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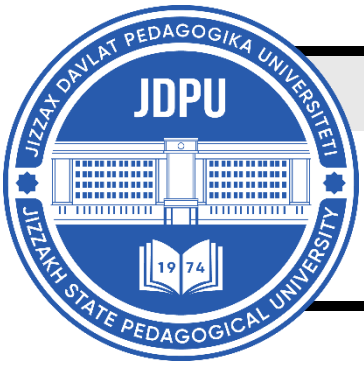
MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



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FORMATION OF STUDENTS' PERSONAL COMPETENCES IN PHYSICAL EDUCATION

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ABOUT ARTICLE

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Abstract: This article examines the methodology for using innovative technologies to attract students of higher educational institutions to physical education and sports. In the current conditions of rapid development of science and technology, the issue of promoting a healthy lifestyle among students has become even more urgent. The conditions for the formation of motivations that encourage students to independently engage in active physical education and sports are scientifically analyzed.

Introduction

In the world's leading scientific research centers (the Federal Institute of Sport Sciences in Bonn, the South African Institute of Sport Sciences in Newlands, the center at Loughborough University), scientific research is being conducted to identify effective methods and means of developing students' physical education. In this regard, special attention is being paid abroad to this activity in order to improve the health of humanity and create the future through a healthy lifestyle.

The problem of increasing the interest of young people in physical education and sports in our country is the most urgent due to the social need to raise a healthy generation. The Resolution of the President of the Republic of Uzbekistan No. PQ-201 dated April 11, 2022 “On measures to bring youth to a new level of mass sports in neighborhoods” specifically addresses the issues of widely promoting a healthy lifestyle and bringing their mass sports involvement to a new level through the systematic organization of mass sports competitions among young people in neighborhoods[1].

Literature review

Numerous studies devoted to the problems of developing physical culture in higher educational institutions indicate the need to search for new technologies that will help form the desire of students to have a high level of health. This depends on the development of personal motivation, special knowledge and behavior, and is also the result of the joint activity of the teacher and the student. Improving the health of students is important, since the future graduate must be a specialist with higher education who has the appropriate level of physical training.

Today, the requirements for the intellectual and adaptive abilities of a person are also increasing. However, the influence of subjective factors such as personal significance, satisfaction, spiritual enrichment on the formation of motives that encourage students to independently engage in physical exercises, sports and active physical education and sports activities is decreasing [2].

A person's attitude to life, motivation, physical and mental health, certain knowledge in the field of physical training and a healthy lifestyle indicate his readiness to adequately serve the state and society. S.N. Chernyakova noted that it is necessary to scientifically study social factors affecting the physical fitness of young people, problems that are harmful to their health and slow down their physical development, and that educational activities organized in educational institutions often have an effective impact on the physical fitness, health, and formation of physical stability skills of students [3]. For this, young people need to adapt in the first year of their education in an educational institution, change their lifestyle, and a number of aggravating factors include: the fact that the stages of introducing young people to education in higher education institutions are not based on psychological adaptation (adaptation) factors;

antipathy towards education and the educational institution associated with mastery that occurs in educational institutions; the lack of systematic work in educational institutions to encourage, promote, and make physical fitness and a healthy lifestyle a habit.

The countries with the world's strongest athletes are investing significant financial and human resources in the development of scientific research to identify and nurture sports talents. The main component of the programs used in all these countries is the formation of national sports institutes and sports training centers, where all aspects of the theory and practice of sports training are studied, as well as scientific and methodological support for training for highly qualified athletes. In these centers, athletes regularly undergo modern pedagogical, biomechanical, physiological tests and medical examinations, which allow obtaining new scientific knowledge, timely correction and improvement of training programs [4].

Methodology

The theoretical and methodological basis of the methodology developed during the study is a model that expresses the essence of the process of forming students' physical culture in the educational system of a pedagogical higher educational institution. The model reflects a unique system of organizing the organizational process of involving students in physical education and sports, the central link of which is the principles, methodological approaches and author's methodology, which ensures the gradual formation of their physical culture from a low level to a high level.

