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DETERMINATION OF PEDAGOGICAL CONDITIONS FOR EFFECTIVE IMPLEMENTATION OF PEDAGOGICAL TECHNOLOGY OF PHYSICAL EDUCATION TEACHERS' SELF-IMPROVEMENT IN THE PROCESS OF PROFESSIONAL ACTIVITY

Physical Education teachers' professional self-improvement comprises motivational, activity, informational and operational, gnostic, and communicative components. The level of these components can be assessed by the demand and motivational, functional, theoretical and methodical, communicative, as well as informational and operational criteria. It has been experimentally proved that the following pedagogical conditions contribute to Physical Education teachers' professional selfimprovement: taking into account teachers' individual and age peculiarities; encouraging Physical Education teachers to self-improvement in the process of professional activities; provision of choosing personal trajectory of self-improvement taking into account the guidelines for professional development. The designed pedagogical technology aimed at Physical Education teachers' professional self-improvement consists of four blocks: targeted, content, organizational and active, and control and effective ones. The implementation of this pedagogical technology results in positive dynamics of Physical Education teachers' professional self-improvement which has been experimentally proved.

Keywords: *self-improvement pedagogical technology in the process of professional activity, physical training teachers, guideline of professional perfection, pedagogical technology, pedagogical conditions.*

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1. FORMULATION OF THE PROBLEM

The educational system modernization leads to the need for a new generation of competitive teachers, both at the state and world levels. The implementation of innovative technologies into the educational process and shift to European system of education significantly alter the content of teachers' work. The increasing of demands to the teachers who work in the system of higher education according to the world standards is leads to the need for continuous education. However, lack of funding for centralized advanced training courses for teachers bring out the need to searching for alternative methods of teachers' professional competence improvement. Therefore, selfimprovement, self-study, and self-education play an important role in teachers' everyday work. The conceptual points as for teachers' selfdevelopment are represented in the Law of Ukraine "On Higher Education" (2014),

National strategy of educational system development in Ukraine for 2012-2022, Program of realization of the Bologna Declaration in the system of higher education and science of Ukraine (2004), National doctrine of physical education and sports development (2004), Memorandum of the European Commission "Life-Long Education" (2000). These documents emphasize that the modern education system demands the educators who are ready for continuous improvement of their professional skills, content and means of their professional activities. However, any improvement has to be done in accordance with a planned program, that is why teachers to plan their self-improvement in the process of professional activities and have to be aware of the means, methods and forms that may be used in self-training, selfeducation, and self-development. This requires the elaboration of the pedagogical technology of Physical

Education teachers' professional self-improvement. Leading scientists have been paying significant attention to pedagogical technologies and their implementation into the educational process (Yu. Babanskyi [1], A. Nisimchuk [5], H. Selevko [9], S. Sysoyeva [10], et. al). At the same time, it should be mentioned that pedagogical technologies are mainly aimed at the improvement of future specialists' training. On the other hand, the issue of the working teachers' professional level improvement (and particularly Physical Education teachers) still remains understudied. Physical Educational teachers' work under modern conditions requires constant updating of knowledge, improvement of pedagogical communication, personal physical capabilities and the ability to use information technologies. All these factors encourage teachers to take part in systematic and continuous self-improvement to develop their personal qualities. The scientific literature review and the study of Physical education teachers' experience of working at higher educational establishments have made it possible to distinguish a number of contradictions between the available level of Physical Education teachers' professional skills and modern requirements to their work in terms of the Bologna process; high demands of the society as well as the state to continuous education of Physical Education teachers and insufficient attention paid to this issue by the teachers themselves; the necessity for teachers to study contemporary pedagogical technologies of self-improvement in the process of professional activities and insufficient development of the theoretical basis of self-improvement. The paper aims to define, substantiate and experimentally check pedagogical conditions of effective realization of pedagogical technology of Physical Education teachers' self-improvement in the process of professional activities. The hypothesis of the research: the realization of pedagogical technology of Physical Education teachers' professional self-improvement will be successful under the following pedagogical conditions: taking into account teachers' individual and age peculiarities; encouraging teachers of Physical Education to self-improvement in the process of work; provision of choosing personal trajectory of self-improvement taking into account the guidelines for professional perfection.

