance of ecological activity for self-realization was estimated according to the ability to analysis the information about the condition of the surrounding nature posing big threat for human health; to understanding of need of development of effective measures on improvement of an ecological situation; to vigorous advisory activity with experts in the ecology sphere at action program creation according to the solution of an environmental problem.

Criteria of assessment:
5 points – assimilation of new information about the state of nature in the region and in the country, as a whole; studying the practical experience of foreign countries according on the solution of environmental problems; development of own ecological situation improvement program at continuous consultations with leading experts;
4 points – ability to an objective assessment of a condition of the surrounding nature; ability to reveal priority actions according to the solution of an ecological situation;
3 points – understanding of need of personal participation in improvement of a condition of habitat; ability to development of own plan on protection and a defense of the surrounding nature and discussion of its contents with leading experts; inability to convince the public of need of association of efforts for the solution of an environmental problem.
2 points – understanding of the opportunities for participation in vigorous ecological activity; inability from large volume of information to allocate the facts demanding urgent intervention; inability to attract the public to the joint solution of an ecological task;
1 point – understanding of ecological activity as possibilities of self-realization, inability to concentrate the efforts in this sphere.

Ability to formulation ecological ideas; assimilation of concepts, basic provisions, terms it was estimated on manifestation of skill of an accurate statement of idea, its justification, ways of realization, and also on correctness of use of concepts, terms.

Criteria of assessment:
5 points – an accurate statement and justification of the views, ideas, good orientation in concepts, basic positions, terms in the ecology sphere; convincing explanation of effective ways of the environment problem solution;

4 points – emergence of the ideas in the extreme ecological situation the realization of which will allow to improve situation; some difficulties in further development of idea, selection of the facts and justification of its prospects;

3 points – idea emergence after a detailed discussion of an environmental problem; the analysis of various opinions on its solution. Understanding of terms, basic provisions, concepts at some inaccuracy of their statement;

2 points – some thoughts and the guesses forming a basis for emergence of idea at other person; inability to use special terms, to be guided in concepts and basic positions;

1 point – inability to formulate idea, knowledge of some terms, separate concepts and provisions in the ecology sphere.

Extent of development of the informative abilities necessary for ecological activity was estimated on manifestation of perception, attention, memory, thinking, analytical skills.

Criteria of an assessment:

5 points – high level of concentration of attention, its timely redistribution; ability to accurate perception of studied parameters of habitat; preservation in memories of information on a problem of scientific research and its reproduction at the right time; optimum level of formation of logical, creative, operational and tactical thinking, and also skills of the analysis and generalization of ecological situations and ways of their overcoming;

4 points – the sufficient volume of attention, its stability, ability to allocate the main signs among minor at perception of natural object; formation of logical, short-term and long-term memory; prevalence of logical thinking over the figurative; some difficulties with synthesis of information on a studied problem;

3 points – insufficient concentration of attention on a research problem; inability in a private sign to see the general at perception of an ecological situation; some difficulties at manifestation of long-term memory; insufficient level of formation of operational thinking; inability to the detailed analysis of parameters of habitat;

2 points – low level of formation of attention, perception, memory, thinking, ability to the analysis and generalization;

1 point – special occupations are necessary for development of leading informative abilities.

The level of understanding of cultural and material values of environment was estimated on readiness for the characteristic spiritual (improving, informative, esthetic impact on the person) and material (the nature gifts, valuable breeds of wood, medicinal herbs, etc.) values.

Criteria of an assessment:

5 points – ability to the analysis of positive impact on an organism of natural forces of nature, expansions of informative activity; formations of feeling of beauty by means of the nature; inability to show comprehensively and convincingly to show their influence on an inner world of a person;

4 points – deep understanding of cultural and material values importance for people; inability to show comprehensively and convincingly to show their influence on an inner world of a person;

3 points – strengthening of attention to material values in case of some underestimation of spiritual ones;

2 points – poor orientation in spiritual values of nature;

1 point – readiness for transfer of cultural and material values without their characteristic.

The need for vigorous ecological activity as an indicator of formation of ecological self-education was estimated according to the degree of in activities of environment condition, leading parameters of habitat study; to initiative manifestation when developing the programs of the destroyed natural objects restoration.

Criteria of assessment:
5 points – participation in all actions connected with ecological activity, an objective assessment of ecological situations, identification of effective ways of their decision, manifestation of a personal initiative and interest in increase of productivity of taken measures;

4 points – aspiration to self-realization in the course of ecological activity, introduction of offers on modernization of ecological education and ecological upbringing education of school children and students; development of the program of ecological education of the population; underestimation of positive experience of ecological activity of the developed countries;

3 points – participation in the activities interesting to the individual; insufficient attention to the new facts of the irrational consumer attitude to nature; underestimation of public opinion environmental problem solution in case;

2 points – hyperactivity in the presence of experts in ecology, lack of initiative, new ideas and offers on nature protection and nature protective activity;

1 point – participation in ecological activity only as a part of educational group.

The analysis of the basic data testifying to level of ecological self-education formation showed lack of essential distinctions in the KG and the EG (p>0.05). In the KG educational process was carried out according to the curriculum. In the EG the various tasks connected with ecological activity in extracurricular time were offered to the students: visit of ecologically unsuccessful areas of the wood, landslide zones, places of the rivers and flooding; the deserted agricultural grounds.

The future teachers investigated a condition of each area, opportunities and prospects of its restoration; programs of an ecological defense of the most destroyed zones collecting full information for meeting with the of experts in ecology; heads of the regional, city and regional organizations, the scientific conferences, urged to solve environmental problems. Students of EG independently developed programs of meetings, conferences; offers on increase of efficiency of ecological activity revealed objective sources of new information in the ecology sphere; organized discussions of the received facts: developed theoretical models of the solution of a specific environmental problem.

After the pedagogical experiment additional testing to identify the dynamics of ecological self-education indices was held. The obtained data testify that results improved in both groups: The KG and the EG, however in the EG their gain was more essential. So, in KG at the initial indicators parrying degree of formation of belief in the importance of ecological activity 3.09±0.27 points to the end of pedagogical experiment indicators improved for 4.68% (p>0.05), in EG, respectively, at initial results 3.04±0.20 points the gain was 21.31% (p<0.05).

In the KG with the initial indices parrying ability to the accurate formulation of ecological ideas, concepts, basic provisions and terms, 2.34±0.19 points to the end of pedagogical experiment results increased for 4.92% (p>0.05); in the EG, respectively, at basic data 2.37±0.18 points the gain of results made 26.12% (p<0.05). The similar tendency was revealed and on other indicators testifying to level of ecological self-education formation.

Thus, the results of the pedagogical experiment showed that process of ecological self-education is long and difficult. Its efficiency is defined by the organization of ecological education; continuity, orientation, variety of ecological activity; extent of impact on ecological consciousness. The difficult structure of ecological self-education includes a number of components in the contents: belief in the importance of ecological activity for creation of comfortable conditions of activity of people; skills of a statement of ideas according to the solution of environmental problems, etc.

Development and use of criteria of assessment of ecological self-education level of formation of allows to operate this process more effectively. Increase of level of ecological self-education promotes improvement of ecological professional and pedagogical competence by means of deepening and expansion of system of special ecological knowledge; formations of skills of the
practical ecological activities connected with development of programs of an exit from an ecological situation; theoretical model of the solution of the specific ecological program.

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THE MODEL OF 12-14 YEARS TEENAGE GIRLS ENGAGED IN SPORTS AEROBICS TECHNICAL READINESS INCREASE ON THE BASIS OF THINKING DEVELOPMENT

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Keywords: stability of competitive activity, components, all-physical and special readiness

Annotation. Sports aerobics as one of art sports makes various impact on an organism, is an effective remedy of motive culture formation, musical taste, harmonization of the personality that is attractive to teenagers and youth. However this type of sports activity is characterized also by coherence of intellectual and motive activity that opens ample opportunities for improvement of leading intellectual qualities.

Research methods: analysis and generalization of scientific and methodical literature, testing, pedagogical experiment, methods of mathematical statistics.

Research material. The model of 12-14 year teenage girl technical readiness increase developed by the author on the basis of thinking formation is offered in the article. Different types of thought processes, their orientation and the contents; criteria of an assessment, development and improvement technique taking into account specific features of considered versions of thinking are revealed. The original material is presented, new approach to increase technical readiness level is engaged in sports aerobics offered in this article.

Results. Pedagogical experiment showed that in the course of sports training successful formation of different types of thinking powers which increase, in turn, makes positive impact on increase of physical readiness indicators as bases for growth of technical skill is carried out. Formation of each version of thinking provides using specific means of pedagogical influence; development of special intellectual and motive tasks, and also criteria of an assessment of logical, creative, operational tactical thinking.

Conclusion. During pedagogical experiment steady interest to sports aerobics as to the main means of spiritual and moral, physical and esthetic development providing realization of 12-14 years girls creative abilities of is created.

The level of technical readiness in sports aerobics is caused by a number of factors: indicators of all-physical, psychological preparation; complexity of carried-out elements, experience of competitive activity, etc. The analysis of special literature, and also materials of our own researches testify that have a great impact on level of sports skill degree of formation of perception, attention, thinking and other intellectual qualities. However in literature available to us there are not revealed works on a problem of thinking level of formation influence and other informative processes of technical readiness of athletes.

The purpose of this work is theoretical and methodological justification of the importance of improvement of thinking as one of fundamental factors of 12-14 years girls technical readiness level increase of which are engaged in sports aerobics.

Objects:
1. To develop model of aerobist technical readiness increase on the basis of thinking development.
2. Experimental checking of this model of use efficiency.

Specifics of sports aerobics as one of art sports is the requirement to high level of technical skill at artistry of various groups of difficulty elements execution. It demands much movements
culture, education of musical and art taste, use of various means of expressiveness of motive actions, and also optimum indicators development of motive and coordination qualities: development the muscular force, speed, the endurance, specific dexterity, spring ability, balance, etc. that makes a basis of all-physical readiness.

Rules of competitions on sports aerobics established requirements to technical readiness of the sportswomen which realization causes quality of each motor act entering of structural elements assimilation into the maintenance of composition of program performance. Level of technical readiness is defined substantially by ability to understanding orientation regularities in space and time; gain of the qualitative parties of motive activity; performance of difficult elements that demands development of intellectual qualities and, first of all, thinking – the main type of informative activity.

Manifestation of thinking abilities is caused by need of the motor form and content dependence understanding act from the accuracy of their reproduction, and also the conditions defining efficiency of each motive task performance.

Data of researches E.A. Anisimova, I.S. Kolesnik, L.I. Kostyunina, point to interrelation and interconditionality of intellectual and motive activity. The integrated nature of training influence of intellectual qualities depending on a type of sports activity provides increase of training effect at each stage of sports training (Balsevich, 2006, 2012; S. D. Neverkovich 2011, L.D. Nazarenko 2006, etc.). N.A. Bernstein considers a problem of physical activity from positions of preliminary planning of motor acts that includes thinking processes in muscular activity of the individual.

The more the athlete analyzes the structural content of acquired physical exercise, sequence of performance of its separate phases, their interdependence and interconditionality in details, the quicker and more successfully of the carried-out element is fancy creation. Active inclusion of thinking in the course of assimilation of equipment of rather difficult element considerably reduces time of its assimilation, reduces power expenditure, increases working capacity. In this regard the great interest is represented, in our opinion, by development of model of technical readiness of aerobist of 12-14 years on the basis of development of powers of thinking.

The content of the model is urged to provide general idea about an orientation and the content of the training occupations promoting development and improvement of thinking, taking into account its main versions. The model (fig. 1) relies on the leading conceptual provisions confirming coherence of cogitative and motive activity; need of sports preparation process consideration as complete object of research with the analysis of all aspects of the individual activity: intellectual, muscular, psychological, etc.

The model is based on the leading principles of training and the training which realization provides purposeful impact on an organism not only for the purpose of motive and vegetative functions improvement, but also for the purpose of activization of cogitative activity. In the course of development of model the following versions of thinking having the big importance for assimilation of rational equipment of motive actions, making the main content of sports aerobics were revealed: logical, creative, quick and tactical. Optimum indicators of these types of thinking provide increase of stability and reliability of competitive activity, confidence of the forces, a choice of conducting wrestling tactics depending on level of competitions, structure of competitions participants, time of carrying out competitions, lot and other factors influencing result of performance.

Important structural component of the offered model is definition of factors and conditions of sports aerobic thinking means development, and also influence of thinking processes on increase of technical readiness level.

**Conceptual provisions:**
- unity of consciousness and activity;
- process of sports training as complete object of research;
- identification and realization of the relationships of cause and effect causing efficiency of training process
Fundamental part of the model is the technique formation of thought processes according to their versions, defining a choice and use of means for improvement logical, creative and other types of thinking; methods and the methodical receptions answering to specifics of each version of thinking, and also criteria of an assessment of thinking processes according to their versions.

One the leading objects when developing model was determination of sports results dependence from a thinking level of development. Criteria of an assessment of indicators of formation of each of considered thinking processes were for this purpose developed. So, extent of logical thinking development establishment is defined by ability of external and internal relations between simple and difficult elements of composition, forms of connections, various motive actions.
Criteria of the assessment:

5 points – technically difficult rational distribution establishment formation skills, spectacular elements at the beginning of composition, in its average and finishing part; choice of the directions of movements on a platform, allowing fully to transfer emotional condition of athletes; use of means of expressiveness with gradual increase in their esthetic influence on the audience;

4 points – identification of external and internal relations as boundary various parts of the competitive program; establishment of optimum quantity of dynamic and static elements; optimum combination of fast and slow pieces of composition;

3 points – establishment of optimum number of acrobatic, gymnastic, dancing, rotary and hopping exercises; establishment of a melody and competitive program compliance;

2 points - establishment of nature of program performance according to typological and phenotypical features of sportswomen, indicators of their physical and technical readiness.

1 point - understanding of need of alternation of slow and fast parts of composition.

Criteria of an assessment of level of formation of creative thinking.

Readiness of the athlete for development of theoretical model of implementation of the program in the conditions of competitive activity is estimated; degree of formation of skills of creation of a motive and art and musical image; to search of original combinations of dancing and choreographic, gymnastic and acrobatic elements.

5 points - formation of skills of creation of theoretical model of composition in difficult conditions of competitive activity with participation of leading masters of sports aerobics; application of effective remedies of the expressiveness emphasizing originality of individual style;

4 points - formation of skills of development motive and a musical artistic image providing high staginess of program performance; use of the expressive, masterly poses causing spectator sympathy, ability is expedient to use a dynamic and static bearing, gestures and a mimicry as means of expressiveness;

3 points - ability to a rational combination of technically difficult elements with dancing and the racetracks raising an esthetic orientation of composition;

2 points - difficulties with development of the new approaches providing coherence of difficult technical actions with various means of expressiveness;

1 point - possibility of a motive image creation by means of the trainer.

Criteria of operational thinking assessment. Ability to the objective analysis of a competitive situation is estimated as need of performance correction program depending on a course of wrestling and possibility of realization of a goal.

5 points - ability to an objective assessment of a competitive situation; formation of skills of timely correction of the program by an exception of risky, technically difficult elements, and also taking into account a psycho-emotional condition and psychological readiness for realization of objectives;

4 points - readiness for an objective assessment of wrestling intensity and a self-assessment of physical and technical readiness; ability to correction the program contents at approximately equal readiness with the opponent;

3 points - psychological readiness for an exception of risky elements for objective performance. Ability to achievement of performance necessary artistry level;

2 points - inability to correction of program performance; difficulties with program revision before competitions;

1 point - decrease in a psychoemotional condition before participation in competitions.

Degree of tactical thinking formation was estimated by means of the following criteria testifying to psycho-emotional condition of the forthcoming competitive activity management complexity skills formation.

Criteria of the assessment:
5 points - ability to concentration of mental and muscular efforts for successful performance irrespective structure and time of carrying out competition. Compliance of results performances to predicted of participants indicators.

4 points - ability to realization of objectives, irrespective of lot and structure of participants. Realization of objectives; critical analysis of the performance;

3 points - decrease in a psychoemotional condition in connection with lot, incomplete realization of planned result;

2 points - unavailability to management of a psychological condition at inconvenient time;

1 point - difficulties with forecasting of possible results of participation in the forthcoming competitions.

These criteria of thinking considered versions estimates were approved during pedagogical experiment and allowed to receive objective results. Thus, the technique of thinking development includes the maintenance of means, a complex of methods and methodical receptions of training and training, and also criteria of the assessment of logical, creative, operational tactical thinking.

Pedagogical experiment with participation of 26 girls was made for the purpose of checking efficiency of this model. Girls of 12-14 years are engaged in sports aerobics, (II and I category). Two groups were organized: control (KG) – 12 sportswomen, and experimental (EG) – 14 people. Before pedagogical experiment testing for the purpose of identification of initial level of all-physical readiness, and also indicators of thinking development was held. The following control exercises were used for the assessment of physical readiness

- shuttle run of 3х11 m (c);
- run on 100 m (c);
- run on 1000 m (c);
- broad jump from a place, a push of two (cm);
- trunks lifting from a prone position on a stomach, hands for the head (a quantity of times for one mines);
- trunks lifting from a prone position on a back, hands behind the head (a quantity of times for one minutes);
- bending and extension of hands in an emphasis lying (a quantity of times);
- lifting of direct feet from a prone position on a back to a floor contact behind the head (a quantity of times).

The received results didn't find essential distinctions on level of all-physical readiness of sportswomen of KG and EG (р>0,05).

The analysis of initial indicators of logical, creative and operational thinking formation also didn't reveal essential distinctions on level of their manifestation at sportswomen of KG and EG (р>0,05). Training classes in KG were given in the standard technique according to the program of the sports training recommended by federation of gymnastics. In EG the technique developed by us for improvement of the main versions of thinking was used. So, when forming the logical thinking necessary for establishment of interrelations nature between separate elements and parts of composition, the following objects were used:

- to explain need of slow and fast parts of programs alternation, features of transition from dancing movements to acrobatic, hopping, etc.;
- to execute various options of connections, sheaves and dancing paths; to reveal the most effective; to give justification;
- to give an assessment of composition maintenance compliance of the to nature of music, specific features and level of athletes technical readiness;
- to determine degree of complexity of the elements making the maintenance of composition, their distribution by separate parts of the program, to establish logic of communications between them, etc.

Improvement of creative thinking was carried out when using the following tasks:
- during the analysis of different sportswomen dancing paths speeches to reveal performance; to call movements receptions and mean expressiveness increase; to create a fancy of the most original motive action demanding manifestation of the maximum elegance, virtuosity and plasticity; - to show different ways of the competitive program separate elements performance increase of artistry of, etc.

Improvement of operational thinking provided use of the corresponding tasks:
- after viewing of competitions to carry out performing level analysis and technical skill, their participants; to give the objective assessment of the brightest performances originality; to reveal prospects of the program complication.

Formation of tactical thinking demanded performance of system of special tasks:
- to define tactics of the performance depending on lot;
- to execute the forecast of results of own competitive activity;
- independently to define expediency of risky elements inclusion depending on a competitive situation.

After carrying out pedagogical experiment repeated testing for the purpose of all-physical readiness indicators dynamics identification, and also studied versions of thinking was held. The analysis of pedagogical experiment results showed that improvement happened in both groups: KG and EG, however in EG indicators were significantly higher. So, in KG in shuttle run of 3x11 m (c) at basic data 9,35±0,54 with to the end of pedagogical experiment results increased for 1,51% (p>0,05); in EG, respectively, at initial indicators 9,37±0,49 gain made 3,87% (p>0,05). In KG when performing broad jump from a place at basic data of 115,24±5,32 cm by the end of pedagogical experiment improvement happened for 4,64% (p>0,05); in EG, respectively, at initial indicators 118,36±4,75 the gain of results made 11,85% (p<0,05). The similar tendency was revealed according to other tests. The analysis of thinking indicators nature of changes also allowed to reveal unevenness of their increase.

So, at initial indicators of logical thinking (at an assessment of degree of interrelation of structural components of composition) – 2,88±0,21 points to completion of pedagogical experiment the gain of results in KG made 11,66% (p>0,05); in EG, respectively, at basic data to the end of pedagogical experiment the increase made 2,79±0,25 points 34,36, (p<0,05).

At initial indicators of creative thinking formation (composition at the assessment of ability to creation of model) in KG at basic data 2,82±0,22 points the gain to the end of pedagogical experiment made 10,20% (p>0,05); in EG, respectively, at basic data 2,78±0,20 points the increase in result occurred for 24,67% (p<0,05).

Dynamics of operational thinking formation also was various in KG and EG. So, in KG at basic data (at an objective assessment of a competitive situation) 13,19±0,25 points improvement of indicators happened for 7,0% (p>0,05); in EG, respectively, at initial indicators 3,21±0,29 points the gain made 21,90% (p<0,05).

In KG at basic data of tactical thinking (a choice of option of performance depending on lot) 3,04±0,26 points to completion of pedagogical experiment improvement of results happened for 10,40% (p<0,05); in EG, respectively, at basic data 3,09±0,22 points the gain made 27,64% (p<0,05).

Thus, results of pedagogical experiment showed that in the course of sports training successful of thinking powers formation different types which increase, in turn, makes positive impact on increase of indicators of physical readiness as bases for growth of technical skill is carried out. Formation of each version of thinking provides use of specific means of pedagogical influence; development of special intellectual and motive objects, and also criteria of an assessment of logical, creative, operational tactical thinking.

