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RESULTS OF EXPERIMENTAL VERIFICATION OF THE REALIZATION OF PEDAGOGICAL TECHNOLOGY OF PE TEACHERS' SELF-IMPROVEMENT IN THE PROCESS OF PROFESSIONAL ACTIVITY AT VARIOUS STAGES OF PROFESSIONAL DEVELOPMENT

The article deals with the issue of professional development and peculiarities of self-improvement of teachers of physical education. The aim of the research is to define components of self-improvement of teachers of physical education at various stages of professional development, and to theoretically substantiate and experimentally check realization of pedagogical technology of teachers' self-improvement in the process of professional activity. Teachers of physical education from higher educational establishments took part in the experiment. A number of methods were used: analysis, comparison, systematization, survey, discussion, teachers interviewing, questionnaire, pedagogical experiment, methods of mathematical statistics, and graphic display of results. Results of the stating experiment proved discrepancy of the actual state of components of PE teachers' self-improvement in the process of activity of professional perfection guideline.

In order to define physical state of PE teachers, tests aimed at physical preparedness have been selected; physiological indices have been defined with the help of functional tests; to characterize muscle component of PE teachers, muscular system development index has been used. For a good evaluation of indices of physical preparedness, physiological, and morphological indices, 9-grade evaluation charts have been developed. Analysis of the level of theoretical and methodological preparedness, pedagogical communication, and computer literacy of PE teachers was done with questionnaires developed by us. Definition of motivation to self-improvement of teachers of physical education in the process of professional activity was done on the basis of the "Motivation Sources Inventory" (J. Barbuto, R. Scholl).

Also, results of practical experience allowed to elaborate the structure of self-improvement of teacher of physical education, which includes the following components: theoretical and methodological knowledge, pedagogical communication, physical self-improvement, computer literacy and personal view on self-improvement of teachers of physical education in the process of professional activity, which we define as an individual process of improvement of professionally-significant components of activity oriented on "Professional I-ideal". "Professional I-ideal" is construed by us as a concept of professional qualities and features that a teacher must possess being oriented on professional requirements.

Keywords: *professional development, self-improvement in the process of professional activity, teachers of physical education, computer literacy, pedagogical communication, physical self-improvement, theoretical and methodological knowledge.*

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1. INTRODUCTION

Primary driving force and source of professional growth and development is self-improvement related to adaptation of individually unique peculiarities of requirements to pedagogical activity, constant improvement of professional competence, continuing development of moral and other features of a person. Therefore, modernization of the system of education requires new generation of teachers, who would be competitive on both national and international levels. Implementation of innovation technologies in the educational process and shift to European system of education make significant changes in the content of teachers' professional activity, while increase of demands to educators from higher educational establishments according to world standards orients on continuing education. Thus, professional activity of teachers of physical education under modern conditions requires constant updating of knowledge, improvement of the level of pedagogical communication, improvement of personal physical qualities and

skills in using informational technologies. All this makes teachers from higher educational establishments be engaged in systematic and continuing self-improvement with purpose of improvement of personal professional qualities.

Issues of professional self-improvement have been discussed by native and foreign researchers (M. D. Curtner-Smith, 2001; S. M. Guerrero, 2005; M. Ksyonzenko, 2012;O. Pavliuk, 2014; C. Steven, 2016). Thus, analysis of professional self-improvement as a psychological and pedagogical problem enabled us to reveal the fact that researchers do not have a common approach to definition of the notion of "self-improvement", while differences in the content of professional self-improvement are greatly stipulated by peculiarities of professional activity.

The aim of the research is to define components of self-improvement of teachers of physical education at various stages of professional development, and to theoretically substantiate and experimentally check realization of pedagogical technology of teachers' self-improvement in the process of professional activity.

2. MATERIAL&METHODS

248 physical education teachers and master students from higher educational establishments (department of theory and method of physical education and sport of Khmelnytskyi National University; department of physical education of Ternopil Volodymyr Hnatiuk National Pedagogical University; department of sports subjects and methods of teaching of Drohobych State Pedagogical University of Ivan Franko; department of physical education of Kyiv National University of Technologies and Design) took part in the reseach.The tasks of the research were solved on the basis of processing scientific and methodological references, legal normative documents regarding state of education, generalization of progressive practical experience in application of such methods of research as theoretical analysis and generalization of information sources, systematization with purpose of analysis of pedagogical and psychological references, historical excursus, method of expert evaluation, pedagogical survey, discussion, teachers interviewing, questionnaire, testing, modeling, method of pedagogical experiment, mathematical methods of processing of statistic data and graphic display of the results of research (fig. 1.).