2. RESEARCH METHODS

The experiment involved 248 teachers of Physical Education (Khmelnyskyi National University, Volodymyr Hnatyuk Ternopil National Pedagogical University, Zaporizhia National University, Ivan Franko Drohobych State Pedagogical University Kyiv National University of Technology and Design), who were divided into experimental (124 teachers) and control (124 teachers) groups. The following research methods were used: theoretical – analysis, comparison, systematization, generalization of literature; historical discourse that has enabled to reveal basic views of scientists on the ways of dealing with the issue of self-improvement of Physical Education teachers in the process of professional activities and to define the basic components of self-improvement; empirical – the method of expert evaluation for defining the guidelines for professional self-improvement of Physical Education teachers; observation, discussion, interviewing of the teachers, polling and testing to assess the real state of self-improvement components, the teachers' motivation to self-improvement; methods of mathematical statistics and graphical representation of the results of the research that have been used for quantitative and qualitative analysis of the results obtained.

3. RESEARCH RESULTS

At the verification stage of the experiment the direction of professional self-improvement on the basis of expert evaluation, the real state of Physical Education teachers' self-improvement, and the peculiarities of this process have been defined [7; 14]. The research results show that theoretical and methodological awareness, the average value of which is 6.78 points, is the most significant component of Physical Education teachers' professional self-improvement. Another significant component is computer skills, the average value of which is 6.22 points.

Physical selfimprovement (6.18 points) is the third important component of Physical Education teachers' professional selfimprovement. Pedagogical communication is a bit less important (5.79 points). The results obtained once again show the priority importance of theoretical and methodological awareness of teachers. This indicates that the basic direction for teachers' self-development is acquisition of knowledge which should be obtained constantly while improving personal educational potential.

Based on the results, the guidelines for Physical Education teachers' professional self-development has been elaborated. It is considered as a direction, a model to be followed in the process of professional self-improvement.

During the verification stage of the experiment, the real state of Physical Education teachers' selfimprovement via the complex of empirical methods was assessed. Some tests for the assessment of the teachers' physical fitness have been selected; physiological indices have been defined via functional trials; index of muscular system growth has been used for the characteristics of the muscle component of the Physical Education teachers. In order to give quality evaluation of physical fitness, physiological and morphological indices, 9-point evaluation tables have been elaborated. Diagnostics of theoretical and methodological level, pedagogical communication and computer skills of Physical Education teachers has been used with the help of questionnaires elaborated by us. Motivation of teachers of physical education to selfimprovement in the process of professional activity was defined with the help of "Questionnaire to Define Sources of Motivation" (G. Barbuto, R. Skoll) [11].

The results of the verification stage of the experiment have proven non-conformity of the real state of Physical Education teachers' professional selfimprovement and the guideline for professional perfection. Therefore, there is a need to implement pedagogical conditions and technologies of Physical Education teachers' self-improvement in the process of professional activities. At the formative stage of the pedagogical experiment, experimental check of the efficiency of pedagogical conditions of implementing pedagogical technologies of Physical Education teachers' professional selfimprovement was performed. By means of the methods of observation, polling, testing, and mathematical statistics, the levels of Physical Education teachers' selfimprovement have been revealed and compared with the results of the verification stage of the experiment; dynamics of self-improvement of Physical Education teachers in the process of professional activities has been defined. It has been revealed that inner motivation, namely inner self-concept was dominant in the teachers, who had the highest indices of self-improvement.

Based on the results, no teachers with low level of inner self-concept has been found in the