Bibliography
MODULAR SCHEME OF STUDENTS’ EDUCATIONAL PROCESS CONSTRUCTION IN THE SPHERE OF PHYSICAL CULTURE AND SPORTS

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Keywords: priority approaches to educational process organization, students’ satisfaction with the quality of education in higher educational establishment, sports education, self-esteem of the employment prospects by the graduates.

Annotation. Nowadays labour-market in the sphere of physical culture and sports became wide and diverse. The activity sphere of the graduates from physical culture higher educational establishments went through structural changes. Strong need of society for the development of services, provided by the specialists in the sphere of physical culture, is obvious. In modern conditions of free employment assistance and competition on a labour-market, graduates from higher educational establishments should be ready for the work in different parts of physical culture system. Thereupon, the importance of students’ fundamental training, their professional competence not only in the sphere of professional sport but in the work with different groups of population grows.

Research methods: retrospective analysis of psychological – pedagogical literature, comparative analysis of the vocational education structure and organization in different educational establishments of Russia and Europe; dynamics of social conditions analysis in which specialists’ professional training is realized; international and home experience analysis; projection; summarizing; pedagogical process modeling; empirical study methods: survey among school teachers, teachers of colleges and higher educational establishments, among coaches and students; pedagogical observation, interview, peer review, testing of students’ level of motional training; analysis of graduates’ from higher educational establishment placing in a job; pedagogical experiment.

Research material. A modular scheme of the professional education organization in the sphere of physical culture and sports is presented. The peculiarities of the modular teaching are shown. These peculiarities consist in the transfer to an individual training of the specialists in the sphere of physical culture, method of shifting the center of gravity of the teaching process to independent work of students.

Research results. Students’ activity increase was achieved by means of realization of pedagogical control and individualization in teaching, independent work enlargement which should be organized and regulated, should have methodical support with dates and forms of pedagogical control of its effectiveness. In the process of methodical lessons, where students are the subjects of pedagogical process, integration of knowledge is realized, intersubjective connections are improved.

The modular scheme of educational process construction provides constant control of teaching quality and that is why it should be regulated by University administration, the heads of the faculties and departments, teachers and students. This regulation will provide education content development and effectiveness increase of all processes of knowledge transfer and perception.
An important result of modular scheme realization and the rating system of higher professional education introduction is change of the teachers' attitude to introduction into educational process the system of examination units, students’ educational activity increase, their satisfaction with the quality of education and self-esteem of the employment prospects on the specialty.

Conclusion. Positive dynamics of indices of students’ satisfaction with education quality in higher educational establishment and self-esteem of the employment prospects by the graduates proves the effectiveness of the developed and approved modular scheme of student’s educational process construction in the sphere of physical culture and sports.

Introduction

Nowadays labour-market in the sphere of physical culture and sports became wide and diverse. The activity sphere of the graduates from physical culture higher educational establishments went through structural changes. Strong need of society for the development of services, provided by the specialists in the sphere of physical culture, is obvious. The system of graduates’ state employment assistance disappeared. In modern conditions of free employment assistance and competition on a labour-market, graduates from higher educational establishments should be ready for the work in different parts of physical culture system. Thereupon, the importance of students’ fundamental training, their professional competence not only in the sphere of professional sport but in the work with different groups of population increases. This fact is mentioned in many research works [2; 4; 6; 8; 9]. The specialists in this sphere now have a real opportunity to influence labour-market dynamics.

The process of integration of Russia into economical, educational and social spheres have monodirectional tendency and this effect will only increase [5, p. 2-7]. That is why substantiation of the strategy of higher professional education is reasonable to carry out taking into account empirical groundworks and theoretical results received in this country and abroad. Therefore all organizational – methodical innovations in the system of higher professional education should be based taking into consideration positive experience received as a result of realization of state educational standards of higher professional education of the first and the second generations.

Urgency of the problem under study is conditioned by existing contradictions, revealed in the process of analysis of theory and practice of training students in higher educational establishment and formulated on three levels:

• on a social – pedagogical level: contradictions between the need of a society for specialists who are able to accustom and fulfill self – realization in the system of social interrelations and impossibility to satisfy this need because of insufficient formation of graduates’ competencies; in the necessity to form the mentality of population to lead a healthy life - style and the absence of needed skills;
• on a scientific – practical level: contradictions between the existing research works on the competence approach to an educational process and absence of students’ competence models development with the use of pedagogical methods; contradictions between an increased scientific knowledge volume, quick ageing of applied knowledge and not very competent graduates in using modern information technologies and also limited apprenticeship;
• on a scientific –methodical level: contradictions between the need of practice for new effective technologies of graduates’ competence development, realized with the help of integration of educational and extracurricular activities and insufficient development of scientific –methodical support of these technologies.

Objective of the research: scientifically substantiate and create modular scheme of educational process construction in terms of competence approach realization in training the specialists in the sphere of physical culture.
Aims of the research: on the basis of the main principle of didactics of individual transition in education to create a modular scheme of students’ educational process construction in the sphere of physical culture and sport.

Research methods and materials. The following methods of theoretical research are used in the study: retrospective analysis of psychological – pedagogical literature, comparative analysis of the vocational education structure and organization in different educational establishments of Russia and Europe; dynamics of social conditions analysis in which specialists’ professional training is realized; international and home experience analysis; projection; summarizing; pedagogical process modeling;

empirical study methods: survey among school teachers, teachers of colleges and higher educational establishments, among coaches and students; pedagogical observation, interview, peer review, testing of students’ level of motional training; analysis of graduates’ from higher educational establishment placing in a job; pedagogical experiment.

The research is made in accordance with the plan of scientific – research and experimental – design works of the Ministry of sport in Russia for the period of 2010-2014 course 04 “Theoretical and methodological basis of development and perfection of the training system, advanced training and specialists’ retraining ”: theme 04.01.06 “The peculiarities of bachelors and holders of a master's degree training on the specialty “Adaptive physical culture” and “Physical culture” in terms of state standards of the third generation”. Also the research is made in accordance with the plan of scientific – research and experimental – design works of P.F. Lesgaft National State University, Saint- Petersburg for the period of 2006-2010: the course 03 “Organizational, juridical, resource and informational support of the sphere of physical culture, sport, tourism and sanitary – resort complex”: theme 03.01 “Higher professional education integration in the sphere of physical culture into All-European system of higher education based on the principles of Bologna agreement”, course 04 “Theoretical and methodological basis of development and perfection of the training system, advanced training and specialists’ retraining” theme 04.02 “The quality of pedagogical education renewal of the students from P.F. Lesgaft National State University” [5; 6; 7; 8].

In general the students from 12 educational establishments of the Ministry of sport took part in the research, from 5 regions of Russia (students, postgraduates and teachers, the heads of educational establishments – n=1248 people).

The research had been carried out since 1996 till 2011 on the base of Ural State University of Physical Culture and P.F. Lesgaft National State University of Physical Culture, Sport and Health, Saint- Petersburg. At different stages 12 more higher educational establishments of physical culture in Russia took part in the research.

Results and their discussion. Optimization of the educational process in the sphere of physical culture and sport should be connected with students’ activity increase. It can be achieved by pedagogical control and individualization in teaching, independent work enlargement which should be organized and regulated, should have methodical support with dates and forms of pedagogical control of its effectiveness. This idea was approved in some research works [1; 3; 8; 9]. Students should be involved into educational process actively as organizers and leaders. In the process of methodical lessons, where students are the subjects of pedagogical process, integration of knowledge is realized, intersubjective connections are improved, knowledge acquire practical value. But as the research shows, nowadays constraining factor in the process of modular scheme of educational realization and control is mentality of the teaching staff: [6, p. 72-73]. Even the first steps on introduction of the modular approach into education proved that it was easier to formulate professional competences than to provide intersubjective approach (modular) during their formation in the process of higher professional education. Modular structure of the educational process can’t be restricted, without structural changes in the principal educational program [7, p. 38].

One of the main principles of the modular scheme of educational process construction is the principle of feedback realization. This principle provides educational process management with the
help of the control system and self – control of the module material mastering. The modules, supplied with the control and self – organization system, develop students’ informational - coordinating functions. Pedagogical communication in case of modular teaching should be realized according to the scheme subject – subject, partner educational cooperation of a teacher and students. According to this principle education is organized on separate functional units – modules which help to achieve concrete didactic aims. The module, at the same time, is a bank of information and a methodical manual on its mastering. In this connection the content of the module should be logical, integrated, compact, autonomous.

An important advantage of the modular teaching is its succession. Modular teaching includes different approaches to education. From a problem oriented teaching it took: problem oriented material organization in a module, not standard exercises. From an active teaching it took the methods of teaching, which help to increase students’ cognitive activity. Playing forms of running check and final check are also successfully used in the didactic system of a modular teaching.

Modular teaching has characteristic features of an individual – differentiated teaching: rejection of continuous method of teaching and use of individual training of the specialists, shifting the center of gravity of the teaching process to independent work of students. Moreover, the didactic system of a modular teaching “is able to accumulate the advantages of integrable theories and at the same time suppress and level their disadvantages” (E. Denisov).

Thus being flexible, practically feasible, “successive”, modular teaching provides efficient use of reserves of an educational process and self- development of the people involved in it [10].

The modular scheme of educational process construction provides constant control of teaching quality and that is why it should be regulated by University administration, the heads of the faculties and departments, teachers and students. This regulation will provide education content development and effectiveness increase of all processes of knowledge transfer and perception.

Preparation for modular scheme realization demanded the participation of the enterprising group, its content comprehension and the development of the algorithm of planning and registration of students’ and teachers’ educational activity, explanatory work among the teaching staff [6; 7; 8].

An important result of modular scheme realization and the rating system of higher professional education introduction is change of the teachers’ attitude to introduction into educational process the system of examination units, students’ educational activity increase, their satisfaction with the quality of education and self-esteem of the employment prospects on the specialty.

According to experimental work results teachers (n=127) evaluated developed and introduced innovations as “mostly like positive” - 66 %; “mostly like negative” -20,7 %; 14,3 % were really at a loss how to qualify it.

Students’ educational – cognitive activity activation during introduction of the rating system was stared according to the indices of lessons “attendance” and students’ “progress”. According to survey among the teachers (n=127) attendance: “became better” - 26,6 %; “mostly like became better ” – 32,2 %; “remained the same” – 14,4 %; “mostly like became worse” – 8,8 %; “became worse” – 2,2 %; 15,5 % – were at a loss how to qualify it. Students’ progress: “became better” – 32,2 %; “mostly like became better ”– 33,3 %; “neither became better, or became worse” – 18,8 %; “mostly like became worse” – 8,8 %; “became worse”– 2,2 %; 4,4 % – were at a loss how to qualify it.

During the results of the experimental work evaluation we took into account the dynamics of students’ satisfaction with the quality of education in higher educational establishment (table 1) and self-esteem of the employment prospects by the graduates (table 2).
Table 1

Students’ satisfaction with the quality of education in higher educational establishment

<table>
<thead>
<tr>
<th>№</th>
<th>Indices</th>
<th>2006 n=142</th>
<th>2010 n=136</th>
<th>2011 n=148</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Choose the same specialty and higher educational establishment</td>
<td>54%</td>
<td>74%</td>
<td>82%</td>
</tr>
<tr>
<td>2</td>
<td>Would choose the same specialty but in another higher educational establishment</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>3</td>
<td>Would choose another specialty but in the same higher educational establishment</td>
<td>16%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>4</td>
<td>Would choose another specialty and another higher educational establishment</td>
<td>11%</td>
<td>8%</td>
<td>2%</td>
</tr>
<tr>
<td>5</td>
<td>Are at a loss how to qualify it</td>
<td>10%</td>
<td>8%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Table 2

Self-esteem of the employment prospects by the graduates

<table>
<thead>
<tr>
<th>№</th>
<th>Indices</th>
<th>2006 n=142</th>
<th>2010 n=136</th>
<th>2011 n=148</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Will be able to find a job on the specialty at once</td>
<td>30%</td>
<td>51%</td>
<td>59%</td>
</tr>
<tr>
<td>2</td>
<td>Not sure that will be able to find a job at once</td>
<td>12%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>3</td>
<td>Ready to work at a place where I can earn more regardless of specialty</td>
<td>18%</td>
<td>12%</td>
<td>0%</td>
</tr>
<tr>
<td>4</td>
<td>Already work on the specialty</td>
<td>28%</td>
<td>36%</td>
<td>38%</td>
</tr>
<tr>
<td>5</td>
<td>Already work not on the specialty</td>
<td>12%</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Conclusion

Positive dynamics of indices of students’ satisfaction with education quality in higher educational establishment (steady professional self-determination+ 28 %) and self-esteem of the employment prospects by the graduates (readiness to work on a specialty + 29 %) proves the effectiveness of the developed and approved modular scheme of student’s educational process construction in the sphere of physical culture and sports.

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THE QUESTION OF HEALTHY LIFE – STYLE PRINCIPLES FORMATION

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Keywords: tolerance, phylogenetic factor, training impact, category of measure, tendency to balance.

Annotation. Guided by a practical work, material accumulated in the literature and the monitoring of healthy life – style skills adoption by the population, the article studies the general theses of the recommended healthy life – style principles which provide an effective healthy life of a person.

Research methods. Scientific literature analysis, the results of the observation, experience analysis.

Research materials. The experience taken from the organization of away healthy life – style schools.

Results. The principles of the complex psychological – pedagogical influence on the personality aimed at the penetration of the regulations and the rules of healthy life – style elements into the consciousness of the people, who train.

Conclusion. An important aim of the whole society is introduction of the population into a healthy life – style and it is possible to achieve it observing the principles of healthy life – style. A healthy life – style of a citizen is a notion which, first of all, means a definite organized process on realization of the Governmental programmes of the country [1,2] in the directions of motivational interest to an active life attitude development of a society.

This is a process aimed at improvement of the personal and social idea of a stated way of life in the country. The aims and the reasons of this process can be different, just as its scale.

It can be just a program of realization of the citizen’s personal conviction in necessity to observe his own principles of life orientation on a personal health, success in society or on the achievement of a definite conditions to strengthen well-being in a family, among friends, at work. Thus, this process in all cases is not categorial and according to its essence and content can include a great number of different components and specific difficulties while its organization.

The observance of definite rules, life aims, even “accidental” conditions of a healthy life – style by the citizens is obvious in order to introduce it into everyday life. At the same time, we suppose that there is an absolute reason to contend that there are clear principles of a healthy life – style which provide the effectiveness of its realization in our society.

Even now it is impossible to deny the existence of a motivational interest of the whole society (a person, a collective, the population of the half of the country) to a healthy life – style and its (healthy life – style) realization in vital activity.

In fact, the notion of a healthy life – style is already actively implemented and provides the achievement of success in a personal and social well-being in the life of many citizens. In other words, the success of a citizen in his life is quite real and reachable in case of observance of the healthy life – style principles.

So, what principles of a healthy life – style are necessary to know and observe in an active systems of vital activity, realization of which can effectively contribute to solution of the health-improving and social problems in modern conditions?
Since 1988 and till now (2013) the away schools of a healthy lifestyle (schools of HLS) has been held by a group of researchers in Saint – Petersburg. The main aims of these schools are practice improvement of sanitary conditions and inculcate the skills of a healthy lifestyle [3,4,5,6]. Schools outings take place in a forest-steppe zone, seaside, mountains or a desert.

On the assumption of the practical research results we defined several principles of a psychological – pedagogical influence on a personality aimed at the penetration of the regulations and the rules of healthy lifestyle elements into the consciousness of the people who train.

These principles are the following:
1. The principle of a healthy lifestyle for everybody and since childhood.
2. The principle of the training effects combination in the systems of a healthy lifestyle.
3. Tolerance of every person who trains in the system of a healthy lifestyle.
4. The principle of measure category in realization of a healthy lifestyle.
5. The principle of a natural tendency to balance in the programs of a healthy lifestyle.
6. The principle of taking into account the phylogenetic factor influence in realization of the programs of a healthy lifestyle.

1. The principle of a healthy lifestyle for everybody and since childhood.

One of the most important problems, which will in general determine success in solution of the society problems, is the problem of the physical and moral health of the citizens. A hypodynamic regime of a modern society acquires the character of an alarming tendency. High technologies, essentially, excluded physical activity but increased greatly psychologic and mental stress. Obviously, the importance of motion activity in physical and intellectual development is ignored since childhood. The physical and moral state of the Russians nowadays causes anxiety. Nowadays death-rate is higher than a birth rate and these negative phenomena especially influence a young generation. The rate of young people addicted to drugs grows, including schoolchildren. During the period of studying at school the number of absolutely healthy children is reduced to 4-5 times and these are people who in several years will take the responsibility for everything in the country. It should become prestigious to be a healthy person in a society. It is necessary for each person to decide which forms and means from a huge arsenal of motion activity, environment influence (air, food, norms of communication, thoughts and others), norms of behaviour to take into account to form a purposeful regime of a healthy lifestyle.

We are convinced that a future citizen and a patriot of a country should be formed physically, spiritually and morally as a personality, first of all, in a family, kindergarten and then at school, higher educational establishment, in social organisations which realize the norms of a healthy lifestyle.

Physical culture can be in any programm: personal, family, group, municipal, federal, regional and international. There is no other similar scheme nowadays, which by analogy with a healthy lifestyle and physical culture, is able to solve actively global problems of society recovery using minimal financial investment.

2. The principle of the training effects combination in the systems of a healthy lifestyle.

As the implementation of a healthy lifestyle is a teaching and educational process it is connected with all main components of teaching and upbringing; methods of teaching, methods of upbringing and forms of teaching and upbringing, though some special principles can also be used (in particular principles mentioned above); methods (in particular methods of muscular relaxation, meditation, penetration into consciousness and others); forms (exercises with self – control accent; orientation on conflicts avoidance, which worsen mental conditions and others).

3. Tolerance of every person who trains in the system of a healthy lifestyle.

Tolerance is readiness to accept behavior or beliefs, which differ from your own, even if you don’t agree or don’t approve of them. Tolerance is an active social behavior to which a person comes voluntarily and deliberately. This principle is obvious while realizing the offered programs of health improvement in the system of healthy lifestyle – style schools. It is always difficult for a person to give
up his habits or get rid of the phobias even if they are harmful. But if we place a person into the system of healthy life – style schools a new day regimen, norms and rules of sleep, nourishment, physical activity and rest make transformation in him and we see a qualitative improvement in his health. Social tolerance in him means acceptance, correct understanding and regard for other norms and way of life, thus, the new ways of self – expression appear and a healthy individuality is demonstrated. Healthy life – style school helps to show tolerance and to live together in friendship, like kind neighbours. In this case the lexeme gets not only socially active direction but also is seen as a condition of a successful socialization (integration into the system of social relations), which lies in an ability to live in harmony with oneself and with people in the system of a healthy life – style.

The essence of this principle is revealed in the process of adaptation to difficult extreme conditions of work and living. For example, while travelling in a desert or the mountains acting “to exhaustion”, not taking into consideration the measure, leads only to destruction of accumulated biological and psychological potential, wasting organism reserves and, eventually, to disadaptation. On the other hand, lack of physical activity can’t provide an expected training effect in different physical exercises.

5. The principle of a natural tendency to balance in the programs of a healthy life – style.
Speaking about the mastering of a healthy way of life, this principle is defined by the rules of homeostasis and the functions of the nervous system on adaptation of the organism to the changing conditions of the environment. This adaptation is determined, at first, only by functional reactions without the body changes. So, at the altitude of 1000 – 3000 meters lack of oxygen in a respirable air is compensated by pulse and respiration rate increase, which means supply of oxygen to the brain tissue. Recurrence of the motor acts predetermines, according to the mechanisms of motor – visceral coordinations, increase of supply of necessary nutrients and then leads to the formation of new muscular structures and new relations of balance.

6. The principle of taking into account the phylogenetic factor influence in realization of the programs of a healthy life – style.
The materials to formulate this principle were accumulated earlier in the research works of V.L. Marischuk (2001 and others), but still the principle wasn’t formed. We form it taking into consideration received data about achievement of quick corrections of different physical qualities, which quite healthy people had due to the peculiarities of their ontogenetic way turned out to be on a very low level of development. We studied 4500 people who were in healthy life – style schools and had a lot of examples of this fact. For example, a lot of people couldn’t pull themselves up the crossbar more than 1-2 times or couldn’t do an exercise “arm-pumping in lying support”, couldn’t run 1 kilometer even slowly. But as a product of a phylogenetic development any healthy person should be able to do such kind of exercises. Practice showed that if a person did mentioned above exercises regularly and repeatedly, improvement of the results could be seen even during 2-3 weeks. The same result was when people had regular running on a distance of 1000 meters (3-4 times a week) with an average speed (4,5-5 minutes) in a group of like-minded people who stimulate and support each other. A person easily reaches the results, programmed for him as a product of phylogenesis, but which didn’t receive necessary development because of individual characteristics of ontogenesis. Hence, we have a reference to the phylogenetic factor.

Directions for the principles of a healthy life – style
1. Realization of the state importance, social necessity of a healthy life – style by every citizen and its value in the process of the society development.
2. The demands of a healthy life – style should become decisive in the social processes on development of the citizens’ skills of communication in groups, while forming the system of interpersonal relations, rules and norms of behavior.
3. An obligatory observance of a healthy life – style during realization of the educational programs on norms of invigoration, rehabilitation and perfection of health functional indices.

4. The realization of the programs on healthy life – style at away schools [1,2,3,4] is possible only in case of fulfillment of the requirements of availability, succession, gradation, cyclicity, versatility, taking into account a purposeful orientation towards positive results for the health of the people who train.

