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Professional Development of Future Physical Culture Teachers during Studying at Higher Educational Institutions

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Abstract

The work was focused on exploring the motives for choosing a teaching profession and the development level of motivation for continuing professional growth in the process of studying at a higher educational institution; the analysis of the levels of readiness of the students of the Faculty of Physical Education for continuing studying; the diagnostics of the dependence of the level of motor readiness of students, who are future physical culture teachers, on the level of their motivation and readiness for continuous professional development. Experimental studies were conducted at the Physical Education Faculty of the Taras Shevchenko National University «Chernihiv College». The study was conducted in 2016-2017 (during the 1st year of study) and in 2019-2020 (during the 4th year of study). The experimental group consisted of 67 students between the ages of 17 and 22. The studies showed the dependence of the level of motor readiness of students on the level of their motivation and readiness for continuous professional development. The indicators of motor activity of the fourth-year students with high levels of motivation and readiness for continuous professional development were increased concerning the amount of the motor activity that is characteristic of the professional activity of a physical culture teacher. The indicators obtained during the study indicate that students, who are aware of the need for professional development master the content of the curriculum better during the period of study and, as future physical culture teachers, better understand the purpose and objectives of education of pupils.

Keywords: physical education, physical culture teacher, motivation, student



1. Introduction

The success of the professional realization of a future teacher and the level of one's professional skill depend on the process of one's own professional development and growth [1, 2]. The professional development of a teacher is a process of continuous transformation in the pedagogical activity that leads to the sustainable development of professionalism. Most scholars [3, 4] divide it into stages, phases, levels, and characterize by the mutual influences and interdependence of all components. Each level of the mentioned process, based on its integrity, systematic organization and subordination to the logic of continuing pedagogic education, is linked to the previous one. This approach makes it possible to distinguish the following stages: the stage of professional self-determination and development during study at higher educational institutions (HEI); the stage of professional improvement and professional growth during postgraduate training in the course of advanced training [5, 6]. Our research focuses on the stage of professional self-determination and professional development of future physical culture teachers while studying at a HEI.

The level of development of the motor readiness of the students of the Physical Education Faculty takes one of the first places in the process of professional development of future physical culture teachers. The activity of a teacher requires constant enrichment of knowledge, development of abilities; therefore, it is important to find out the level of motivation and readiness of students for continuous professional growth and its influence on the development of the students' motor readiness.

2. Literature Review

E. F. Zeyer [2] considers motivation as a component of professional development, a structural component of professionalism. In its turn, professional development is defined as the formation of stable positive motives, socially significant and professionally important qualities of a person, readiness for continuous professional growth, finding optimal methods and ways of qualitative and creative performance of the professional activity, according to the individual-psychological characteristics of a specialist. The scientist identifies several types of the motivation of professional choice: basic, which is revealed in the combination of the attitude to work with an interest in the profession, assessment and testing of one's own qualities, readiness for self-improvement; the type of motivation for professional choice, which is to understand the specifics of the chosen profession and limit the choice related to the requirements for the mental and physical qualities of a person; a type of professional choice motivation which is characterized by a mismatch between the interest in the chosen profession and the motives for social duty. The latter type is considered the least effective, because a student is guided only by one's own desires, without considering the subjective and objective possibilities of realization of the latter.

Ye. P. Ilin [7] proves that professional and cognitive motives mostly affect the success of education. Educational activities at a HEI consist of many parts. These parts are relatively independent entities as if they are built into motives that contribute to the final result. Cognitive, professional, pragmatic, public and social, and personally-prestigious motivations are the components of a common motive for learning activities. The studies of scientists [8, 9, 10] prove that motivation is an important factor in successful physical activity of a student.

The notion of readiness among other things in pedagogical science is considered as the readiness for professional activity, continuous professional development. O. S. Kocharian, Ye. V. Frolova, & V. M. Pavlenko [11] reveal readiness in the context of a particular form of activity, its quality, and type. The scientist links the development of the readiness for the independent activity to the process of formation in the students learning generalized skills, during which the stages change from the motivational basis of action to the use of the ability to act independently to master a new skill.

Most scientists consider readiness as a certain mental state, by which they understand the specific manifestation of all components and the psychics in a certain period of time, and define it as concentration, instant mobilization of the forces of an individual directed to perform proper actions at the right moment or the state to act in a proper way in the proper direction [12, 13, 14]. The readiness as a mental state can mean the possibility of a future teacher to solve problems in the learning environment.



