

PEDAGOGICAL CONDITIONS FOR TRAINING FUTURE PHYSICAL EDUCATION TEACHERS FOR PROFESSIONAL ACTIVITY BASED ON A DIFFERENTIATED APPROACH: IMPLEMENTATION AND THEIR EFFECTIVENESS

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Abstract. *The article examines the peculiarities of the training of future teachers of physical culture based on the principles of a differentiated approach. The determination of the effectiveness of the implementation of pedagogical conditions for the training of future teachers of physical culture based on a differentiated approach was chosen as the aim of the research. Analysis, synthesis and modeling methods were used to study the state of research. The results of our research was carried out with the help of empirical methods: pedagogical observation, questionnaires, interviews, testing, the method of experimental evaluations. Mathematical statistics methods were used to process the research results. Factors influencing such a process have been determined, among which a significant role is assigned to pedagogical conditions. An analysis of various pedagogical conditions was carried out, among which the following were selected and adapted to the subject of the study: ensuring students' motivation for classes by using a differentiated approach in classes on preparation for sports and pedagogical activities; improvement of the content of sports and pedagogical activities based on the principle of a differentiated approach; the use of modern information technologies for the implementation of a differentiated approach in training classes for sports and pedagogical activities; the use of interactive forms and methods of learning in the educational process, which allow a wider application of a differentiated approach in preparation for sports and pedagogical activities. Each pedagogical condition was implemented in lectures and practical classes. The effectiveness of the components of the training of future physical culture teachers (motivational, activity and content) has been proven. Those components are consistent with the selected pedagogical conditions. In order for students to master the practical material, training, general development and exercises on devices were differentiated. Differentiated tests have been developed to determine the readiness of future teachers for sports and professional activities. An electronic course was developed, for which the SunRav BookOffice program was used.*

Keywords: *future teachers of physical culture, sports-pedagogical activity, differentiated approach, pedagogical conditions, modern technologies, forms and methods of education.*

JEL Classification: I28, I29, L83

Formulas: 0; **fig.:** 1; **tabl.:** 1; **bibl.:** 8

Introduction. The effectiveness of training future specialists depends on many factors. In the conditions of the new Ukrainian school, the requirements for teachers, the level of their professional training, and professional competence are increasing. This also applies to physical education teachers. Increased requirements are placed on them, since the physical health of the younger generation depends on their level of readiness. A physical education teacher must have the ability to distribute the physical load on each individual student, depending on his physical capabilities. And for this, the teacher must have knowledge of individualization and differentiation in the distribution of loads for each student. A differentiated approach creates conditions for an even distribution of loads during physical education lessons and extracurricular activities. The implementation of this approach allows you to cover the whole class with exercises, providing the opportunity for all students to participate in their

performance in accordance with their physical capabilities. In addition, the implementation of a differentiated approach relieves the moral stress of students, because they are sure that they will fulfill the exercises. This is the importance of a differentiated approach in the training of physical culture teachers, which, in combination with correctly selected pedagogical conditions, has a positive effect.

Literature review. The problem of high-quality training of specialists has always been in the field of view of scientists, among whom a significant contribution was made by pedagogues-scientists: M. Danylko, L. Zelenska, I. Zyazyun, N. Nychkalo, T. Osadcha, S. Sysoeva, L. Sushchenko, B. Shiyan and others.

Recent studies are aimed at finding new educational technologies for the training of specialists in humanitarian (I. Glazkova, A. Stareva, V. Bazurina, A. Akusok, O. Dubaseniuk), technical (L. Kostelna, E. Neroba, S. Litvinchuk), physical and mathematical (L. Breskin) profiles. The problem of training physical culture teachers was considered in detail in the works of O. Alekseev (use of the principle of individualization by physical culture teachers in working with students), I. Dubogai (general problems of training future physical culture teachers), G. Kondratska (formation of ethical culture), Yu. Moseichuk (ways to increase professional competence), E. Pavlyuk and O. Pavlyuk (innovative technologies) in the training of physical education teachers.

Aims. The determination of the effectiveness of the implementation of pedagogical conditions for the training of future teachers of physical culture based on a differentiated approach was chosen as the aim of the research.

Methods. Analysis, synthesis and modeling methods were used to study the state of research. The results of our research was carried out with the help of empirical methods: pedagogical observation, questionnaires, interviews, testing, the method of experimental evaluations. Mathematical statistics methods were used to process the research results.

