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PROFESSIONAL APPLICATION GUIDELINES OF TECHNOLOGICAL HIGH SCHOOL PHYSICAL EDUCATION: PROBLEMS AND PERSPECTIVES

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Abstract. *In the present research, a study was carried out aimed at improving the process of physical education in technological high school education oriented towards the professional-applied physical training of the future specialist in the field. Based on the traditional and current approaches in the field of theory and practice of vocational training applicable to different levels of education, as well as taking into account the psychophysical and psychosocial characteristics of pupils' personality, we identified the educational potential of physical education in the high school cycle related to the perspective of its applied professional technological guidelines. The main factors that served to determine the character of the formative pedagogical influences of the professional-applied physical education process became the basic structural-functional components in the context of psychophysical qualities, motor skills and psychosocial characteristics necessary for the specialist to achieve socio-professional objectives.*

Keywords: *physical education, high school, applied vocational physical training, physical development, physical qualities, psychomotor skills, professiogram.*

Introduction. According to the recommendations of the European Parliament and the Council of the European Union, education as a whole should provide citizens with a wide range of skills, including the ability to approach any professional task creatively, critical thinking, the potential to solve a wide range of socio-professional problems, to make independent decisions, to assess risks and to manage one's own feelings constructively. In non-vocational education in physical education, a major importance is highlighting such key competencies, among which are awareness of one's own needs and identification of resources to overcome emerging obstacles to professional success, which is achieved by increasing motivation and confidence in one's own strengths. The training of learning / training skills must include a certain ability to focus on the goals set, to reflect operatively and adequately on the various conditions, to evaluate correctly and objectively the results of one's own educational activities.

The training / learning process should be formed in such a way as to create equal opportunities for independent action and teamwork. Key competence includes a "sense of entrepreneurship", based on special knowledge, planning skills, self-organization and subsequent skills of analysis, delegation, communication and cooperation. Thus, the results of education policies are expected, including in non-vocational physical education, in which the main objective is the oriented vocational training of the pupil through a competence approach [8].

At the same time, the key problem of the current education system in many countries around the world is the lack of an adequate relationship between the existing skills of graduates and the requirements of the employer. Despite repeated attempts to revise current documents governing the content of the

educational process, including the subject of "Physical Education", the overload of the archaic practical component of curricula, where there is an excessive complexity of educational material, lack of interdisciplinary connections, is mentioned everywhere, clarity in structuring the content of the program after years of study, continuity of the skills development process, where there is no possibility of wide tuning applications of skills acquired in future personal, social and professional spheres, lacks the mechanism of objective performance evaluation of graduate personality.

All attempts to modernize curricula in physical education have not had a significant impact on the motivation of high school pupils to practice physical education activities and, as a result, do not find adequate reflection on the psychophysical and functional performance of physical education, the personality of the high school pupil with an industrial vocational profile [13].

The **aim of the research** is to build the perspectives of forming the professional-applied guidelines of physical education in technological high school education.

Objectives of the study:

1. Studying the psychophysical and socio-psychological characteristics of the personality of the high school pupil.

2. Identifying the means and effective methods of professional-applied physical education within the discipline "Physical education" in technological high schools.

Research methods. Theoretical analysis and generalization of data from the literature; design; comparison; abstraction.

Research results. According to biological characteristics, the age of high school pupils coincides with the end of preadolescence and, according to psychologists - with the beginning of adulthood. During adolescence the processes of growth and body formation are completed, the final values get constant dimensions. Subsequent physical training to an insignificant extent depends on heredity and more on environmental factors, including the orientation of physical education. The complication of the social sphere and the work activity in which an adult is involved today, inevitably leads to the increase of the study term, the elimination of training periods, allowing young people to self-identify, trying on different professional roles. However, the extension of socializing time should contribute to an expansion of training opportunities. This also imposes special obligations on the high schools physical education [2].

The skeleton of the adolescent reaches the level of maturity, however, the process of improving functionality can take up to 25 years. By the middle of adolescence, the processes of nervous and humoral regulation of heart function stabilize. Active exercise creates favorable conditions for increasing the functional abilities of the cardiovascular, respiratory, hormonal systems. The muscular resistance to the fulfillment of the dynamic efforts by the adolescent corresponds to the respective indicators of an adult. Also, at the age of 17, the values of static resistance obtain the maximum indicators. The recovery period after physical exertion remains longer compared to adults [2].

