

Developing pedagogical mastery of future physical education teachers in higher education institutions

IRYNA MAKSYMCHUK¹, BORYS MAKSYMCHUK², VALENTINA FRYTSIUK³, TETIANA MATVIICHUK⁴, IRYNA DEMCHENKO⁵, INNA BABII⁶, SVITLANA TSYMBAL-SLATVINSKA⁷, ALONA NIKITENKO⁸, VALENTYNA BILAN⁹, ANDRII SITOVSKYI¹⁰, IHOR SAVCHUK¹¹

¹Vinnytsia Education and Research Institute of Economics of Ternopil National Economic University, Vinnytsia, UKRAINE

^{2,3}Vinnytsia State Pedagogical University named after Mykhailo Kotsiubynskyi, Vinnytsia, UKRAINE

⁴Lviv State University Of Physical Culture, Lviv, UKRAINE

^{5,6,7,8,9}Pavlo Tychyna Uman State Pedagogical University, Uman, UKRAINE

^{10,11}Private Higher Educational Institution Academy of Recreational Technologies and Law, Lutsk, UKRAINE

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Abstract:

The study deals with the process of developing pedagogical mastery of future physical education teachers during professional training. The concept of “pedagogical mastery of future physical education teachers” has been specified. The components (motivation-, knowledge-, activity-, value- and personality-based), criteria (motivation-based, cognitive, behavioural, value- and personality-based) and levels (creative, productive, reproductive, elementary) have been identified. Pedagogical conditions for developing the outlined quality (creating the students’ positive motivation toward acquiring pedagogical mastery; ensuring integrity, continuity and consistency of the process of developing pedagogical mastery of future physical education teachers; using innovative educational technologies for developing pedagogical mastery of future physical education teachers) have been justified and their efficiency has been experimentally proved. Within the study, the model for developing pedagogical mastery of future physical education teachers during professional training has been designed and presented. It reflects the interrelations between target, theoretical and methodological, content and technological, diagnostic and productive blocks.

Key words: development, pedagogical mastery, future physical education teachers, professional training.

Introduction

The process of developing pedagogical mastery of future physical education teachers in higher education institutions is determined by the results obtained, namely, the formed features of the levels of pedagogical mastery development during professional training. The peculiarities of the outlined process have been identified based on pedagogical experiment.

The aim of the experiment consisted in verifying efficiency of pedagogical conditions that ensure the process of developing pedagogical mastery of future physical education teachers during professional training.

Materials and methods

Efficiency of the process of developing pedagogical mastery of future physical education teachers during professional training has been verified based on three-stage pedagogical experiment with the use of the designed model and the complex of pedagogical conditions. The experiment involved 468 students (Year 1–4) and 19 physical education teachers from these higher education institutions. The students were divided into two groups: control group (CG) – 191 persons; experimental group (EG) – 277 persons.

Based on the analysis of scientific literature, the study on the education process in higher education institutions and the results on the ascertaining stage of pedagogical experiment, pedagogical conditions for developing pedagogical mastery of future physical education teachers during professional training have been identified and justified. They involve creating the students’ positive motivation toward acquiring pedagogical mastery; ensuring integrity, continuity and consistency of the process of developing pedagogical mastery of future physical education teachers; using innovative educational technologies for developing pedagogical mastery of future physical education teachers.

These pedagogical conditions have been identified and justified taking into account methodological approaches, namely, acmeological, axiological, activity-based, systemic, culturological, competency-based, personality-oriented.

The first pedagogical condition (creating the students' positive motivation toward acquiring pedagogical mastery) was expected to verify that positive motivation of future physical education teachers mainly depends on their readiness to acquire pedagogical skills as important components of pedagogical mastery, in particular, communicative and perceptual skills, emotional stability, optimistic projection, creativity. This pedagogical condition has been realized due to content analysis and restructurization of the content of curricula (based on new topics) for such subjects as Introduction to the Course, Culture of Professional Language and Communication, Pedagogy, Content and Types of Professional Activities in Physical Education and Sports and development of the author's programme on teaching placement. Their significance for the process of developing pedagogical mastery of future physical education teachers during professional training has been justified. The programme of an optional academic subject (special course) involved studying three modules, namely, Teacher's Pedagogical Mastery as the Complex of Pedagogue's Personality Traits, Mastery of Pedagogical Interaction, Teacher's Mastery of the Education Process Management.