Results. Based on the analysis of psychological and pedagogical literature, it was determined that pedagogical conditions have a significant influence on the effectiveness of training future specialists. Therefore, it was determined which pedagogical conditions would be effective for this process. The analysis of the conditions encountered in the research of scientists allowed us to identify those that can be adapted to the conditions of differentiation of the training of future teachers of physical education. The following conditions were chosen: ensuring students' motivation for classes by using a differentiated approach in classes on preparation for sports and pedagogical activities; improvement of the content of sports and pedagogical activities based on the principle of a differentiated approach; the use of modern information technologies for the implementation of a differentiated approach in training classes for sports and pedagogical activities; the use of interactive forms and methods of learning in the educational process, which allow a wider application of a differentiated approach in preparation for sports and pedagogical activities.

The effectiveness of the pedagogical process is determined by the final result. Let's consider how the selected pedagogical conditions were implemented and how effective they were.

Implementation of the first pedagogical condition. The issue of personal motivation in the process of professional training of students is considered in the works of A. Verbytskyi. [1], E. Ilyina [2], I. Kasyanenko [3], L. Romanyshina [4], O. Khorokholets [5] and others. Motivation is an important component of a future teacher's readiness to apply a differentiated approach.

According to E. Zakharina, the formation of the motivation of the future teacher of physical education requires: acquisition of knowledge, abilities, skills to perform their professional tasks; stimulation by teachers of creative organization of educational work, encouragement to perform independent work [6].

In the process of a formative experiment in EG, we tried to motivate students to take classes in sports-pedagogical activity (hereinafter SPD) by forming in them a positive attitude towards the chosen profession. During the training, guided by the principle of consciousness and activity, the educational material was explained, including each considered issue regarding its importance for the future pedagogical activity of the teacher. Much attention was paid to the internal (aspiration to be a physical education teacher, a sense of satisfaction from the chosen profession) and external (lectures, practical classes when studying the disciplines: anatomy, physiology, biomechanics, theory and methods, sports games, athletics) activities.

Separately, students' motivation was formed through the use of incentives and encouragements for performing more complex creative tasks.

The implementation of the second pedagogical condition refers to the improvement of the content of SPD based on the principle of differentiated education. For example, in gymnastics classes, it was carried out by filling it with tasks that allowed each student to progress in relation to the requirements set before him by the academic discipline, as well as in terms of his professional growth.

Students completed tasks by testing. In accordance with the topics of the theoretical block, we developed 250 test tasks on the material of gymnastics, which were divided by levels of difficulty, which allowed students to choose tasks according to their level of knowledge at the time of writing the modular control or test. In order to better master the educational material, we developed a manual on the theory of gymnastics from which students could gain relevant knowledge.

In order for students to master the practical material, training, general development and exercises on devices were differentiated.

Training exercises:

– to differentiate tasks for identified subgroups according to the existing level: "low", "medium", "high":

1. Performing the task in a subgroup of 3-4 students.
2. Performing the task in a subgroup of 6-8 people
3. Performing the task in a group (grade 1 - for the ability to tell, 2 - for the ability to conduct, 3 - for the ability to teach).

– the following sequence of study of the formation exercises section is proposed: formation techniques on the spot, lining up and re-lining, moving, opening and closing.

General developmental exercises:

– to differentiate tasks for identified subgroups according to the existing level: "low", "medium", "high":

1. Performing the task in pairs (4-5 repetitions).

2. Performing the task on a subgroup.

3. Performing the task in a group (grade 1 - for the ability to show and tell, 2 - for the ability to conduct, 3 - for the ability to correct mistakes.

– the following sequence of studying the methods of general developmental exercises is proposed: separate, separate-stream, stream, pass-through, game, etc. During the performance, use exercises: with a gymnastic stick, a ball, with a change of places in rows and columns, with a bench, on a bench, near the gymnastic wall, on the gymnastic wall, in pairs, complexes for different age groups with objects and without objects.

Exercises on devices:

– to differentiate tasks for identified subgroups according to the existing level: "low", "medium", "high":

1. for the technique of performing exercises on gymnastic equipment,

2. for assistance and insurance in the process of performing gymnastic exercises,

3. for knowledge of the methodology of teaching exercises.