During adolescence, the external and internal influence of sex hormones on adolescent motivation and behavior remains significant. Physiologically, adolescence is no longer as extreme as puberty, however, the transition to adulthood is not yet complete. At the end of adolescence, the interaction of the cortex of the brain and subcortex departments is perfected. The morphogenesis of associative structures in the frontal segments of the brain cortex is completed, which ensures the formation of self-awareness and the presence of complex emotions.

The main place is occupied by social factors, which predominate over biological ones in improving mental skills. The intellect of the adolescent as a whole plays a link between the biological organism and the

portrait of the personality as part of society [3]. Such psychological neoplasms are observed as attitudes towards work, self-awareness and desire for uniqueness. In the motivational sphere, the motives based on professional self-determination predominate. Of particular importance is the building of relationships with people who are of interest from a professional point of view, as well as actively developing the motivation for success. The adolescent's desire for self-actualization can be the main driver of activity and behavior as a whole. It is in adolescence that the most stable qualities of the individual are formed, which subsequently create the basis for its orientation and the value-semantic structure as a whole [10].

The adolescent has to make a difficult choice between the pleasures of adolescent life and the decision to study, ignoring some aspects of youth in favor of professional growth and the development of a successful career. In general, the sensational component of adolescence is inseparable from the professional formation of personality, for which young people master all the levers: anatomical-physiological indicators, which are at the level of an adult, real participation in adulthood, individualization in communication, ability to evaluate the desire and deeds with the principles and own imagination "I", sustainable moral ideals, the desire to build life plans for the future and their implementation, the ability to be responsible for their choice. Optimal organized vocational training can become a strong stimulus for the formation of psychological neoplasms inherent in young age [5].

The analysis of current research indicates an active search to solve the problem of low efficiency of physical education of pupils aged 15-16. According to experts, it is at this age that the implementation of the objectives of applied professional physical training is effective, which ensures the appropriate qualification of the future specialist. A special aspect is the elaboration of special professional-applied physical training programs, built on the use of the specific specific actions identified, which are particularly valuable for use in subsequent production operations. There are also papers that address issues related to the development or improvement of the system for assessing the level of professional motor skills or qualities. For example, the scales of the speed or quality of the production operations performed, the degree of independence in solving professional tasks. A special aspect are studies on the elaboration or improvement of professional programs for different specialties.

We mention that there is already experience in building a professional applied physical training of future computer technology programmers. Based on the curriculum, it is proposed to include in physical education classes at least 50% of the means of professional-applied guidance to improve indicators: speed of restructuring motor actions, stability, tempo and rhythm of motor action, spatial orientation and vestibular stability, general endurance and static, operational and long-term memory, thinking and all kinds of attention [4].

Physical education programs for technological high schools can be organized, taking into account the acquisition in stages of skills and abilities of professional significance. For example, the professional-applied training of engineers and builders is gradually implemented, evenly distributed over the years of study. During the semester, the teaching task is grouped into compartments: theoretical, methodical-practical and control. The program may include a motivational component aimed at activating pupils and taking into account their preferences. The control test is completed by assessing the "level of psychophysical training". This approach can be implemented in the core part of the physical education program, without increasing the academic hours allocated to the discipline [7].

Following the example of the training of construction masters, professional-applied physical training can be built on a complex approach. It is proposed to work in several blocks. The medical unit is responsible for health assessment and monitoring the socio-psychological unit performing the professional diagnosis of psychosocial qualities and their correction, the health unit (effective pedagogical) performs the process of professional-applied physical training, and the sports unit carries out sports activities [1] .

The purposeful application of sports activities in the field of "Physical Education", if they are close to the educational objectives and have a tendency towards important professional qualities, can also have a positive effect. Thus, the training of technical specialists can be more effective provided that the use of special devices and trainers for the development of the physical qualities necessary for the specialist in order to perform professional operations [6].