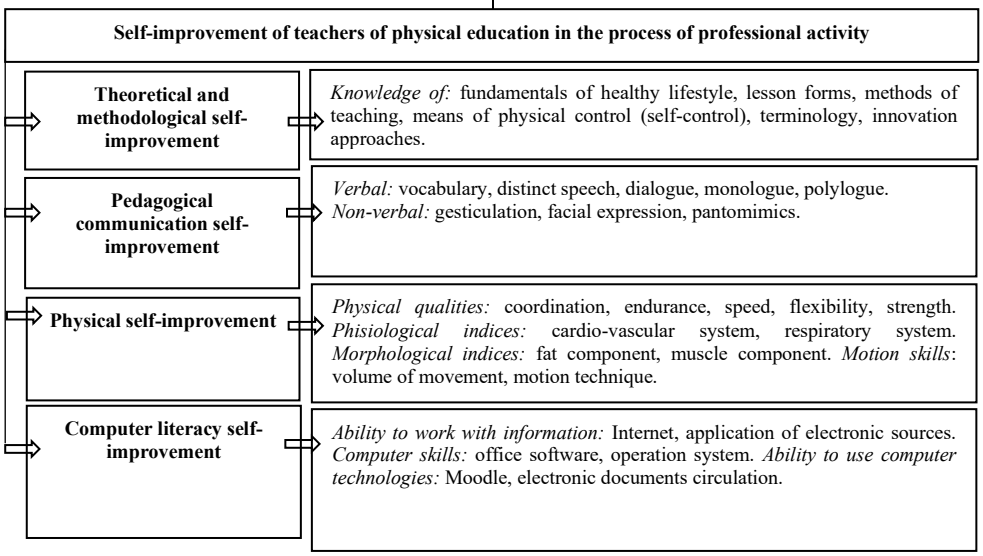

Fig. 1. Structure of PE teachers' self-improvement in the process of professional activity

To define importance of components, indices, and elements of professional excellence, method of expert evaluation was used. Group of experts included 29 specialists, who were chosen by the following criteria: competence in the field of physical culture and sports, sufficient working experience in higher educational establishments, creativity, creative approach to work, positive attitude to participation in expertise, norms of ethics and academic relations. Department heads of physical education of leading higher educational establishments of Ukraine with working experience of at least 10 years were also involved in the questionnaire. To conduct the research, a questionnaire was developed, in which participant had to evaluate suggested

components, indices, and elements of professional excellence of teachers of physical education. Evaluation was done by a 9-grade scale (from 0 to 8). Higher grades correspond to those components that are more significant for the profession of a teacher of physical education. On the contrary, lower grades indicated on lower significance.

The obtained results were processed using method of average values. After expert evaluation, components of professional excellence guideline of teachers of physical education were established; their value was determined (fig. 2).

Theoretical and methodological knowledge with average value of 6.78 (maximum grade - 8) turned to be the most significant component of self-improvement of teachers of physical education. The following elements were defined by the participants of the experiment as rather significant: knowledge of the fundamentals of a healthy lifestyle (7.22), methods of teaching (7.22), and knowledge of innovation approaches (7.0).

As defined by the specialists, next in significance is self-improvement of computer literacy of teachers of physical education, average value of which is 6.22. Ability to process information on the Internet (7.0), use of electronic resources (6.78), and ability to work with Moodle (6.22) were defined by the participants as the most significant elements of self-improvement of computer literacy.

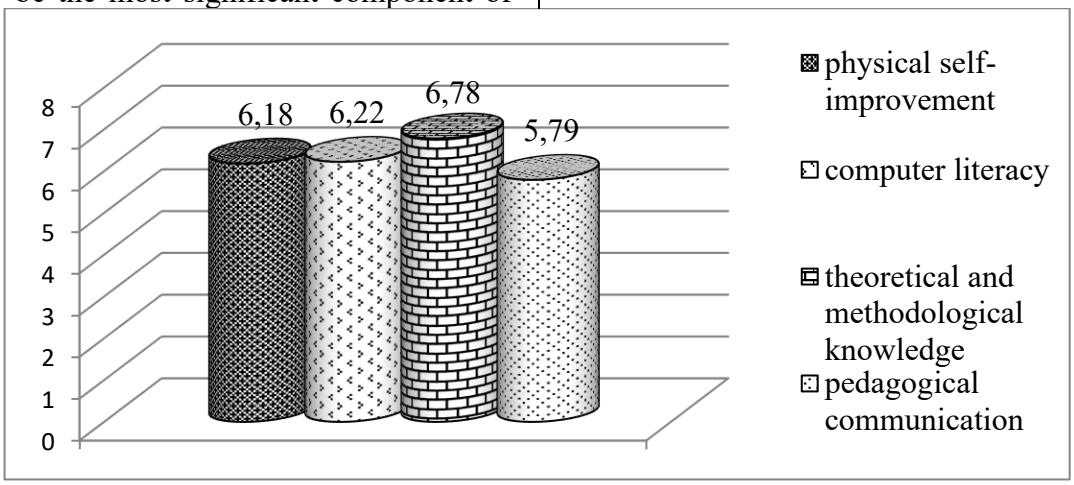

Fig. 2. Components of professional excellence of teachers of physical education

Experts defined physical self-improvement of teachers of physical education as next in significance with a grade of 6.18. Cardiovascular system (7.22), teachers' endurance (7.0), and motion technique of teachers of physical education (6.89) were defined as important indices.