– the following study sequence is offered: Performance technique and teaching method of basic elements on gymnastic devices. Mastering the basic methods of assistance and insurance. Methods of teaching the elements of the Comprehensive program of physical education of secondary schools in grades 1-11. Compilation of approximate training combinations on gymnastic devices.

Implementation of the third pedagogical condition. At the current stage of education development, the informatization of society has caused a sharp increase in the use of modern information technologies in education. New ways of obtaining information and knowledge are emerging. In the future, the specific weight of the ways of such perception of information, including educational information, will steadily grow. There are objective grounds for the formation of scientific and educational activities of higher educational institutions with the mandatory use of modern information technologies [1].

In the process of creating an electronic course, we used the SunRav BookOffice program. The software shell consists of two parts that can work independently of each other.

SunRav BookEditor – a program for creating and editing books with a built-in spell check system, allows you to create links from anywhere to book sections, to other books, to tests, to Internet pages or to any other documents. It is possible to open links in pop-up windows, the appearance of which can be customized to your liking. With its help, you can create electronic books, manuals, dictionaries, encyclopedias and store them in various formats. A convenient and simple editor for work will allow you to comfortably organize educational and methodological activities [6].

With the help of SunRav TestOfficePro, knowledge testing in educational disciplines was organized and conducted, as well as for educational purposes. The program is easy to use, has a simple interface and a wide variety of test tasks, in which

you can change the type of answer, limit the time of the answer, the value of the question in points. It is also possible to use pictures and video materials of different formats in the tests.

Currently, there are programs in the educational space that allow you to combine various types of tasks and make the learning process convenient for teachers, easy and accessible for students. At the Ternopil National Pedagogical University named after V. Hnatyuk the Moodle software is used. It precisely performs these functions and was created for a full-fledged interactive educational and methodological complex.

Summarizing the above, we note that the use of information technologies significantly improves the educational process of students, makes it more interesting, and education itself becomes more accessible. But in our opinion, the use of advanced educational technologies should be harmoniously combined with practical training in sports disciplines. And only under this condition is it possible to achieve the maximum result from the educational process, namely the formation of a future teacher of physical education.

Implementation of the fourth pedagogical condition. Interactive learning is a special form of organizing cognitive activity that has a specific, foreseeable goal - the creation of comfortable learning conditions under which each student feels successful, intellectual ability [7].

Interactive training in physical education, in particular in the cycle of sports and pedagogical disciplines, involves the formation of new experience for students through their direct practical involvement in classes. Having a certain level of knowledge and experience, they skillfully perform tasks, separate educational functions of the teacher, thereby teaching and learning themselves. This solution of educational tasks contributes to students' motivation for classes, their creative and personal growth.

To divide interactive technologies into groups, we will use the classification according to O. Pometun and L. Pyrozhenko [7], which, depending on the purpose of the lesson and the forms of organization of educational activities, divide them into four groups:

- interactive technologies of cooperative learning;
- interactive technologies of collective and group learning;
- situational modeling technology;
- technologies for processing debatable issues.

In accordance with this distribution, we offer the following forms of introduction of interactive technologies into the educational process of training a future teacher of physical culture from SPD (Fig. 1).

In the conditions of interactive training of students with special needs, we used a problem-based lecture to implement the theoretical block of questions.

The form of interactive learning "Circle of ideas" is effective in the process of solving acute controversial issues. This form allows you to create a list of ideas for solving a specific task, involving all participants in the discussion.

Such methods of collective and group training as: "Microphone", "Brainstorming" were used in the practical classes. This gave each student a chance to say something quickly, taking turns answering a question or expressing an opinion or position.