G. Griban, et al. [15] point out that the student's readiness for continuous professional development is the result of a purposefully organized process. The readiness includes the desire to solve professional tasks, to have professional skills, abilities, and knowledge developed at the proper level.

Yu. Zaitseva [16] points out that a physical education teacher must possess the technical elements of physical culture, adapted to one's professional activity, the methods of explanation and presentation of the basic and auxiliary elements. The professional motor activity of a physical culture teacher means the skills of mastering the technique of physical exercises and spotting, imitation of their technique, demonstration. In order for a physical culture teacher to become a true professional, one must have practical skills that are part of the professional pedagogical activity along with theoretical knowledge [17, 18].

Researching the technology of forming the culture of motor activity of the students of HEI, scientist [19, 20] prove that a future specialist in physical education, in addition to special pedagogical knowledge and skills, must have high motor readiness, professionally important motor skills, mastering of which must be stimulated during the educational process. Thus, the formation of motor readiness takes one of the defining places in the professional training of a future physical culture teacher. One's motor readiness is determined by the level of development of physical qualities, the formation of motor skills, the result of a specialized process of physical education, aimed at solving specific problems [21, 22].

The aim of the article is to investigate the fundamental factors of the continuing professional development of future physical culture teachers in the process of studying at a higher educational institution.

The tasks are

- 1) to investigate the motives for choosing the profession of a teacher and the level of students' motivation to education activities at a higher educational institution;
- 2) to determine the readiness levels of the students of the Physical Education Faculty for continuous professional growth;
- 3) to identify the dependence of the level of motor readiness on the students' motivation and readiness for continuous professional development.

3. Method

3.1. Participants

Experimental studies were conducted at the Physical Education Faculty of the Taras Shevchenko National University «Chernihiv College». The study was conducted in 2016-2017 (during the 1st year of study) and in 2019-2020 (during the 4th year of study). The experimental group consisted of 67 students between the ages of 17 and 22.

3.2. Materials

The experimental study used a set of techniques that revealed professionally important qualities. Theoretical and methodological data of the study of motivation and readiness for professional development, theory and technique of using test methods for personality study were applied. Choosing the indicators and methods of investigating the professional development of a student, the researchers took into account the content of the activity and the general psychological characteristics of a professional.

The experimental study included diagnostic techniques that revealed the personal and generally intellectual qualities of the respondents. The techniques used were investigated and evaluated in terms of their validity and reliability. To conduct the qualitative analysis of revealing the most important reasons for choosing the profession of a teacher, the questionnaire of Ye. P. Ilin [7] was adapted. The level of development of respondents' motivation for learning activities was determined using the adapted methodology of T. D. Dubovytska [11]. The level of the students' readiness for continuous professional growth was determined using the adapted methodology of V. Zvereva and N. Nemova [23].

In the process of research of the motives for choosing the profession of a teacher, the respondents were asked to evaluate the presented motives for choosing pedagogical activity on a scale from one to ten. The points were calculated on two scales, which revealed the importance of each motive and let to make the

conclusions about the respondent's pedagogical vocation, related and secondary interests that in turn made it possible to identify high, middle, low and levels of students' motivation.

The methodology of T. D. Dubovytska revealed the level of development of the respondents' internal motives. The motive is internal when it coincides with the purpose of the activity. Internal motives are related to the cognitive need of a subject, the pleasure one receives from the learning process. The purpose of studying is to master the learning material, which in this case has the character of educational activity. The domination of internal motivation is characterized by the manifestation of the student's own activity in the process of educational activity. The following regulatory boundaries were used to determine the level of internal motivation: 0-5 points – low internal motivation; 6-14 – the middle level of internal motivation; 15-20 – a high level of internal motivation.

The questionnaires were used to find out students' level of readiness for continuous professional growth. The evaluation was performed on a five-point scale. The adapted methodology of V. Zvereva and N. Nemova made it possible to find out the factors that hinder or stimulate the professional development of the respondents; to determine the level of realization of their development needs (a high level of readiness), the developmental dependence on the situation and conditions (the middle level of readiness), a low level of development (a low level of readiness).

To achieve the aim of the study, the following scientific methods were used: an analysis of scientific and methodological literature, pedagogical observation, chronometry method, heart rate monitoring, questioning, testing, pedagogical experiment, the methods of mathematical statistics.

