

## The role of various types of field training in development of health-formation competence of future specialists in physical culture and sports

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### Abstract:

The article deals with issues of health-formation competence of future specialists in physical culture and sports in the process of various field trainings. The aim is to experimentally check the efficiency of development of health-formation competence of future specialists in physical culture and sports in the process of various field trainings.

Experimental work was done in 7 universities of Ukraine that provide training for specialists in physical culture and sports; the experimental group consists of 197 students, in the control group was 197 students. The students of 1<sup>st</sup>-4<sup>th</sup> years of studies who studied on specialties “Physical Culture and Sports” and “Secondary Education: Physical culture”. Field training was conducted in 2 areas (“active training” – a course of improving sports mastery; “practice of professional development” – introductory, on the 1 year of studies (for 2 weeks); pedagogical practice on the 3 year of studies (for 6 weeks); vocational practice on the 4 year of studies (for 4 weeks). Content basis of pedagogical system (special course called “Fundamentals of Coaching and Teaching Activity”) of professional growth of specialists in physical culture and sports served as an independent experimental factor implemented in the process of professional training of the experimental group.

The number of respondents from EG with low level was 12.19% before the experiment, while no such respondent was revealed after the experiment. Changes in health-formation competence were observed with students from EG. The number of students having medium level increased by 6.6%, with high level increased by 5.59%. Effectiveness of knowledge formation increases due to experimental factor ( $p \leq 0,05$ ).

Based on the pedagogical experiment carried out, statistically-important changes ( $p \leq 0,05$ ) proved positive dynamics of the development of health-formation competence of future specialists in physical culture and sports in the process of professional training within experimental group.

**Key Words:** health-formation competence, student, physical culture and sports, professional training, field practices, professional development.

### Introduction

Within the context of the issue of health-formation competence of future specialists in physical culture and sports, the specifics of professional activity of such specialists should be taken into account (Morales & Barry, 2007; Speller, Smith & Lysoby, 2009). The study of peculiarities of professional activity enables us to tackle various scientific and practical tasks, which include professional selection; professional consultation; projection of new types of activity; creation of profesiograms; creation of a model of specialists in certain fields and development of new forms and methods of training of qualified specialists, and approaches to the development of their health-formation competence (Pavlova et al., 2017).

The study of the dynamics of development of health-formation competence enables us to analyze the issue of training and use of specialists, assess quality work aimed at the formation of a personality of a future specialist in physical culture and sports, pay attention to peculiarities of professional activity (Soltyk et al., 2017; Vallerand, 2007). Within this context, we offer our own view on interpretation of such definition as health-formation competence of future specialists in physical culture and sports, and consider it as a component aggregate of general professional knowledge, skills, and experience of a specialist in physical culture and sports regarding formation of health with various layers of society formed during professional training in organization and planning of educational and training activity that takes into account educational, development, intellectual, general educational, special, practical, social, information, and communication components of educational process and contains the following key components: ability to organize and administer physical exercises and sports activities taking into account physical and psychological state of a person; ability to forecast short-term and long-term results of educational, training, and health-improving activity; ability to implement individual approach to organization of students in various forms of physical education, getting people involved to various

kinds of sports; ability to form educational, training, and recreational programs, pointing out key ideas in them, and updating their content; ability to promote health-improving types of physical exercises; ability to distinguish means of activation of students' activity in the process of physical education and training; ability to apply principles of health-improvement, educational and sports activities management; ability to organize physical education in specialized institutions for children and teenagers; ability to work with students having different capabilities, ability to create individual programs for them. Development of these components of health-formation competence is the primary tasks during various field training of future specialists in physical culture and sports (Buns Matthew, 2015; Iermakov, Cieślicka & Muszkieta, 2015).

