

Formation of value orientations in youth during physical training

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Abstract

The purpose of this study is to determine and scientifically justify the indices of development of value orientations in students based on the introduction interactive technologies during professionally oriented physical education. The timeliness of the research: one of the relevant problems of modern pedagogical science is the need to determine the influence of professional-applied physical training on the formation of the personality of students. For the effective functioning of modern society, a qualified specialist is required who not only possesses perfectly a certain specialty, manages to rule his state of physical fitness, psychosomatic health, but also has highly developed value orientations. The participants of the research: we experimentally controlled the effectiveness of the implemented measures during professionally oriented physical education at three general educational institutions (n=92). The pedagogical experiment was conducted in accordance with the physical education schedule (three lessons a week) and included an experimental program that regulated the planning, organization, control, regulation, correction and promotion of the development of value orientations in the students. The methods of the research: theoretical analysis and generalization of scientific and methodical literature, pedagogical observation, pedagogical experiment, methods of mathematical statistics. The process of forming value orientations in students youth during professionally oriented physical education should be structured as a pedagogical system that is an open type with complex organizational and pedagogical conditions to ensure optimal functioning in an educational environment. Conclusions. A comparative analysis of the results of the research shows the effectiveness of the author's approach and the possibility of its introduction into the practice of the educational process of vocational schools.

Keywords: professionally applied physical training, value orientations, youth



1. Introduction

One of the relevant problems of modern pedagogical science is the need to determine the influence of means of professional-applied physical training on the formation of the personality of students, which would harmoniously combine spiritual wealth, moral purity and physical perfection. Scientific and technological progress changes the society in technological terms that leads to an increase of requirements for professional ability, competence, spiritual, moral, functional, physical perfection of a man. For the effective functioning of society, a qualified specialist is required to master a certain specialty, to maintain a good state of physical fitness and psychosomatic health, and finally, to possess highly developed value orientations. Modern society feels the need of competent, competitive, professionally mobile specialists who are capable of continuing vocational education and have a high level of universal and professional culture, psychosomatic health, being able to creatively solve social and personal problems.

2. Literature Review

The main tasks of physical culture and sports are a constant improvement of the level of health, physical and spiritual development of the population, promotion of economic and social progress of society [1, 2, 3]. Consequently, physical culture and its integral part, professionally applied physical training, should be considered as a purposeful activity, aimed at creating effective conditions for the physical and spiritual development of students on the basis of universal values that would contribute to moral, aesthetic and professional development with the goal of further self-realization [4, 5]. Physical culture and sports, professionally oriented physical education of students are powerful social-pedagogical systems of formation, pedagogical correction and perfection of the moral structure of the personality of future specialists. In the context of this position, the scientific point of view is that the physical education and sport are professionally oriented to physical education, has specific educational qualities. This is primarily due to the fact that in such pedagogical systems interactive forms of educational and educational activity of students are effectively implemented, various psychological and pedagogical situations of educational orientation are used, the solution of which is supported by the results of their psychomotor activity, psycho emotional experience and causal type of attribution [6, 7, 8].

The formulated position is reinforced by the fact that physical culture and sport, physical education is inherently polyfunctional in nature. Such a point of view finds its confirmation in the practice of upbringing by ensuring the formation of the moral and spiritual qualities of the individual, psychomotor development, organization of useful social and professional activity, disease prevention and rehabilitation, physical and psycho-emotional recreation and communication [9, 10, 11]

The analysis of the state of physical education, its positioning in the context of the formation of value orientations in youth has shown the need for the development of new scientific and technological and organizational and pedagogical approaches that are capable of solving the actual social and pedagogical problem, the essence of which is the introduction into the educational environment of the educational establishment of organizational and pedagogical factors and technologies for the formation of value orientations, including the means of professionally oriented physical education (physical training day) [5, 8, 11, 12].

In our view, the optimization of the professional training of students by means of physical education should take place through the implementation of the following structural and logical level-based scheme: psychosomatic health level, the level of psychophysical ability to work, value orientations formation level, professional preparedness level, and the ability for professional mobility.

The aim of this study is to determine and scientifically justify the indices of development of value orientations in students based on the introduction interactive technologies during professionally oriented physical education.