experimental group. The decrease of the number of teachers in EG with average-level inner self-concept (29.84%) is obvious. The research results have shown that the number of teachers with mature highlevel inner self-concept increased in the EG by 29.84%. According to the analysis of experimental data, there were no teachers with the low level of gnostic component in the EG. The number of teachers in the EG with the average level of gnostic component decreased by 12.9%. At the same time, the increase of the number of teachers with the high level by 12.9% has been observed in the EG. Actual data of communicative component show that the number of teachers in EG with the low level of communicative component decreased by 24.99%. The number of teachers in the EG with the average level of communicative component of self-improvement increased by 23.39%, namely the number of teachers with the high level of communicative component increased by 1.7%. The analysis of the data of the formative stage of the carried out experiment shows the increase of the activity component of Physical Education teachers' professional self-improvement in the EG, namely the number of teachers in the EG with the low level decreased by 8.87% and the number of teachers with the average level of activity component increased by 4.84%. The results of the teachers in EG with the high level have increased by 4.03%. At the same time, no substantial changes in the activity component have been found in the control group. The data analysis of the informational and operational component shows the decrease of the number of teachers in the EG with its low level by 21.76%. It should be mentioned that the number of teachers in the EG with the average level of informational and operational component decreased by 3.23%. The number of teachers in the EG with the high level increased by 24.99%.

Discussion Issues related to professional self-improvement have been discussed in the works of domestic and foreign scientists (T. Vaynilenko [2], S. Gerrero [12], M. CartnerSmith [13], K. Kolodyeznikov [3], M. Ksyonzenko [4], Ye. Pavlyuk [15; 16], G. Passmor [17], S. Steven [18] et al.). Professional self-improvement plays an important role in teachers' work as it promotes improvement of their professional qualities and has positive impact on the quality of the educational process [6; 8]. The experimental check of the implemented pedagogical conditions and technologies has shown positive dynamics of

Physical Education teachers' professional self-improvement. The validity of the results has been checked and proved by means of Student's t-criteria. In general, the research has proved the hypothesis that Physical Education teachers' professional selfimprovement can be successful under the following pedagogical conditions: taking into account teachers' individual and age peculiarities; encouraging Physical Education teachers to self-improvement in the process of professional activities; provision of choosing personal trajectory of self-improvement taking into account the guidelines for professional perfection.

The proposed pedagogical technology of Physical Education teachers' professional selfimprovement has proved its effectiveness. Conclusions Physical Education teachers' professional selfimprovement comprises motivational, activity, informational and operational, gnostic, and communicative components. The level of these components may be assessed by the demand and motivational (available cognitive interest; prominent needs and motives of selfimprovement; available certain level of inner motivation, namely self-concept; axiological attitude towards pedagogical activity; understanding the importance of continuous and systematic improvement of professional skills throughout life), functional (ability to use methods and means of improvement of physical qualities; ability to evaluate physical fitness; ability to perform assessment and self-assessment), theoretical and methodical (having knowledge about healthy lifestyle, forms of conducting lessons, basic teaching methods, basic means of physical education and their implementation into the educational process; knowledge of innovative approaches), communicative (ability to communicate in the form of a monologue, dialogue and polylogue; use gestures, mimics, pantomimics at the lessons; use professional terms in pedagogical activity, etc.), as well as informational and operational criteria (ability to use Internet means and office software while working with a computer, various sources of

information, computer operation system, Moodle in the educational process). The level of Physical Education teachers' professional self-improvement can be low, average, or high.

It has been experimentally proved that the following pedagogical conditions contribute to Physical Education teachers' professional self-improvement: taking into account teachers' individual and age peculiarities; encouraging Physical Education teachers to self-improvement in the process of professional activities; provision of choosing personal trajectory of self-improvement taking into account the guidelines for professional perfection. The developed pedagogical technology Physical Education teachers' professional self-improvement consists of four blocks: targeted, content, organizational and active, control and effective. The targeted block has its aim, principles, approaches, and functions. Contents block comprises pedagogical conditions Physical Education teachers' professional self-improvement; selfimprovement components, and guideline for professional perfection of Physical Education teachers. The organizational and active block involves organization of selfimprovement process; peculiarities of application of forms, methods, and stages of Physical Education teachers in the process of professional activity. Control and effective block involves components, criteria, and level of self-improvement of Physical Education teachers. The implementation of this pedagogical technology will result in positive dynamics of Physical Education teachers' professional self-improvement. The carried out research does not cover all aspects Physical Education teachers' professional selfimprovement. We plan to perform the research studies in the following directions: the formation of motivation to Physical Education teachers' professional selfimprovement; readiness of Physical Education teachers to use innovative technologies, etc.

4. CONFLICTS OF INTEREST

The authors report no conflicts of interest.