The analysis of the scientific and methodological literature allowed us to find out the motives for choosing the profession of a teacher, the peculiarities of the development of motivation for educational activity because the motivational component determines the direction of future transformations of the student's personality, taking into account the needs of pedagogical activity and focusing on improvement and professional development; to analyze the concept of readiness, which pedagogical science considers as a readiness for self-education, independent activity, professional activity, continuous professional development, the content of motor training of the students of the Faculty of Physical Education. The method of pedagogical observation allowed us to investigate the meaningful component of the motor activity development of the students of the experimental group, its nature, and magnitude, not disturbing the natural course of the educational process. The chronometry method was used to control motor activity, total and motor density that is to determine the amount of time spent on the motor activity components of the students of the experimental group in the 1st and 4th years of study. It was carried out by the observation of each student. The heart rate monitoring was used to determine the energy orientation of the motor activity of the students in the 1st and 4th years of study. The heart rate, which characterized the energy-saving mode, was measured using a pulsometer during the student's motor activity with an interval of ten seconds. The questionnaires and testing methods were used to obtain reliable structured information regarding the motives for choosing a profession of a physical education teacher, the level of development of motivation for continuous professional growth in the learning process, and the level of readiness for the continuous professional development of students. The pedagogical experiment became the leading method of the research because it gave an opportunity to track the dynamics of development of the studied factors in the process of purposefully organized training, which is characterized by a positive attitude to continuous professional development.

The methods of mathematical statistics were used to perform the objective and qualitative analysis of the results of a study that had a numerical expression. The following procedures were applied: calculation of the percentage; calculation of arithmetic mean. Statistical processing was carried out using Microsoft Excel, which also helped to distribute experimental data.

3.3. Procedure

Higher pedagogical education is a fundamental component of the system of continuous pedagogic education. At the stage of studying at a HEI, a future teacher acts not only as an object of purposefully organized influence but also as a subject of continuing education. This stage is characterized by creative activity for mastering the educational program and one's own development, its purpose is to form a general



pedagogical basis for future pedagogical activity, the ability to solve pedagogical tasks. In fact, this stage determines the further professional activity and professional development of a teacher.

To achieve the aim of the work, we studied the level of motivation of the students of the experimental group for choosing the profession of a physical culture teacher, the level of their motivation for studying activities. We also determined the level of students' readiness for continuous professional growth. The structure and content of students' motor activity were investigated and the dependence of the level of motor readiness on the students' motivation and readiness for continuous professional development was revealed.

4. Results and Discussion

Motivation is a desire, incentives, and stimulation that leads to the activity and determines its orientation. Motivation internally drives activity, combines meaningful and dynamic sides of both actual and potential content. Generally, motivation is defined as a process that begins with the actualization of a motive and ends with the initiation of any action [23]. Motivation determines the direction of future changes in the personality of a student, taking into account the needs of pedagogical activity and focus on improvement and professional development. Mastering the profession, a student must have a strong professional motivation for studying, related to the interest in one's future profession because, at this stage, motivation is a prerequisite for the development of professionalism. The motivation for professional development is one of the important qualities of a pedagogical worker, but its formation is impossible in a short time. When referring to the motivation for continuing professional growth of a future educator, one should consider, first of all, educational and professional motivation, based on professional orientation and aimed at solving professional problems [6, 12, 24].

Exploring the motivation of educational activities, one should separate the motives for education and the choice of specialty. At the stage of professional choice, motivation is crucial in the process of professional self-determination. Only when school graduates adequately assess their own psycho-physiological capabilities and the content of the chosen profession, realize its social significance, the choice of the profession can be conscious [15]. The results of the study of the motivation for choosing a profession by the students of the experimental group are presented in Table 1.

The analysis of the obtained data shows that 25.37% and 59.70% students questioned had the desire to be engaged in the pedagogical activity at high and middle levels respectively. 40.40% and 44.77% students had high and middle levels of interest in the subject of Physical Education respectively. Choosing a profession for the opportunity to show the abilities, 46.27% students showed the middle level of motivation and 19.40% – a high level. 49.76% respondents (35.82% students showed the middle level of motivation; 13.94% – a high level) realized the need for continuous professional growth. At the same time, choosing a profession, 59.70% students had a high level of motivation for extra earnings and long-lasting vacations; 49.25% respondents – for a convenient work schedule. Generally, the analysis of the results made it possible to find out that more than half of the students of the group chose the profession regarding their own pedagogical orientation and interest in the subject of Physical Education, based on the awareness of their own pedagogical abilities and the need to constantly develop.