3. Method

3.1. Participants

We experimentally controlled the effectiveness of the implemented measures during professionally oriented physical education at three general vocational establishments (n=92): Higher Professional College (n=34), Technical Lyceum (n=27), Professional Lyceum (n=31). Control and experimental groups were



staffed by students (boys aged 15–17) who, according to the state of health, were included to the main training group. According to the results of the medical examination and pedagogical diagnosis, these groups were homogeneous. According to the indices of development of value orientations (motivation of successful activity, self-evaluation, etc., level of psychomotor abilities, psychosomatic health, development of physical qualities, etc.), the fluctuations were within the limits that did not have statistically significant differences ($p > 0.05$).

3.2. Materials

The pedagogical experiment was conducted in accordance with the physical education schedule (three lessons a week) and included an experimental program that regulated the planning, organization, control, regulation, correction and promotion of the development of value orientations in the students. The experimental program was agreed with the leadership and educational collectives of educational institutions (in terms of «projective sessions» and conferences that were held once a month). The implementation of the planned activities took place in cooperation with the teachers of physical education, sports trainers, as well as with the teachers of the departments of physical education, sport and health, who also worked on the project and provided the work of «projective sessions» before the beginning of the educational experiment and in the process of its implementation. To determine the probability of difference in the results of the study the Student's test was done. The significance for all statistical tests was set at $p < 0.05$. All statistical analyses were performed with the SPSS software, version 21, adapted to medical and biological researches.

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

3.3. Procedure

The implementation of activities of professionally oriented physical education was carried out by implementing adequate means, methods, pedagogical technologies, interactive forms of organization of the educational process of students, constructed on the basis of diagnostic objectives and tasks of professional training of future specialists. The pedagogical experiment was conducted in three stages, which were aimed at the implementation of the tasks of professionally oriented physical education in the context of the development of value orientations of students, namely:

- the formation of the ability to establish qualitative-static (situational) links between the results of educational activities and value orientations (83 classes with elements of professionally applied physical training, 9 activities for extra-curricular physical education and sports activities);

- the formation of the ability to establish qualitative-dynamic links between the results of educational activities and value orientations (65 classes with the elements of professional-applied physical training, 12 activities for extra-curricular physical education, sports and sports activities);

- the formation of the ability to establish qualitative and perspective links between the results of educational activities and value orientations (54 classes with elements of professional and applied physical training, 15 activities for out-of-school physical culture, fitness and sports work).

The content of each stage was determined by the purpose and objectives of its implementation, as well as a set of interactive technologies for their solution, technology management and pedagogical monitoring, the dynamics of educational achievements of students in the process of professionally oriented physical education.

4. Results

In the course of the study it was found out that at the beginning of the experiment there were no statistically significant differences in the indicators of the development of value orientations in the students of the control and experimental groups. The results of the educational experiment presented in Table 1 indicate that under the influence of the experimental program students of the experimental group had statistically regular positive changes. Thus, the analysis of the results of the experiment gives reasoned arguments that the adaptation by students of the purposes of forming value orientations by means of professionally oriented physical education, their further differentiation at the level of specific lessons, forms of extra-curricular physical culture, recreational and sports work, independent classes led to the emergence of a systemic impact and cumulative educational effects of educational environment.



Table 1. Dynamics of development indices of value orientations in students of the control and experimental groups during the experiment.

Criteria for assessing the level of development of value orientations	Evaluation of indices ($\bar{X} \pm m$), points			
	Control group		Experimental group	
	Before the experiment	After the experiment	Before the experiment	After the experiment
Attitude towards personal psychosomatic health	3.62±0.02	4.27±0.03*	3.58±0.02	9.81±0.07**
Attitude to educational activity	2.98±0.01	3.10±0.02*	2.81±0.01	9.33±0.06**
Attitude to professionally applied physical training	3.27±0.02	3.81±0.02*	3.25±0.02	10.62±0.08**
Relation to the historical memory of the people	2.86±0.01	3.33±0.02*	2.70±0.01	9.85±0.07**
Attitude to the Motherland	3.31±0.02	3.65±0.02*	3.28±0.02	10.58±0.08**
Respect for the rights and freedoms of other people	2.90±0.01	3.43±0.02*	2.80±0.01	10.60±0.08**
Social responsibilities of a person	2.61±0.01	3.29±0.02*	2.53±0.01	10.13±0.08**
Affiliate Dominance	3.26±0.02	3.65±0.02*	3.05±0.02	10.47±0.08**
Self-education ability	2.83±0.01	2.99±0.01*	2.75±0.01	10.24±0.08**
Attitude to the culture of the country	3.01±0.02	3.54±0.02*	2.91±0.01	8.74±0.06**
Ability to self-education	2.13±0.01	2.60±0.01*	2.02±0.01	9.31±0.07**
Ability to determine the goals of education	3.41±0.02	3.91±0.02*	3.24±0.02	10.0±0.08**

Note: *the results do not have statistically significant comparative dynamics ($p > 0.05$); **the results have statistically significant comparative dynamics ($p < 0.001$).