The second pedagogical condition (ensuring integrity, continuity and consistency of the process of developing pedagogical mastery of future physical education teachers) implies that development of such an important component of pedagogical mastery as the students' humanistic attitude is achieved through their participation in various types of placements and extracurricular activities. Indeed, placement is a system-forming factor in professional training of future physical education teachers, a leading parameter in their professional self-development, establishment of an individual creative style of professional activity. Teaching placement combines the students' theoretical readiness with their future professional activities, facilitates experience acquisition. In this regard, the programme on teaching placement is coordinated so that it is at most approximated to future pedagogical activity in the context of pedagogical mastery development.

The implementation of the complex of extracurricular activities and techniques (independent work, research activities, cultural and leisure activities, sports activities, volunteer activities, student self-government) has stimulated social, spiritual, intellectual and moral development of future physical education teachers. Therefore, extracurricular activities can be considered as an integrated system, whose elements are interrelated and complexly develop pedagogical mastery of future physical education teachers.

The third pedagogical condition consisted in using innovative educational technologies for developing pedagogical mastery of future physical education teachers. In order to successfully organize this process, the following educational technologies have been used while studying psychological and pedagogical subjects and the special course: interactive technologies, project-based learning, training and information technologies for developing communication skills, productive interaction and constructive criticism, which has contributed to improving personality- and value-based component of the students' pedagogical mastery. The use of active learning methods has raised the students' cognitive readiness to develop pedagogical mastery. They are the following: analysis of problem pedagogical situations, the Feelings Basket technique; organization of the so-called "situations of success", business and role games, discussions, brainstorming, case studies, the incomplete sentences technique as well as visiting pedagogical clubs, creating an individual programme of professional and personal growth, self-improvement, building a specialized vocabulary, writing essays on such topics as My Favourite Teacher, Physical Education of the Future.

As a result of using active and traditional learning methods, a conversation lecture, a problem-based lecture, a counseling lecture, a mistake-based lecture have been used. Modeling and analysis of problem situations, participation in business, role games and educational discussions have ensured development of the students' productive professional communication, transformation of the acquired knowledge into the internal action plan, which has confirmed great potential of innovative educational technologies to assist future physical education teachers in acquiring pedagogical mastery.

The students' involvement into personality-oriented activities through the use of innovative educational technologies and introduction into the education process the special course on Fundamentals of Development of Future Physical Education Teachers' Pedagogical Mastery have revealed the potential of every physical education teacher. Comprehensive adherence to the above-mentioned pedagogical conditions has ensured efficiency of the process of developing pedagogical mastery of future physical education teachers during professional training.

In order to provide a holistic representation of the process of developing pedagogical mastery of future physical education teachers during professional training, a model for developing pedagogical mastery of future physical education teachers has been designed (see Figure 1). It includes the stages of its development, namely, motivation-, activity- and reflection-based.