## **Material & methods**

### *Study population*

Experimental work was done in 7 universities of Ukraine that provide training for specialists in physical culture and sports (Khmelnitskyi National University, Zaporizhzhia National University, Kamianets-Podilskyi National Ivan Ohienko University, Ternopil Volodymyr Hnatyuk National Pedagogical University, Drohobych Ivan Franko State Pedagogical University, Uzhhorod National University, Vasyl Stefanyk Precarpathian National University). The experimental group consist of 197 students, in the control group was 197 students. The students of 1<sup>st</sup>-4<sup>th</sup> years of studies who studied on specialties "Physical Culture and Sports" and "Secondary Education: Physical culture" took part in the experimental work.

### *Protocol*

Content basis of pedagogical system of professional growth of specialists in physical culture and sports (Soltyk et al., 2017) served as an independent experimental factor implemented in the process of professional training of the experimental group. This system was based on the elaborated special course called "Fundamentals of Coaching and Teaching Activity" and was introduced in the process of professional training of future specialists in physical culture and sports as an experimental factor. Formation of optimal content envisaged selection of material in accordance with division structuring, methodological systematization of subdivisions etc. Structuring of professionally-important data has been done in accordance with structural and logical scheme of material for vocational subjects.

When organizing field training, the following points have been observed: 1) clear definition of the aim and types of activity; 2) appointing supervisors for each student during field training or one supervisor for several students; 3) making a report on the results of field training after its completion; 4) having continuous cooperation of the university (faculty) with comprehensive schools, children's and youth schools, schools of higher sports mastery.

Field training was conducted in two areas: as "active training" – a course of improving sports mastery; "practice of professional development" – introductory, on the first year of studies (for 2 weeks); pedagogical practice on the third year of studies (for 6 weeks); vocational practice on the fourth year of studies (for 4 weeks). Primary aim of the "active training" was to apply theoretical knowledge, theory and methods of sports training regarding organization of sports activities in the process of physical education. During active training, participants acquired new skills, which improved their level of health-formation competence. The aim of "professional development" training was defined as: 1) to introduce professional activity; 2) to develop general idea of participants about children's sports school and the content of work with children within various form of physical education and sports training in the selected sports specialization. The main result of both types of practice was formation of professional competence in the organization of sports events.

Formation of health-formation competence in the experimental group, differed in the implementation of professional and motivational trainings in the educational process; improvement of the content of professional training of future coaches-teachers on the basis of implementation of educational and methodological complex that includes output data about educational subject and its author (authors), subject's curriculum, content of subject's sections (modules), lectures, supplementary information materials, practical classes with the methodological recommendations, tasks for self-preparation, practical exercises (tests), module control, control tasks and assessment criteria for summing up control; provision of professional self-improvement of future coaches-trainers based on the use of person-oriented technologies.

Within various types of field training, briefing was chiefly used when the following components of health-formation competence were being formed: "ability to use modern fitness technologies; orientation on professional self-improvement", which featured concentration of a future specialist in physical culture and sports on conducting classes in aerobic- and power-oriented fitness; creation of complexes for aerobic- and power-oriented fitness; balancing aerobic- and power-oriented physical workload for different age groups; planning individual and group trainings; ability to determine changes in functional systems of organism under influence of aerobic and power workload etc. In terms of content in educational process, briefing was introductory, running, and final. Introductory briefing was held prior to independent studies of future specialists in physical culture and sports; running briefing was held during it; final briefing as held to analyze the results of independent work, point out best works, distinguish further perspectives in the studies.

During organization of active sports and pedagogical practice, participants could also do experimental checks in order to solve contradictions between the volume of physical and psychological load on students (during educational and training classes) and their age abilities; between students' health and the volume training workload etc.

The method of explanation to future specialists in physical culture and sports regarding various types of field trainings were chiefly used while teaching new material and to consolidate skills and knowledge. This was most specific to cases, when teachers saw that students did not understand something, for instance, when analyzing issues regarding elaboration and substantiation of physical workload standardization; physiological criteria for assessment of physical workload of various types, character, and intensity; physiological substantiation of didactic principles of physical education; application of physiological peculiarities of physical exercises for children of various age and sex; giving definition to physiological aspects of sports orientation etc. Successful explanation depended on its validity, teaching logic, selection of arguments, clearness of teacher's speech, its tempo and imagery.