The target component of the model is the formation of a student's physical culture and involvement in sports on the basis of innovative technologies. The methodological components of the model include the process of forming physical culture by identifying a system of theoretical aspects of physical culture; medical-biological, psychological, pedagogical, philosophical, sociological, professional-integrative principles; cultural, systemic-activity, innovative-technological, competence-based and person-oriented methods of implementing methodological approaches to research; self-formation of students based on resolving internal contradictions of the individual, individualization of physical education activities, development of integrative content, creativity. physical education competence, intensive self-improvement using mobile devices; a complex of pedagogical influences consisting of a system of interrelated

organizational, pedagogical, methodological, technological and individual specific conditions for the effective formation of students' physical culture. As a structural component of the model, the foundations of professional training are outlined by integrating the content of such classes as "Attraction to physical education and sports", "Analysis of chronobiological processes". The indicators of the formation of the student's physical culture were expressed in low, medium, high levels based on motivational, activity, cognitive criteria.

The social order of training graduates with a high level of physical culture - the methodology determines the methodological support of the process of forming the physical culture of students. A special website providing web content information developed during the research is integrated with the Jizzakh State Pedagogical University platform www.main.jdpu.uz and is presented 24/7 – in the “Clubs and Groups” section on the online sports club page “Physical Education and Mass Sports”. In this case, the methodology for forming students’ physical culture using “Post” content is implemented based on the ideas of mobile education, which represents the algorithm of interaction between the teacher and the student via the Internet and mobile devices, and also introduces the national-regional component of the training content, various health programs and non-traditional systems of physical exercises. The web content “Physical Education and Healthy Lifestyle” consists of blocks of theoretical-methodological and practical stages, and consists of exercises and media information developed in accordance with the gender of the students.

In the practical stage block, the skills of future teachers to perform physical exercises were formed using the Coaching method, taking into account the professional activity of future teachers. In the first stage of the study, the student learns to use mobile content in cognitive activity and chooses an individual way of engaging in it for himself. In the second stage, the student understands the need and role of using mobile technologies in the process of developing physical culture. For these purposes, the content includes questions for self-testing, the purpose of which is to check the student's level of perception and assimilation of the independently studied material. The result of this monitoring is the level of use of mobile content. In the third stage, the formation of appropriate skills in working with mobile content requires not only individual, but also group activities in its use. In the fourth stage, the monitoring and testing process is carried out, which allows you to quickly obtain information

about the demand for mobile content and its content. The result of this period is the development of conclusions about the effectiveness of the content.

Thus, it can be concluded that the experimental programs identified above constitute the content of the author's methodology for the formation of physical culture of students of a pedagogical higher educational institution. The content of the methodology for the formation of physical culture of students was developed based on the identification of stages, their purposeful implementation and determination of the result.

Results

During the study, the technology for implementing a specific approach to physical education and sports consisted of the following sequential stages:

Stage 1 (the first stage of the formation of physical education and sports culture) - September-December (1st semester), during which the student's need for physical education and sports, physiological and psychological aspects of the student's participation in physical education and sports are identified;

Stage 2 (generalizing stage) - February-May (2nd semester) generalizing specific goals and objectives based on the preliminary formation of students' physical education and sports culture, that is, strengthening their health by engaging in the chosen type of sport;

Stage 3 (independence stage) - in the second year of study at a higher educational institution, students independently develop physical education and sports culture and regularly engage in sports.

The level of formation of the motivational component in students was determined using the following diagnostic methods:

1) The author's methodology for determining the worldview of physical culture through Google forms questionnaires;

2) The author's methodology for selecting a group of motivations for physical education and sports;

3) The methodology for assessing the emotional-emotional state.

4) SFK (Health, Activity, Mood) test.

5) Differential measurement of emotions according to the K. Izard method.

For the experiment, students were divided into two groups regardless of gender: the experimental group (80 students) and the control group (81 students). Each of the respondents in both groups was diagnosed using the methods described above, with the exception of monitoring for operational and reflexive-evaluative indicators.