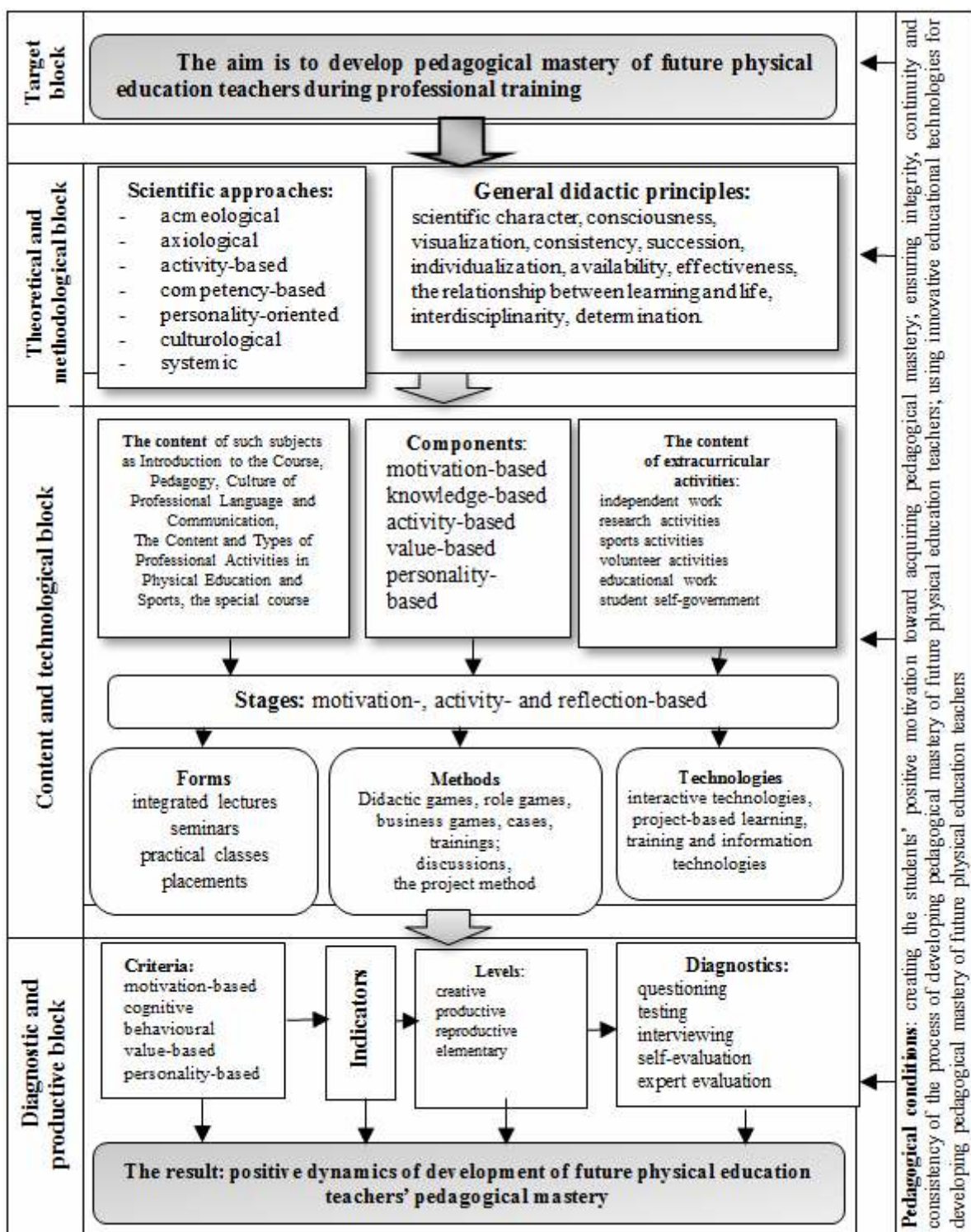


Fig. 1. The model for developing pedagogical mastery of future physical education teachers during professional training

The designed model for developing pedagogical mastery of future physical education teachers consists of the following components: the target block contains the aim; the theoretical and methodological block includes methodological approaches and principles; the content and technological block encompasses the content, forms, methods, technologies, components, stages; the diagnostic and productive block – criteria, indicators, levels and diagnostics of development of future physical education teachers' pedagogical mastery.