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Анотація

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ВИЗНАЧЕННЯ ПЕДАГОГІЧНИХ УМОВ ЕФЕКТИВНОЇ РЕАЛІЗАЦІЇ ПЕДАГОГІЧНОЇ ТЕХНОЛОГІЇ САМОВДОСКОНАЛЕННЯ ВИКЛАДАЧІВ У ПРОЦЕСІ ПРОФЕСІЙНОЇ ДІЯЛЬНОСТІ

Статтю присвячено теоретико-експериментальному дослідженню проблеми самовдосконалення викладачів фізичного виховання у процесі професійної діяльності. Мета полягає у визначенні, теоретичному обґрунтуванні й експериментальній перевірці педагогічних умов ефективною реалізації педагогічної технології самовдосконалення викладачів у процесі професійної діяльності. Використано комплекс методів: аналіз, порівняння, систематизація, метод експертних оцінок, спостереження, бесіди, інтерв'ювання викладачів, анкетування і тестування, педагогічний експеримент, методи математичної статистики. Було визначено головні складники самовдосконалення викладачів фізичного виховання: теоретико-методична обізнаність, педагогічне спілкування, фізичне самовдосконалення та комп'ютерна грамотність. Теоретико-методична обізнаність складається з основ здорового способу життя, форм проведення занять, засобів фізичного виховання, методів контролю (самоконтролю), знання термінології, інноваційних підходів. Самовдосконалення педагогічного спілкування містить невербальний (жестикація, міміка, пантоміміка) та вербальні компоненти (словниковий запас, виразність мови, діалог, монолог, полілог). Фізичне самовдосконалення включає фізичні якості (силу, координацію, швидкість, гнучкість та витривалість), фізіологічні показники (серцево-судинна та дихальна системи),

морфологічні показники (жировий та м'язові компоненти), рухові вміння (об'єм рухів та техніка рухів). Самовдосконалення комп'ютерної грамотності охоплює вміння працювати з інформацією (Інтернет, використання електронних ресурсів), навички роботи з комп'ютером (робота з офісними програмами, з операційною системою), вміння використовувати комп'ютерні технології (модульне динамічне об'єктно-орієнтоване середовище для навчання; електронний документообіг). З метою визначення фізичного стану викладачів підібрано тести для перевірки фізичної підготовленості; фізіологічні показники були визначені за допомогою функціональних проб; для характеристики м'язового компонента викладачів фізичного виховання був застосований індекс розвитку мускулатури. Для якісної оцінки показників фізичної підготовленості, фізіологічних та морфологічних показників розроблено оцінні таблиці за дев'ятибальною системою. Діагностика рівня теоретико-методичної обізнаності, педагогічного спілкування та комп'ютерної грамотності викладачів фізичного виховання здійснювалася за допомогою розроблених нами анкет. Визначення мотивації до самовдосконалення викладачів фізичного виховання у процесі професійної діяльності проводилося на підставі «Опитувальника для визначення джерел мотивації» (Дж. Барбуто, Р. Сколл). Теоретично обґрунтовано та експериментально перевірено такі педагогічні умови самовдосконалення викладачів фізичного виховання в процесі професійної діяльності: урахування індивідуальних та вікових особливостей викладачів, забезпечення вибору власної траєкторії самовдосконалення з урахуванням орієнтиру професійного самовдосконалення, посилення мотивації викладачів фізичного виховання до самовдосконалення у процесі професійної підготовки. Розроблено та науково обґрунтовано модель педагогічної технології самовдосконалення викладачів фізичного виховання у процесі професійної діяльності. Отримані результати експериментальної роботи свідчать про те, що впроваджені педагогічні умови сприяють успішному самовдосконаленню викладачів фізичного виховання у процесі професійної діяльності. На основі проведеного педагогічного експерименту відбулися статистично значущі зміни у рівнях самовдосконалення, що засвідчили позитивну динаміку самовдосконалення викладачів фізичного виховання у процесі професійної діяльності в експериментальній групі та підтвердили ефективність розробленої технології.

Ключові слова: самовдосконалення у процесі професійної діяльності, викладачі фізичного виховання, орієнтир професійної досконалості, педагогічна технологія, педагогічні умови.

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