To organize the experimental study, the method of mathematical statistics used in the quantitative analysis of experimental data was used. In the context of mathematical and statistical processing of the results of pedagogical research, we used X^2 (chi-square) to compare the distribution of subjects in the experimental (TG) and control (NG) groups. It allows us to transfer the scores obtained as a result of the diagnostics of the formation of physical culture to levels (high, medium, low) by components and indicators, to construct tables of distribution of scores to determine the number of students at this level, and also to prove whether the number of students at one of the levels is really more or less.

The value of the (chi-square) is calculated by the following formula:

$$X^2 = \frac{1}{n_t * n_n} \sum_{i=1}^{c} \frac{(n_t * T_i - n_n * T_i)}{T_i + N_i}$$

During the training sessions before the experiment (initial part) and after the experiment (control section) in pedagogical universities, the levels of formation of the following components and indicators of physical culture formation of students were determined (high, medium, low): motivational (physical culture-oriented worldview, motivational-value attitude to physical culture, emotional indicator); activity (mental, physical and health); cognitive (operational, reflective-evaluative and behavioral).

In the 2023/24 and 2024/25 academic years, during the physical training process in pedagogical higher educational institutions, the respondents of the experimental group implemented the methodology for the formation of physical culture of students and the pedagogical conditions identified in the study. For students in the control group, the educational process was carried out according to traditional professional training within the specified time period.

The following data were determined for the experimental (TG) and control (NG) groups on the formation of components and indicators of students' physical culture in the initial and control sections (Table 1).

Table 1. Pre- and post-experimental results of respondents on the components and indicators of physical culture

Components of physical culture	Physical culture indicators	Analysis type	Number of respondents						Mathematical-statistical analysis	
			High level		Medium level		Low level			
			TG	NG	TG	NG	TG	NG	X^2	P
Motivational	Worldview	Before	4	5	54	57	22	19	3,79	> 0,05
		After	31	19	39	32	10	30	157,9	< 0,05
	Motivational	Before	2	2	61	60	17	19	2	> 0,05
		After	14	7	60	56	5	18	86,4	< 0,05
	Emotional	Before	10	9	43	43	28	29	3,83	> 0,05
		After	17	11	50	49	13	21	19,73	< 0,05
Active	Mental	Before	10	13	41	40	29	28	2,84	> 0,05
		After	19	14	42	41	19	26	16,01	< 0,05
	Physical	Before	6	5	35	41	39	36	3,69	> 0,05
		After	11	6	47	43	22	32	35,7	< 0,05
	Health	Before	2	2	37	36	41	43	2,3	> 0,05
		After	7	4	50	47	23	30	13,96	< 0,05
Cognitive	Process	Before	9	9	25	37	46	35	2,78	> 0,05
		After	21	12	55	47	4	22	16,85	< 0,05
	Reflective-evaluative	Before	3	2	12	28	65	51	3,99	> 0,05
		After	9	4	38	22	33	55	11,62	< 0,05

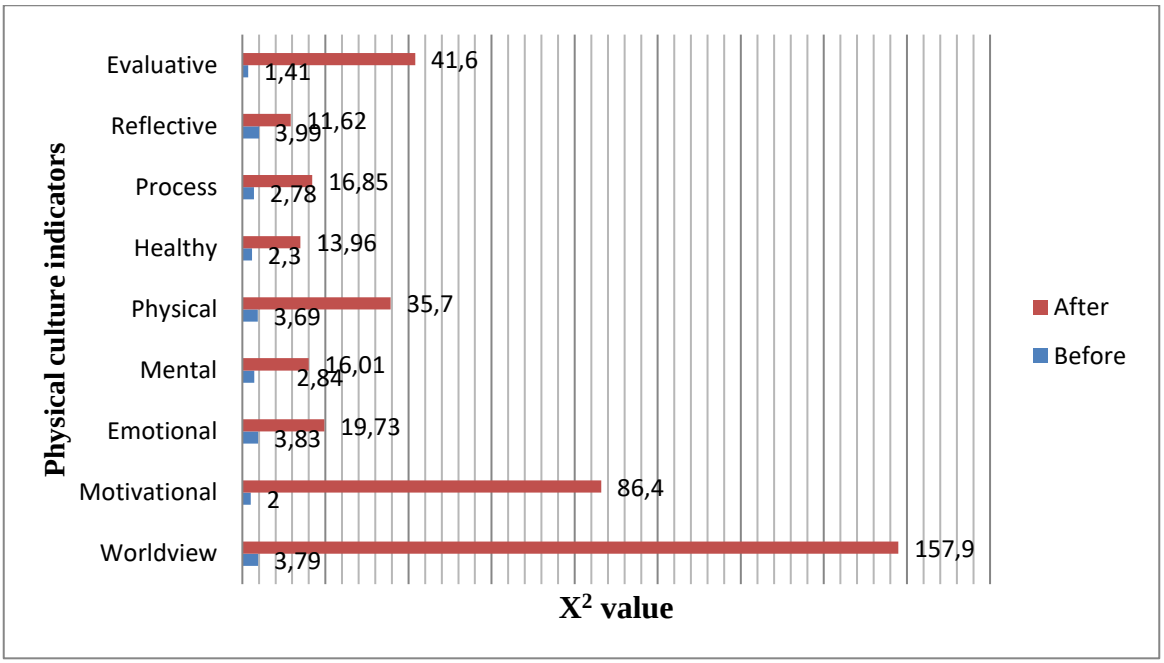
	Behavior	Before	11	9	42	48	26	24	1,41	> 0,05
		After	33	17	41	49	7	15	41,6	< 0,05