It was found out that the level of development of indicators of value orientations of students in the experimental group in comparison with similar indices of the students in the control group had a statistically significant growth dynamics. Thus, in the experimental group, the attitude of students to personal psychosomatic health was 9.81 points, while in the control group it was 4.27 points; the ratio of attitudes to educational activities is 9.33 points and 3.10 points, respectively. Assessment of the attitude towards professionally oriented physical education (professionally applied physical training) – 10.62 points and 3.81 points respectively. The influence of interactive methods and pedagogical technologies of educational activities of students aimed at the formation of value universal human and professional orientations, the attitude towards self-identity as a social and personal value caused the high dynamics of the formation of a positive attitude to the historical memory of the people in the students of the experimental group, on average up to 9.85 points (control group – 3.33 points); positive attitude towards the Motherland in the experimental group – up to 10.58 points (control group – 3.65 points); respect for the rights and freedoms of other people in the experimental group – up to 10.60 points (control group – 3.43 points); social responsibilities in the experimental group – up to 10.13 points (control group – 3.29 points); a positive attitude to the culture of their country in the students of the experimental group – to 8.74 points (control group – 3.54 points). We also have the opportunity to argue that the influence of methods, tools and forms of professionally oriented physical education led to an increase in partner dominants in experimental group students to 10.47 points (control group – 3.65 points), which we considered as a value orientation that integrates psycho-emotional personality structure.

The next step in assessing the effectiveness of the implemented measures of professionally oriented physical education of students was to determine their impact on the development of education and self-education. To do this we conducted the analysis of the components of education and self-education (the

ability to self-organization, self-evaluation, self-control, self-fulfillment, etc.) of students. These results allowed to establish that the systematic influence of interactive forms of professionally oriented physical education (subject-subject mechanisms of interaction, mutual educational impact, etc.) provided a positive dynamics in the development of education and self-education, on the basis of which the needs for continuing education, development and preservation of psychosomatic health, professional development, professional mobility. It was found out that in the experimental group, the ability of students to self-education had higher rates of growth (up to 9.31 points) compared to those in the control group (2.60 points). In the context of the study, we considered it expedient to determine the impact of professionally oriented physical education on the development of the ability to formulate the goals and objectives of vocational training. The analysis of the results suggests that the implemented measures contributed to a higher rate of formation of the needs-motivation sphere of the experimental group (10.0 points) compared with the control (3.91 points). The positive dynamics of indices is explained, in our opinion, by an individualized approach to the development of cognitive, axiological, praxeological, affective and motivational components of the conscious attitude of students to educational activities in the process of physical education and professional training. We consider the important argument in explaining this fact to be the realization in the process of the educational experiment of systemic effects of the effective reinforcement of the influence of interactive technologies, as well as the operational development of psychomotor professionally oriented abilities, motor skills and abilities of students of the experimental group (the phenomenon of «stimulating influence of the useful result»).

Our next scientific position was to determine the impact of professionally oriented physical education as an open type of a pedagogical system, which ensured the implementation of an experimental program. The result of the effectiveness of educational effects was the dynamics of students' development of such value orientations as self-organization, diligence, persistence, and self-evaluation. We considered these qualities as personal formation that provided the subject of the educational process with successful activity as well as the ability to establish qualitative-static, qualitative-dynamic and qualitative-perspective relationships between the results of educational activities and the pace of the development of value orientations (Table 2).

The analysis of the data shows that the ability of students to knowingly establish links between the results of educational activities, actions, behavior (as factors of value orientations) provides growth indices that characterize the ability to self-organization, diligence, perseverance, self-evaluation, self-control, tolerance. In the experimental group, these indices have higher and statistically significant growth rates compared to the control group.

Table 2. Indices of formation in students' ability to self-organization, diligence, persistence, self-evaluation under the influence of professionally oriented physical education.