Within various types of field trainings, teachers used narrative-explanations prior to doing independent works and partially during conversations. This was a narrative of a scientific, popular science, and descriptive character that, throughout educational process, was supposed to provide students with independent comprehension of regularities of international historical development of means, forms, methods, ideas, and theories of sport and Olympic movement with the aim to execute and implement fundamental principles of Olympic spirit, which formed the following components of health-formation competence of future specialists in physical culture and sports in the process of professional training: ability to intelligently determine progressive historic heritage of international sport and Olympic movement at various stages of society development with the aim to form a number of educational, social, cultural, legal, patriotic, economic, ecological, political and other values of students; ability to provide highly professional theoretical and methodological training needed for work with various layers of society; ability to implement gained knowledge while assessing modern tendencies, ideas, events, approaches and phenomena observed in modern sport and Olympic movement. Every type of narrative had educational orientation of studies, conformed to valid and scientific facts, relied on sufficient amount of good and convincing examples that proved validity of theoretical points, promoted better comprehension of new material. The narrative was structured the way it envisaged clearness of the main idea and basic aspects, repetition of the most important points; included conclusions and generalizations; was scientific, available and plain in terms of the language, emotional in terms of form and content.

Within various types of field trainings in youth sports schools and other sports organizations, various narratives (method of teaching in question-answer mode) were held. According to its aim, the following types of narratives were distinguished: introductory narrative (preparation to a practical class), informative narrative (based on observations of the results of training), repetition narrative (consolidation of educational material), and control narrative (to check obtained knowledge).

During practical training session students were divided into groups to complete this works more conveniently. The structure of practical trainings session consists of the following elements: introduction of its topic, aim and tasks; actualization of supporting knowledge (formation of professional, organizational, pedagogical, methodological knowledge and skills needed for organization of sports events) and skills of future specialists in physical culture and sports, and formation of health-formation competence, namely orientation on professional self-improvement; motivating educational activity of students; presenting them the instruction; selection of necessary logistical support in the selected kind of sports; doing works under supervision of a teacher; making a report; discussion and theoretical integration of the obtained results.

Lessons with the control group have been conducted by the traditional methods.

#### *Instrument and statistical analysis*

The three level of health-formation competence (low, medium, high) was defined (table 1). In this research, we have suggested to analyze health-formation competence in combination with functional component that developed preparedness of future specialists in physical culture and sports to the process of health formation in educational and training process and activity and practical criterion.

**Table 1. Characteristics of level of health-formation competence**

Component	Level	Development criterion	Indices
Functional	High	Activity and practice	Application of the results of professional training in module special course in professional-orientation situations on creative level
	Medium		Application of the results of professional training in module special course in professional-orientation situations on constructive level
	Low		Lack of the results of professional training

In the structure of the functional component, activity and practical component has been pointed out. This component characterizes possession of methods of means of defining personal quality of health formation, ability to independently make professional decisions, knowledge of professional categorical apparatus and skills to use it in the context of students' health formation.

Examination of the levels of health-formation competence of future specialists in physical culture and sports was supported by the totality of methods (expert assessment, interactive testing in MOODLE system, interview, pedagogical survey, polling, complex theoretical and practical tasks developed on the basis of curricula) of examination of the level of knowledge and skills formation depending on their type: the level of practical skills was assessed by the accuracy and speed of performing certain actions peculiar to this type of work. Data was classified according to the previously elaborated scale (table 2).

Table 2. Assessments of students' performance by value coefficients (in points)

Practical work		Self-preparation, individual work	Final control
Practice by the types	Test	Development of individual programs of health-improving and motor activity	Examination of final thesis
0.6	0.1	0.1	0.2

The characteristics of subjects were described analyzed by mean value (M), mean square deviation (S). The normal distribution of empirical rows was checked by the Shapiro-Wilk test. Statistical verification of the hypothesis about the probability of differences between the indicators of different groups Student's t-criterion was used. For all conducted tests, the level of significance was set at least to  $p < 0.05$ .