According to experts, the least significant component is self-improvement of pedagogical communication, average value of which is 5.79. Most often, expert selected ability to have a dialogue (7.11), sufficient vocabulary (6.67), distinctive speech (6.44), and ability to keep a polylogue with students (6.44).

The obtained results once again proved priority value of theoretical and methodological component of teachers' professional excellence. This proves that the basic guideline in activity of teachers of physical education is knowledge that needs to be constantly acquired, updated, while increasing personal educational potential. The next spot in significance in professional excellence of teachers is stipulated by rapid development of computer technologies and its wide-spread implementation in teaching activity. This fact requires significant reorientation of self-improvement of teachers of physical education in terms of computer literacy. Next in significance in professional excellence of teachers of physical education is professional communication, which can be explained by impossibility to change actual communication, personal example, and various forms of information transfer with other non-verbal means.

By using the method of average values, average grades of elements of professional exceelence guideline were defined (fig. 3).

Based on expert evaluation and detailed analysis of all elements of self-improvement of teachers of physical education, the following most significant elements were defined: knowledge of teaching methods (7.22), knowledge of fundamentals of a healthy lifestyle (7.22), indices of cardiovascular system (7.22),

ability to keep dialogue with students (7.11), endurance (7.0), ability to work with Internet-information (7.0), and knowledge of innovation approaches (7.0). The least significant elements are morphological indices, namely: fat component (3.89), gesticulation (4.44), pantomimic (4.78), and mimic (4.89).

To establish correlation between elements of the guideline of professional excellence, correlation analysis, namely linear correlation was used. Correlation coefficient was defined by the formula:

$$r = \frac{\sum_{i=1}^{n}(x_i - \bar{x}) * (y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2 * \sum_{i=1}^{n}(y_i - \bar{y})^2}}$$

in which n–volume of selection; x_i, y_i – variables values of both selections; $\bar{x}\ i\ \bar{y}$ – average values of both selections.

This coefficient has value ranging from -1 to 1. The closer obtained result is to -1 or 1, the better we can state available tight correlation. Boundary values that indicate on correlation at p=0,05or p=0,01 level. Revealing tight correlations between elements of self-improvement allows defining which components of self-improvement are in tight correlation, and which do not have any relations. This information gives additional possibilities for further self-improvement of teachers of physical education in the process of professional activity. That is, influencing on or developing certain elements of self-improvement, we at the same time stimulate development of others that have dependencies.

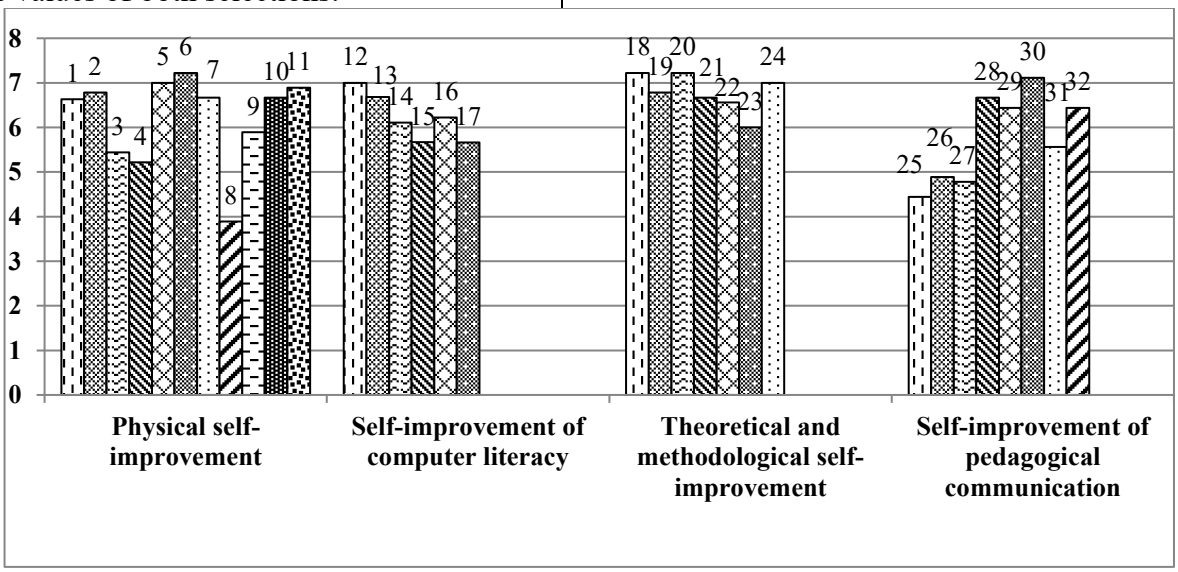

Fig. 3. Evaluation of elements of professional excellence of teachers of physical education