5. Without observance of the norms and demands of a healthy life – style it is impossible to form conceptions of a healthy life – style and need in the feed system, system of sleep, exercises and rest organization.

6. A healthy life – style for every school member is possible and necessary in case of obligatory combination of environment conditions and individual characteristics of the people who train. It is necessary to consider these conditions in case of new training groups formation.

7. Professionalism, tolerance of the staff and understanding in the process of lessons organization is very important in the work of healthy life – style schools.

8. In the process of a healthy life – style success is possible only if there is staff solidarity and regular, intensive training.

Bibliography


THE PROBLEM OF YOUNG GOALKEEPERS’ TECHNICAL TRAINING ANALYSIS IN FOOTBALL IN TERMS OF THE SENSORY RECEPTORS FUNCTIONS DEVELOPMENT OF VISUAL AND VESTIBULAR SENSORY SYSTEMS

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Keywords: technical training, goalkeepers, football, visual and vestibular sensory systems, special exercises.

Annotation. The article presents the survey results among football coaches and goalkeepers. Technical readiness of 15-16 year-old goalkeepers depends on the degree of development of the visual and vestibular sensory systems’ receptors. To increase the level of technical readiness of goalkeepers in football a set of special exercises for the development of vision and balance functions should be used.

Research methods: scientific literature analysis, questionnaires, perimetry.

Research materials. The results of survey among coaches and goalkeepers and the data of perimetry allowed to define the main directions of 15-16 year – old goalkeepers’ technical training, taking into account the peculiarities of the functions of visual and vestibular sensory systems.

Results. Goalkeepers in football can be divided into four categories. The 1st – the goalkeeper is the most successful when turning aside and catching the balls which fly along the bottom (below waist level); the 2nd - the goalkeeper is the most successful when turning aside and catching the balls which fly on high ground (higher than shoulder level); the 3rd - the goalkeeper is the most successful when turning aside and catching the balls which fly on breast and waist level; the 4th – universal type, the goalkeeper is the most successful when turning aside and catching the balls flying on any level against the body of a goalkeeper. The level of technical preparedness of 15-16 year - old goalkeepers in football depends on the degree of functions of visual and vestibular systems development.

Conclusion. The content and methodology of young goalkeepers’ technical training on preparatory phase should be based on use of special exercises and training equipment, modeling unexpected goal attacks and the functions of visual and vestibular sensory systems development.

The effectiveness of a goalkeeper’s tactical - technical activities directly depends on the activity of different functional systems of the organism, including sensory systems [1-3]. One of the key directions in football goalkeepers’ technical training is taking into account the peculiarities of perception by a visual analyzer of a ball flight in case of different actions of a goalkeeper connected with an arbitrary body imbalance. The peculiarities of motor, visual, and vestibular
sensory systems functioning when goalkeepers react to a signal are not sufficiently studied. There are no specially developed methodologies of the training lessons on technical training of young goalkeepers. Goalkeepers’ training process analysis shows that tactical – technical and physical training of young goalkeepers is often done without creating necessary conditions for complex development of motor and sensory systems functions [1,3,4,5].

To improve goalkeepers’ training process in football, to define the main directions of the scientific research on the problem of technical training, to develop new means and methods of technical training coaches and goalkeepers answered the questions of the survey. 138 football coaches who work with young goalkeepers of the age range from 10 to 17 and 34 goalkeepers (15, 16 year-old) took part in the survey.

The analysis of the survey results allows to state that during the preparatory period of the training, technical and physical training are defined by the respondents as the most important components of the whole training process. As the most coaches pointed out (84,8%), the training process on physical fitness of 15-16 year - old goalkeepers should be directed at dexterity, speed and power qualities development. For this purpose coaches use different exercises during the work with goalkeepers, including different kinds of jumps. Moreover, goalkeepers and coaches state that for coordination development their volume should be 65% and to develop speed and power qualities 35%. Besides, most goalkeepers (85%) say about the necessity of vestibular apparatus development and the ability to perform motional activities on body imbalance and fall.

89% of the coaches point out the necessity to develop sensory systems of young football players’ organisms. The coaches said that, first of all, it is necessary to develop the functions of kinaesthetic and motor (49%), visual (43%), tactile (8%) analyzers. All coaches consider that a goalkeeper should have a special vision of the field which is necessary to develop with the help of a special methodology of tactical – technical training, based on the use of the means directed at peripheral vision and balance development. They think that broadening the borders of a visual field will allow the goalkeeper to orient in game situations, especially during the attack of the goals.

From the goalkeepers’ point of view, it is necessary to have special time during each training lesson for the functions development of sensory systems analyzers: vestibular – to 40%, visual – to 30%, tactile – to 20% and auditory – to 10%. They say that the development of the ability “to see the field” is an important condition for improvement of their sportsmanship and inclusion of special exercises for peripheral vision development into the training process can provide better spatial orientation, especially in case of the goals attack.

Most coaches (86%) consider it possible to use special exercises and the training equipment as an important condition for training goalkeepers’ visual and vestibular functions of the sensory systems, modeling real conditions of their game activity. At the same time, the analysis of the training process observation protocol shows, that in spite of confidence in necessity of special means application, which are directed at improvement of the functions of visual analyzer, coaches don’t pay attention to this question in the process of young goalkeepers training. Unfortunately, it was stated that the goalkeepers didn’t pass ophthalmography diagnostics. The training lessons are usually built taking into consideration only the motion asymmetry and sometimes the domination of the right and the left hand and leg, but never the domination of the eyes and the perimetry data.

Most goalkeepers (87%) think that use of special training equipment for development of the functions of visual and vestibular analyzers, in case of modeling real conditions of their game activity, can increase the level of their technical training. Moreover, 89% of goalkeepers don’t know which eye is dominant (leading). It is obvious that absence of this information leads to the fact that exercises concerning this peculiarity of visual sensory system functioning are not used during the training lessons. Not many special exercises based on the peculiarities of interaction of visual and motor sensory systems are used in the training process. In this connection, it is reasonable
enough to say about the necessity to create a complex of training methods, directed at young goalkeepers’ visual and vestibular sensory systems development. In particular, it is possible to suppose that the goalkeeper who has broader borders, deeper field of vision and higher degree of motion coordination development has more time for taking right decision.

According to the answers which the coaches gave, the most difficult for 15-16 year - old goalkeepers are the kick on the ball from the ranges of the goal, which flies along the bottomsidestand from the goalkeeper (56%). One third of the asked coaches (34%) consider the balls which fly on high ground and sidestand from the goalkeeper “the most difficult” to turn aside and 7% consider the balls flying sidestand from the goalkeeper and at breast height difficult to turn aside. The analysis of the goalkeepers’ answers concerning the classification of goalkeepers depending on ability to turn aside the balls (flying on different levels) successfully allows to state that for 43% of respondentskicks along the bottom (on the right and on the left of a goalkeeper) are the most difficult to turn aside; for 34% of respondents the balls which fly on high ground, for 23% of respondents the balls which fly at breast height.

On the basis of the analysis of 48 video records from the matches with the goalkeepers who took part in the survey and those who didn’t, it was stated that most missed balls were kicked to bottom flange (40%) and to shoulder height (32%). Thereunder, we can define groups of goalkeepers according to their success in turning aside the balls which fly into different zones of a goal. According to the segmental peculiarities of the body goalkeepers can be divided into three groups: those who turn aside successfully the balls flying below waist level; from waist to shoulders; those who turn aside successfully the balls trajectory of which is directed at the area of shoulder height and higher. This information allows to use anthropometrical parameters to define the most important training zones in the training process in which the goalkeepers turn aside the balls worst of all. As 72% of the coaches say, goalkeepers can be divided into four categories according to their success in turning aside the balls which fly into different zones of a goal: the 1st – the goalkeeper is the most successful when turning aside and catching the balls which fly along the bottom (below waist level); the 2nd - the goalkeeper is the most successful when turning aside and catching the balls which fly on high ground (higher than shoulder level); the 3rd - the goalkeeper is the most successful when turning aside and catching the balls which fly on breast and waist level;the 4th--universal type, the goalkeeper is the most successful when turning aside and catching the balls flying on any level against the body of a goalkeeper.

Naturally, this classification of goalkeepers is relative and doesn’t show all combinations of technical activities fulfilled by goalkeepers during the game. It is obvious that taking into account only the spatial characteristic is not sufficient. While evaluating the level of difficulty of turning the ball aside it is necessary to take into account some other conditions, such as: the speed of the flying ball, its trajectory, rotation and the level of readiness of the goalkeeper’s body sensory systems in the moment of the goal attack. To standardize these conditions even in case of game situation modeling is very difficult.

Along with these facts, interesting are the data of perimetry. Least values of young goalkeepers’ field of vision bounds are marked on meridians “down - inside”$48,9\pm4,3^\circ$ and “upward” $54,7\pm4,4^\circ$ which authentically differs in high indices on other meridians. Goalkeeper’s smaller field of vision, small field of control by the visual analyzer of the ball flying into the lower zone of the goal lead to spending much time for change of locomotor apparatus (time to turn an eye and a head towards a flying ball and be ready to jump). All this brings down the effectiveness of goalkeepers’ actions on turning aside the ball, directed at the bottom of a goal and aside a goalkeeper.
It is stated that almost all coaches (97%) use exercises on turning aside the balls with hands or legs in case of unexpected goal attack during the training. However, these exercises are not constantly used and are not systematized, there are no methodologies of their use. In the process of training they take only 2 or 3% from a general training time. Most of goalkeepers (69%) think that the use of exercises on turning aside and catching the balls done in case of unexpected goal attack can provide the improvement of their playing skills. Some goalkeepers (12%) answered in the negative and 19% couldn’t answer definitely. At the same time only 25% of goalkeepers use exercises on turning aside the balls with hands or legs in case of unexpected goal attack during the training. In the process of training they take only 8 or 12% from a general training time and they are held not systematically only once or twice a month (having trainings six times a week).

Thus, the analysis of scientific – methodical literature, observation data, results of survey among coaches and goalkeepers allowed to define that the main direction of young goalkeepers’ technical training on preparatory phase is the development of content and methodology of special exercises and training equipment use, which provide conditions of unexpected goal attacks modeling and the functions of visual and vestibular analyzers sensory systems development.

Bibliography


LOGICAL THINKING DEVELOPMENT AS THE FACTOR OF SPORTSMANSHIP IMPROVEMENT OF THE PEOPLE GOING IN FOR SPORTS AEROBICS

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Keywords: 12-14 year-old girls, technical readiness, pedagogical experiment.

Annotation. The problem of effectiveness increase of the competitive activity is one of the most urgent in many kinds of sport including sports aerobics. The specialists in this sphere try to find effective ways of technical readiness indices increase by means of results improvement of the leading motional - coordinating qualities; complication of the competitive program, the level of artistry increase; the system of sports selection development and etc.

Research methods: scientific and methodical literature analysis and summarizing, testing, pedagogical experiment, the methods of mathematical statistics.

Material. The article presents a new approach to results improvement of the competitive activity by means of the unity provision of an intellectual and motion activity.

Involving the female athletes into co-operative creative process of sports training directed at high level of sportsmanship achievement activates intellect including logical thinking, which helps to solve the problems concerning effectiveness increase of the training process. The results of the pedagogical experiment proved the prospectivity of the offered by the author direction which helps to increase the level of technical readiness by means of purposeful logical thinking formation.

The content of sports aerobics includes different physical actions typical to this kind of sport, elements of choreography and different artistic kinds of sport. All this allows to speak about sports aerobics as an alloy of different artistic – aesthetic physical actions combined into a single composition in accordance with the rules of the competitions [3,4]. Variety of movements, their aesthetic orientation, the opportunity of self-actualization by means of individual style formation cause the necessity to involve athletes into mutual constructive process on sportsmanship formation.

Competitive program content includes the fulfillment of the elements of a definite difficulty and it is connected with a rational technique of acrobatic exercises; exercises of sports and artistic gymnastics, figure skating, synchronised swimming mastering. All this demands a high level of a special technical readiness, clear idea of sportsmanship improvement laws, understanding of the main conditions and principles which define the orientation of the training process [1,2,5].

The artistry of composition fulfillment is also important in sports aerobics and it demands the knowledge of different expressiveness methods and their correct choice, taking into consideration individual, age-related and other characteristics. Objective appraisal of the used expressiveness methods, their distribution according to different parts of the program, are very important too. Creativity of the female athletes conditions the necessity to reveal logical thinking, the development level of which defines the opportunities of the female athletes in creating the composition, formation of performing mastery [3,4].

The aim of the research work is theoretical and methodical substantiation of logical thinking formation importance as the factor of competitive activity effectiveness formation of 12-14 year old girls, who go in for sports aerobics.
The objectives: 1. To create the methodology of logical thinking formation while going in for sports aerobics.

2. By an experimental approach to reveal the dependence of competitive activity results on the level of logical thinking development.

Sports activity directed at the development of the person’s kinesiologic potential provides great opportunity for cognition formation. Cognition is the main intellectual quality which conditions mastering the laws of competitive exercises technic development and revelation of the factors and conditions which provide the sportsmanship improvement. Cognition is a difficult perceptive process during which different demands are made on thought process. Logical thinking should state more effective preparatory exercises, reveal their rational succession, optimal dosage for mastering the technique.

Logical thinking is also revealed when improving the factors which influence sport results increase, pedagogical conditions providing sportsmanship improvement – all this proves that logical thinking is one of the main kinds of intellectual activity the development of which stimulates the female athletes’ working capacity and increase of their technical readiness.

Special literature analysis, the materials of our own research works on the problem of logical thinking influence on sportsmanship improvement, help to define that an optimal level of logical thinking provides inner and external communication between the main unit of the technique of a difficult element and its details which give a special expressiveness and individuality to the performance. Owing to logical thinking indices we can define the correspondence of motion action character with the music for the performance, correspondence of the competitive activity programs with the level of their physical and technical readiness and etc. All mentioned above is evidence of logical thinking formation indices’ great influence on the training process effectiveness and productivity of the competitive activity.

To define the degree of logical thinking influence on performance aims realization during definite competitions a pedagogical experiment was carried out. 26 girls of the age range between 12 to 14 years old of the 1st and the 2nd class took part in the experiment. Two groups were organized: control group (CG) – 12 people and a treatment group (TG) – 14 people. In the CG the training lessons were held on a traditional methodology in accordance with the program recommended by the gymnastics federation. In the TG was used created by us methodology of logical thinking formation which consisted of different motional tasks demanding logical intellectual capabilities:

- to substantiate the expediency of slow and quick parts of the composition alternation, rational distribution of the most difficult elements in different parts of the program performance;
- to enlarge the analysis of the female athletes’ performances of different qualifications with further evaluation of the their technical and artistic readiness level; to define the main mistakes, to name the ways of their prevention and the ways of correction;
- to substantiate the expediency of mastering different variants of the running and dancing elements, choreographic, acrobatic combinations and links between the elements of high difficulty;
- to define the degree of correspondence of the composition content with the music, individual characteristics of the female athletes.
- To give a comparative analysis of the used expressiveness methods and their effectiveness for the necessary level of artistry provision and others.

Before the pedagogical experiment the logical thinking level formation of the female athletes from the CG and TG was tested, with the help of created by us evaluation criteria. The degree of logical thinking development was defined by the ability to set external and inner connections between the easy and difficult elements of the composition, the forms of connections of various motion actions.

Evaluation criteria:
5 points: high level of the skills formation – ability to plan rationally technically difficult spectacular elements at the beginning of the composition, in its middle and in the final part of the performance, the choice of the directions of the actions on the area which will help to choose the direction of the movements on the area and will help to convey emotional state; the use of expressiveness methods with the gradual increase of their aesthetic impact on the audience;

4 points – revelation of external and inner connections between different parts of the competitive program, the choice of the optimal quantity of dynamic and static elements; optimal combination of quick and slow parts of the composition;

3 points - the choice of the optimal quantity of acrobatic, gymnastic, dancing, circumrotatory and jumping exercises; correspondence of the melody with the competitive program;

2 points – an ability to state the character of the program performance in accordance with typological and phenotypic peculiarities of the female athletes, indices of their physical and technical readiness;

1 point – understanding of the necessity to interchange slow and quick parts of the composition.

Data handling of the research works didn’t reveal considerable differences on the initial level of logical thinking formation of the female athletes from the CG and the TG (р >0,05). Initial level of technical readiness was defined according to the following indices:

- the quantity of the elements of high difficulty;
- variety of running and dancing tracks;
- the use of different directions of the movements;
- correspondence of the composition with the music;
- individual style demonstration.

The analysis of the received results didn’t reveal considerable differences concerning general physical fitness of the female athletes from the CG and the TG (р >0,05). To define the initial indices the following tests were held: a shuttle run 3х11 meters (seconds); 100 meters distance running (seconds); 1000 meters distance running (seconds); standing long-jump, long-jump pushing both legs (centimeters); lifting the body from prone position, arms on the nape (quantity in one minute); lifting the body from back-lying position, arms on the nape (quantity in one minute); hands flexion and extension from front leaning rest position (quantity); straight legs lifting from back-lying position till touching the floor over the head (quantity).

The analysis of the research results didn’t reveal considerable differences concerning the level of technical readiness of the female athletes from the CG and the TG (р >0,05).

During the pedagogical experiment in the TG the accent was made on the ability to think logically; the individual evaluation of each motional task directed at the formation of a definite kind of intellectual activity was given; the importance of logical thinking indices increase as one of the factors of competition results improvement was explained. Moreover, it was offered to the female athletes from the TG to choose independently the motional tasks which provide the development and improvement of logical thinking, these tasks then were fulfilled by the whole group; the most original and interesting tasks were revealed and pointed out in the presence of the whole group and this was an additional stimulus for the development and improvement of power of apprehension in a chosen direction; in the process of physical training by means of physical fitness indices dynamics monitoring during the control trainings; elimination competitions before the main competitions; in case of separate tasks fulfillment on evaluation of the quality of high difficulty elements; acrobatic tracks and units.

After the pedagogical experiment the second test on physical and technical readiness was held also the level of logical thinking formation was checked. The results of the pedagogical experiment showed that there was improvement according to all parameters in both groups: CG and TG. However, the female athletes from the TG had more significant results increase. In the CG in a shuttle run 3х11 meters (seconds), in case of initial data of 9.35±0.54 seconds, to the end of the pedagogical experiment the results increased by 1.51% (р >0.05); in the TG in case of initial data of
9.37±0.49 seconds the increase was 3.87% (p>0.05). In the CG fulfilling the standing long-jump in case of initial data of 115.24±5.32centimeters to the end of the pedagogical experiment was the increase by 4.64% (p>0.05); in the TG in case of initial data of 118.36±4.75centimeters the increase of the results was 11.85% (p<0.05).

The technical readiness level also increased in the CG and in the TG with different values of the received indices. In the CG the initial data quantity of high level difficulty elements was 2 elements, to the end of the pedagogical experiment the quantity of the elements increased to 3 elements; In the TG the initial data quantity of high level difficulty elements was 3 elements, to the end of the pedagogical experiment the quantity of the elements increased to 4 elements. In the CG in case of initial indices of variety of running and dancing tracks 3.4±0.26, to the end of the pedagogical experiment increased and were 3.8±0.21; in the TG in case of initial indices of 3.1±0.15 points the results increased and were 4.3±0.29 (p<0.05). In the CG in case of initial data of technical readiness index as the use of different directions of the movements was 3.3±0.25 points, to the end of the pedagogical experiment the indices increased and were 3.7±0.20 points; in the TG in case of initial data of 3.4±0.24 points the results increased and were 4.6±0.32 points (p<0.05). Such a tendency of technical readiness indices increase was also revealed concerning other its kinds.

Thus the results of the pedagogical experiment allowed to state the dependence of technical readiness indices improvement on the increase of logical thinking level. The increase of the data characterizing the degree of logical thinking formation also had a positive impact on physical fitness level of the female athletes from the TG.

Bibliography

THE METHODOLOGY OF PHYSICAL CULTURE FUTURE TEACHERS’ EMOTIONAL STATES REFLECTION DEVELOPMENT

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Annotation. The article considers the problem of the emotional states reflection development of the future teachers of physical culture. The efficiency of the author’s methodology of the studied process development, realized in the course «Psychological regulation» is justified. The diagnostic tests are presented, on the base of which the level of the reflexive abilities development has been identified. The experimental data confirming efficiency of the experimental work are analyzed.

Research methods: scientific literature analysis, mathematical statistics methods, psychological testing.

Research materials. The level of the emotional states reflection development is defined on the basis of the following criteria: emotional awareness, the ability to recognize emotions, ability to control ones emotions, social empathy, tolerance. The diagnostic apparatus is selected taking into account the structure of the studied concept and the objective of the development work.

Results. Stating experiment showed no significant differences according to the results of group comparison (tests – «Emotional intellect diagnostics », «Perceptive self-appraisal of fractional and integral emotional expressivity », «Social empathy diagnostics », «Tolerance»), t-range is 0,66-1,8. At the end of the formative experiment reliable differences were obtained, evidence of the effectiveness of the experiment was presented, t-range is 2,3-5,4.

Conclusion. The inclusion of the art-technologies, aimed at the development of a personality resource potential and implemented during the group training, study of a proposed material by each student, allows to achieve the aim and to obtain reliable, stable, positive changes concerning each criterion and the index of the emotional states reflection.