## Results

In our research, we propose to analyze health-formation competence in combination with functional component that developed preparedness of future specialists in physical culture and sports to work with health formation in educational and training process and activity and practical component.

The idea behind functional component lied in comprehension of the system of fundamentals of professional training sciences in form of scientific concepts, theories, laws, regularities, models, classifications, categories, processes, phenomena, notions, facts that develop health-formation competence of specialists within various types of field training. Activity and practical criteria characterize knowledge of the methods and means of defining personal quality of health formation, ability to independently make professional decisions; knowledge of professional categorical apparatus and ability to use it in the context of students' health formation.

Analysis of the results of research of health-formation competence by activity and practical criterion showed the following: the number of respondents from EG with low level was 12.19% before the experiment, while no such respondent was revealed after the experiment (Figure 1). Changes in health-formation competence by activity and practical component were observed with students from EG. The number of students having medium level increased by 6.6%, average grade increased from 3.49 to 4.17 points ( $p \leq 0.05$ ) (Table 3). After the experiment, the number of students having high level of health-formation competence by activity and practical component increased by 5.59%; however, average grade had a slight increase (0.22 points) and was statistically unreliable.

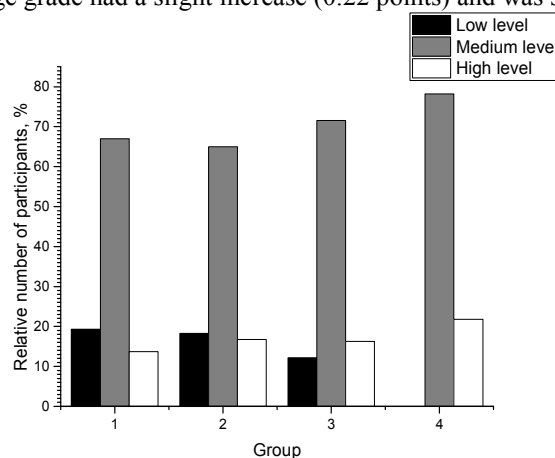


Fig 1. Development of health-formation competence (activity and practical component) under in control and experimental groups:

1 – CG before the experiment, 2 – CG after experiment, 3 – EG before the experiment, 4 – EG after the experiment

Table 3. Results of the research of the development of health-formation competence of future specialists in physical culture and sports by activity and practical component (at  $p \leq 0,05$ )

Level	Control group		Experimental group	
	Before the experiment	After the experiment	Before the experiment	After the experiment
Low	2.13	2.17	2.11*	–*
Medium	3.54	3.52	3.49*	4.17*
High	4.57	4.48	4.54*	4.76*

\*  $p \leq 0,05$

Among students from CG, the number of the ones having low level of health-formation competence by activity and practical criterion was 19.29%. After the experiment, no differences in the number of students and index of health-formation competence were observed. Such results were also observed with CG respondents having medium or high level of competence. The number of students with medium competence level decreased from 67.01% to 64.98%; average grade changed from 3.54 to 3.52 points (Table 3).

Application of elements of a structured content of major subjects in the educational process had positive effect, which manifested itself in the increase of quality of students' knowledge (functional component of health-formation competence). The dynamics of assessment of the researched student groups quality of knowledge throughout four years is shown in Figure 2.