Value orientations	Assessment of the level of formation level ($X \pm m$), points			
	Control group		Experimental group	
	Before the experiment	After the experiment	Before the experiment	After the experiment
Self-organization	3.65±0.02	3.71±0.02*	8.97±0.05	9.86±0.06**
Durability	3.16±0.02	3.53±0.02*	7.83±0.04	9.69±0.06**
Persistence	3.06±0.02	3.48±0.02*	7.49±0.04	9.83±0.06**
Self-assessment	3.05±0.02	3.22±0.02*	8.51±0.05	9.84±0.06**
Self-control	3.02±0.02	3.21±0.02*	7.23±0.04	9.78±0.06**
Tolerance	3.62±0.02	3.89±0.02*	8.39±0.05	10.58±0.07**

Note: * the comparison of estimates does not have statistically significant differences ($p > 0.05$); ** the comparison of the estimates is statistically significant ($p < 0.001$).

In order to substantiate the effectiveness of the experimental program in the context of the reliability and sustainability of the educational, educational and psychomotor educational achievements of the students, we consider it expedient to determine the factors that influence the formation of motivation to professionally oriented physical education and professional training (Table 3).

Table 3. Indices of the formation in students the motivation of successful activity under the influence of professionally oriented physical education.

The nature of the manifestation of the influence of motivators on the formation of attitude to successful activity	Assessment of the level of development of the motivation of successful activity ($X \pm m$), points			
	Control group		Experimental group	
	Before the experiment	After the experiment	Before the experiment	After the experiment
The conscious choice of the educational institution	3.34±0.02	3.95±0.02*	7.83±0.05	10.71±0.06**
The desire for professional self-realization	4.45±0.03	4.89±0.03*	8.37±0.05	11.54±0.06**
The desire to do physical exercises independently	3.98±0.02	4.22±0.03*	7.88±0.05	10.15±0.06**
Attracts the content of professionally oriented physical education	4.03±0.02	4.29±0.03*	7.96±0.05	11.63±0.06**
Consciously apply to professionally oriented physical education as a professional value	3.05±0.02	3.77±0.02*	9.11±0.06	11.26±0.06**
Additionally, I attend activities of out-of-school physical culture, recreational and sports work	3.12±0.02	3.39±0.02*	8.72±0.05	10.94±0.06**
I know and understand the indices of my own psychophysical development that can substantiate the importance of professionally oriented physical education	3.48±0.02	3.85±0.02*	7.74±0.05	9.80±0.06**
Perform an independent search for additional information on the values of professionally oriented physical education	3.02±0.02	3.65±0.02*	7.94±0.05	10.80±0.06**
The measures of professionally oriented physical education attract	3.10±0.02	3.44±0.02*	8.62±0.05	10.83±0.06**
I have the skills of psychomotor control	3.11±0.02	3.56±0.02*	8.24±0.05	10.27±0.06**
I carry out development and preservation of psychosomatic health	4.12±0.03	4.38±0.03*	7.55±0.05	9.68±0.06**
I have a method of development of physical qualities	3.05±0.02	3.42±0.02*	7.80±0.05	9.94±0.06**
I have a method of forming motor skills and abilities	3.10±0.02	3.58±0.02*	7.41±0.05	9.86±0.06**
Supporter of a healthy lifestyle	2.98±0.01	3.11±0.02*	8.06±0.05	10.24±0.06**
I understand the psycho-physiological mechanisms of influence the body of harmful habits	3.15±0.02	3.61±0.02*	7.10±0.05	9.45±0.06**

Note: * the results do not have statistically significant dynamics ($p > 0.05$); ** the results have statistically significant comparative dynamics ($p < 0.001$).

A comparative analysis of the results of the study was carried out on the indices that fulfilled the function of the criteria for assessing the development of motivation students in educational and educational activities. Consequently, the dynamics of the development of the motivation of successful activity in

students of the experimental group has a stable character of formation that is characterized by indices of variations of average estimates of its formation.