1 – power; 2 – coordination; 3 – speed; 4 – flexibility; 5 – endurance; 6 – cardiovascular system; 7 – respiratory system; 8 – fat component; 9 – muscle component; 10 – volume of movement; 11 – movement technique; 12 – ability to work with Internet-information; 13 – use of electronic resources; 14 – work with office software; 15 – work with an operational system; 16 – ability to use Moodle; 17 – electronic documentation; 18 – knowledge of fundamentals of a healthy lifestyle; 19 – knowledge of teaching forms; 20 – knowledge of teaching methods; 21 – knowledge of means of physical education; 22 – knowledge of means of control (self-control); 23 – knowledge of terminology; 24 – knowledge of innovation approaches; 25 – gesticulation; 26 – mimic; 27 – pantomimic; 28 – vocabulary; 29 – speech expressiveness; 30 – dialogue; 31 – monologue; 32 – polylogue.

Tight direct correlation was revealed between the following elements of self-improvement (at $p < 0,01$):

– work with office software – work with an operational system; (0.95), i.e. if teachers know how to work with office software, they work well with operational system;

– skills in working with Internet-information – knowledge of teaching methods (0.95), i.e. using Internet network, teachers can improve and extend personal knowledge of teaching methods;

– knowledge of means of physical education – knowledge of means of control (self-control) (0.91). This indicates on the fact that specialists who have god knowledge of means of physical education and use them in their professional activity, also operate well with means of control (self-control) during classes;

– knowledge of teaching methods – sufficient vocabulary (0.88). This indicates that the

better teachers know totality and diversity of teaching methods, the better their vocabulary is, which is realized in ability to use it in pedagogical communication with students and in educational activity;

– ability to work with Internet information – sufficient vocabulary (0.85). This means that the better specialists use Internet network to search for information with purpose of improving their pedagogical activity, the better heir vocabulary is, which they can use during classes;

– knowledge of means of physical education – ability to keep a polylogue (0.85). This shows that teachers who know means of physical education well (including physical exercises, hygiene factors, and recreational forces of nature) can have high-level classes, discussions, and communication with students in this area with educational purpose.

During the research, tight opposite correlation between mimic and polylogue (-0.85) was revealed. Thus, the worse the skill of a teacher of physical education in verbal communication is, namely skills in having a polylogue, the more they use mimic during communication.

Average correlation was revealed between the following elements (at $p< 0,05$): ability to work with Internet-information – knowledge of forms of teaching (0.79); expression of speech – knowledge of forms of teaching (0.77); knowledge of forms of teaching – knowledge of teaching methods (0.76); expression of speech – use of electronic resources (0.74); knowledge of means of physical education – knowledge of terminology (0.72); ability to work with Internet-information – ability to use electronic documents (0.71); skills in working with an operational system – use of electronic resources (0.7); knowledge of teaching methods – knowledge of terminology (0.69); having a polylogue – knowledge of control methods (self-control) (0.69).

Thus, based on expert evaluation, the most important components and elements of self-improvement of a teacher of physical education in the process of professional activity needed for achieving "Professional I-ideal" have been defined.

The given research clearly shows that the most important thing in modern professional activity of teachers of physical education is theoretical and methodological knowledge, computer literacy and physical self-improvement being next in significance, while self-improvement of pedagogical communication is the least important. According to specialists, the most significant elements of self-improvement of teachers of physical education are knowledge of teaching methods, knowledge of fundamentals of a healthy lifestyle, indices of cardiovascular system of teachers, ability to have a dialogue with students, physical qualities, endurance, ability to work with Internet-information, and knowledge of innovation approaches.

Self-improvement of teachers in the process of professional activity is a process that can take place instantly. It takes place throughout entire professional career and, naturally, can have significant discrepancies at various stages of a specialist formation. Research of self-improvement of teachers of physical education cannot be carried out without analysis of stages of professional development of a teacher.

3. RESULTS

We will consider periodization proposed by (O. S.Pavlyuk, 2013), the core of which is criterion of person's professional developmentas the most acceptable periodization of professional development of a subject of pedagogical activity in the sphere of physical culture. According to it, professional development of a teacher starts from pre-professional development, characteristic feature of which is acquisition of a primary professional experience during lessons in physical-education and sports groups. Along with the formation of various psychological peculiarities and fostering of willpower sphere, athletes are introduced to a range of physical exercises, training methods, teaching forms and methods.