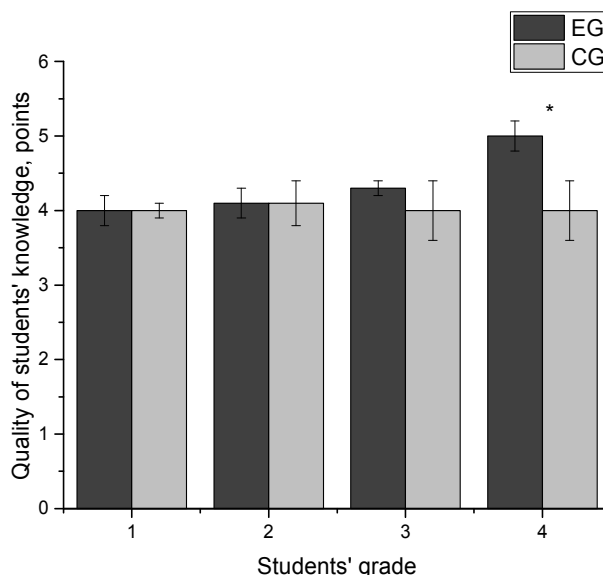


Fig. 2. Assessment of quality of students' knowledge (functional component) at (\* –  $p \leq 0,05$ ):

EG – experimental group; CG – control group

Effectiveness of knowledge formation increases due to experimental factor. Average quality of EG students' knowledge is 0.3 points higher than the ones from CG. The number of excellent grades of students from the experimental group during state examinations was 14.4% higher than the one of students from the control group during state examinations ( $p \leq 0,05$ ).

## Dicussion

Professional growth of future specialists in physical culture and sports starts with professional training, which envisages formation of professional orientation and system of professional knowledge, skills, experience in theoretical and practical tackling of professional situations and tasks (Soltyk et al., 2017; Winterstein, 2002; Wuest & Bucher, 2003). Thus, our scientific research and results of its implementation enabled formulation of such points regarding further development of health-formation competence of future specialists in physical culture and sports.

On the level of state: provision of monitoring of professional competences of specialists in physical culture and sports, where state, world community, and labor market (enterprises, organizations) requirements to content of higher education are generalized; reflection of social demand to training of such specialists with consideration to the analysis of professional activity and requirements to the content of higher education put forth by the state and individual customers who need the specialists (Buns Matthew, 2015).

On institutional level: provision of educational and qualification requirements to higher educational establishments in form of a system of acquired general (instrumental, inter-personal, systematic) and basic professional competences of specialists in physical culture and sports, professional purpose and conditions of

using graduates of higher educational establishments, bachelors in “Physical Culture and Sports” based on the results of acquired general and professional competences; imposing requirements to attestation of such specialists, responsibility for quality of education professional training (Backman & Larsson, 2016; Barbuto, 2006; Wuest & Bucher, 2003).

On organizational and pedagogical level: provision of the formation of knowledge in peculiarities of the system of professional training that is based on fundamental knowledge of regularities of personality comprehensive development; creation of educational and training process for children and teenagers, content and forms of sports and health-improving training, means and methods of physical and theoretical training, pedagogical mastery of a specialist in physical culture and sports; methods of teaching and educating the growing generation in the process of doing physical exercises; organization of classes with children and teenagers, knowledge and skills that allow to organize classes in special medical groups, conduct training and health-improving activities with disabled people, organize work with health improvement; to form skills in development and implementation of special recreational program and complexes of physical exercise for various layers of society, organize and conduct educational and training classes with consideration of physical and psychological state, organize doctoral and pedagogical monitoring over effectiveness of educational and training classes (Quennerstedt & Larsson, 2015; Winterstein, 2002).

### Conclusions

Thus, we have drawn a conclusion that effectiveness of the development of health-formation competence of future specialists in physical culture and sports in the process of professional training is provided with optimal approach to creation of structure and content, which is implemented due to use of various types of field training with formation of their health-formation competence being mandatory requirement.

Coaching field training promotes development of health-formation competence in wide range of training of specialists in physical culture and sports, which requires students to elaborate various skills in working with trainees. Thus, professional training of future specialists in physical culture and sports does not only require approximation of studies in higher educational establishments to real professional activity based on implementation a specific principle of professional orientation, but also envisages broadening of independent educational and cognitive , as well as creative work of future specialists in this field, which has practical and professional orientation and lies in the bases of self-improvement and self-education.

### Conflicts of interest

The authors report no conflicts of interest.

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