Table 1. The study of the motivation of profession choice by the students of the first year of study of the Physical Education Faculty (n=67, %)

The motives for choosing a profession	The level of motivation		
	Low	Middle	High
The desire to become a teacher	14.93	59.70	25.37
An interest in the subject	14.93	44.77	40.30
Non-standard, creative content of work	44.77	40.30	14.93
The desire to help students	40.30	40.30	19.40
The opportunity to show the abilities	34.33	46.27	19.40
The need for constant growth	50.28	35.82	13.94
Staying in a cultural environment	10.45	59.70	29.85
Independence, freedom of activity	29.85	50.75	19.40



Increased personal standards	25.37	55.23	19.40
Love and gratitude of students	70.15	19.40	10.45
Long-lasting summer vacation	20.90	19.40	59.70
Understanding students' problems	10.45	70.15	19.40
Recognition by society	26.87	53.73	19.40
The level of salary	59.70	29.85	10.45
Family tradition	40.30	29.85	29.85
Convenient work schedule	10.45	40.30	49.25
Possibility of additional earnings	29.85	10.45	59.70

The scientists [6, 25] note that the interest in the future profession is formed at the stage of its choosing; the perception of a profession, adaptation to professional activity – at the stage of vocational training. The process of mastering a pedagogic profession and understanding professional activity is the most difficult in the motivational structure. The substantive dissimilarity of the student's motivation is its transitional character because it combines cognitive and professional motivation. Beginning the study at a HEI, a former pupil is faced with a decrease in the level of external control over the educational activity and a change in the structure of the educational activity itself. Successful learning activities require a strong motivation because a student must plan, implement and control it by oneself.

The motivation for studying at a HEI is developed directly in the process of educational and cognitive activity of a future teacher because the life goals and sensory motives, related to the study, appear. However, the orientation to active learning arises only when personal cognitive interest, the basis of which is an internal motive, encourages studying [26, 27]. The results of the study of students' educational motivation are presented in Table 2.

Analyzing the orientation and the level of motivation of the students of the Physical Education Faculty for educational activity, it was revealed that among the students of the 1st year, the middle level of motivation, which accounted for 44.77% respondents, prevailed. 40.30% students of the 1st year had high motivation for study. In our opinion, the advantage of the number of students with the middle level of motivation for study in the first year is related to the decrease in the level of external control. 14.93% students had a low level of motivation for study, which coincided with the percentage of students who had a low level of motivation for teaching activities when entering a HEI.

Nowadays, the task of educational activity at the university is to create the conditions and activate the factors that positively influence the development of the educational activity of a future teacher, accelerate one's professional development. The indicators obtained as a result of the study of the 4th-year students' level of motivation indicated positive dynamics of motivation. Thus, the number of students with a low level of internal motivation was decreased by 8.96%, while the number of students with a high level of motivation was increased by 5.97%. The obtained indicators identify the creation of necessary conditions and activation of factors that positively influence the development of the educational motivation of a future teacher, indicate the emotional pleasure that a student receives of the learning process at a HEI. The positive dynamics of indicators also indicate the manifestation of students' own activity and confirm that the motivation for studying at a HEI is developed directly in the process of educational and cognitive activities of a future teacher.

Table 2. The study of the motivation for educational activity by the students of the Faculty of Physical Education (n=67, %)

The level of motivation	The 1st year of study	The 4th year of study	The difference
Low	14.93	5.97	8.96
Middle	44.77	47.76	2.99
High	40.30	46.27	5.97

In the process of mastering the profession, motives are changed, they acquire new content. The students form the readiness to act according to their motives. The readiness can be defined as an integral

system of values, cognitive, emotional and behavioral qualities that provide an individual with the opportunities for self-realization. The readiness is the result of upbringing, self-education, vocational training or professional education, professional orientation, professional self-determination, and professional development. Its content combines the desire to solve professional tasks independently and creatively, to have professional skills, abilities, and knowledge developed at the proper level.

Getting ready for an activity goes through several stages, namely, setting a goal, developing a model for future action, revealing readiness in specific actions, and comparing the goals set with the results. The situational and long-standing readiness is distinguished. The long-standing readiness is formed as a result of a specially organized activity, in advance. Unlike situational readiness, which is characterized by relative constancy, the long-standing readiness is a permanent prerequisite for successful activity. The long-standing readiness is interesting from the point of view of a pedagogical science since this state is formed in advance, developed under the proper conditions, it can lead to sustainable results. The level of students' readiness for continuous professional growth is presented in Table 3.