Efficiency of the suggested and implemented pedagogical conditions (creating the students' positive motivation toward acquiring pedagogical mastery; ensuring integrity, continuity and consistency of the process of developing pedagogical mastery of future physical education teachers; using innovative educational

technologies for developing pedagogical mastery of future physical education teachers) has been verified based on the designed model and determined by questioning the students before and after the experiment using common in psychology and pedagogy diagnostic techniques: M. Schneider's diagnostics of communication; researches on communicative and organizational inclinations; the Teacher's Empathy Ability Test; the Self-Control Ability Test; K. Thomas' technique for diagnosing personality's inclination to conflict behaviour (N. Gryshyna's adaptation); the test designed to identify the level of communicability (V. Kan-Kalik, M. Nikandrov); Pedagogical Situations Methodology. The reliability of correspondences and differences in experimental data as for the levels of development of future physical education teachers' pedagogical mastery, the effect of the change in development of the phenomenon under study have been confirmed with the help of Pearson's nonparametric criterion χ^2 .

The content and technological support for developing pedagogical mastery of future physical education teachers has been developed. It includes the author's special course on Fundamentals of Development of Future Physical Education Teachers' Pedagogical Mastery; the author's programme on teaching placement introduced in some topics of such subjects as Introduction to the Course, Culture of Professional Language and Communication, Pedagogy, Content and Types of Professional Activities in Physical Culture and Sports, thematic assignments and situations oriented toward developing pedagogical mastery of future physical education teachers, methodical recommendations for lecturers in order to improve the process of developing pedagogical mastery of future physical education teachers during professional training.

Results

The analysis of the results has shown that at the early ascertaining stage of the experiment, a significant number of the EG students had the elementary level of pedagogical mastery development – 47.0%, the reproductive level – 32.5%, the productive level – 10.8% and the creative level – 9.7%. It has been found out that the same situation has been observed in the CG. Thus, 41.9% of the respondents had the elementary level, 35.6% – the reproductive level, 13.6% – the productive level and 8.9% – the creative level. So, at the beginning of the experiment, most students had the elementary and reproductive levels of development of future physical education teachers' pedagogical mastery.

During the formative stage of the experiment, those EG students who had the elementary level of pedagogical mastery development achieved the reproductive level and those who already had the reproductive level – the productive level.

In Table 1 one can see the final results obtained at the early and late formative stages in the EG and CG groups in relation to the changes in the level of development of future physical education teachers' pedagogical mastery during professional training.

Table 1. The overview of the levels of future physical education teachers' pedagogical mastery during professional training

Groups	The stages of the experiment	Elementary		Reproductive		Productive		Creative	
		Number	%	Number	%	Number	%	Number	%
EG (277)	Ascertaining	130	47,0	90	32,5	30	10,8	27	9,7
	Formative	37	13,4	72	26,0	88	31,8	80	28,8
CG (191)	Ascertaining	80	41,9	68	35,6	26	13,6	17	8,9
	Formative	59	30,9	57	29,8	41	21,5	34	17,8

Data analysis has shown the following results obtained at the late formative stage of the experiment: 28.8% of the respondents had the creative level of pedagogical mastery development, 31.8% – the productive level, 26% – the reproductive level and 13.4% – the elementary level.

During the formative stage, 17.8% of the CG students had the creative level of pedagogical mastery development, 21.5% – the productive level, 29.8% – the reproductive level and 30.9% – the elementary level.

The change in the ratio of the respondents has been presented according to the results of development of future physical education teachers' pedagogical mastery during professional training at the early and late ascertaining and formative stages of the experiment (see Figure 2).

The results of pedagogical experiment has proved positive dynamics of development of future physical education teachers' pedagogical mastery during professional training due to implementation of pedagogical conditions and the designed model. So, it can be concluded that the aim of the study has been achieved, the defined objectives have been fulfilled and the hypothesis has been confirmed.

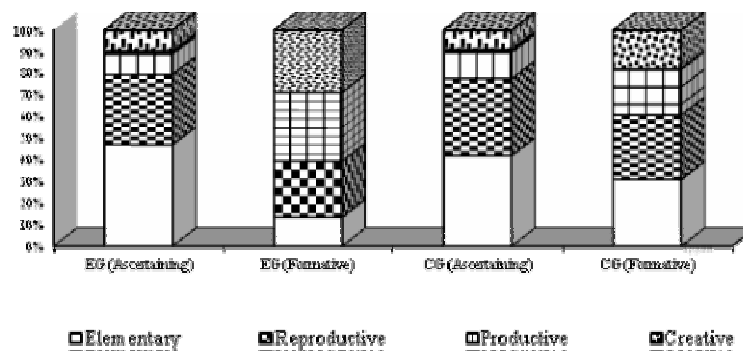


Fig. 2. The distribution of the students according to the levels of pedagogical mastery development based on the results of the experiment