Based on the analysis of the initial and control data on the dynamics of the formation of physical culture in various indicators of motivational, activity and cognitive components, it was found that all indicators improved in the experimental groups compared to the control groups. After the end of the experiment, an increase in the number of students in the experimental group at a high and average level of physical education compared to the control group was noted. A decrease in the number of students in the experimental group compared to the control group was noted at a low level of physical education. In order to clearly define the above-mentioned rules, a logarithmic diagram was constructed showing the comparative results of the mathematical and statistical processing of the research results of the initial and control sections on X^2 for all indicators of formation. (Diagramm 1)

Summing up the results of the research work, it was proven that there is effectiveness. The fact that the indicator is 1.14 times higher, that is, by 14%, indicates the effectiveness of the experimental test work. It should be noted that for the reliability of obtaining comparative results, the selection of respondents was carried out according to all indicators of the formation of physical culture, however, the reliability analysis revealed significant differences between the data of all respondents and the data of the sample.

Based on the analysis of the logarithmic diagram (diagram 1), it can be shown that the methodology for developing students' physical culture and the identified pedagogical conditions based on the research methodology had the most significant impact on their worldview oriented towards physical culture (157.9+/-3.79 units), the motivational and value attitude of young people to engaging in physical education (86.4+/-2 units) and their behavioral indicator (41.6+/-1.41). This is explained by the fact that it meets the needs and interests of young people through the implementation of modern innovations.

Diagramm 1. Comparative results of the formation of physical culture of students according to various indicators of the initial and control sections according to X2



The experimental methodology had a less positive effect on the above criteria on the mental indicator (35.7+/-3.69 units), emotional indicator (19.73+/-3.83 units) and operational (process) indicator (16.85+/-2.78 units), and physical indicator (16.01+/-2.84 units).

Of all the indicators of the formation of students' physical culture identified in the study, the introduction of the experimental methodology had the least positive effect on the indicators of health promotion (13.96+/- 2.3 units) and reflexive (11.62+/- 3.99 units). This is explained by the fact that the formation of students' physical culture in the context of the health component largely depends on the health infrastructure of the higher educational institution and the individual characteristics and living conditions of each student.

Conclusion

As a result of the research on innovative mechanisms for involving students in physical education and sports, it is necessary to provide education based on a new approach to regular physical education and sports, to develop their attitude to a healthy lifestyle, to grow up as a comprehensively perfect person, and to improve their health. Improving the methodology for adapting students to innovative activities is of great importance in developing a system for developing physical abilities and involving them in sports in educational practice. In order to take into account the specialization and professional activities of students in the formation of their physical culture, to develop their regular involvement in physical education and sports, it

is necessary to develop targeted measures for their psychological support, individual recommendations based on the results of diagnostics of their psychophysical readiness for future professional activities and the level of health.

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