Introduction

The problem of emotional states reflection is an actual problem as nowadays the teacher of physical culture, who is able to control emotional reactions, express ideas and feelings in an adequate form on the basis of understanding the reasons of their appearance without emotions suppression, negative control is increasingly in demand.

A high level of emotional expression development is also one of the main effectiveness criteria, as a person who expresses emotions openly and vividly by means of a developed, active mimicry, pantomime and voice seems to be more reliable and preferable for actual psychic states demonstration. The image of the teacher, in this case, becomes complete, easy to perceive: people have an opportunity to see correspondence of the inner world with the form through which it is revealed. As it was mentioned earlier, in a sports activity students always have to work with psychic states. Understanding of emotions, feelings, senses provides more effective training process. It will be easier to cope with stress, caused by different reasons (competitions in general, pre-starting states in particular, change of usual atmosphere in case of team practice sessions, conflicts with people and other reasons) if there is clear, timely and efficient realization of its reasons, peculiarities of its progress and possible consequences [4, p.188].

The process of emotional states reflection development of the future teachers of physical culture is realized in course of the humanistic principles and modern demands to education content.
K.N. Apushkina and Y.V. Kirillova also mention that the main aim of a modern professional education is the student’s potential development [2, p.14]. Developed reflexive abilities allow a person to reveal intellectual, communicative, creative resources to the maximum as the base for these abilities is realization of the issue in details, understanding of the reasons for imbalance or success in an activity.

Research organization
The experimental ground was the Federal state budgetary educational establishment of higher vocational education “Ural State University of Physical Culture”. In an experiment during the period of 2011-2012 took part 182 full-time students of the 4th course on the specialty “Physical culture” (n=182). The control group (CG) consisted of 90 people, the treatment group (TG) consisted of 92 people.

Research methodology
During the 7th term developed by us methodology was introduced into an auctorial special course “Psychological regulation” in a treatment group. The methodology was directed at decrease of the society negative influence, student’s health saving with the help of the emotional states regulation, participation in different kinds of creative activity, concentrated on improvement of interaction between people and harmony with oneself.

One of the pedagogical conditions of the methodology successful realization was use of arntechnologies. These technologies help to reveal personal peculiarities of every student which influence inner emotional states experience and behavior. The technologies are the following:
1) accentuation of personality traits; values system; self-rating peculiarities; anxiety and frustration (this personal potential was diagnosed on the basis of picture, photo, collage techniques);
2) behavioral strategies in a difficult, conflict situation; the style of interpersonal communication of people in a group, in a group of pupils, during a training process, in case of competitions of different level (on the basis of group work with collage, picture, dramatherapy, dancing techniques);
3) students’ basic emotions (while using photo techniques, to be exact, the function of external and internal changes dynamics reflection);
4) social position “follower - leader” in pedagogical and sports activities, everyday life (by the example of dancing techniques);
5) psychological–pedagogical work was carried out with the students’ pre-starting states (in terms of work with the techniques of passive music therapy).

The future teachers of physical culture were given individual and group psychological – pedagogical tasks on recognition, expression, step-by-step, detailed analysis of the experienced emotional states. After each seminar, which was held in a form of training, the probationers were offered to give feedback in written form and to select the situations (educational, training, everyday) which demand support of a high level of emotional states reflection development. The realization of the identified personal peculiarities, need for the use of constructivemodes of behavior and understanding of work prospects with negative sides of character and temperament allowed the respondents to select a desired result and the ways of its achievement.

The students of the treatment group were also suggested to define verbally the need for detailed and efficient analysis of the emotional states, to express emotions openly and adequately, ecologically for oneself and people around which means to practice the received information about emotional states reflection.

In the control group the lessons were held using the methodology of self-regulation developed by Y.G. Shults [5], and the variants of autogenic training by A.V. Alekseev [1]. This methodology is based on psychomuscular training: on interconnection of psyche and the tone of a person’s skeletal muscles. Concentration of the voluntary attention on separate muscle groups, their alternate exertion and relaxation in a necessary correlation and volume allows to achieve desired physical and emotional state during a definite time period. The mentioned above methodology can
also be used during the training lessons, training sessions and while working with pre-starting states. The main disadvantage of this methodology is in relatively short obtained effect, no opportunity to define the reasons for emotional states appearance and transportation of the received information into the situations of communication and interaction with the students, a coach, colleagues, rivals, i.e. with the people who are directly related to the professional activity of the teachers of physical culture.

Results and their discussion

Samples representativeness calculation (on the basis of the confidence interval) was accomplished according to the methodology developed by S. Glants [3]. The results (with accuracy to units) allowed to identify the following: samples representativeness of the control group should represent 89 people (in the research the control group consisted of 90 people), the treatment group – 90 people (92 people participated in the research). On the basis of the received data we come to the conclusion that the sample of the research is representative.

Validity of differences on studied characteristics in experimental groups was estimated with the help of Student's t-test as the received data met the requirements of parametric comparative tests of group phenomenon application.

The following methods were used for the level of the emotional states development study:
1) “Emotional intelct diagnostics” (fractional scales “Emotional awareness”, “Emotional non-rigidity”, “Emotions identification of other people”) (author – N. Hall);
2) “Perceptiveself-appraisal of fractional and integral emotional expressivity” (authors L.E. Bachina, A.E. Ol’shannikova);
3) “Socialempathy diagnostics” (under edition of N.P. Fetiskin, V.V. Kozlov, G.M. Manuilov);

During the state experiment the following facts were received (table 1).

**Note: X - arithmetic middling, 
σ - average quadratic deviation,  
m - standard error of arithmetic middling,  
t_p - rated Student’s t-test,  
P - significance level**

As it is seen in table 1, no reliable differences were defined concerning all diagnostic methodologies before the experiment in the experimental groups (rated index is well below the critical, having the significance level P = 0.05). In this case the main condition is observed, which gives an objective reason for carrying out experimental work later on.

At the end of the forming experiment the following facts were received (table 2).
Comparative analysis of the indices of emotional states reflection development level in experimental groups after the experiment (n=182)

<table>
<thead>
<tr>
<th>Diagnostic methods and scales</th>
<th>CG</th>
<th>TG</th>
<th>t_p</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>X ± σ</td>
<td>m</td>
<td>X ± σ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional awareness</td>
<td>8,8 ± 2,2</td>
<td>0,23</td>
<td>10,1 ± 2,2</td>
<td>0,23</td>
</tr>
<tr>
<td>Ability to identify emotions</td>
<td>9,8 ± 2,1</td>
<td>0,22</td>
<td>11,6 ± 2,4</td>
<td>0,25</td>
</tr>
<tr>
<td>Ability to manage emotions</td>
<td>9,2 ± 2,2</td>
<td>0,23</td>
<td>10,2 ± 2,4</td>
<td>0,25</td>
</tr>
<tr>
<td>Social empathy</td>
<td>22,0 ± 3,1</td>
<td>0,32</td>
<td>23,0 ± 2,8</td>
<td>0,29</td>
</tr>
<tr>
<td>Tolerance</td>
<td>9,8 ± 2,2</td>
<td>0,23</td>
<td>11,1 ± 2,4</td>
<td>0,25</td>
</tr>
<tr>
<td>Emotional expressivity</td>
<td>7,3 ± 2,1</td>
<td>0,22</td>
<td>8,3 ± 2,3</td>
<td>0,24</td>
</tr>
</tbody>
</table>

As it is seen in table 2, at the end of the experimental reliable differences concerning all registered indices were received. This fact proves the effectiveness of suggested by us methodology of development of the studied phenomenon.

Summary

Emotional states reflection is an important part of a successful communication and person’s interaction with the world around and with himself. An effective condition of the studied process development is art – technologies. They allow to diagnose real psychological characteristics of the students as the research is made with the help of the projective tests.

Use of trainings based on the student’s active position in the educational process of sports profile allows to realize each student’s personality creative resources. These forms of work stimulate the activation of psychological processes, give an opportunity to study own professional and personal experience from a new point of view, which will provide the development of the reflexive abilities of the students’ states. During an approved training on the basis of art-technologies takes place realization and acceptance of a personal potential and, as consequence, implementation of effective interaction with group-mates, teachers, pupils. Demonstration of the emotional support, sensitivity towards students, fundamental understanding of their personal characteristics will allow to increase the effectiveness of the educational process.

Carried out forming experiment showed that the implementation into educational process the developed methodology on the basis of the art-technologies, directed at understanding and acceptance of a personal characteristics, decrease of negative emotions influence on communication and activity of the teacher of physical culture allows to get reliable positive changes concerning the studied characteristics and achieve necessary level of emotional states reflection development of the future teachers of physical culture.

Bibliography
DYNAMICS OF PHYSICAL DEVELOPMENT AND PHYSICAL READINESS INDICATORS OF 12–17 YEARS WEIGHT LIFTERS

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Cheboksary

Keywords: kettle bell sports, age of 12-17 years, educational and training process.

Annotation. In improvement of sports selection quality, programming and the organization educational and training process of young weight lifters the big role is played to knowledge of athletes indicators of physical development, physical readiness of features age dynamics at separate stages of long-term sports preparation. These indicators revealed during a pilot study are presented in article aged from 12 till 17 years which can be used by coaches as model characteristics as the concrete purposes of educational and training process causing, in turn, features of its contents and the organization.

Research methods: analysis and generalization of scientific and methodical literature and the standard and legal documents, pedagogical testing, anthropometry, dynamometry, spirometry, methods of mathematical statistics.

Research materials. Experimentally established indicators of physical development and the physical readiness are given in article, observed by weight lifters aged from 12 till 17 years, original test exercises for measurement of size of the maximum effort when performing rising from knee-bend are presented and a press lying. Among indicators of physical development it is offered in addition to standard to use length of a brush and basin width which according to the assumption of authors influence, respectively, weight deduction by a brush of one hand and an emphasis elbow joints when lowering weights on a breast.

Results. 59 male athletes-weight lifters took part in a pilot study: at the age of 12–13 years – 15 people, at the age of 14–15 years – 26 people, at the age of 16–17 years – 18 people. At all examinees indicators of physical development (the mass of a body, body length, length of a shoulder of a hand, brush length, basin width, vital capacity of lungs, a dynamometry of the right brush, a dynamometry of the left brush, dynamometry of stanovy) and physical readiness (high-speed and power qualities, power qualities, power endurance, coordination abilities, the general endurance, flexibility) were measured.

Average values of studied indicators in each age group are revealed.

Conclusion. The average level of indicators of physical development inherent in everyone age and physical readiness can be used when developing standard requirements for pupils of DYuSSh (office of kettlebell sports) taking into account stages of long-term sports preparation, and also at definition of problems of physical preparation in each age period.

INTRODUCTION

Relevance of the problem. The subject of research chosen by us moves forward as actual because at the present stage of development of kettlebell sports in the approximate program of sports preparation of weight lifters for DYuSSh and sports school [6] age borders of children for transfer in group of initial sports preparation are lowered till 10–11 years. Meanwhile today in standard and legal documents of the International and All-Russian federations of kettlebell sports, and also in available us scientific and educational and methodical literature [1], [3–15, etc.] data on
dynamics of indicators of physical development and physical readiness of weight lifters at early stages of long-term sports preparation aren't submitted. It creates certain difficulties at sports selection, during the programming and the organization of educational and training process.

In this regard the purpose of our research consisted in identification of dynamics of indicators of physical development and physical readiness of weight lifters aged from 12 till 17 years.

**METHODS AND RESEARCH ORGANIZATION**

To achievement of a goal we applied the following research methods: analysis and generalization of scientific and methodical literature and standard and legal documents, pedagogical testing, anthopometry, dinamometry, spirometry, methods of mathematical statistics.

As skilled and experimental base of research offices of kettlebell sports of DYuSSh and SDYuSShOR of the Chuvash Republic acted. 59 male athletes-weight lifters took part in a pilot study: at the age of 12–13 years – 15 people, at the age of 14–15 years – 26 people, at the age of 16–17 years – 18 people.

At all examinees indicators of physical development (the mass of a body, body length, length of a shoulder of a hand, brush length, basin width, vital capacity of lungs, a dinamometry of the right and left brush, a dynamometry stanovy) and physical readiness (high-speed and power qualities, power qualities, power endurance, coordination abilities, the general endurance, flexibility) were measured.

Test exercises for measurement of indicators of physical readiness are given in table 1.

<table>
<thead>
<tr>
<th>Indicators of physical readiness</th>
<th>Test exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-speed and power qualities</td>
<td>Broad jump from a place</td>
</tr>
<tr>
<td></td>
<td>Diving of a medicine ball (weight) forward-up two hands from below from Nominative – a foot stance separately, hands forward-from top to bottom: 1 – swing between feet back; 2 – diving</td>
</tr>
<tr>
<td>Power qualities</td>
<td>Rising from приседа with the maximum effort</td>
</tr>
<tr>
<td></td>
<td>Press lying with the maximum effort</td>
</tr>
<tr>
<td>Power endurance</td>
<td>Knee-bend weighing 50% from a maximum within 2 min.</td>
</tr>
<tr>
<td></td>
<td>Bending extension of hands in an emphasis lying within 2 min.</td>
</tr>
<tr>
<td></td>
<td>I hung on a crossbeam to the full</td>
</tr>
<tr>
<td>Coordination abilities</td>
<td>Threefold broad jump about a place / broad jump from a place</td>
</tr>
<tr>
<td></td>
<td>Diving of a medicine ball (weight) forward-up two hands from below / stanovy a dinamometry / rising from a place</td>
</tr>
<tr>
<td>General endurance</td>
<td>Run of 1000-3000 m taking into account age</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Inclination forward from the main stance</td>
</tr>
</tbody>
</table>

The assessment of level of the physical development (PD) of weight lifters was carried out by a technique, offered V.V. Bunak [2], and the physical readiness (PR) – by the standard technique – in standard conditions – on the same equipment, at the same time, according to requirements of rules to carrying out test exercises. Measurement of studied indicators was preceded by warm-up.

The following indexes calculated taking into account indicators of physical development:

- Quetelet's index as relation of weight of a body to length of a body (g/cm);
- shoulder index as relation of length of a shoulder to body length;
- brush index as relation of length of a brush to body length;
basin index as relation of width of a basin to body length;
• vital index as relation of vital capacity of lungs to the mass of a body;
• power index of a brush as relation of force of brushes of both hands to the mass of a body;
• Stanovy index as relation of stanovy force to the mass of a body.

Distinctive features of carrying out test exercises at measurement of indicators of physical readiness were:
– at a rising from knee-bend with the maximum effort examinees, previously having put on the special medical hinged orthosis certified of the universal size a knee joint which fixed bending of feet on coal 90º, rose on a basic platform of 30×60 cm in size, the dynamometer connected to the help of a hook with a platform, the opposite end through a metal chain from two parties of the handle. Handle length – 140 cm. Weight lifters became on a basic platform so that a hook fixed in the middle of a platform, and a dynamometer were between feet; the handle connected to a dynamometer, established on a back behind the head and, bending feet in a knee joint 90º, holding a back directly, pulled it up;
– press lying with the maximum effort it was made by the same dynamometer lying a back on a bench, examinees bent hands to a corner 90º, the dynamometer connected to the help of a hook with the bottom cross longeron of stances on which the opening, by the opposite end through a metal chain from two parties of the handle previously was drilled;
– performing knee-bend weighing 50% from a maximum within 2 min. examinees also put on the orthosis for a knee joint, from stances established behind the head on a back a post weighing 50% from a maximum and, bending feet to a corner 90º, squatted at fast pace within two minutes;
– in bending and extension of hands in an emphasis lying within 2 min. examinees a breast concerned the sensor attached between hands on a floor (bench);
– performing hanging on a crossbeam to the full diameter of a crossbeam corresponded to diameter of a handle of the weight (35 mm);
– coordination abilities were estimated on the basis of a ratio of indicators of test exercises of a threefold broad jump from a place and a broad jump from a place, a diving by two hands from below a medicine ball, on the one hand, and a stanovydinamometry, the maximum effort at a rising fromknee-bend, with another. The coefficients parrying these ratios are higher, the is more realized available for weight lifters high-speed and power (a broad jump from a place) and power (force of muscles of a back on indicators of a stanovydinamometry and force of muscles of feet – on rising indicators from knee-bend) potential when performing difficult and coordinate actions – a threefold standing jump and a ball diving.

RESULTS OF RESEARCH AND THEIR DISCUSSION
Average values of physical development and physical readiness of weight lifters boys in three age groups studied by us are given in tables 2-3.

Table 2

<table>
<thead>
<tr>
<th>Age (years) and number of people</th>
<th>Index Quetelet</th>
<th>Index of a shoulder brush</th>
<th>Index brush</th>
<th>Index basin</th>
<th>Vital Index</th>
<th>power index</th>
<th>Stanovy index</th>
</tr>
</thead>
<tbody>
<tr>
<td>12–13, n=15</td>
<td>303,58±6</td>
<td>0,19±0,00</td>
<td>0,11±0,01</td>
<td>0,16±0,01</td>
<td>62,35±11,36</td>
<td>1,41±0,35</td>
<td>1,59±0,30</td>
</tr>
<tr>
<td>14–15, n=26</td>
<td>340,84±3</td>
<td>0,19±0,01</td>
<td>0,11±0,00</td>
<td>0,16±0,01</td>
<td>70,36±11,24</td>
<td>1,25±0,18</td>
<td>1,89±0,31</td>
</tr>
<tr>
<td>16–17, n=18</td>
<td>386,61±6</td>
<td>0,19±0,01</td>
<td>0,11±0,00</td>
<td>0,16±0,01</td>
<td>66,41±10,42</td>
<td>1,36±0,27</td>
<td>2,01±0,36</td>
</tr>
</tbody>
</table>
The analysis of level of physical development and functional condition of examinees testifies that all indicators, except indexes of a shoulder, a brush and a basin in relation to body length, have positive dynamics. Such feature is caused, in our opinion, not only natural development of an organism of children during the various age periods, but also, more, by application of exercises of kettlebell sports. Significant increase in indicators of a hand and stanovydinamometry can be explained with features of kettlebell sports. So, capture for a handle of the weight assumes a long dynamic and static stress of muscles of a brush and a forearm.

Competitive exercises of kettlebell sports, in particular push on a long cycle and breakthrough, also the majority of elements of power juggling are carried out at the expense of vigorous extension of a trunk, as caused a bigger gain of an indicator of a stanovydinamometry.

Comparative results of weight lifters in the age period 12–17 years given in table 3, speak about increase of level of physical readiness with age.

### Table 3

<table>
<thead>
<tr>
<th>The physical qualities</th>
<th>Test exercises</th>
<th>Age (years) and quantity of examinees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>12–13, n = 15</td>
</tr>
<tr>
<td>The high-speed and power</td>
<td>Long jump from a place, cm</td>
<td>166,40±23,22</td>
</tr>
<tr>
<td></td>
<td>Diving of a medicine ball, cm</td>
<td>599,3±104,98</td>
</tr>
<tr>
<td>The power qualities</td>
<td>Rising from the place, kg</td>
<td>63,20±17,12</td>
</tr>
<tr>
<td></td>
<td>Presslying, kg</td>
<td>29,13±10,89</td>
</tr>
<tr>
<td>The power endurance</td>
<td>Knee-bend weighing 50% from a maximum in 2 min., times</td>
<td>70,80±20,86</td>
</tr>
<tr>
<td></td>
<td>Bending extension of hands in an emphasis lying in 2 min., time</td>
<td>37,60±12,63</td>
</tr>
<tr>
<td></td>
<td>I hung on a crossbeam, with</td>
<td>101,73±39,93</td>
</tr>
<tr>
<td>Coordinational abilities</td>
<td>Triple jump in length about a place / long jump from a place</td>
<td>3,01±0,38</td>
</tr>
<tr>
<td></td>
<td>Diving of a medicine ball / stanovydinamometry and a rising from a place (cm/kg)</td>
<td>6,84±1,77</td>
</tr>
<tr>
<td>The general endurance</td>
<td>Run on 1000–3000 m, with</td>
<td>478,20±22,68</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Inclination forward, cm</td>
<td>8,25±3,01</td>
</tr>
</tbody>
</table>

Note: in a diving of a medicine ball at the age of 12–15 years the weight of a ball made 3 kg, at the age of 16–17 years – 6 kg; bending extension of hands in an emphasis lying within 2 min. examinees at the age of 12–15 carried out from the situation "emphasis lying on a gymnastic bench", at the age of 16 years and is more senior – from an emphasis lying on a floor; in hanging to the full diameter of a crossbeam made 35 mm; at determination of the general endurance results in running taking into account age – in 12–13 years – 1500 m, in 14–15 years – 2000 m were considered, in 16–17 years and are more senior – 3000 m.

It is caused, on the one hand, by age development of motive function of athletes, on another - stimulating influence of a factor of occupations by kettlebell sports.

The results of research received by us say that occupations by kettlebell sports have essential impact on power and high-speed and power qualities and the general endurance. Along with it, sports activity in kettlebell sports is to a lesser extent connected with the movements demanding the maximum manifestation of speed and coordination abilities. Therefore these physical qualities are
shown at the beginning and upon termination of pedagogical experiment at the average level of development. Rather low, but the positive indicator of flexibility can be explained to that flexibility at weight lifters in an inclination forward isn’t so strongly expressed. Competitive exercises of kettlebell sports, in particular, a push on short and long cycles, demand from weight lifters development of special flexibility which has to be shown in radio carpal, elbow, humeral, coxofemoral, knee and ankle joints, a spine column.

