ПРОФЕСІЙНА ОСВІТА

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SCIENTIFIC PRINCIPLES OF PROVIDING PEDAGOGICAL CONDITIONS FOR THE TRAINING OF PHYSICAL THERAPIST STUDENTS TO USE CLINICAL ASSESSMENT TOOLS

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The article describes and gives a basis for scientific principles of providing pedagogical conditions for the use of clinical assessment tools by physical therapist students. It has been established that the educational process of students majoring in 227.1 (Physical Therapy) should be based on five components: motivation; formation of knowledge, skills, and abilities; quasi-professional methods; practice; evaluation criteria.

The author proposes to introduce the following pedagogical conditions into the educational process to ensure the presence of these components of improving the quality of physical therapists' education: formation of theoretical knowledge and practical skills while using clinical assessment tools; supplementing the content of special disciplines with interaction in quasi-professional settings; introduction of tutoring support in the educational process of physical therapists.

The implementation of pedagogical conditions, according to the author's idea, is based on the activity-based (organization of the educational process, in which the main attention is paid to the active, versatile, productive, maximally independent educational and cognitive activity of students) and competence-based (formation of competencies, training results are considered significant outside the education system) approaches, explanatory and illustrative (to ensure that students understand the content of the educational material) and reproductive (aimed at reproducing the ways of doing things according to the algorithm defined by the teacher) methods, concepts of problem-based learning (a form of organizing the interaction between teachers and students, which aims to create problem situations in the educational process and facilitate their solution by students) and collective (creating specific conditions for the exchange of knowledge, skills and experience between students) learning.

Key words: *physical therapy, physical therapist, professional training, pedagogical conditions, clinical assessment tools.*

Олена Бурка. Наукові засади забезпечення педагогічних умов підготовки студентів – фізичних терапевтів до використання клінічних інструментів оцінки

У статті описано й обґрунтувано наукові засади забезпечення педагогічних умов підготовки до використання клінічних інструментів оцінки студентами – фізичними терапевтами. Встановлено, що освітній процес студентів спеціалізації 227.1 «Фізична терапія» повинен ґрунтуватися на п'яти складових: мотивації; формуванні знань, умінь і навичок; квазіпрофесійних методах; практиці; критеріях оцінювання.

Для забезпечення наявності зазначених елементів підвищення якості навчання студентів – фізичних терапевтів, за авторським задумом, запропоновано впровадити в освітній процес такі педагогічні умови: формування теоретичних знань і практичних вмінь використання клінічних інструментів оцінки; доповнення змісту фахових дисциплін взаємодією у квазіпрофесійних умовах; впровадження тьюторського супроводу в навчальний процес фізичних терапевтів.

Реалізація педагогічних умов, за авторським задумом, відбувається на основі діяльнісного (організація освітнього процесу, за якої головна увага приділяється активній, різнобічній, продуктивній, максимально самостійній навчально-пізнавальній діяльності тих, хто навчається) і компетентнісного (формування компетентностей, результати підготовки вважаються вагомими поза системою освіти) підходів, пояснювально-ілюстративного (для забезпечення розуміння здобувачами освіти змісту навчального матеріалу) і репродуктивного (спрямований на відтворення способів діяльності за визначеним викладачем алгоритмом) методів, концепцій проблемного навчання (форма організації взаємодії педагогів і здобувачів освіти, метою якої є створення в навчальному процесі проблемних ситуацій і сприяння їхньому вирішенню студентами) та колективного (створення специфічних умов для обміну знаннями, уміннями й досвідом між здобувачами освіти) способу навчання.

Ключові слова: *фізична терапія, фізичний терапевт, професійна підготовка, педагогічні умови, клінічні інструменти оцінки.*

Introduction. The current state of public health and the situation of the last five years in Ukraine have led to an increased interest in specialists in nonmedical recovery and long-term maintenance of a satisfactory body condition. Physical therapists and their assistants are prime examples of such specialists. A few years ago, they were called upon to apply their knowledge to fulfill their professional tasks, but now their responsibilities have been expanded to include a creative approach to rehabilitation: critical assessment, quick response to changing conditions, and combined work in a multidisciplinary team.

That is why at the present stage, the training of a physical therapist requires changes and a better educational process at all levels of education.

It is well known that pedagogical conditions are the most effective means of ensuring quality education. This is particularly true for practical professions, in particular, the field of 22 Healthcare.