In our research of periodization of professional development, only stages of further professional development were used, since we analyze teachers of physical education and their professional activity. They include: stage of professional adaptation (19 – 21 – 24 – 27 years); stage of development of a professional (21 – 27 – 45 – 50 years); stage of professionalism realization (45 – 50 – 60 – 65 years); stage of decline (61 – 66 yearsand more).

Results of the research of theoretic and methodological knowledge (fig. 3) prove that the best index of theoretic and methodological knowledge of teachers of physical education is at stage of decline (7.39 points), which is logical as

these are experienced teachers, most of who have scientific degrees and accumulated range of knowledge needed for effective work. At the stage of adaptation, theoretical and methodological knowledge was 7.11 points. After graduation, young teachers have sufficient knowledge but do not always now where and how to use them in pedagogical sphere. Indices of theoretical and methodological knowledge are similar at the stage of development of a professional and realization professionalism (6.89 points each).

Analysis of pedagogical communication testing results showed that level of communication qualities was 5.41 points at the stage of development of a professional (fig. 1); at the stage of decline – 5.22; at the stage of adaptation – 4.8; at the stage of realization of professionalism – 4.8.

Based on research of the components of self-improvement of teachers of physical education in the process of professional activity at various stages of professional; development (fig. 3), it has been revealed that indices of physical self-improvement at the stage of realization of professionalism and at the stage of adaptation are practically similar (5.86 and 5.85 points respectively). High indices of physical qualities at the stage of adaptation can be explained by the fact that a big number of researchers have just finished their sports career or still continue it. Therefore, indices of physical self-improvement are in age norm range. At the stage of realization of professionalism, teachers think more about their health and try to work more to improve their physical qualities. This is proven by the results of testing. At the stage of development of a professional, physical indices constitute 4.95 points. At the stage of decline, the indices are the lowest – 4.91. Stage of decline is characterized by decrease of professional activity, deterioration of functional state, progressing chronic illnesses and manifestation of new ones. In researches by Benjamin Chase, Morgan Hall, Timothy A. Brusseau, 2018, increase of cases of traumas and injuries is noted. Therefore, teachers of physical education pay less attention to physical self-improvement or do not care about it at all.

Based on analysis of computer literacy at various stages of professional development (fig. 4) of teachers of physical education, it has been revealed that the vest result of computer literacy of teachers of physical education is observed at the stage of adaptation – 6.22 points. This proves that young specialists pay more attention to work with a computer and have better skills in its application in their professional activity. The age of specialists at the stage of adaptation ranges from 19-21 to 24-27, i.e. the period of studies in a school or a higher educational establishment falls on the period of active implementation and application of computer technologies in educational process.

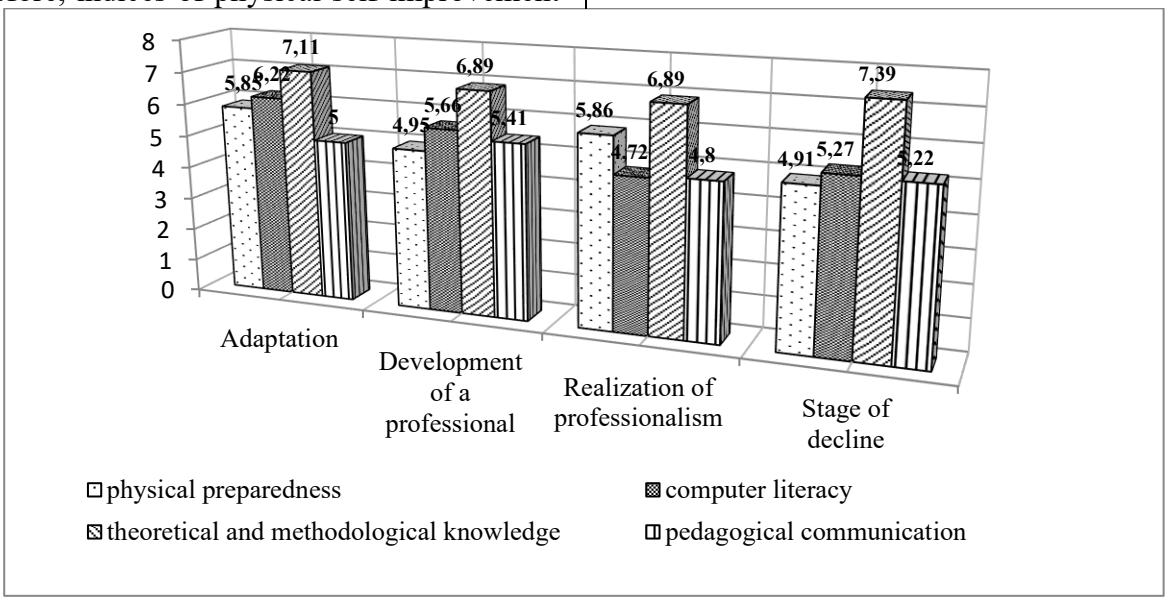

Fig. 4. Indices of components of self-improvement of physical education teachers at stages of professional development