CONCLUSIONS
Summary. Orientation of coaches to dynamics of indicators of physical development allocated with us and physical readiness and test exercises for their measurement will allow to increase quality of sports selection, programming and the organization of educational and training process of weight lifters.

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SELECTION OF REFEREES FOR WORK IN SOCCER ON THE MODULE OF PSYCHOLOGICAL STRUCTURE

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Keywords: refereeing, soccer, modules of psychological structure.

Annotation. In the real work the problem of selection and success of refereeing in soccer from the point of view of modular typological structure of the identity of Dr. of Ped-csPolozov A.A. was considered.

Research methods: analysis of scientific literature, psychological testing, analysis of statistical data.

Research materials: 42 most qualified referees on URFO soccer were tested. Their type of the personality, character type, length of service as the referee, age, average during the season an assessment of their work are defined by inspectors of a match.

Results: The sphere of an orientation of interests appeared the most informative from the psychological point of view. More than a half of all referees belong in the ESFJ, ESTJ, ESTR and ISTJ psychotypes. Most widespread among referees of URFO one sensation, extraversion, rationality and logic, least – intuition. Rather weak influence on a refereeing assessment is revealed from the sphere "will and feelings" - character types. The formula, allowing to predict an expected assessment of the referee from his psychological characteristics and a refereeing experience was created.

Conclusion: Forecasting of referees work success in soccer on modular structure of the personality showed that the type of character doesn't influence level the referee of estimates. At the same time perceiving, sensation (irrationality and sensation) displace an assessment of the referee up on 0,225 that is very essential.

Methodology of carrying out work.

In (1) recommendations about a psychological portrait of the personnel in dispute proceeding from modular typological structure of the personality were formulated. In theses we will remind its contents:

The majority of psychologists of the past allocated in the structure of interests orientation identity sphere, "will and feelings" and intellectual. On the basis of it the module of psychological structure of TL+TH+TI [4] was made.

The Types of the Personality (TP) are formed of 4 dichotomies (alternative qualities):
- Ir – irrationality – ability to work "on a situation" (P)
- Ra – rationality – aspiration to plan the activity (J)
- Ex – an extraversion – aspiration to communication, action (E)
- In – an introversion – aspiration to reflection instead of action (I)
- Se – sensation – ability to feel the world "in details" (S)
- In – intuition – ability to perceive ideas, imagination (N)
- Eth – ethics – actions taking into account opinion of other people (F)
- Lo – the logician – action within the found logical chain (T).
In the sphere "will and feelings" from a set of works contours of 8 types of character gradually appear. Mac-Williams (1998), Narankho (1998), Popov, the Look (2000), Louen (2000), by Horni (1995) allocated the character types (CT):
2. Narcissus – envy, revaluation of, need for a worship.
3. Paranoid – suspiciousness, neglect others, unsociability.
4. Compulsive – doubts, the pedantry, scrupulousness stirring to business.
5. Psychopathic – callousness, desire "to make all", neglect.
6. Hysterical – a demonstrative, theatricality, drawing attention.
7. Depressive – conciliation, fear to be left, the depression.
8. Masochist – patience in hope for the subsequent benefit.

Howard Gardner allocated 7 types of intelligence – analytical, linguistic, spatial, interpersonal, intra personal, corporal кинестетический and musical. As a rule, one of them is developed more strongly than others. We designate it TI.

In [1] it was suggested that the best referees are irrational sensation with compulsive type of character.

### Table 1

<table>
<thead>
<tr>
<th>Jobtitle</th>
<th>Designation</th>
<th>Character type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of a type of the joint venture.</td>
<td>InItLo</td>
<td>Schizo</td>
</tr>
<tr>
<td>Head coach the national team</td>
<td>IrLo</td>
<td>Narcissus</td>
</tr>
<tr>
<td>President of club</td>
<td>ItEth</td>
<td>Narcissus</td>
</tr>
<tr>
<td>Head coach of club</td>
<td>RaLo</td>
<td>Narcissus</td>
</tr>
<tr>
<td>Coach selector</td>
<td>EcEth</td>
<td>Compulsive</td>
</tr>
<tr>
<td>Second coach</td>
<td>SeLo</td>
<td>Compulsive</td>
</tr>
<tr>
<td>Forward</td>
<td>IrSe</td>
<td>Psychopathic</td>
</tr>
<tr>
<td>The player</td>
<td>RaIt</td>
<td>Schizo</td>
</tr>
<tr>
<td>Defender</td>
<td>RaSe</td>
<td>Paranoid</td>
</tr>
<tr>
<td>Referee</td>
<td>IrSe</td>
<td>Compulsive</td>
</tr>
<tr>
<td>Psychologist of team</td>
<td>EthIn</td>
<td>Depressive</td>
</tr>
<tr>
<td>Coach of DYuSSh</td>
<td>RaEth</td>
<td>Masochist</td>
</tr>
<tr>
<td>Press attaché</td>
<td>RaEth</td>
<td>Hysterical</td>
</tr>
<tr>
<td>Administrator</td>
<td>IrEc</td>
<td>Hysterical</td>
</tr>
<tr>
<td>Manager of club</td>
<td>EcLo</td>
<td>Schizo</td>
</tr>
<tr>
<td>Accountant of club</td>
<td>RaLo</td>
<td>Paranoid</td>
</tr>
<tr>
<td>Doctor, lawyer of club</td>
<td>RaSe</td>
<td>Compulsive</td>
</tr>
</tbody>
</table>

**Results of work.** Pedagogical experiment was made within inspection of 42 acting referees serving games of various level in URFO. Thus an average assessment of referees in URFO - 8,3 points. Distribution of estimates among referees closely to so-called normal distribution that speaks about relative objectivity of estimates.
Fig. 1 Normal distribution of estimates of referees

Fig. 2. Distribution of referees on age categories

Table 2

<table>
<thead>
<tr>
<th>Name, surname, middle name</th>
<th>Age</th>
<th>Experience</th>
<th>An average assessment</th>
<th>Type of the personality</th>
<th>Character type</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Ya.S.</td>
<td>1990</td>
<td>2</td>
<td>8.3</td>
<td>ESFR</td>
<td>Depressive</td>
</tr>
<tr>
<td>A A.S.</td>
<td>1986</td>
<td>4</td>
<td>8.2</td>
<td>ISFJ</td>
<td>Masochist</td>
</tr>
<tr>
<td>A I.A.</td>
<td>1992</td>
<td>1</td>
<td>8</td>
<td>ESFJ</td>
<td>Depressive (masochist)</td>
</tr>
<tr>
<td>B G.V.</td>
<td>1985</td>
<td>5</td>
<td>8.2</td>
<td>ESFJ</td>
<td>Depressive</td>
</tr>
<tr>
<td>B A.P.</td>
<td>1977</td>
<td>4</td>
<td>8.3</td>
<td>INFR</td>
<td>Psychopathic</td>
</tr>
<tr>
<td>V R.R.</td>
<td>1967</td>
<td>14</td>
<td>8.1</td>
<td>INFJ</td>
<td>Masochist</td>
</tr>
<tr>
<td>V N.A.</td>
<td>1967</td>
<td>15</td>
<td>8.2</td>
<td>ESFJ</td>
<td>Masochist</td>
</tr>
<tr>
<td>G E.M.</td>
<td>1988</td>
<td>8</td>
<td>8.6</td>
<td>ESTR</td>
<td>Psychopathic</td>
</tr>
<tr>
<td>G A.S.</td>
<td>1990</td>
<td>5</td>
<td>8.6</td>
<td>ESTJ</td>
<td>Depressive</td>
</tr>
</tbody>
</table>
For further work we need to understand how the number of referees is distributed according to age. Smoothing was carried out on 7 points.

Apparently from the schedule, the greatest number of referees is grouped about length of service of 7 years. For receiving a smoothed curve used the following transformations are used:

\[
Y'(1) = \frac{5Y(1)+2Y(2)-Y(3)}{6}
\]

\[
Y'(2) = \frac{Y(1)+Y(2)+Y(3)}{3}
\]

\[
Y'(3) = \frac{Y(1)+Y(2)+Y(3)+Y(4)+Y(5)}{5}
\]

\[
Y'(N-1) = \frac{Y(N)+Y(N-1)+Y(N-2)}{3}
\]

\[
Y'(N) = \frac{5Y(N)+2Y(N-1)-Y(N-2)}{6}
\]

<table>
<thead>
<tr>
<th>Name</th>
<th>Year</th>
<th>Age</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zh A.I.</td>
<td>1985</td>
<td>10</td>
<td>8,2</td>
<td>ESTR</td>
</tr>
<tr>
<td>K A.V.</td>
<td>1986</td>
<td>9</td>
<td>8,4</td>
<td>ESTR</td>
</tr>
<tr>
<td>K R.N.</td>
<td>1983</td>
<td>2</td>
<td>8,2</td>
<td>ISTR</td>
</tr>
<tr>
<td>K A.Yu.</td>
<td>1970</td>
<td>7</td>
<td>8,3</td>
<td>ESFJ</td>
</tr>
<tr>
<td>K S.A.</td>
<td>1987</td>
<td>7</td>
<td>8,5</td>
<td>ESTR</td>
</tr>
<tr>
<td>K O.A.</td>
<td>1989</td>
<td>3</td>
<td>8,1</td>
<td>ESTJ</td>
</tr>
<tr>
<td>L R.M.</td>
<td>1979</td>
<td>13</td>
<td>8,5</td>
<td>ENFR</td>
</tr>
<tr>
<td>L E.V.</td>
<td>1987</td>
<td>5</td>
<td>8,1</td>
<td>ENFJ</td>
</tr>
<tr>
<td>MA.B.</td>
<td>1989</td>
<td>7</td>
<td>8,1</td>
<td>ESTJ</td>
</tr>
<tr>
<td>M Yu.V.</td>
<td>1987</td>
<td>7</td>
<td>8,3</td>
<td>ESTR</td>
</tr>
<tr>
<td>M R.L.</td>
<td>1984</td>
<td>9</td>
<td>8,2</td>
<td>ENFR</td>
</tr>
<tr>
<td>O A.R.</td>
<td>1987</td>
<td>4</td>
<td>8,2</td>
<td>ESFJ</td>
</tr>
<tr>
<td>O D.V.</td>
<td>1994</td>
<td>1</td>
<td>8,1</td>
<td>ISTJ</td>
</tr>
<tr>
<td>P P.A.</td>
<td>1989</td>
<td>6</td>
<td>8,2</td>
<td>ISTJ</td>
</tr>
<tr>
<td>P A.L.</td>
<td>1988</td>
<td>8</td>
<td>8,2</td>
<td>ESTJ</td>
</tr>
<tr>
<td>P Yu.S.</td>
<td>1989</td>
<td>3</td>
<td>8,5</td>
<td>ESFJ</td>
</tr>
<tr>
<td>P L.R.</td>
<td>1987</td>
<td>6</td>
<td>8,5</td>
<td>ESTR</td>
</tr>
<tr>
<td>P M.Ye.</td>
<td>1988</td>
<td>7</td>
<td>8,5</td>
<td>ISTJ</td>
</tr>
<tr>
<td>P V.V.</td>
<td>1972</td>
<td>18</td>
<td>8,7</td>
<td>ISTR</td>
</tr>
<tr>
<td>R V.A.</td>
<td>1990</td>
<td>4</td>
<td>8,1</td>
<td>ENTR</td>
</tr>
<tr>
<td>R A.A.</td>
<td>1983</td>
<td>8</td>
<td>8,3</td>
<td>ISFJ</td>
</tr>
<tr>
<td>S M.Yu</td>
<td>1987</td>
<td>8</td>
<td>8,7</td>
<td>ESTJ</td>
</tr>
<tr>
<td>T V.N.</td>
<td>1973</td>
<td>16</td>
<td>8,2</td>
<td>ENTR</td>
</tr>
<tr>
<td>T D.A.</td>
<td>1973</td>
<td>12</td>
<td>8,2</td>
<td>ISTJ</td>
</tr>
<tr>
<td>U Ye.V.</td>
<td>1989</td>
<td>3</td>
<td>8,1</td>
<td>ESTJ</td>
</tr>
<tr>
<td>Ch A.V.</td>
<td>1981</td>
<td>12</td>
<td>8,3</td>
<td>ESTR</td>
</tr>
<tr>
<td>Ch S.P.</td>
<td>1971</td>
<td>15</td>
<td>8,4</td>
<td>ISTJ</td>
</tr>
<tr>
<td>Sh A.G.</td>
<td>1973</td>
<td>22</td>
<td>8,5</td>
<td>ESFR</td>
</tr>
<tr>
<td>Sh E.N.</td>
<td>1975</td>
<td>14</td>
<td>8,5</td>
<td>ESTR</td>
</tr>
<tr>
<td>Ya V.A.</td>
<td>1989</td>
<td>4</td>
<td>8,1</td>
<td>ESTJ</td>
</tr>
</tbody>
</table>
That there was enough first cycle of smoothing, was a consequence of a narrow interval of an arrangement of all referees.

**Fig. 3.** The schedule of referees' work evaluation of a GPA dependence during the season from an experience of their work

After 7 years of a referee's experience outflow of referee's shots is observed, however the average assessment of the remained shots grows due to outflow of less qualified part.

**Fig. 4.** Age of the greatest estimates for referees

Even more evident is the schedule of refereeing quality dependence from age. As it appeared, the 7-year experience of refereeing is the share of age of the maximum sporting achievements – 25
years. At this age the best results in sports are reached. Also the greatest value of an index of intelligence of IQ is the share of this age. Passing of this peak, deterioration intellectual and physical parameters inevitably reduces an assessment of the referee that in turn has the demoralizing affect. It is possible to assume that decrease in physical and intellectual standards which is projected on decrease in estimates during the season, substantially leads to outflow referee's shots.

**Fig. 5.** Number of referees with different psychotypes in research

**Fig. 6.** Number of referees with various aspects of interestorientation sphere

At first compared an average assessment of referees rational and referees-irrational. Further – referees extroverts and referees introverts, etc.
Fig. 7. Comparison of an average assessment of referees on dichotomies

Fig. 8. Contribution of different aspects to an average assessment of the referee

Apparently from the drawing, the greatest value for the referee in soccer has rationality/irrationality. In this couple the greatest difference in level of referee's estimates. Irrational we are better ready to an unexpected course of events and are capable to fast decision-
making. On the average they have estimates 0.12 points higher, than rational. The following factor on the importance is the combination sensation / intuition. Here difference also is very great – 0.1 points. Irrational sensation has an assessment on the average 0.229 points above, than rational intuitionalists that more. ESTR combination will be ideal. People with these T will have an assessment 0.3 points higher than the average level. The schedule can be presented in the tabular:

Table 3

<table>
<thead>
<tr>
<th></th>
<th>Average deviation of estimates of referees from properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irr</td>
<td>0.082588</td>
</tr>
<tr>
<td>Rat</td>
<td>-0.04255</td>
</tr>
<tr>
<td>Extr</td>
<td>0.023111</td>
</tr>
<tr>
<td>Intr</td>
<td>-0.013</td>
</tr>
<tr>
<td>Sens</td>
<td>0.03075</td>
</tr>
<tr>
<td>Int</td>
<td>-0.07371</td>
</tr>
<tr>
<td>Log</td>
<td>0.037</td>
</tr>
<tr>
<td>Et</td>
<td>-0.028</td>
</tr>
</tbody>
</table>

Fig. 9. Total amount of deviations from an average assessment on dichotomies
Fig. 10 Ratio Change rational and irrational depending from age

Fig. 11 Change of a ratio of number of extroverts and introverts among referees on soccer from age
Fig. 11 Change of a Ratio of Extroverts and Introverts depending from age

Fig. 12 Ratio Change sensation and intuitionalists depending from age

Fig. 13 Change of a Ratio of Logicians and ethics from age
Fig. 15. Number of referees with different TH in various age categories

Fig 14. Number of referees with different types of character
Fig. 15. Deviation of average season of an assessment of the referee depending from character type

There was one more sphere - intellectual. From 7 types of intelligence allocated with G. Gardner, the most demanded in soccer can be corporal kinesthetic and spatial here. The first allows "to feel" mastery of athletes, and the second – spatially to estimate single combats. Indirectly corporal kinesthetic intelligence can be estimated by level of skill of the referee as football player. There is the standard gradation: without the category, 2nd category, 1 category, candidate for the master of sports, master of sports.

Fig. 16. Dependence of average success of refereeing on level of his game as football player

Apparently from the schedule, transition to each subsequent step of the refereegame skill as football player gives an average gain to his assessment already as referees for 0,11. It is very large increase.

The spatial intelligence was estimated by us by that part of the traditional IQ test which suggests to compare different spatial kits. In the IQ test chosen by us was 11. Questions average students of higher education institution answer correctly 8 of 11 such questions. The average of the correct answers of referees was 7,9 that is almost identical. However the correlation coefficient between
number of the correct answers and level of a referee's assessment during the season was equal 0.34 that does inexpedient use of this dough for an assessment of referees.

As a result all specified figures can be generalized in the simplified model of an assessment of the referee in soccer. It depends on psychological characteristics and length of service:

<table>
<thead>
<tr>
<th>Table 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model of calculation of expected evaluation of the work of the referee.</strong></td>
</tr>
<tr>
<td><strong>Type of personality</strong></td>
</tr>
<tr>
<td>8,3 Irrational</td>
</tr>
<tr>
<td>8,3 Rational</td>
</tr>
<tr>
<td>8,3 Extraversion</td>
</tr>
<tr>
<td>8,3 Introversion</td>
</tr>
<tr>
<td>8,3 Sensation</td>
</tr>
<tr>
<td>8,3 Intuition</td>
</tr>
<tr>
<td>8,3 Logic</td>
</tr>
<tr>
<td>8,3 Ethics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calculation example</strong></td>
</tr>
<tr>
<td>Agafonov Ya.</td>
</tr>
<tr>
<td>8,3</td>
</tr>
<tr>
<td>Zheludkov A</td>
</tr>
<tr>
<td>8,3</td>
</tr>
<tr>
<td>Tarasov D.A.</td>
</tr>
<tr>
<td>8,3</td>
</tr>
</tbody>
</table>

The average of the experience of the referee work evaluation in URFO (– 8.3) "extra charge" for rationality/irrationality, extraversion / introversion, sensation / intuition, logic/ethics increases. Also the assessment like character, experience and category increases.

**CONCLUSION**

1. In the real work the problem of selection and success of refereeing in soccer from the point of view of modular typological structure of the identity of Dr. Ped.Polozov A.A. was considered. According to this concept, the personality is subdivided into spheres of "orientation of interests", "will and feelings" and "associative and intellectual" (according to K.Leongardu, 1987). In each of these three spheres types of the personality, character and intelligence (T, TH, TI) are allocated, respectively.

2. 42 most qualified referees on URFO soccer were tested. Their T, TH, length of service as the referee, age, average assessment of their work during the season are defined by inspectors of a match. As the result has the following is receivable:

- average assessment of referees 8.3 points and its distribution round this value is close to so-called "normal" distribution that speaks about relative reliability of the obtained data;

- the highest estimates the referee receive at the age of 25 years is the experience of refereeing 7 years;

- after passing physiological and intellectual peak in 25 years the level of an assessment of referees falls that stimulates big outflow of shots. Thus the average assessment of referees at the age of 25-28 years falls. From 29 years other tendency dominates: outflow of shots from among referees
proceeds, but there is the most qualified part which average level is higher than others. It leads to growth of average value of estimates of such highly skilled remained referees. The peak of development of such referees is the share of age of 39 years and the experience of referee's work - 16 years. Further there comes recession in estimates.

3. The sphere of interest’s orientation appeared the most informative from the psychological point of view. The following became clear:
- more than half of all referees belong to the ESFJ, ESTJ, ESTR and ISTJ psychotypes;
- "most popular" among referees of URFO sensation are, an extraversion, rationality and logic. Most "not popular" property – intuition;
- comparison of average estimates of referees in couples of dichotomies revealed the certain regularity: sensation had a GPA 0,104 higher, than intuitionalists; irrational had an assessment 0,125 higher, than rational; logicians received an assessment 0,065 higher, than ethics; extraverts – are 0,036 higher, than intraverts. Thus, irrational sensation (SR) was received by estimates 0,225 points higher, than rational intuitionalists (NJ).

Ideal psychotype, from this point of view, for refereeing ESTR. However it is necessary to consider as a recommended condition of selection of referees irrational sensation (SR).

4. Rather weak influence on the refereeing assessment is revealed from the sphere "will and feelings" - character types. It appeared:
- more than half of referees treat psychopathic, depressive and masochist types of character. In it there is nothing surprising as these TH possess the greatest resistance to the life of the football referee filled with stresses;
- the majority of referees the assessment fluctuation cases were in the interval-0,05:0,05 and insignificantly influenced the general assessment. For compulsive and hysterical types of character the assessment is doubtful because of small number of examinees;
- stated in (1) assumption of a priority of compulsive TH didn't receive confirmation because of indecision peculiar to these people;
- the type of character has impact not on success of the referee work but on duration of his work in this quality.

5. Identification of age dynamics showed:
- replacement by irrational/rational takes place. Other dichotomies are in balance and have no trend on change of a ratio of resisting properties.
- among TH depressive TH has a steady tendency to growth. Practically compulsive, hysterical and shizo TH "disappear". Emergence of paranoid, narcissus and shizo TH has incidental, unstable character. Psychopathic and masochist TH are steady throughout all time.