The indicator of the development level of readiness for professional development in the 1st year was mainly dependent on the lack of awareness of the specificity of the future profession, the level of theoretical knowledge and the lack of experience in teaching activities. At this stage of the study, the number of students with a low level of readiness for professional growth accounted for 34.32%. The first-year students with the middle level of readiness (50.75%) differed in the formal approach to the study, and only 14.93% students with a high level of readiness for professional development felt they were complete subjects of the educational process. That is why under the influence of teachers, the goals of freshmen were directed to the development of interest in the pedagogical activity, qualities, skills, abilities, revealing opportunities for professional realization and determining the direction of future transformations on the basis of the needs of the profession. The indicators of the 4th-year students were formed during the study period. Under the purposeful systematic influence of teachers, who simultaneously were the organizers of teaching practice, the image of the profession of a teacher and the perception of oneself as the subject of this profession, an active personal attitude to studying were formed, the motivations for professional orientation and the need for professional development were strengthened. Thus, the number of students with a high level of readiness for professional growth was increased by 26.87% and accounted for 41.79% in the 4th year of study. The number of students with a low level of readiness for professional development was decreased significantly, accounting for 14.79%. This potential of students gives the opportunity to conclude that there is a sufficiently high level of readiness to acquire new knowledge and to improve the acquired ones, to perform complex tasks.

Table 3. The study of the level of readiness of the students of the Physical Education Faculty for continuous professional growth (n=67, %)

The level of motivation	The 1st year of study	The 4th year of study	The difference
Low	34.32	14.93	19.40
Middle	50.75	43.28	7.46
High	14.93	41.79	26.87

It should be noted that the level of motivation and readiness for continuous professional development play an important role in the success of the future teacher's motor readiness, in particular motivation is defined as an important factor of successful physical activity [18]. The student's professional motivation is the basis of the professional training one receives at a HEI. The set of needs and interests forms the basis of the future teacher's professional training. Such needs as acquiring the basis for improvement and professional development, increasing professionalism, guide an individual in the process of mastering the profession of an educator.

A physical culture teacher must have professionally significant qualities, skills, abilities, and knowledge necessary for successful solving the tasks defined by the profession, that is, to have a high level of pedagogical skills [12]. The high level of professional skills of a teacher depends on one's professional development, based on the educational activity at a HEI. At the stage of studying at a HEI, one masters the

skills of physical exercise teaching, management of children's collective, the knowledge of age physiology, professional capacity. In addition to special pedagogical knowledge and skills, the graduates of the Physical Education Faculty must have a high level of motor (physical) readiness. The basis of it is practical skills that are formed over a long period of time, and therefore physical training takes one of the defining places in the professional training of students. Acquiring knowledge in the studying process, forming the skills needed for the physical education teacher, under the guidance of teachers, students form the professional potential necessary for the realization of pedagogical activity and development.

In addition to theoretical knowledge, the students of the Physical Education Faculty must acquire a sufficiently high level of skills. One of the objectives of our study was to analyze the level and dynamics of motor readiness, depending on the level of development of motivation and readiness for professional growth. In the course of the study, the practical classes in basic subjects were timed, in order to determine the energy orientation of students' motor activity, heart rate monitoring was performed.

Having analyzed the results of practical classes of first-year students in basic disciplines, we can conclude that their motor activity is mostly of a mixed character. A freshman spends significantly less time doing aerobic and anaerobic exercises. Performed motor activity is mostly represented by the middle or simple coordination complexity, complicated movements are rare. In terms of skills and abilities, the exercises which were already learned prevailed, in comparison to new exercises. The smallest amount of time is spent on additional actions. Such physical qualities as agility, power, and flexibility are used quite rarely in practical classes, in contrast to speed and endurance. Therefore, we can conclude that the first-year student's motor activity is characterized by speed, endurance, mixed orientation, simple or moderate coordination. The indicators of first-year students with a high level of motivation and readiness for studying activity almost do not differ from those of the students with a low level of motivation and readiness. The differences are observed only in the performance of additional actions, motor actions with revealing flexibility, dexterity, and power, which most likely depends on the level of initial motor readiness, physical development, skills, and lifestyle.