At the stage of development of a professional, computer literacy results in 5.66 points. Age category of teachers at this stage ranges from 21-27 to 45-50. Acquisition of vocational education, same as with teachers who are at the stage of adaptation, coincides with the

period of education computerization and informatization. Slightly lower results of computer literacy are observed at the stage of decline – 5.27 and at the stage of realization of professionalism – 4.72. This shows that teachers, whose age corresponds to these stages of professional development, have worse skills in using computer technologies in their professional activity and pay less time and attention to this kind of activity.

Thus, thorough analysis of all components of actual state of teachers' self-improvement in the process of professional activity allows assuming that teachers show better results in knowledge of means of physical education (7.67), slightly worse knowledge of fundamentals of a healthy lifestyle (7.54), sufficient knowledge of teaching form (7.24), teaching methods (7.67), and can work with electronic documents (7.01).

Less-developed components of self-improvement of teachers of physical education in the process of professional activity are: use of pantomime in pedagogical communication (3.69), speed as a physical quality (3.41), use of means of Internet in personal professional activity (4.0), use of a number of office software (4.06), and indices of respiratory system (4.13). In the process of research, we have revealed the fact that actual state of self-improvement components of teachers of physical education in the process of professional activity at various stages of professional development is different.

Results of the stating experiment proved discrepancy of the actual state of components of PE teachers' self-improvement in the process of activity of professional perfection guideline. That is why there is a need to implement pedagogical technology of PE teachers' self-improvement in the process of professional activity (table 1).

Table 1.

Results of the research of the level of formation of PE teachers' self-improvement components in the process of professional activity

Levels	Control group (CG)						Experimental group (EG)					
	Before the experiment			After the experiment			Before the experiment			After the experiment		
	Abs. unit	in %	average point	Abs. unit	in %	average point	Abs. unit	in %	average point	Abs. unit	in %	average point
Motivational component – inner processes												
low	5	4,03	-8	4	3,23	-8	7	5,65	-2	0	-	-
avergae	93	75	2,06	94	75,8	2,17	90	72,58	2,39	89	71,77	3,31
high	26	20,97	7,8	26	20,97	7,8	27	21,77	8,8	35	28,22	8,83
Motivational component – instrumental motivation												
low	11	8,87	-8	10	8,06	-8	0	0	-	0	0	-
avergae	72	58,06	2,36	73	58,87	2,5	93	75	1,72	91	73,39	2,72
high	41	33,07	8,5	41	33,07	8,63	31	25	9,5	33	26,61	9,83
Motivational component – external I-concept												
low	5	4,03	-7	5	4,03	-6	5	4,03	-6	0	-	-
avergae	88	70,97	1,35	88	70,97	1,59	114	91,94	1,90	114	91,94	2,18
high	31	25	9,83	31	25	9,83	5	4,03	7	10	8,06	7,5
Motivational component – inner I-concept												
low	0	0	-	0	0	-	0	0	-	0	0	-
avergae	47	37,9	3	41	33,06	2,63	52	41,94	4,4	15	12,10	5,67
high	77	62,10	9,67	83	66,94	9,63	72	58,06	9,43	109	87,9	9,67
Motivational component – aim internationalization												
low	0	0	-	0	0	-	0	0	-	0	0	-
avergae	61	49,19	1,17	60	48,39	1,25	83	66,94	2,5	72	58,06	4,21
high	63	50,81	8,83	64	51,61	8,83	41	33,06	9,16	52	41,94	9,2
Activity component												
low	36	29,03	3,86	35	28,23	3,93	22	17,74	4,13	11	8,87	4,19
avergae	88	70,97	5,49	89	71,77	5,54	96	77,42	5,57	102	82,26	5,78
high	0	0	-	0	0	-	6	4,84	6,88	11	8,87	6,94
Information and operational component												
low	21	16,93	4,15	20	16,12	4,23	37	29,84	3,55	10	8,08	4,33
avergae	97	78,23	5,75	97	78,23	5,78	82	66,13	5,84	78	62,9	5,87
high	6	4,84	7,58	7	5,65	7,60	5	4,03	7,66	36	29,02	7,19
Gnostic component												
low	0	0	-	0	0	-	0	0	-	0	0	-
avergae	52	41,94	6,18	53	42,74	6,20	47	37,90	6,07	31	25	6,20
high	72	58,06	7,5	71	57,26	7,5	77	62,1	7,35	93	75	7,42
Communicative component												
low	42	33,87	4,17	36	29,03	4,23	35	28,22	4,21	4	3,23	4,50
avergae	77	62,10	5,40	82	66,13	5,41	79	63,71	5,64	108	87,10	5,72
high	5	4,04	7,25	6	4,84	7,27	10	8,07	7	12	9,67	7,38