6. The formula, allowing to predict an expected assessment of the referee from his psychological characteristics and a refereeing experience was created. To average on the experience to evaluation of the referee work in URFO – 8.3, "extra charge" for rationality/irrationality, extraversion / an introversion, sensation / intuition, logic/ethics increases. Also the assessment like character and experience increases. The formula showed very close results to the obtained experimental data.

7. From 7 types of intelligence allocated with G. Gardner, the most demanded in soccer as it seemed to us it the beginning, can be corporal kinesthetic and spatial. The first allows "to feel" mastery of athletes, and the second – spatially to estimate single combats. Indirectly corporal kinesthetic the intelligence can be estimated by level of the referee skill as football player. There is the standard gradation: without the category, 2nd category, 1 category, KMS and master of sports. Increase of digit "readiness" of the referee on 1 step led to growth of referee’s estimates on the average for 0,11. The correlation coefficient between number of the correct answers on spatial intelligence and level of a referee's assessment during the season was equal 0,34 that does inexpedient use of this dough for an assessment of referees.

Bibliography
PEDAGOGICAL CONDITIONS FOR EFFECTIVENESS OF SPORTS TRAINING INITIAL STAGE OF 12-14 YEAR OLD BOXERS

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I.S. Kolesnik – doctor of pedagogics, professor
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Ulyanovsk

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Keywords: boxing, initial training, pedagogical experiment, physical and special training.

Annotation. One of the main conditions of highly qualified boxers’ training is selection of talented teenagers who have necessary intellectual and motional potential. However one more urgent problem is a sustained interest to a chosen kind of sport formation.

Research methods: scientific and methodical literature analysis and summarizing, testing, pedagogical experiment, mathematical statistics methods.

Research material. The article is about pedagogical conditions of need for systematic going in for boxing formation as an opportunity to self-expression, self-development and self-perfection; cognitive processes, moral and volitional qualities formation.

Results. The results of the pedagogical experiment revealed the importance of rationally organized training process oriented at age-related and psychophysical characteristics of 12-14 year old teenagers; creation of atmosphere of equity, clear demands, respect for child’s personality, many-sided development provision by means of skills formation of techniques fulfillment using the right and the left hand; successful manoeuvring which provides the readiness to attack any moment; creation of success situation which increases teenager’s self-appraisal and confidence in his power, and also for sport results improvement at every training.

Conclusion. The creation of trust and respect during the training process, clear demands; mastering exercises which provide necessary base for technical – tactical readiness; creation of the conditions for teenagers’ self – realization, development of their best qualities is a strong stimulus of motivation preservation to become a master of sports, strong, dexterous and courageous. This approach to a training process organization is perspective and worth mentioning.

Boxing is popular among teenagers as it gives an opportunity to test the abilities, to reveal fortitude, courage, wit, creates rivalry. Watching the competitions among adults provides inner readiness to future trials which demand high level of physical and technical training, ethical – volitional and moral qualities. Teenagers often long for independence, self-affirmation, they are susceptible to the style of communication with people around. At the same time they overestimate their strength and abilities, psychologically are not ready to self-discipline, emotions control, readiness to self-restriction. That is why it is relevant to explain to young sportsmen the importance of weight categories introduction as they not only create equal conditions for the rivals but mainly make high demands to the whole process of vital activity organization and include:

- the necessity to preserve a definite weight for a long period of time which provides an optimal speed of movements in interaction with a rival; high indices of a special dexterity, body steadiness formed during the training process; an individual motional rhythm, accuracy of motional actions, clear perception of spatial – temporal and spatial – power movements parameters.
Weight preservation is connected with rational nourishment organization, an optimal volume of activity, sufficient rest for organism self-recovery and it demands self-discipline, responsibility, well-ordered day regimen, different kinds of activity co-ordination.

The aim of the research work is to give theoretical and methodical substantiation of the importance of pedagogical conditions revelation which provide effectiveness of sports training initial stage of 12-14 year old boxers.

**Objectives:**
1. To reveal pedagogical conditions which provide the improvement of the training process of boxers - beginners.
2. To check the effectiveness of their use in the process of the pedagogical experiment.

Boxers’ sportsmanship improvement is provided by co-operative efforts of a coach, a sportsman, material and technical base state and by other factors. This conditions the necessity to use the system approach as the main direction which determines the effectiveness of the training – competitive activity.

The speed of new motional actions mastering in boxing: boxer’s stand, the movement manner, defensive and onrushing actions; strengthening of skills of their use depending on the situation during the combat, are defined by the level of PT instructor’s professionalism, his ability to improve the teenager’s level of physical and technical readiness which provides rational mastering of physical exercises and is the base for further sports training.

According to V.A. Kiselev, 2006; V.A.Sannikov, 2006; V.V. Filimonov, 2000 and others boxing is known for a special staginess conditioned by constant dangerous moments which demand wit, sharp mind, original decisions, connected with the ability to risk, and ability to cope with difficult situations thanks to clear perception, rival’s actions reflection, switching attention, creative and tactical thinking.

The effectiveness of the technically difficult techniques in boxing is determined by the ratio of height - weight indices, phenotypic, age-related and other peculiarities which are evidence of the necessity to study different individual features of a sportsman, his behavior, actions, traits of character, skills, interests and inclinations. Polyvalent character of a boxer’s activity on the boxing ring, polydirectivity of movements, constant change of motional rhythm determine the appearance of timely motor reaction, active thought process, creation of the rival’s behavioral pattern in every situation on the boxing ring; constant correction of own algorithm of techniques; memorization of initial situations. Involving the sportsmen into active creative activity on development of an individual program on the boxing ring, taking into consideration inclination to own manner of behavior during a combat increases the effectiveness of the training – competitive activity [1, 2, 4, 5, 7].

The analysis of the scientific – methodical literature, the materials of our own research works showed that the leading pedagogical conditions of the initial stage of sports training effectiveness increase of 12-14 year old boxers are the following:
- gradual broadening of the boxers’ independent actions sphere;
- qualifying demands to teenagers which should be clear, fair, logical, and shouldn’t hurt their feelings;
- diversified development of the organism provision;
- successful manoeuvring skills formation;
- development of the ability to orient in space and time;
- creation of the situation of success;
- results improvement on each training.

Boxing provides a lot of opportunities owing to high dynamics of motor acts, constant change of situations, unforeseen actions of a rival. This stimulates the desire of a young sportsman to fulfill independent actions, but lack of experience, absence of skills of highly technical motions use, absence of control of psychological – emotional state creates the conditions for trauma, strong pain which can be the reason for interest loss to a chosen kind of sport.
One of the main aims of a coach is the provision of a gradual and successive formation of the skills of different defensive actions use, their rational choice depending on the character, kind and complexity of onrushing techniques of a rival. The ability to give an objective appraisal of personal physical, technical, psychical and intellectual readiness helps a teenager to make a correct decision while using techniques in interaction with the opponent.

Mastering the skills of self-control in the process of mastering the basis of a rational motional mode and in case of individual improvisation during independent realization of onrushingtechniques is the main condition for the training level increase of young boxers. The skills of accurate instructions, orders fulfillment of a coach, fulfillment of stated norms and rules of behavior in a gym, the degree of explanations understanding are formed during a long period of time. The speed of their strengthening is determined by the ability of a coach to explain clearly, precisely, briefly the rights and duties of young sportsmen; the ability to see in every sportsman a personality worthy of respect. PT instructor shouldn’t permit jokes concerning the surnames, offensive nicknames creating the atmosphere of kindness, respect to each other and to a coach, the employees of a sports school for children and youth.

One of the main pedagogical conditions of sports training initial stage effectiveness increase of 12-14 year old children is the provision of a diversified organism development. Boxing influences all groups of muscles, functional systems of the organism. In the process of preparatory and special physical exercises fulfillment develops the muscle strength, speed, endurance, special dexterity, movements accuracy and other motional - coordinating qualities. Diversified development creates the ability to fulfill all motional actions with the left hand as well as with the right hand, regardless of the degree of technique complexity, psychological – emotional state, physical and technical readiness of a rival.

Manoeuvring skills formation is very important in boxing as they help to take an advantageous position for an onrushing and defensive action. The technique of boxing provides use of different ways of movements on four main and four interim directions, circle-wise, by steps and jumps. Each method is used to solve a definite problem, it corresponds with a definite distance, has a specific speed and the style of fulfillment. A sliding step gives an opportunity to move on short distances of 15-20 centimeters; it is used on all distances and on all directions in order to prepare for onrushing actions, in order to choose successful moment for a strike and a defensive distance.

Pacing is done by a short or long pace, depending on a tactical aim, with the front and behind leg support for an onrushing action or to escape a rival’s strike. Shuttle movement is a combination of short, alternate two or more steps fulfilled in the opposite direction and this allows to move quickly from one distance to another; to be ready to attack or escape a rival’s strike.

Side steps to the right and to the left help to defend from the straight strikes in the head or in the body, to take an onrushing distance, to counter-attack; jumps: pushing off from one or two legs – short (15-20 centimeters), middle (20-40 centimeters) and long jumps (40-60 centimeters) are used. Their advantage is in an opportunity to quick change of the distances, suddenness of attack, quick escape from a rival’s strike. Constant work with lower extremities, use of all methods of movement on the ring and timely choice of an effective method are the indices of a diversified training of a boxer and mastering the manoeuvring technique.

The wrestler should constantly move in space and time for more effective control of motional activity and control of the rival’s actions. Sense of space and time allows to foresee the rival’s or partner’s movements. The formation of this skill provides confidence in personal power, increase of self-appraisal, the training level.

Creation of situation of success inspires a teenager, makes him stronger, helps to concentrate on the orders, instructions, tips of the coach, to orient consciously when choosing the way of an onrushing and defensive technique fulfillment. First success in boxing is very important for realization of the correct choice of a kind of sport, for self – motivation, for psychic and physical readiness to achieve the aim.
One of the characteristics of a juvenile age is yearning for quick results achievement. But mistakes, failure, misfortune bring down the level of psychological – emotional state, intellectual and physical efficiency, the desire to reveal volitional qualities. That is why it is important to evaluate the progress of a boxer beginner at each training lesson. The coach should mention more positive results in the activity of a young sportsman than his failure and mistakes. Even slight praise gives a teenager more energy, courage, desire to solve the problems.

The pedagogical experiment was carried out to check the expediency of the given pedagogical conditions realization. 32 boxers took part in the experiment. The control and the treatment groups were organized. Each included 16 people. The test was held before the pedagogical experiment to reveal the initial indices of physical fitness. The following control exercises were used: 30 meters race (seconds); 100 meters race (seconds); 3000 meters race (minutes); standing long-jump (centimeters); pull ups (quantity); hands flexion and extension with front support position (quantity); throw of a filled ball 1 kilogram (meters). The analysis of the research results revealed inherent difference on the level of physical fitness of the boxers from the control group (CG) and the treatment group (TG) ($p > 0.05$). Moreover, the following parameters were taken into consideration: the training lessons attendance, quantity of attempts to physical exercises fulfillment on the boxing apparatus, progress and discipline at school. Comparative analysis of the given indices didn’t reveal inherent differences in the CG and the TG ($p > 0.05$). The training process in the CG was held in accordance with the program of boxers’ sports training recommended by the Russian Federation of boxing using generally adopted methodology. In the TG great attention was given to realization of the given pedagogical conditions.

After the pedagogical experiment the second test was held to reveal the dynamics of physical fitness indices. The analysis of the research results testifies to the fact that the indices improved in both groups: in the CG and in the TG but in the TG they were considerably high. In the CG and the TG in the race control exercises was the tendency of the results improvement with the domination of the boxers from the TG. In other control exercises the increase of the indices in the TG was higher. The CG with the initial data of standing long-jump of $186.18 \pm 10.20$ centimeters to the end of the pedagogical experiment had the indices increase for $7.53\%$ ($p > 0.05$); the boxers from the TG with the initial results of $183.97 \pm 14.65$ centimeters had the indices increase for $14.16\%$ ($p < 0.05$). The CG with the initial data in pull ups of $6.44 \pm 6.50$ times to the end of the pedagogical experiment had the indices increase for $6.31\%$ ($p > 0.05$); the boxers from the TG with the initial results of $5.98 \pm 0.42$ times had the indices increase for $11.63\%$ ($p < 0.05$). This tendency of results improvement of physical fitness in the TG was revealed also in other parameters.

The analysis of other parameters, characterizing the sportsmen attitude to the training process, showed that in the CG absence from the training lessons remained the same as it was at the beginning of the pedagogical experiment – 2-3 times a month not having any reasonable excuse; in the TG the absence from the training lessons was only because of illness.

In the CG the quantity of attempts to fulfill physical exercises on the boxing apparatus remained the same as on the initial level – 6-8 times during the training lesson; in the TG the quantity of attempts increased to 12-14 times during one training lesson. In the TG, as the form-masters mention, was the improvement in progress and discipline but in the CG these indices remained the same.

Thus the results of the pedagogical experiment revealed the importance of rationally organized training process oriented at age-related and psychophysical characteristics of 12-14 year old teenagers; creation of atmosphere of equity, clear demands, respect for child’s personality, many-sided development provision by means of skills formation of techniques fulfillment using the right and the left hand; successful manoeuvring which provides the readiness to attack any moment; creation of success situation which increases teenager’s self-appraisal and confidence in his power, and also for sport results improvement at every training.

Bibliography
MODERNIZATION OF RUNNERS TRAINING ON THE BASIS OF THE FUNCTIONAL STATE COMPLEX EVALUATION

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Keywords: average - distance runners, a functional state physical working capacity, a psychofunctional state, heart rate variability, the correlation analysis, the factorial analysis.

Annotation. Modern training of average - distance runners is characterized by significant increase in loading intensity owing to strengthening of the sports competition. Absence of technical means of complex diagnostics of the athletes' functional state complicates the process of training planning and competitive loadings planning which can lead to failure in adaptation (N.D. Grayevskaya, 2004; V.V. Ivochkin, 2004; E.V. Zemtsovsky, 2004; Y.V. Vysochin, 2007; L.V.Kapilevich, 2009; N.N.Zakharyeva, 2012). The questions of average -distance runners’ functional state assessment are considered in the article. The results of the following indices change are presented: heart rate variability, indices of physical working capacity, psychoemotional state, a functional state of the neuromuscular apparatus. The technique of a complex assessment of an athlete’s functional state is also presented.

Research methods: analysis and generalization of scientific - methodical and special literatures, questionnaire, methods of functional diagnostics: polymyography, heart rate variability with activeorthostatic test, research of physical working capacity (PWC170 test), the express -diagnostics of a functional state on S.A. Dushanin's method and the "Reaction to Moving Object" test (RMO); testing, pedagogical experiment, methods of mathematical statistics.

Research material. Physical working capacity is estimated by means of the PWC170 test, a psychofunctional state by the "Reaction to Moving Object" test, an assessment of neuromuscular system was on agrarian and industrial complex "Rehabilitation and diagnostic RDK-2 complex", an assessment of heart rate variability was done with active orthostatic test.

Results. Complex diagnostics of the runners' functional state and its further complex assessment by means of the received indices was carried out. The runners’ functional state improvement in the experimental group from the 1st to the 3rd investigation phase is observed. The correlation and factorial analysis of the indices is carried out, the model scale of a functional state assessment is developed.

Conclusion. The results of the pedagogical experiment reveal the need for inclusion of a complex functional state assessment into planning and realization of the training process of the athletes specializing in average distance running, especially on the level of sports improvement. The results of the conducted research work allow to change the coaches’ idea of track and field athletics and a functional state of an organism of the athlete. This research can show an effective work of athletes' functional state complex assessment.

Urgency of the research work. Modern training of average - distance runners is characterized by significant increase in loading intensity owing to strengthening of the sports competition. Absence of technical means of complex diagnostics of the athletes’ functional state complicates the process of training planning and competitive loadings planning which can lead to failure in adaptation (N.D. Grayevskaya, 2004; V.V. Ivochkin, 2004; E.V. Zemtsovsky, 2004; Y.V. Vysochin, 2007; L.V.Kapilevich, 2009; N.N.Zakharyeva, 2012).
The analysis of scientific - methodical and special literature allowed to reveal that running on average distances is characterized by significant increase in volume and intensification of the training loadings. Further their increase can lead to failure in adaptation, overtraining and pathological changes of the functional systems in the organism.

All mentioned above allows to come to the conclusion that there isn't enough information on functional state of an organism complex assessment in the athletes’ training process management.

In this regard the aim of our work is development and experimental substantiation of a technique of average - distance runners training on the basis of a complex functional state assessment.

Research organization. The experimental work was carried out during the period from 2011 to 2013 in the Municipal autonomous educational institution of children’s additional education sport school for children and teenagers “YarChally”, special sport school for children and teenagers of the Olympic reserve № 12 in NaberezhnyeChelny. The athletes specializing in average - distance run took part in the experiment. According to the results of the preliminary research one control and one experimental group was created. There were 15 people in each group. With the help of Student’s t-criterion the check of a hypothesis of uniformity of two selections was carried out, on the basis of which in case of 5% significance level the conclusion was made on absence of distinctions between the groups on studied indices.

The experiment had three stages. In September the initial state of athletes’ functional readiness was defined, on the basis of what correction of training loadings was done.

Research results and their discussion. Within the substantiation of an experimental technique questioning of the experts and average - distance runners was carried out. 25 coaches and 60 athletes of various qualifications took part in the questionnaire. The average age range of the asked coaches was the following: 50 years - 57%, from 30 to 50 years – 38%, from 20 to 30 years – 5%. The trainer's length of service: from 5 to 10 years – 13%, from 10 to 20 years - 51% and more than 20 years - 36%. Answering the question "Do you use diagnostic methods in the training process?" 100% of the respondents said "yes". The question "What diagnostic methods do you use?" allowed to diagnose active use of heart rate index definition method. The question about the degree of interesting diagnostic methods application revealed a high level (83%) and higher than an average level (17%) of application. To define the athletes’ functional state most trainers use the method of heart rate calculation– 77%, 13% prefer electrocardiographic indices, 8% - use testing by means of physical activity and 2% - prefer biochemical researches. Answering the question "What do you think of complex diagnostics of your athletes’ functional state?" 80% answered positively, 15% noted that don't see any necessity to do it, and 5% of the respondents answered in the negative.

The average age range of the asked athletes was the following: from 18 to 25 years - 56%, till 18 years – 31%, senior than 25 years – 13%. 100% of the respondents use heart rate indices in the training process. Answering the question "Do you think the training process lacks assessment?" 76% of the respondents answered positively; 21% of the respondents consider that enough attention is paid to assessment; 3% of the respondents found it difficult to answer. Most athletes (83%) showed a high degree of interest in diagnostic means application in the training process and 17% of the respondents estimated it as above average.

The complex assessment of a functional state included determination of physical working capacity, psychofunctional state, heart rate variability with active orthostatic test, the functional state and the reserve resources of an organism and a functional state of the athletes’ neuromuscular system.

In the CG (control group) the results of PWC170 were 1397,6±30,27 kgf / min.; relative PWC170 – 20,25±0,29 kgf/min/kg; and in the EG (experimental group) – 1376±30,27 kgf/ min., 20,32±0,42 kgf/min/kg (the distinctions are inauthentic, p=0,658; p=0,889). In the CG the indices of MOC (maximum oxygen consumption) were 3,67±0,07 litre/min, relative MOC – 53,85±0,43 ml / (kg*min); in the EG – 3,59±0,07 litre/min, 53,63±0,68 ml / (kg*min) respectively (p=0,429; p=0,786).
In the CG the accuracy of reaction to a moving object (RMO) was 18,95±0,87 milliseconds; tendency of RMO to forestalling – 22,11±0,80 milliseconds; tendency of RMO to anticipation – 19,24±1,1 milliseconds; variation range – 68,67±3,22 milliseconds. In the EG indices of RMO were 17,03±0,86 milliseconds; 22,89±0,97 milliseconds; 21,06±0,83 milliseconds; 69,33±3,16 milliseconds (distinctions are inauthentic, p>0,05).

For an assessment of the state of physiological functions regulation mechanisms in an organism, the general activity of regulation mechanisms, neurohumoral heart regulation, a ratio between sympathetic and parasympathetic sections of the autonomic nervous system (ANS) the method of “Heart rate variability” (HRV) was used, besides, active orthostatic heart test also was used. In the CG the initial level of heart rate in rest was 62,13±2,10 beats/min; indices of the spectral analysis: TP – 3144,07±138,36 ms², VLF – 33,86±1,54%, LF – 26,18±1,02, HF – 36,83±1,42, the tension index (TI) – 83,86±3,80 conventional units, the current functional state – 10,47±0,47 points. In the EG the indices were 61,47±1,81; 3286,73±167,27 ms², 35,82±1,02, HF – 36,83±1,42, the tension index (TI) – 83,86±3,80 conventional units, the current functional state – 10,47±0,47 points. In all indices between the groups the distinction are inauthentic (p>0,05). When carrying out HRV by means of the active orthostatic test (AOT) at the I stage indices were similar (p> 0,05): heart rate was 81,20±1,98 beats/min; indices of the spectral analysis: TP – 3107,33±111,90 ms², VLF – 43,26±1,53%, LF – 38,03±1,63, HF – 19,66±0,91; K30:15 – 1,14±0,03. In the EG: 78,87±2,49; 3100,80±131,33 ms², 42,73±1,50%, 37,33±1,91%, 18,02±0,59%.