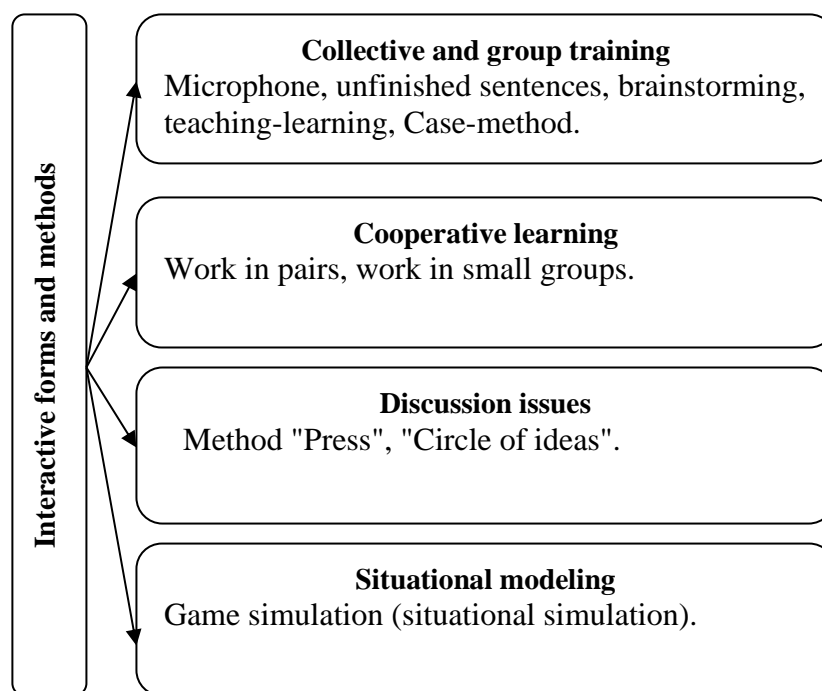


Figure 1. Forms and methods of training used in the process of training future teachers of physical culture from SPD

Source: developed by the author

Our research has shown that this method can be used to sum up the material studied, to activate students at the beginning of the lesson.

In practical classes, solving the issue of educational practice, we used the method "Work in small groups", "Teaching-learning". For their implementation, the students were given a list of tasks that they had to complete preliminary preparation in the form of a study card. Each of them in the practical session performed their task on the part of the group performing the role of a teacher, in this way the process of mutual learning was carried out, which in turn contributed to a better understanding of the educational material and their motivation to study.

The implementation of interactive learning in lecture classes in the process of training future teachers of physical culture with SPD contributes to the fact that the student rethinks the process of acquiring knowledge from the fact that he should be provided with ready-made knowledge to the understanding that he should acquire it by his own efforts. The use of forms of interactive learning in practical classes with SPD activates the thinking of students, increases the effectiveness of training not only due to the increase in the amount of educational material transmitted, but also due to the depth and speed of its perception, ensures high results of education and training of students, promotes self-improvement of future specialists physical culture.

Results. In order to check the effectiveness of pedagogical conditions, a pedagogical experiment was conducted. Students were divided into control and experimental groups. Students of the control group studied according to the standard method. Students of the experimental group studied according to the experimental group.

The pedagogical experiment involving 362 students was conducted on the basis of Ternopil National Pedagogical University named after V. Hnatyuk, Kremenets Regional Humanitarian and Pedagogical Academy named after Taras Shevchenko, Prykarpattia National University named after V. Stefanyk, Lviv State University of Physical Education and Sports.

At the ascertainment stage of the research, the initial level of the formation of competencies was determined in both groups, which showed that they are approximately the same in terms of theoretical, practical and physical indicators.

The diagnosis of the results of our research was carried out with the help of empirical methods: pedagogical observation, questionnaires, interviews, testing, the method of experimental evaluations (experts were teachers of higher education institutions with more than 10 years of experience). Mathematical statistics methods were used to process the research results.

Readiness for professional sports activity was determined by motivational, activity, content components. After analyzing the results, we combined them and placed them, as the result of the analysis (Table.1).

Table 1. Final assessment of students' readiness for professional and sports activities (on the ECTS scale)

ECTS scale	National scale	Number of students (CG)	Number of students (EG)
A	Perfect	2 (3%)	7 (11%)
B	Very good	3 (5%)	4 (6%)
C	Good	7 (11%)	18 (29%)
D	Mediocre	17 (27%)	20 (32%)
E	Satisfactorily	20 (31%)	10 (16%)
FX	Unsatisfied with the opportunity reassembly	15 (23%)	4 (6%)
X	Unsatisfactory with mandatory repeat course	0 (0%)	0 (0%)
Total number of students		64	63

A comparison of the given data allows us to say that after the end of the training course the students of the experimental group found themselves at a qualitatively higher level than their fellow students, whose training took place according to the old methodology. This, in turn, gives us the right to claim that the students of the experimental group have better qualitative and quantitative indicators of the formation of readiness for professional activity.

Conclusions. Thus, the conducted studies showed that the implementation of pedagogical conditions based on a differentiated approach has a positive effect on the effectiveness of training future physical education teachers for professional activities. Further research will be aimed at individualizing the training of future teachers with secondary school students.

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