Thus, in the experimental group, the indicator characterizing the level of the formation of a conscious choice of an educational institution has a range of fluctuations of 5.34–10.71 points (control group 3.13–3.95 points); an indicator characterizing a stable desire for professional self-realization in the experimental group was 5.43–11.54 points (control group 4.05–4.89 points); a stable desire to independently engage in physical exercise and sports in students of the experimental group amounted to an average of 5.53–10.15 points (control group 3.68–4.22 points); attracts the content of professionally oriented physical education – in the students of the experimental group 4.87–11.63 points (control group 3.35–4.29 points); a conscious attitude to professionally oriented physical education as a specialty – in the students of the experimental group 4.78–11.26 points (control group 2.89–3.77 points); the need for additional attendance of activities of out-of-school physical culture, health and sports work – in the students of the experimental group 5.69–10.94 points (control group 2.98–3.39 points); understanding of the need to know the indices of their own psychophysical development and the ability to substantiate the significance of physical education – in the students of the experimental group 5.39–9.80 points (control group 3.05–3.85 points); carry out independent search of additional information on the significance of the influence of physical education as a professional value – in students of the experimental group 4.63–10.80 points (control group 2.83–3.65 points); attracting activities of professionally oriented physical education – in the students of the experimental group 5.34–10.83 points (control group 2.84–3.44 points); have skills of psychomotor control – in students of experimental group 4.88–10.27 points (control group 2.94–3.56 points); carry out the development and preservation of psychosomatic health – in the students of the experimental group 5.39–9.68 points (control group 3.84–4.38 points); have a method of development of physical qualities – in the experimental group 4.79–9.94 points (control group 2.85–3.42); have a method of forming motor skills and abilities – in the experimental group 4.98–9.86 points (control group 2.67–3.58); lead a healthy lifestyle – in students of the experimental group 5.14–10.24 points (control group 2.57–3.11 points); understand the mechanisms of influence the body of harmful habits – in the students of the experimental group 4.67–9.45 points (control group 2.79–3.61 points).

5. Discussion and Conclusion

The analysis of literary sources and scientific research has shown that the problem of the use of physical culture and sports with the purpose of forming the motivation to develop the value orientations in youth is relevant in the modern theory and a practice of vocational education [1, 2, 4, 5, 9, 11, 13–16]. In our opinion, along with the achievements of other scholars, the rationale for the stated positive dynamics, we see the need to adhere to certain psychological and pedagogical laws, the implementation of which in the educational process is the result of the developmental influence of professionally oriented physical education, namely:

1. Interiorization approach to the formation of the goals of the (goal-setting) of the professionally oriented physical education, on the basis of which is the education of abilities to goal formation, that is a motivate factor for education, self-education, self-actualization, self-evaluation, diligence, perseverance in achieving the goals and objectives of educational activity;

2. Formation in students conscious and constructive attitude to personal psychosomatic health; development of psychomotor abilities, motor skills and abilities; positive dynamics of their professional preparedness, professional mobility. On the principles of such an approach (due to the implementation of the subject-subject interaction of students in dyads, triads, micro groups, small groups), the systemic effect of the development of adequate self-evaluation, cognitive, praxeological, axiological, and personal components of the motivation of successful activity is achieved;

3. Systematic reinforcement of the results of the students goal-forming activity, formation of value orientations, a causal type of attribution, actions and behavior (psychomotor development, professionally oriented physical qualities, motor skills and abilities in the context of their transposition into the structure of the individual).

Conclusions.

The presented results of the study allow to determine the content of professionally oriented physical



education that should be based on the implementation of certain conceptual provisions, the essence of which is as follows:

1) the content of the structural and functional components of the education of the personality of students, their vocational education and professionally oriented physical education must be determined by the system-forming function of structured goals of the formation of a competitive, competent, healthy specialist capable of social self-realization in the labor market and modern challenges of socio-economic development countries;

2) the process of forming value orientations in students during professionally oriented physical education should be structured as a pedagogical system that is an open type with complex organizational and pedagogical conditions to ensure optimal functioning in an educational environment;

3) the implementation of innovative technologies of the subject-subject structure aimed at forming the ability to establish qualitative-static, qualitative-dynamic, qualitative-perspective relationships between the results of educational activities, actions, behavior and value orientations of the individual (self-organization, diligence, self-evaluation, self-control, tolerance, self-actualization, self-realization), and as an integral result of education – the development of the desire for education, self-education, professional self-realization;

4) the formation of active social and personal attitude among students in relation to measures of professionally oriented physical education, creative use of physical culture and sports as factors of the optimization of professional training.

A comparative analysis of the results of the research shows the effectiveness of the author's approach and the possibility of its introduction into the practice of the educational process of vocational schools.

Prospects for further research in this direction. An analysis of the level of physical fitness of student youth of vocational schools will be conducted in the future.

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