In the CG the anaerobic metabolic capacity (AHAME) was 85,22±4,53%, the aerobic metabolic capacity (AMC) – 241,17±6,93%, the general metabolic capacity (GMC) – 322,45±8,99%, the power of phosphocreatine source of power supply (CR.P.) – 31,99±0,97%, the power of a glycolytic source of power supply (PGL) – 30,73±0,64%, the power of an aerobic source of power supply (PAIEO) – 68,96±1,23%, the heart rate on PANO (HRpano), which characterizes power supply of muscular work due to an aerobic synthesis of ATP, – 168,98±1,65 beats per minute; the level of a functional state: the integrated - 29±0,67 points, current – 28,29±0,73 points, operational – 19,87±0,34 points. In the EG the research results are the following: AHAME – 85,59±4,35%, AMC – 240,84±6,09%, GMC – 323,77±6,63%, CR.F. – 32,03±1,55%, PGL – 30,53±0,84%, PAIEO – 69,40±1,38%, HRpano – 169,31±1,65 beats per minute, the level of a functional state: the integrated – 29,13±0,32 points, current – 28,93±0,40 points, operational – 20,07±1,03 points.

In the CG the speed of relative voluntary tension (SRVT) was 6,31±0,30 kgf/kg×sec. coefficient of the maximum relative voluntary force (CMRVF) – 6,95±0,37 kgf/kg, the speed of voluntary relaxation (SVR) – 4,42±0,27 1/sec., a functional state of muscles (FSM) – 10,05±0,28 conventional units, a functional state of neuromuscular system (FSnms) – 8,56±0,43 conventional units, a functional state of the central nervous system (FScns) – 4,90±0,27 conventional units. In the EG: 6,58±0,25 kgf/kg×sec, 7±0,54 kgf/kg, 4,3±0,22 1/sec., 10±0,92 conventional units, 8,51±0,75 conventional units, 4,94±0,29 conventional units.

At the I stage of the researches indices of the athletes’ special physical readiness both groups were equal (p>0,05). In the CG the following results are received: 800 m running – 2,07±0,01 min., 1500 m running – 4,11±0,03 min., the 10th jump – 22,26±0,86 m, running 7,92±0,16 sec., a standing long-jump – 246,53±5,68 m. In the EG: 800 m running– 2,06,8±0,02 min., 1500 m running – 4,12,1±0,03 min., the 10th jump – 22,28±0,69 m, 1500 m running – 7,90±0,18 sec., a standing long-jump – 247,87±6,27 m.

Picture 1 shows the pleiad of correlation of the ergometricand physiological indices of average - distance athletes.
The pleiad of correlation of the ergometrical and physiological indices of average-distance athletes

Notation conventions: 1 – MOC (maximum oxygen consumption), l/min; 2 – relative MOC ml / (kg*min); 3 – PWC170 W; 4 – PWC170 to W/kg; 5 – accuracy of reaction to a moving object (RMO); 6 – tendency of RMO to delay; 7 – tendency of RMO to anticipation; 8 – variation range; 9 – heart rate (HR) in rest, beats/min.; 11 – %VLF; 13 – %HF; 14 – pNN50, %; 15 – K30/15; 16 – conventional unit IN; 17 – AHAME, %; 18 – the aerobic metabolic capacity (AMC), %; 19 – the general metabolic capacity (GMC), %; 20 – a standing long-jump; 21 – the power of a glycolytic source of power supply (PGL), %; 22 – the power of an aerobic source of power supply (PAIEO), %; 23 – the heart rate on PANO (HRpano), beats/min.; 24 – a functional state of the central nervous system (FScns), conventional unit; 25 – the speed of relative voluntary tension (SRVT), kgf/kg*sec.; 26 – coefficient of the maximum relative voluntary force (CMRVF), kgf/kg; 27 – the speed of voluntary relaxation (SVR), 1/sec.; 28 – a functional state of muscles (FSM), conventional unit; 29 – a functional state of neuromuscular system (FSnms), conventional unit; 30 – 800 m running, minutes; 31 – 1500 running, minutes; 34 – the power of phosphocreatine source of power supply (CR.P.); strong statistical interrelation (0,99-0,7); average statistical interrelation (0,69-0,5).

The strongest interrelations between the indices of aerobic productivity and physical efficiency of athletes, and indices of a psychofunctional state (variation range and RMO accuracy) are defined; the heart rate on PANO (HRpano) is substantially caused by the general metabolic capacity (GMC) and the power of an aerobic source of power supply (PAIEO). It means that the increase of working capacity level leads to increase in power and profitability of an aerobic source of power supply of muscular activity. The index of tension has high negative interrelation with the result in 1500 m running (r =-0,74). Strong correlation connection is revealed between the indices of 800 m running and a general spectral power (TR) (r=0,77). The average negative interrelation is revealed in the indices of 60 m running and an index of %VLF (r =-0,67).

The factorial analysis allowed to define 5 structural components characterizing the athletes’ functional state. The sum of deposits on all components was 65,29%, the share of the unaccounted ones was 34,71%.

We interpreted the 1st structural component of a functional state as "the functional productivity". This component is the largest, its share in the general dispersion was 19,23%. It includes indices of physical working capacity (absolute and relative PWC170), the aerobic productivity (MOC), indices of %VLF and the indices of accuracy of RMO, FSnms (the coefficient of correlation is equal 0,52; 0,62; 0,60) with smaller factorial loading.

The share of the 2nd structural component of a functional state was 13,5% of the general dispersion. It united heart rate (HR) indices in rest (r =-0,70) and "Reaction to Moving Object" test indices - a tendency of RMO to delay and variation range (r=0,72 and 0,77). With smaller factorial loading this group included an index of parasympathetic section activity of autonomic nervous system (%HF), tension index (r=0,51 and 0,54) and with negative correlation connection – indices.
of 1500 m running and the 10th jump ($r = -0.54$ and $-0.52$). This component can be interpreted as an economization of the general functional state.

The 3rd structural component of a functional state (the factorial weight 12.35%) united indices of 800 m running ($r = 0.81$), indices of the general spectral power ($r = 0.69$), with a negative connection included PGL, a standing long-jump and FScns ($r = -0.68$, -0.59 and -0.52). This component can be interpreted as improvement of regulatory mechanisms functional state.

In the 4th structural component of the functional state, the factorial weight of which is 11.14%, on the basis of weak loadings outstand factorial loadings of the general metabolic capacity ($r = 0.82$), with smaller loading an index of AMC ($r = 0.61$), the power of phosphocreatine and aerobic source of power supply ($r = 0.62$ and 0.62 respectively), heart rate on the level of PANO ($r = 0.62$). This component can be interpreted as efficiency of power supply mechanisms of muscular activity.

The 5th component of a structural functional state has a share of the general dispersion of 9.07%. The greatest factorial loading in this component is brought by the speed of relative voluntary tension (SRVT) and a functional state of muscles (FSM) indices ($r = 0.80$ and 0.63 respectively). This component can be interpreted as a functional state of neuromuscular system.

The defined structural components of a functional state characterize the importance of physiological systems of an organism and make the greatest contribution to change of a functional state and reserve facilities of an athlete’s organism.

To create a 10-mark scale of a functional state assessment a scale of intervals was used (B.M. Zatsiorsky, 1982; L.V. Shelekhov, 2010) when in the course of measurement to each studied object some number is given which is equal to the quantity of measuring units, proportional to the intensity of measured quality.

Each studied index was estimated according to a mark rating scale. For example, in MOC indices the range of distribution of results in a model rating scale was from 3.17 l/min (1 point) to 4.17 l/min (10 points). In PWC 170 indices the range of distribution was from 1282.1 – one point to 1710 – 10 points.

The experimental technique of average distance runners preparation provides control of a functional state of an organism and its assessment for further correction of the training influences. The technique is created on the basis of the conducted preliminary researches and a complex assessment of athletes’ functional state.

The methodological basis of athletes’ training process creation on the basis of a complex assessment of their functional state was made by a right choice of means and control methods and their compliance to statistical criteria of reliability, objectivity and informational content; definition of the maximum quantity of the indices characterizing a functional state of an organism, and the athlete’s readiness level; comparison of the actual indices with the standard; timely information and receiving an initial material for correction of the training process.

Picture 2 presents the general scheme of an experimental technique realization of average distance runners preparation on the basis of a complex assessment.
Комплексная оценка функционального состояния спортсменов

I этап
II этап
III этап

Проведение полученных результатов

Создание модельных и реальных профилей среднеспортивных

Организационно-методические особенности

Соотнесенность взаимодействия тренера и спортсмена

Соблюдение требований организации проведения комплексной оценки

Учет адаптационных и резервных возможностей организма и спортсмена

Предоставление индивидуального подхода корректировки интенсивности нагрузок

Согласование усилий медицинского и спортивного центра в проведении контрольных и текущих исследований

Определение оптимального объема показателей для оценки функционального состояния и готовности, его достаточности, стандартизацию условий и источников получения информации

Проведение корригирующих воздействий

Получение необходимого уровня функционального состояния

Спортивные результаты

Рис. 2. Схема реализации техники комплексной оценки функционального состояния спортсменов

Техника тренировки среднеспортивных на основе комплексной оценки функционального состояния
The experimental technique includes a stage-by-stage complex assessment of an average-distance runner’s organism functional state; carrying out the correlation analysis of interrelation of the received indices; carrying out the factorial analysis of the received indicators; identification of the main structural components of an average-distance runner’s functional state; creation of a model scale of an assessment of structural components of a functional condition; evaluation of assessment scale results in points; definition of level of the actual development of each structural component of a functional condition; creation of profiles of model and actual values of athletes; comparison of individual data and the model; correction of the training process on the basis of strong and weak points; determination of the studied components of a functional state and organizational-methodical features of technique realization; efficiency determination.

The first stage of a complex assessment of an average-distance runner’s functional state was in September and October during the preparatory period on involving and the first basic developing stages. The main aim of these stages is the level increase of versatile and functional readiness. At these stages there is a gradual adaptation to volumes of the main training loadings in an aerobic mode (heart rate 155 beats/min) with the volume of running 215-240 km; in the mixed mode (heart rate 156-175 beats/min) with the volume of running 35 km; in an anaerobic mode (heart rate over 180 beats/min) the main volume of running - 5 km. The first stage also was held with carrying out control-transferable tests. Athletes of the control group trained according to the traditional program. The training process didn't include correction on the basis of indices of functional readiness. Correction of the training loadings was carried out for the EG of athletes on the basis of a complex assessment of their functional state. The ratio of volume and intensity of the training loads of the average-distance runners was changed taking into account the change of the structural components of a functional state. It should be noted that at the first stage the athletes had insufficient development of aerobic mechanisms of power supply. Long run in a continuous mode was offered to the athletes of the experimental group at aerobic power supply of work. The pulse had to be no more than 150 beats/min. The control over a pulse mode was carried out with help of the heart rate monitor “Adidas miCoach” system with the subsequent analysis of the obtained data.

The volume of running in a week microcycle was offered to be 50 km in case of two times trainings. For the purpose of carrying out deeper adaptive processes in an organism of athletes the share of loading in the mixed mode, i.e. including running with heart rate from 151 to 170 beats/min gradually raised, the week volume of running in the EG reached 60 km. Taking into account the actual functional state of the athletes from the EG the optimum ratio of physical activities in the first-third zones of intensity was offered 90-95% from the total amount of loading. In 4-5 zones loading volume, generally running loading, was 5-10%.

At the second stage of a complex assessment of average-distance runners’ functional state which was held in January and February during the competitive period of a winter competitive stage, the main objective was to increase the level of special physical readiness. The athletes from the CG had the volume of the running loading from 300 km, and in the EG after correction and taking into account the functional state of the athletes from the EG the optimum ratio of physical activities in the first-third zones of intensity was offered 90-95% from the total amount of loading. In 4-5 zones loading volume, generally running loading, was 5-10%.

At the second stage of a complex assessment of average-distance runners’ functional state which was held in January and February during the competitive period of a winter competitive stage, the main objective was to increase the level of special physical readiness. The athletes from the CG had the volume of the running loading from 300 km, and in the EG after correction and taking into account the functional state – within the range from 290-360 km. Priority was given to loadings in an aerobic mode for support of cardiorespiratory system. Loadings in an anaerobic mode reached 15-20 km with the use of an interval technique.

At the third stage of a complex assessment of average-distance runners’ functional state which was held in May during a precompetitive training of the competitive period, the main objective was the level increase of technical-tactical skill and special working capacity. Much attention was paid to development of special endurance. The total amount of special training means during a mesocycle was about 320 km in the control group. And in the EG the volume of special training means according to zones of intensity was corrected taking into account the results of a complex assessment of a functional state. In an intensity zone of heart rate of 155 beats/min the volume of running loading was 250 km. In an intensity zone in the mixed mode (heart rate 156-175 beats/min) the volume of running loading reached 40 km in the EG. Running volume in heart rate anaerobic mode over 180 beats/min fluctuated in the range of 15-19 km. In a basic microcycle the
greatest possible volumes of physical activities in the first or the third zones of intensity were carried out. The total amount of loading reduced by 25-30% with simultaneous increase by 35-40% of the loading volume in the fourth and fifth zones of intensity. The loading in special exercises was increased, such as speeding-up 10 x1000 m; speeding-up 5x100 m, 6x1000 m (heart rate to 170-180 beats/min; running 8-10x400m. Besides, the control estimations were carried out which prepare to competitions. In the CG there were about 3-4 such estimations, in the EG not less than 4-5 estimations. The last control training in the EG was carried out three days before the competitions.

To the athletes with prevalence of aerobic productivity, taking into account fast loss of the level of special power readiness, the trainings were planned for the development of special endurance, and before the competitions one training of the same orientation was carried out. In the group of the athletes with prevalence of aerobic and anaerobic facilities the undulatory principle of training was used, i.e. the impact-detonated and training microcycles were used. It was necessary to pay more attention to recovery actions. To athletes with prevalence of anaerobic and aerobic facilities it was suggested to alternate impact-detonated microcycles with operated microcycles. The combination of volume and intensity of loading was changed. Athletes were given more time for restoration of forces before the competitions. The athletes with prevalence of anaerobic opportunities quickly got tired, required recovery actions.

Conclusion. On the basis of carrying out a complex diagnostics and the correlation analysis of the studied indices the following structural components of average -distance runners’ functional state are revealed: component I – "the functional productivity"; component II – "an economization of cardiovascular system activity "; component III – "an indicator of the central regulation"; component IV – "efficiency of metabolic processes"; component V – "a functional condition of neuromuscular system". The model scale of significant indices assessment of structural components of functional state which characterizes a model level of studied indices development is done and on this basis the assessment of the actual values of the athlete’s functional profile is carried out.

The technique of average - distance runners’ training on the basis of a complex assessment of a functional state included complex diagnostics of functionality and special physical readiness, identification of interrelation between the indices characterizing a functional condition and the factorial structure of a functional state, its subsequent assessment on the developed model scale of an assessment of functional condition structural parameters, diagnostics of individual abilities of the athletes, comparison of individual data with a model, determination of the work orientation, selection of means and methods of sports training, creation of the training process, stage-by-stage comparison of the actual and planned results, planning of correcting influences.

The results of the pedagogical experiment reveal the need for inclusion of a complex functional state assessment into planning and realization of the training process of the athletes specializing in average distance running, especially on the level of sports improvement.

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PECULIARITIES OF HEART RATE VARIABILITY OF QUALIFIED BADMINTON PLAYERS AT REST

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Key words: qualified badminton players, heart rate variability, vegetative regulation types.

Annotation: To study the degree of regulatory-adaptive systems activity of sportsmen organism is important for planning a training process and early detection of overwork. The cardiovascular system is a marker of the muscle reserve compensation abilities and violation of its vegetative regulation is an early sign of the breakdown in the organism adaptation to load. The study of heart rate variability indices helps to prevent the state of disadaptation, to reveal the hidden pre-pathological status of athletes. The article gives the comparative analysis of heart rate variability of badminton players. 59 athletes of the age range from 17 till 21 were examined (first-rank sportsmen, candidate masters of sports and masters of sports). Two types (2 groups) of vegetative regulation were defined.

Research methods: the analysis of scientific literature, tool method with use of the hardware-based program complex “VNS-Spectrum” for studying of heart rate variability.

Materials. 59 athletes of the age range from 17 till 21 were examined (first-rank sportsmen, candidate masters of sports and masters of sports). The athletes who go in for badminton took part in the research on voluntary basis, the written informed consent was received.

Results. Among the badminton players examined by us two groups of athletes having various level of tension of regulatory systems (according to classification of N.I.Shlyk – the 1st and the 3rd groups) were defined. These regulatory systems differ in quantitative and qualitative ratios of heart rate vegetative regulation indicators, revealed in different degrees of activity of sympathetic, parasympathetic sections of autonomic nervous system (ANS) and the central structures of heart rate management. So, the 1st group of vegetative regulation included badminton players who showed low indices of SDNN, high indices of AMo and IN more than VLF. The 3rd group of vegetative regulation includedbadminton players who had great values of SDNN, HF, LF, and VLF and low values of AMo, IN.

Conclusion. The research works show that badminton players have different initial degree of activity of heart rate vegetative regulation at rest. Two types (2 groups) of vegetative regulation are defined. So, the majority of sportsmen (81,4%) are in the 3rd group according to classification of N.I.Shlyk (moderate activity of a parasympathetic section of vegetative nervous system). Other athletes of this specialization (the 1st group) are characterized by moderate activity of a sympathetic section of autonomic nervous system and the central regulation.

Introduction. Nowadays the study of regulatory-adaptive systems activity level of sportsmen organism is important for planning a training process and early detection of overwork [1, 3, 7, 10, 18, 19, 23]. At the same time, as a cardiovascular system is a marker of the muscle reserve compensation abilities and violation of its vegetative regulation is an early sign of the breakdown in the organism adaptation to load, the study of heart rate variability indices helps to prevent the state
of disadaptation, to reveal the hidden pre-pathological status of athletes [13, 14, 22]. Sportsmen with different degree of heart rate vegetative regulation activity can’t have the same physiological reaction to standard physical load [9, 12, 17]. Suggested by N.I. Shlyk [20] classification defines 4 groups of sportsmen who have different level of regulatory systems tension: the 1st group of sportsmen has moderate predominance of sympathetic and central regulation of heart rate, decrease of autonomous contour of regulation activity and moderate tension of organism regulatory systems; the 2nd group has a clear predominance of sympathetic regulation of heart rate, sharp increase of central regulation activity over autonomous, low functional state of regulatory systems, the state of vegetative dysfunction; The 3rd group has moderate predominance of parasympathetic activity; the 4th group has a clear predominance of parasympathetic section of autonomic nervous system over sympathetic one.

The research was carried out in order to define the type of vegetative regulation of heart rate of qualified badminton players in a reference state.

The methods and organization of the research.

The analysis of heart rate variability was carried out with the help of hardware-based program complex “VNS- Spectrum”, produced by the company “Neurosoft” (Russia, Ivanovo). The mentioned hardware-based program complex worked together with the computer and provided the formation of dynamic rows of cardiointervals with the sampling rate of electrocardiographical signal of 1000 Hz. Measurement accuracy R-R intervals ± 1millisecond. The research works were carried out in the morning. 5 minute record of electrocardiogram was accomplished indoors with constant temperature (22°C). For the examined badminton players the period of adaptation to the conditions of the research (horizontal position of a body) was 10 minutes. The record was made in conditions of even breathing, without deep breathing. Badminton players didn’t take part in the training during the examination. The received results were subjected to statistical analysis [2].

The analysis of heart rate variability was carried out with the help of R.M. Baevski variationpulsometry [3] and according to the results of heart rate wave structure examination (spectrum analysis) [15].

The following indices were estimated during the research work:

Mode – Mo (c), the value of frequently met R-R interval which shows the dominating level of sinoatrial node functioning. The indices of mode in case of sympathotonia are minimal, in case of vagotonia they are maximum. The value of mode in norm varies from 0,7 to 0,9 [6];

Amplitude of mode - AMo (%) is a ratio of R-R intervals quantity, with the values equal to Mo, to general quantity RP – intervals in percentage. This index shows the degree of rhythm rigidity. In norm it is 30 – 50 %. The increase of AMo proves the predominance of sympathetic impact on sinoatrial node and considerable heart rate rigidity. This index in case of vagotonia tends to decrease [14];

Variational swing of dynamic row of R-R intervals- ΔX(c)- difference between the maximum and the minimal values of RP – intervals (width of histogram base). The higher parasympathetic index is the stronger isvagus impact on heart rate (is seen as a parasympathetic index). Normal values are from 0,15 to 0,45 [15];

During the examination of the cardiovascular system adaptation level and evaluation of the regulation processes adequacy some parameters were defined - derivatives of classical statistical indicators (indices of R.M. Baevski [4]);

Index of strain (IS) (conventional units) gives the most complete estimation of tension level of central regulation mechanisms in the process of adaptation to changing environment. Index of strain of the regulatory systems reveals the degree of centralization of a heart rate management and characterizes the activity of the sympathetic section of autonomic nervous system. In norm the index is from 80 to 150.(IS = AMo/2xΔXxMo) [4];

Index of vegetative balance - IVB (conventional units) defines the ratio of sympathetic and parasympathetic regulation of heart activity.Calculation of IVB was carried out using the formula: IVB = AMo / ΔX. In norm the index is from 35 to 145 [8];
Vegetative rhythm index – VRI (conventional units) allows to judge vegetative balance from the viewpoint of autonomous contour of regulation activity. The higher activity is (less than VRI value) the stronger is the impact of parasympathetic section of autonomic nervous system (ANS).