During the study, the requirements for students are being increased, and therefore the indicators of students' motor readiness are changed towards the prevailing components of motor activity, which are directly related to the professional activity of a teacher of physical education: an increase in the volume of motor actions of aerobic orientation, a decrease in the time to perform the movements of mixed orientation, reduced amount of extra movements, increased endurance and decreased agility and power, the ability to perform and correctly show physical exercises, to perform physical exercises with the students, the need to spot the students during the class.

The physical activity orientation of a physical culture teacher should ensure a low level of exhaustion and a high level of efficiency that increases the volume of motor actions of aerobic orientation. In the process of gaining pedagogical experience, the ability to rationally distribute load is formed, the endurance is increased and speed and power load are decreased, the ability to effectively solve pedagogical tasks through performing coordinating simple movements emerges. These components determine the efficiency of a teacher, are they are formed and improved during practical training and in the process of teaching practice. Their dynamics are directly influenced by the level of motivation and readiness for professional development (Table 4).

The experiment with the 4th-year students with the middle level of motivation and readiness for professional growth showed that in the course of practical classes, the volumes of motor actions of aerobic orientation (45.5%), simple coordination complexity (50%), showing previously learned exercises (53%), spotting (4%), and motor activity requiring endurance (35.5%) were significantly increased. At the same time, there was a decrease in the time of performing movements of mixed and anaerobic orientation – 35.5% and 19% respectively, medium (36%) and high (14%) coordination complexity, new exercises (24%), additional actions (19%). Such components of motor activity as speed and agility were hardly changed. The volumes of the physical actions of aerobic orientation of the 4th-year students with the middle level of motivation and readiness were increased by 13.5% of the time, in comparison to the students of the 1st year, while the motor activities of mixed and anaerobic orientation were decreased by 6.3% and 7.2% respectively. The volumes of physical activity of simple coordination complexity were increased by 18.9% of the time,



while the ones of medium and high orientation were decreased by 5.2% and 13.7% respectively. The indicators of the substantive component were changed in the following way: the time spent showing previously learned exercises was increased by 3.9%, spotting - 3.2% due to reduced time spent showing new exercises by 2.3% and performing additional actions - by 4.8%. Performing motor actions requiring endurance was increased by 15.1%, agility - 0.9%, power - 2.6%, while performing motor actions requiring flexibility and speed was decreased by 5.4% and 8% respectively.

The indicators of motor activity of the 4th-year students with a high level of motivation and readiness for professional development differed significantly from the ones of the 1st-year students. The volumes of physical activity of simple coordination complexity were increased to 51.9% (by 19.9%) due to the decrease in the volumes of motor activity of the medium coordination complexity to 34.5% (by 6%) and a high coordination complexity to 13.6% (by 13.9%). The mixed and anaerobic motor activities were decreased to 30% (by 11.4%) of the time and 14.8% (by 11.3%) of the time respectively, while aerobic motor activity was increased to 55.2% (by 22.7%) of the time. Regarding the substantive component, after passing the teaching practice, the time of showing new exercises was decreased to 19% (by 7.3%), the time of performing additional actions - to 18% (by 5.8%). At the same time, the amount of time to perform the previously learned exercises was increased to 56% (by 6.9%) and spotting - to 7% (by 6.2%). The indicator of endurance volumes were increased to 43% (by 22.6%) of the time, while the indicator of flexibility, speed, agility, and power volumes were decreased by 11% (6.2%), 14.1% (11.9%), 18% (0.7%), 13.9% (3.8%).

Table 4. The structure and content of the physical activity of the students of the Physical Education Faculty (n=67, %)