In order to define physical state of PE teachers, tests aimed at physical preparedness have been selected; physiological indices have been defined with the help of functional tests; to

characterize muscle component of PE teachers, muscular system development index has been used. For a good evaluation of indices of physical preparedness, physiological, and morphological indices, 9-grade evaluation charts have been developed. Analysis of the level of theoretical and methodological preparedness, pedagogical communication, and computer literacy of PE teachers was done with questionnaires developed by us. Definition of motivation to self-improvement of teachers of physical education in the process of professional activity was done on the basis of the "Motivation Sources Inventory" (J. Barbuto, R. Scholl).

The research and analysis of the results revealed that inner motivation, namely inner I-concept prevailed with teachers who had best indices of self-improvement. The results of EG analysis showed no teachers with low level inner I-concept. Visible is decrease of the number of teachers from EG whose level of I-concept is average at 29.84%. Analysis of the results of motivation component formation proved that the number of teachers with already formed high-level I-concept increased by 29.84%. Probability of the results has been proven by Student's T-criterion that showed 2.09, critical t at $p \leq 0,05$ equals 2.06 .

Analysis of data from table 1 shows improvement of the level of formation of activity component of PE teachers' self-improvement in the process of professional activity in the experimental group. Namely, indices of activity component of teachers from EG having low level decreased by 8.87%. Results of the research of of teachers from EG having average level of activity component formation show its increase by 4.84%. Results of testing of teachers from EG having high level, showed increase by 4.03%. At the same time, no significant changes regarding the level of formation of activity component have been revealed within the control group.

Analysis of data regarding the level of formation of innovation and operational component shows that the number of teachers from EG having low-level information and operational component has decreased – 21.76%. It should be noted that the number of teachers from EG having average-level innovation and operational component decreased by 3.23%. The number of teachers from EG having high-level innovation and operational component increased by 24.99%.

Based on the analysis of experimental data on the level of formation of gnostic component, no teachers having low level have been revealed in the EG. The number of teachers from EG having average-level formation of gnostic component decreased by 12.9%. At the same time, increase of the number of teachers from EG having high level by 12.9% has been revealed.

The given actual data on communicative component in table 1 show that the number of teachers from EG having low-level communicative component decreased by 24.99%. The number of teachers from EG having average level of formation of self-improvement communicative component increased by 23.39%; namely, the number of teachers from Eg having high-level communicative component increased by 1.7%.

Probability of the difference between results of the research of communicative component of PE teachers' self-improvement in the process of professional activity has been defined with the help of Student's t-criterion, which is 2.27 at $p \leq 0,05$.

4. DICUSSION

A person's professional development is viewed as an integral process that dynamically evolves in time from formation of professional intentions to complete self-realization in creative pedagogical activity. A source of professional development is contradictions between the achieved level of person's development and requirements set by the team, society, educational activity to the system of already formed knowledge, skills as well individual and psychological features of a person (M. D. Curtner-Smith, 2001; S. M. Guerrero, 2005). In this context, we have generally supplemented the process of professional development of teachers of physical education at various stages, which is viewed as a complex poly-systematic education that is regulated based on individual determination and is tightly related with actual professional activity, is done on the basis of goal-oriented professional self-improvement including professional teaching, professional development and self-development, professional education and self-education (O. Pavliuk, 2014).

We prefer the view on the issue of professional development by (J. Passmore, 2000; M. Ksyonzenko 2012; C. Steven, 2016), where development and improvement are viewed as a

process of creative change of a person under influence of educational environment, productive activity and personal activity, aimed at self-improvement and self-realization. In this context, we consider that formation causes the need in development and self-development, in which interaction between personality and professional activity should be considered the core of professional development (Ye. O. Pavliuk, 2015). It should be noted that professional development of teachers of physical education promotes self-improvement in the process of professional activity since it causes the need in systematic self-improvement of professionally-important qualities and stimulates for continuous education throughout the entire career, which has been proven in research by foreign scientists (Jan-ErikRomar, Peter Åström, MagnusFerry, 2018).

We will supplement scientific research by (Poom-Valickis, K., Saarits, U., Sikka, H., Talts, L., &Veisson, M., 2003; E. Backman & H. Larsson, 2014)from the point of view of person's professional development leading to formation of personal qualities and features peculiar to people of this profession, which make execution of professional duties easier. Personality of a teacher of physical education develops, forms, and manifests itself primarily during pedagogical activity and pedagogical communication; each of these spheres of teacher's work sets special demands to teacher's personality.