VRI was calculated according to the following formula: \[ VRI = \frac{1}{M_0 \cdot \Delta X} \]

Normal value is from 3 to 150 [4];

Index of adequacy of regulation processes - IARP (conventional units norm is 15 - 50) – IARP shows correspondence between the level of sinus unit functioning and sympathetic activity. The index was calculated according to the following formula:

\[ IARP = \frac{AM_0}{M_0} \] [5];

SDNN - (standard deviation of the NN interval) is a standard deflection (SD) of the normal intervals values R-R (N-N). Anomalous intervals R-R were excluded from the analysis. SDNN is an integral index characterizing BCP in general (reveals the state of regulation mechanisms) which depends on the impact on sinus unit of sympathetic and parasympathetic sections of vegetative nervous system. Increase or decrease of this index is evidence of vegetative balance shift to domination of one of the sections. But this can’t definitely show the influence of each section on BCP. Normal values are from 40 – 80 milliseconds [15].

During the spectrum analysis the following parameters were defined:

- TP (total power) is a general power of the spectrum characterizing BCP. It is a power within the range from 0,003 to 0,40 Hz and it shows summarized activity of neurohumoral effects on heart rate;
- HF (high frequency) – electronic oscillations of cardiac rate in case of frequency of 0,15 - 0,40 Hz. The power within this range reveals the autonomous contour of regulation activity in case of vagal control of heart rate (cycles of the parasympathetic section of autonomic nervous system);
- LF (low frequency) - low-frequency cycles (vasomotorial waves) a part of the spectrum within the range from 0,04 to 0,15 Hz, which has mixed parentage and in general characterizes the system of regulation of the vascular center, has the influence of the sympathetic section of autonomic nervous system;
- VLF (very low frequency) – very low frequency cycles, within the range from 0,003 to 0,04 Hz, domination of the spectrum in a general structure is conditioned by the increase of the above-segmental level of regulation and by dominance of sympathetic effects. In case of exhaustion of sympathoadrenal activity vegetative activity provision is fulfilled with the help of the cerebral ergotropic and humoral – metabolic effects [16].

LF/HF was calculated – the value of the ratio (balance) of sympathetic and parasympathetic effects – relative activity of the subcortical sympathetic nerve centre. LF and HF dimension was carried out in relative units which present the part of each component in general power of the spectrum in percentage terms and with the help of which the power of VLF-component was calculated.

The research work was carried out on the basis of a specialized school of the Olympic reserve for children and teen-agers № 9 in Krasnodar, specialized schools of the Olympic reserve for children and teen-agers of the Krasnodar Territory, physiology, anatomy and theory and methodology of sports games departments of Kuban State University of Physical Culture, Sport and Tourism.

59 athletes of the age range from 17 till 21 were examined (first-rank sportsmen, candidate masters of sports and masters of sports). The athletes who go in for badminton took part in the research on voluntary basis, the written informed consent was received.

Results and their discussion.

General information concerning the analysis of the indices of heart rate variability results of the badminton players at rest are presented in table 1.
Indices of heart rate variability results of the badminton players with different activity of the vegetative regulation at rest (M ± m)

<table>
<thead>
<tr>
<th>Indices of heart rate variability</th>
<th>Group of vegetative regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 n = 11</td>
</tr>
<tr>
<td>Cardiac rate (beat per minute)</td>
<td>80,4 ± 3,8</td>
</tr>
<tr>
<td>SDNN (milliseconds)</td>
<td>49,0 ± 1,2</td>
</tr>
<tr>
<td>AMo (%)</td>
<td>39,2 ± 1,7</td>
</tr>
<tr>
<td>IS (conventional unit)</td>
<td>98,6 ± 9,4</td>
</tr>
<tr>
<td>TP (milliseconds / H)</td>
<td>4067 ± 120</td>
</tr>
<tr>
<td>HF (milliseconds / Hz)</td>
<td>1294 ± 104</td>
</tr>
<tr>
<td>LF (milliseconds / H)</td>
<td>1158 ± 191</td>
</tr>
<tr>
<td>VLF (milliseconds / Hz)</td>
<td>1656 ± 210</td>
</tr>
<tr>
<td>LF/ HF</td>
<td>0,86 ± 0,02</td>
</tr>
</tbody>
</table>

Note: P - validity of differences between the indices of the 1st and the 3rd groups of vegetative regulation

Among examined by us badminton players two groups of sportsmen were defined who have different levels of regulatory systems tension (according to the classification of N.I. Shlyk – the 1st and the 3rd groups) which differ in quantitative – qualitative indices correlation of heart rate vegetative regulation seen in different degree of the sympathetic and the parasympathetic sections of autonomic nervous system activity and central structures of heart rate control.

The 1st group of vegetative regulation included badminton players (11 people, 18,6\%) whose cardiac rate was within the range of 80,4 ± 3,8 beats per minute and at the same time low activity of the parasympathetic section of autonomic nervous system was registered (low indices of SDNN) and moderate activity of the sympathetic section of autonomic nervous system (high indices of AMo and IS). In this case increase of power of low-frequency waves spectrum is seen (high values of VLF) which characterize the influence of higher nerve centres on cardiovascular subcortical neural center (Diagram 1).
Diagram 1. The structure of spectrum power of heart rate variability of the badminton players from the 1st group of the vegetative regulation.

The 3rd group of vegetative regulation included badminton players (48 people, 81.4%) whose cardiac rate was within the range of 72.5 ± 2.1 beats per minute and at the same time high values of SDNN, HF, LF, and VLF and low indices of AMo, IS were registered. This proved a moderate activity of the parasympathetic section of autonomic nervous system and subcortical neural centers (Diagram 2).

Diagram 2. The structure of spectrum power of heart rate variability of the badminton players from the 3rd group of the vegetative regulation.

The comparative analysis of the indices of badminton players’ heart rate variability from the 1st and the 3rd group of the vegetative regulation is presented in the research work. Some indices of the badminton players from the 3rd group were lower: cardiac rate for 13.3% (P ≤ 0.05), amplitude of Mo and IS for 13.8% (P ≤ 0.05) and for 38.3% (P ≤ 0.05) accordingly, than the indices of their colleagues from the 1st group.
Diagram 3. Indices of heart rate variability of the badminton players with different vegetative regulation.

Other studied by us indices in the 3rd group were higher than the similar indices in the 1st group: SDNN for 55.1% (P ≤ 0.001), TP for 36.3% (P ≤ 0.05), HF for 124% (P ≤ 0.001), LF and VLF for 6.2% (P ≤ 0.05) and 7.1% (P ≤ 0.05). Comparatively high values of general spectrum power (neurohumoral modulation) TP were registered. It is important to mention that the dynamics of the ratio LF/HF reflecting the sympathetic - parasympathetic balance of the badminton players from the 3rd group was directed at vagal impact.

Taking into consideration the statistical analysis of the indices of heart rate variability of the badminton players from the 1st group (18.6%), control mechanism of heart rate revealed in strengthening of the sympathetic section of autonomic nervous system influence. At the same time in the 3rd group of the vegetative regulation (81.4%) dominated the moderate activity of the parasympathetic section. It is verified by the following parameters (IVB, VRI, IARP, diagram 3).

Thus, according to the results of carried by us research works among badminton players at rest different types of heart rate vegetative regulation were defined. The sportsmen of the 1st group have high activity of the sympathetic section of autonomic nervous system, cortical and subcortical constructions of central regulation. It proves that the organism’s systems which provide the regulation of the trophic processes, cause their acceleration in spite of great energy capabilities of the sportsmen.

The badminton players from the 3rd group of vegetative regulation at rest had reasonably high activity of the parasympathetic section of autonomic nervous system and nerve centres. This shows the balanced state of the regulation system of the organism and its great spare capacities and proves that in case of longterm adaptation, having constant sport exercises, specific control mechanisms activate.

According to A.P. Zhuzhgov and N.I. Shlyk [11]; I.I. Shumikhina [13]; T.V. Krasnoperova [12] and others, the sportsmen of the 3rd group of vegetative regulation at rest have great spare capacities of the organism and optimization of anabolism and catabolism processes.

The results show that the sportsmen of the 3rd group have considerable typical characteristics of heart rate vegetative regulation unlike the sportsmen of the 1st group.
The research works show that badminton players have different initial degree of activity of heart rate vegetative regulation at rest. Two types (2 groups) of vegetative regulation are defined. So, the majority of sportsmen (81,4%) are in the 3rd group according to classification of N.I.Shlyk (moderate activity of a parasympathetic section of vegetative nervous system). Other athletes of this specialization (the 1st group) are characterized by moderate activity of a sympathetic section of autonomic nervous system and the central regulation.

Bibliography


BASIC CHARACTERISTICS OF ETHNOSOCIAL AND CULTURAL COMPETENCE OF ECONOMISTS IN TOURISM AND HOSPITALITY MANAGEMENT

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Keywords: ethnosocial and cultural competence, economists in tourism and hospitality industry.

Abstract. The article reveals main characteristics of ethnosocial and cultural competence of economists in tourism and hospitality sphere in philosophical-cultural, social-psychological and pedagogical aspects, presented in a logical chain of definitions of "competence", "professional competence", "socio-cultural competence", "ethnosocial and cultural competence". The definition of ethnosocial and cultural competence of economists in tourism and hospitality industry is given as a set of common cultural and general professional knowledge, professional values, psychological readiness and ability to communicate in cross-cultural environment and productive interaction based on recognition of parity of ethnic cultures and mental traditions.

Methods of research: analysis of scientific and educational literature, pedagogical supervision.

Material. Ethnosocial and cultural competence of economists in tourism and hospitality sphere is considered in the aggregate of common cultural and general professional knowledge, professional values, psychological readiness and ability to communicate in cross-cultural environment and productive interaction based on recognition of parity of ethnic cultures and mental traditions.

Result. The analysis of the scientific literature allows us to conclude that competence is determined by a combination of personal, professional and social qualities of a skilled person corresponding to the proper level of mastering his profession and productive activities.

Conclusion. Basic characteristics of ethnosocial and cultural competence of economists in tourism and hospitality sphere dedicated by the author in the philosophical-cultural, socio-psychological and pedagogical aspects give clear picture of their nature and content.

The paper gives the basic characteristics of ethnosocial and cultural competence of economists in tourism and hospitality management in philosophical-cultural, social-psychological and pedagogical aspects, which are presented in a logical circuit of definitions «competence», «professional competence», «socio-cultural competence», «ethnosocial and cultural competence». The paper gives the definition of ethnosocial and cultural competence of economists in tourism and hospitality management as a set of common cultural and general professional knowledge, professional values, psychological readiness and ability to cross-cultural communication and productive interaction based on recognition of the parity of ethnic cultures and mental traditions.

Key words: basic characteristics, ethnosocial and cultural competence, economists in tourism and hospitality management.
Introduction.

World processes of globalization determined the decision of the problem of professionalism in various spheres of Russia’s economy. Professionalism is now the main factor that contributes to the dynamic development of Russian society. Special attention was given to this issue in the President's message to the Federal Assembly December 12, 2013, which stated that the system of professional education, high school science must work on practical realization of the modernization programs of social-economic sphere.

Tourism and hotel management industry is by definition a "hospitality area" which enhances the image and attractiveness of different regions of Russia, that people of different professions, different intentions (tourism as acquaintance with the nature and culture of the country, opportunity to see and make contacts for subsequent commercial, social-cultural activities, etc.) visit as tourists.

Speaking about international tourism, the key role in this process is played by specialists-managers, economists, whose professional qualifications includes ethnosocial and cultural competence and plays a crucial role.

The purpose of the research is to reveal main characteristics of ethnosocial and cultural competence of economists of tourism and hotel industry on the basis of the disclosure of the definition of this phenomenon. In the definition of "ethnosocial and cultural competence of economists in tourism and hospitality sphere" we proceed from the consideration of the previous logic of concepts such as "competence", "professional competence", "socio-cultural competence", "ethnosocial and cultural competence".

Material and methods of research. The material of the article is a concentrated expression of the analytical approach to the problem, built in logical chain "analysis-synthesis-conclusion". Analytical-synthetic method of research is used.

Results and discussion of the research. In "Great Dictionary of Foreign Words" (1998) competence is defined as the possession of knowledge that allows to judge anything, express weighty, authoritative opinion.

I.A. Zimnyaya treats competence as "ownership, possession of suitable competence by a person, including his personal attitude to it and to the subject of activity. Competence is based on competence skill, but is not limited by it, i.e. competence should be treated as an integral characteristic, disintegrating on the spectrum of individual competence skills" [4, p. 35-41].

In the interpretation of D. Bruner competence is a set of qualities inherent by a skilled person, whose qualities correspond to the proper level of mastering his profession [12].

V.A. Demin treats competence as "level of a person’s skills, reflecting the extent of a certain competence skill and enabling to act constructively in the changing social conditions" [15, p. 34-42].

In V.A. Kalnei’s interpretation competence is considered as the ability to mobilize knowledge and expertise obtained in the process of learning and includes them in the concrete life and professional situations. The scientist believes that competence also enclosed hidden opportunities [14].

For our research regarding consideration of the problem of formation of competence of economists in tourism and hospitality industry, the consideration of this concept in terms of the psychological concept of improving governance (note the position of M. Kyaerst of inexpedient consideration of competence in general, but only in relation to specific cases, professions, etc.) is of particular interest. He identifies in a manager’s competence the following components such as a precursor to the formation of competence, including natural ability and talent, acquired knowledge, experience, and education, professional qualifications; activities as a process having the structure, characteristics and attributes (features) and the results of this activity reflected in its results, the observed changes in the activity of objects, as well as in quantitative and qualitative parameters and results and occurred shifts [1, p. 45-67].

Thus, competence is determined by a combination of personal, professional and social qualities of a skilled professional that correspond to an adequate level of mastery of his profession.
and productive activities. As we can see, for the most part, scientists, describing competence emphasize activity nature of this phenomenon, which was pointed out in our definition. Thus it is logical to consider the following concepts - "professional competence".

G.M. Kodzhaspirova characterizes professional competence as specialist’s possession of the sum of knowledge, abilities and skills, which are the basis for forming the base of professional activities, for communication, in general, for the formation of a professional’s personality, endowed with certain values, ideals, attitudes [6].

From the standpoint of acmeology professional competence is defined as the main cognitive component of professionalism of a specialist associated with his work in solving professional tasks in a constantly expanding system of knowledge, range of problems being solved. It allows to perform professional activities at a highly productive level [3].

From the point of view of the psychological approach of E.V. Bondareva the following components of professional competence are identified:

- functional component is a system of knowledge of all subjects, as well as the skills of his creative work, reflecting the depth, size, style of thinking, moral and ethical standards, social functions acquired by a future specialist in high school;
- motivational component reflects the motives, goals, needs, professional and valuable significant installations;
- reflective component includes the collection of self-management skills, self-analysis, forecasting the results of his activities;
- communicative component is presented by productive thinking and establish harmony in interpersonal relations, clearly present information and implement professional interaction [7].

In accordance with the selected psychological and acmeological parameters professional competence is defined by us from the position of the specialist’s of tourism and hotel management activity as a system of professionally significant relevant knowledge and skills of their use in a wide range of professional practice as an innovative way of thinking and values in the performance of social functions and as efficiency of the activity on implementation of professional interaction.

Socio-cultural competence is defined as:

- "a set of knowledge, skills and personal qualities necessary for intercultural communication in accordance with cultural and social norms of communicative behavior", expressed in structural components such as "knowledge (knowledge of specific cultural differences and similarities, expressed in the norms, values, behavioral samples), skills (ability to apply knowledge in communication), personal behavioral qualities (cultural polycentric, empathy, non-flatness judgment, flexibility)" [10].
- "integral quality of a person that connects valuable understanding of social reality, categorical specific social knowledge as a guide for self-determination as the ability of an individual to implement social technology in the major areas of human activity" [9, p.84].
- "a set of specific personality traits, abilities, knowledge and social skills, subjective readiness for self-determination that human integration in society through the productive performance of different social roles" [5].

For our study the definition of social competence given by the German philosopher and sociologist Jürgen Habermas in the context of the theory of speech communication is of special interest because verbal component of professional competence is the most important characteristic of the specialist in the field of tourism and hospitality industry. The scientist examines social competence through the prism of the adequacy of the social reality that requires the effectiveness of using mechanisms of emerging situations faced by a human.

"Socio-cultural competence" is considered by many scholars through the prism of culture communication (M.A. Bogatyreva, N.B. Ishkhanyan, V.V. Safonova, R. Milrud etc.). In their research they highlight the role of prevailing values in culture, which serves to establish harmonious contacts based on the ability to perceive and act adequately in situations of communication with representatives of different cultures. This understanding is in unison with the opinion of the French
explorer M.Th. Claes that socio-cultural competence skill is reflected in knowledge and respect the culture of the interlocutor, his scale of values which guide his communication. It is important to take into account the fact that, as the scientist points out, differences in scale of values of interlocutors often lead to problems in communication [2].

Socio-cultural competence is reflected in the willingness and ability to implement a dialogue between territorially, geographically and ethnically different traditional cultures. It is important to know his own culture and the culture of the area (region, country), which the interlocutor represents. Socio-cultural competence is an effective mechanism of education of internationally oriented person who is aware of the relationship and interdependence, uniqueness and integrity of ethnic picture of the world in which intercultural cooperation is an urgent need to address global problems of humanity [2, p 6].

On the basis of the definitions given by scientists, we understand socio-cultural competence as the willingness and ability to establish harmonious contacts with representatives of different cultures, to adequate perception and action in communicative situations on the basis of an equal dialogue.

The outlined approaches to disclosure of the concepts "competence" and "professional competence", "socio-cultural competence" as a basis for consideration of the core concept "ethnosocial and cultural competence" allow us to see common for them, that is total personal, cognitive, activity-related components of a person’s culture as part of a complex in all its diversity society in which the individual lives, works, realizing his life and professional attitudes, personality, endowed from his birth by national traits having his "cultural face". The essence of ethnosocial and cultural identity is not to lose your personality and go harmoniously in a common human context. So, let's consider the following concept of our research - "ethnosocial and cultural competence."

This concept is treated by us in the unity of such principles as general cultural knowledge, values, psychological, social and ethnic identity, the knowledge of norms and behaviors specific to the communication environment, as well as the willingness and ability to cross-cultural communication.

An important basis for the given definition is the works of the great humanist, scientist, musician, philosopher Albert Schweitzer who defined culture as a result of all the achievements of individuals and mankind in all areas of knowledge and activities that contribute to the enrichment of the individual and overall progress. As an important feature of Culture he singled out the ministry of development of man and mankind. He associated human progress with the development of culture and justified this by saying that "reasonable ideals designed to promote the advancement of mankind, are perceived by individuals and take the form that promotes the most efficient and expedient impact on their living conditions. Therefore, the ability of a person to be the carrier of culture, that is, to understand it and act in its name depends on the extent to which he is both a thoughtful and free being. [13] Continuing the idea of the great scientist and humanist, we note that a cultured person is guided by the ideals created by mankind for the harmony of the individual and society, man and nature, which, incidentally, was for Albert Schweitzer the highest and universal value. Many scientists (P.S. Gurevich, E.S. Markarian, B.T. Likhachev, etc.) culture is considered as a product of social activities and associated with the development of personality as a generalized characteristic of a person and as a measure of its spiritual, moral and professional development. As a personality, a man is formed by defining the relationship to the world in the making of his consciousness and self-consciousness, which is the basis of culture evolution of personality. In this process, an important part of communication is speech, thanks to which "the meaning of human communication is retained, behaviors are mastered, the cultural norms are assimilated, the scientific knowledge is accumulated, art is introduced. This creates a cultural speech environment, speech community of people and a set of cultural elements (traditions, symbols, values, norms) used by this community". [8, p. 99].

In the definition of the main concepts of the study, we proceed from the triad derived by B.S. Gershunskii - "literacy", "culture", "mentality", which reflects modern life and professional context,
personal and professional needs in the life of self-realization in accordance with their abilities and interests. [11]

As for mentality: mentality is a deep level of collective and individual consciousness, including the unconscious, the totality of intellectual attitudes, orienting behavior of a particular social or ethnic group or an individual. Unlike ideology, mentality expresses the level of consciousness in which the relationship to the world is not logically identified, but gives you the opportunity to take their own way itself, its natural and social environment.

Conclusion. Modern ethnosocial and cultural environment in which professional activities of an economist in tourism and hospitality industry will be held, is a combination of different interacting individuals, groups and social institutions.

This environment creates a kind of "social order" system of tourism and hotel management.

Therefore, for the harmonious existence of this system organizational, managerial, social and psychological mechanisms of inter-ethnic cooperation must be involved. The effective mechanism of interaction is interethnic tolerance, based on the recognition, understanding and respect for the national mentality of all inhabitants of the region, which will be held professional roles.

The law of the development of culture of interethnic communication as an essential component of professional competence of an economist in tourism and hotel industry is due to the fact that the national mentality of the person is determined objectively by existing links with a particular territory, where economic relations, culture and language, family and household traditions with psychological phenomena are developed.

Knowledge of the culture and history of the people contributes to the understanding of the mentality, that particular way of thinking, the deep spiritual edifice inherent ethnic group, which has developed over many generations and formed in certain climatic, historical and cultural conditions. It is determined by parameters such as historically national character; certain national sympathies and antipathies; national traditions enshrined in culture; life important values. The consideration of these ethno-cultural traits allows the skilled specialist to build a constructive relationship with consumers of tourist services on the basis of a cultural dialogue.

**Bibliography**