The indicators		A high level of motivation		The difference	The middle level of motivation		The difference	A low level of motivation		The difference
		1st year	4th year		1st year	4th year		1st year	4th year	
Orientation (%)	Aerobic	32.50	55.20	22.70	32.00	45.50	13.50	32.00	40.00	8.00
	Anaerobic	26.10	14.80	11.30	26.20	19.00	7.20	26.20	24.40	1.80
	Mixed	41.40	30.00	11.40	41.80	35.50	6.30	41.80	35.60	6.20
Coordination complexity (%)	Simple	32.00	51.90	19.90	31.10	50.00	18.90	31.10	32.00	0.90
	Medium	40.50	34.50	6.00	41.20	36.00	5.20	41.20	43.70	2.50
	High	27.50	13.60	13.90	27.70	14.00	13.70	27.70	24.30	3.40
Substantive component (%)	Showing new exercises	26.30	19.00	7.30	26.30	24.00	2.30	26.30	25.90	0.40
	Showing previously learned exercises	49.10	56.00	6.90	49.10	53.00	3.90	49.10	50.60	1.50
	Performing additional actions	23.80	18.00	5.80	23.80	19.00	4.80	23.80	21.00	2.80
	Spotting	0.80	7.00	6.20	0.80	4.00	3.20	0.80	2.50	1.70
Physical qualities (%)	Flexibility	17.20	11.00	6.20	18.00	12.60	5.40	18.00	12.80	5.20
	Agility	18.70	18.00	0.70	19.00	19.90	0.90	19.00	23.50	4.70
	Speed	26.00	14.10	11.90	24.90	16.90	8.00	24.90	24.00	0.90
	Power	17.70	13.90	3.80	17.70	15.10	2.60	17.70	17.80	0.10

	Endurance	20.40	43.00	22.60	20.40	35.50	15.10	20.40	21.70	1.30
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In the structure of motor activity of 4th-year students with a low level of motivation and readiness for professional development, mixed (35.6%) and aerobic (40%) activities were observed most often. In comparison to 1st-year students, the volume of aerobic motor activity was increased by 8%, mixed motor activity – by 6.2%. Regarding the anaerobic motor activity, less time was spent on its performing – 24.4%, which was decreased by 1.8%. This motor activity was characterized by movements of a medium coordination complexity, the volume of which was increased by 2.5% and accounted for 43.7%. Regarding the substantive component, during practical classes, the majority of time was spent on displaying previously learned exercises, the volume of which was increased by 1.5% and accounted for 50.6%. A smaller amount of time was spent on additional motor activity – 21% (it was decreased by 0.4%) and on showing new exercises – 25.9% (it was decreased by 0.4%). Concerning the physical qualities of the 4th-year students, speed (24%) and agility (23.7%), a low level of manifestation of power (17.8%) and flexibility (12.8%) prevailed. Less time was spent on motor activity requiring endurance the volume of which accounted for 21.7% and was increased by 1.3%, in comparison to freshmen.

5. Conclusions

On the basis of the analysis conducted, the primary factors of the continuous professional development of the students of the Physical Education Faculty in the process of study at a higher educational institution were considered. The studies of the motivation for choosing a profession revealed that choosing their future profession, more than 50% students realized the need for continuous professional development, were motivated by their own pedagogical orientation and were aware of their pedagogical opportunities.

The analysis of the students' motivation for studying showed that the students with middle and high degrees of motivation prevail among the 1st-year students (44.77% and 40.30% respectively). The percentage of students with a low level of motivation (14.93%) corresponded to the percentage of students with a low level of motivation for professional teaching activities. The analysis of the dynamics of the level of motivation for educational activity shows that among the 4th-year students, the number of students with a low level of motivation was decreased by 8.96%, while the number of students with middle and high levels was increased by 2.99% and 5.97% respectively.

The analysis of students' level of readiness for professional growth showed that in the 1st year of study, it depended on the level of awareness of the specificity of the teaching profession and theoretical knowledge. The interest in the pedagogical activity, revealing opportunities of professional realization, awareness of the need for the professional development of the 4th-year students were formed under the purposeful systematic influence of teachers in the studying process. In general, the number of 4th-year students with a low level of readiness for professional development was decreased by 19.4%, in comparison with the first year of study, with the middle level – by 7.46%; the number of students with a high level of readiness was increased by 26.87%. The obtained results show that the 4th-year students have a sufficiently high level of readiness to acquire new knowledge and to improve previously acquired, to solve complex tasks.

The analysis of the dependence of the level of motor readiness of students on the level of their motivation and readiness for continuous professional development showed that the indicators of motor activity of the students of the 4th year with a high level of motivation and readiness for continuous professional development were changed, that is there was an increase in the volume of those motor actions, which are characteristics of the professional activity of a physical culture teacher. Thus, aerobic activity was increased by 22.7% of the time, mixed and anaerobic activities were decreased by 11.4% and 11.3% of the time respectively. The endurance volume was increased by 22.6% and agility and power volumes were decreased by 0.7% and 3.8% respectively.

Thus, the results of the research show that the students, who realize the need for professional development, acquire the content of the curriculum during the study better and understand the purpose and objectives of students' education better.



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