5. CONCLUSIONS

Results of expert evaluation proved that the most important thing in self-improvement of teachers of physical education in the process of professional activity is computer literacy; next in significance is physical self-improvement; the least important, according to scientists, is pedagogical communication. Important elements of self-improvement, as mentioned y the researchers, are: knowledge of teaching methods, knowledge of fundamentals of a healthy lifestyle, indices of cardiovascular system, ability to have a dialogue with students, endurance as physical quality, ability to work with Internet-information, and knowledge of innovation approaches. Based on the research, a guideline of professional excellence of teachers of physical education has been elaborated, which we can view as a trend, an example to be pursued in the process of self-improvement. The guideline of professional excellence contains the same components, elements, and indices as self-improvement of teachers of physical education.

Thus, it should be noted that the process of self-improvement of teachers of physical education is continuing; concept of "Professional I-ideal" will be changed due to the fact that working conditions and requirements for teachers from higher educational establishment will be changed, other kinds of activity will be appearing, and personal requirements will be increasing. The guideline of professional excellence of teachers of physical education may be changed with time; however, at current stage, it is a trend, an example, which needs to be pursued and requires self-improvement and continuing education.

Experimental verification of the implemented technologies proved positive dynamics of PE teachers' sekf-improvement in the process of professional activity.

6. CONFLICTS OF INTEREST

The authors report no conflicts of interest.

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Abstract

ПАВЛЮК Оксана, СКАЛІЙ Олександр, ПАВЛЮК Євген

РЕЗУЛЬТАТИ ЕКСПЕРИМЕНТАЛЬНОЇ ПЕРЕВІРКИ РЕАЛІЗАЦІЇ ПЕДАГОГІЧНОЇ ТЕХНОЛОГІЇ САМОВДОСКОНАЛЕННЯ ВЧИТЕЛІВ ФІЗКУЛЬТУРИ В ПРОЦЕСІ ПРОФЕСІЙНОЇ ДІЯЛЬНОСТІ НА РІЗНИХ ЕТАПАХ ПРОФЕСІЙНОГО РОЗВИТКУ

У статті розглядаються питання підвищення кваліфікації та особливості самовдосконалення вчителів фізичного виховання. Мета дослідження – визначити компоненти самовдосконалення вчителів фізичного виховання на різних етапах професійного розвитку, теоретично обґрунтувати й експериментально перевірити реалізацію педагогічної технології самовдосконалення вчителів у процесі професійної діяльності. В експерименті брали участь викладачі фізичного виховання вищих навчальних закладів. Було використано ряд методів: аналіз, порівняння, систематизація, опитування, дискусія, опитування вчителів, анкетування, педагогічний експеримент, методи математичної статистики, графічне відображення результатів. Результати констатуючого експерименту засвідчили невідповідність фактичного стану компонентів самовдосконалення вчителів фізкультури в процесі діяльності з орієнтації на професійне вдосконалення. Для визначення фізичного стану вчителів фізкультури підібрано тести, спрямовані на фізичну підготовленість; за допомогою функціональних проб визначені фізіологічні показники; для характеристики м'язової складової вчителів фізкультури використано індекс розвитку м'язової системи. Для якісної оцінки показників фізичної підготовленості, фізіологічних і морфологічних показників розроблено 9-бальні оціночні таблиці. Аналіз рівня теоретико-методичної підготовленості, педагогічної комунікації та комп'ютерної грамотності вчителів фізкультури проводився за допомогою розроблених нами анкет. Визначення мотивації до самовдосконалення вчителів фізичного виховання в процесі професійної діяльності здійснено на основі «Інвентаризації джерел мотивації» (J. Barbuto, R. Scholl). Також результати практичного досвіду дозволили розробити структуру самовдосконалення вчителя фізичного виховання, яка включає такі компоненти: теоретико-методичні знання, педагогічне спілкування, фізичне самовдосконалення, комп'ютерна грамотність та особистий погляд на самовдосконалення. вчителів фізичного виховання в процесі професійної діяльності, яку ми визначаємо як індивідуальний процес удосконалення професійно-значущих компонентів діяльності, орієнтованих на «Професійний Я-ідеал». «Професійний Я-ідеал» трактується нами як поняття професійних якостей і особливостей, якими повинен володіти вчитель, орієнтуючись на професійні потреби.

Ключові слова: професійний розвиток, самовдосконалення в процесі професійної діяльності, вчителі фізичного виховання, комп'ютерна грамотність, педагогічне спілкування, фізичне самовдосконалення, теоретико-методичні знання.

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