Successful attempts are made to create complex methods for diagnosing and testing pupils' psychophysical indicators in technical specialties during physical education classes. Systemic diagnosis may include individual, typological, psychophysiological, and functional models of pupil personality. This approach allows pupils to be differentiated in the educational departments, to identify the most prospective pupils and bachelors, to diagnose the state of the body, including stressful states, to identify the level of adaptation to study and future professional activities, to identify the risk group, to analyze interpersonal compatibility in academic groups [9].

A wide range of means of physical education can be used to educate individuality, initiative, ability to resolve conflict situations, creativity in work, the ability to self-organize in high school pupils from vocational education. The issue of applying dynamic games, national games, traditional holidays is quite current. It is also important to include creative tasks regarding the example of the composition of exercise complexes. Improving interdisciplinary connections is achieved through physical education breaks, relaxation exercises, which can be used later in the workplace. Special digital programs are developed to check professional availability: theoretical and methodological knowledge in the field of professional-applied physical training [11].

To date, special pedagogical technologies are being developed to stimulate adaptability to various unfavorable production conditions by increasing indicators of the physical training level of high school pupils in technological education. Based on the professional program of the specialist, those segments of the body of a worker who make a significant effort in the process of professional operations are established. For these body segments, exercise complexes are made up as well as massage techniques regarding work preparation or recovery after a work schedule [12].

Of particular importance to technology workers is the level of coordination of movements. There is a practice of "immersion" of pupils in conditions as close as possible to those of the professional, namely - the performance of complex coordination movements against the background of fatigue. Fatigue is considered to cause a person to find more rational (economical) ways to solve motor skill tasks. For this purpose, the training method is applied depending on the conditions, from which on four "position" the exercises aimed at the formation of one of the skills are performed and on the last one, on the fifth "station", it is necessary to combine tutorial exercises for accuracy, speed, rationality and inventiveness in the complex. At each meeting the assignments should have a novelty aspect for the pupils. Dynamic and sports games can also be used to develop special relaxation [14].

Technological high school graduates, as usual, actively use manual work at work. Manual dexterity, motor relaxation, accuracy of manual movements, absence of trembling

hands, strength of hands and fingers - all these are the qualities that attract the attention of physical education teachers in order to prepare pupils well for future professional activities [15]. Also, for these employees is characterized by the manifestation of special memory (memorization of numbers, geometric forms), imaginary thinking, switching attention, acute visualization and hearing. The tasks of professional-applied physical training include in this case a variety of means aimed at the complex development of physical and cognitive qualities. These tasks are successfully solved through dynamic and sports games, special tasks of games for memory, intelligence, fine motor skill and attention. Given the age of the high school pupil, the format of the exercise game may be the most popular for pupils.

Conclusions:

1. The psychophysical and socio-psychological characteristics of the personality of the high school pupil allow us to build a process of professional-applied physical education, taking into account the biological maturity. Recommended physical exertion can be at the same level as for adults. The properties of the nervous system are in harmony with social prescriptions. At this age the intellectual abilities of the personality are at the peak of development. The personality of the adolescent has a well-pronounced orientation for socio-professional activities. In this sense, the most favorable conditions for professional self-determination are created, the development of important professional qualities, the use of internal personality resources in order to begin the successful employment in the professional field.

2. Modern production technologies are a complex factor which advances the special requirements for the content of the professional-applied physical training of technological high school graduates. Current publications indicate that the construction of physical education in specialized high schools should be based on the professional profile of the specialist. Physical educational activities should be aimed at maintaining and improving the level of psychophysical health of future workers, towards a significant increase in the motivation to exercise, which for the most part should be presented by the tasks for the development of qualities, motor skill, psycho-social and professional intellectuals. The mandatory compartment should be the control over the state of motor and psychosocial preparation for professional activities.

3. Given the particularities of the professional activities of technological high school graduates, the most promising means of vocational physical training should be exercises for the development of special manual dexterity, the formation of a high level of strength and endurance of the arms and legs, corset area, vestibular stability, overall strength, increased levels of attention, memory, thinking and functionality of optical and auditory analyzers. For adolescents, it is necessary and current to include the game and the method of competition, as well as the development of extracurricular sports activities based on the preferences of the pupils themselves.

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