Discussion

In the study, scientific conclusions of certain scholars have been justified. According to T. Matviichuk (2015), along with the actual education process pedagogical conditions for training physical education teachers are considered to be the range of organizational measures aimed at pedagogical innovation, modern trends in higher education, physical culture and sports and a new paradigm of education. M. Nosko's (2003) research findings reveal methodological and theoretical foundations for developing professional education and improving quality of the specialists' training, G. Haug & C. Tauch (2001) and D. Norris' (1996) – transformation of higher education toward the European space. R. Mushketa (2006), who studied physical education teachers' training for assessing the students' academic achievements in Poland, along with famous Polish scholars B. Hodań and Zh. Zhukovska, indicates “within their school and extracurricular functions the teacher of physical education should not take into account only the level of modern physical culture, but also the actual level of the whole society, in order to predict its development in their professional activity. In this regard, the most important becomes their integral function associated with an integration of the influences of different environments affecting the student. All expectations that arise from communication between society and the active personality of the teacher are reflected in the requirements for the profile of the physical education teacher during their training”. B. Maksymchuk (2017) believes that “this integration is especially urgent in the social and educational policies of developing countries, in particular in Ukrainian educational space”.

The research findings by L. Sushchenko (2003), O. Tymoshenko (2009) et al. belong to **the second group** of the obtained indicators and reflect general issues of the specificity of future physical education teachers' professional training, the peculiarities of physical education teachers' activities and the prospects of its optimization. The authors emphasize that professional activity of physical education teachers differs from other pedagogical specialties and requires much more attention, concentration, responsibility. Thus, the physical education teacher must simultaneously control the state, movement and safety of all the students over large areas, be able to adjust and assist the students in adapting to situations that are changing dramatically (gaming, educational, weather, physical ones); protect the students from injuries, overload; constantly promote universal, cultural, pedagogical values, skillfully stimulate various aspects of student development due to physical exercises, games and exercises.

O. Soltyk et al. (2017) state that “positive dynamics of forming professional competency of future specialists in physical culture and sports during professional training is effective due to the implemented organizational and pedagogical conditions for such specialists' professional development during professional training”. The whole range of complex and practically stress-producing factors for the teacher leads to the conclusion made by V. Papucha (2010): “from an economic point of view, quality professional activity of the physical education teacher under modern conditions is inadequately evaluated, physically and psychologically exhaustive, with a great “index of unpredictability” and a significant “professionally deforming” potential”.

Conclusions

The analysis of the results on diagnostics of the output level of future physical education teachers' development obtained at the ascertaining stage of the study has confirmed the existence of inconsistency between the students' traditional training and dynamic needs of the modern labour market, an unsatisfactory state of their pedagogical mastery development.

The model reflects the process of developing pedagogical mastery of future physical education teachers during professional training, which involves three consecutive stages, namely, motivation-, activity- and

reflection-based. It consists of the interconnected blocks – target, theoretical and methodological, content and technological, diagnostic and productive.

Pedagogical conditions for developing pedagogical mastery of future physical education teachers during professional training identified and implemented during the experiment have constituted the basic element of the designed model for developing pedagogical mastery of future physical education teachers during professional training.

The results of the study have shown that due to adherence to the outlined pedagogical conditions and implementation of the designed model for developing pedagogical mastery of future physical education teachers during professional training at the formative stage of the experiment there have been documented certain changes in the distribution according to the levels of pedagogical mastery development in general: 28.8% of the EG students and 17.8% of the CG students had the creative level. The indicator of the productive level in the EG has considerably increased up to 31.8%, in the CG – up to 21.5%.

Conflict of interest

The authors declare no conflict of interest.

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