Purpose: to describe and substantiate the scientific basis for providing pedagogical conditions for training in the use of clinical assessment tools by physical therapists.

Study methods. Theoretical analysis of scientific sources on the research subject, generalization and systematization of the collected material, development of the regulatory framework for organizing the educational process for students majoring in 227.1 Physical therapy and ergotherapy.

Study results. In our study, pedagogical conditions mean appropriate pedagogical circumstances that promote or counteract the manifestations of pedagogical patterns caused by the action of external and internal factors [8]. Therefore, there is a need to create and implement such pedagogical conditions that will ensure complete and high-quality training of physiotherapists.

The study of scientific sources concerning professional training of specialists revealed several common statements. In particular, numerous works state that the training process is based on the following components:

– interest: a starting point for a conscious choice by an applicant. M. Levochko and N. Gres are convinced that the formation of students' desire for learning occurs from the first classes through the establishment of social contacts and familiarization of future professionals with the profession [2];

– formation of knowledge, skills and abilities: theoretical knowledge is the basis for professional training of any specialists, because without the theory it is impossible to realize and understand certain provisions, rules or structure of the organization of activities. A trained student is a student armed with theoretical knowledge, able to complete any tasks in the classroom independently (in a group or under the guidance of a teacher) and consciously. Establishing the procedure for solving a problem transforms theoretical knowledge into practical skills;

– quasi-professional methods: providing training in conditions close to professional ones. The process of professional training involves the provision of theoretical information, which complicates the practical implementation of the acquired knowledge in professional activities. A. Verbytskyi emphasizes the need to create conditions for the transformation of acquired knowledge, skills and abilities into means of solving practical problems. Therefore, it is reasonable to intensify training by providing conditions for transferring theoretical knowledge into practice during classroom training through the use of quasi-professional teaching methods. According to R. Rudenko, introducing such changes in the training of specialists is a way to increase the effectiveness of preparing students for future professional activities. In addition, solving problems contributes to the development of collective forms of communication that are socially significant;

– practice: it is a way to give students required skills and abilities to solve professional problems independently and effectively in the context of the transforming and changing society. This form of education contributes to the improvement of students' professional abilities through independent performance of professional tasks using theoretical knowledge and practical skills acquired during training in various situations inherent in the future professional activity;

– assessment methods as a traditional part of the training process. It is known that the existence of a sound control system ensures the improvement of the learning process by improving the quality of training of future specialists. An important point of modern professional training is the need to measure the subjective experience of a future specialist, that is, to determine the level of residual knowledge of general professional disciplines – the basis for the acquisition of knowledge of integral subjects [1].

We assume that, based on the above characteristics, teaching physical therapist students to use clinical assessment tools can be carried out according to a similar scheme.

We propose to introduce the following pedagogical conditions into the educational process to ensure the presence of these five components while teaching physical therapist students to use clinical

assessment tools: formation of theoretical knowledge and practical skills to use clinical assessment tools; supplementing the content of special disciplines with interaction in quasi-professional settings; introduction of tutoring support in the educational process of physical therapists.

Implementation of pedagogical conditions, according to the author's idea, is based on the activity and competence approaches, explanatory and illustrative and reproductive methods, concepts of problem-based learning and collective learning.

Activity means active interaction of a subject with the world aimed at changing and transforming it in order to meet their needs. In the course of the activity there is a reproduction-embodiment in the object of a mental model-image, the realization of the connections and attitudes of the subject to reality [4].

The activity-based approach towards the educational process focuses on the active, versatile, productive, and maximally independent learning and cognitive activities of students.

According to the activity-based approach, human activities are based on the structural-level principle with the following levels of activity organization: operations (unconscious), actions (conscious), and autonomous activity. Certain types of activity are integrated into the fourth level of activity regulation – the personality system, which is a kind of human activity ordering: what they want, what they can do, and how they manifest themselves to other subjects [5].

These levels indicate the patterns of formation of students' professional skills in the learning process. That is, the final results of the activity should be the formed skills of using clinical assessment tools. To achieve this goal, a specialist must obtain an incentive to act that will contribute to the formation of a motive [4].

The provisions of the activity approach lay the theoretical basis for the production of meaning-forming motives that will ensure the formation of students' attitudes towards the profession as personally significant and activities based on internal motivation. This is supported by the fact that healthcare professions have high social importance and are difficult to master. Therefore, meaning-forming motives are an excellent means of maintaining interest and increasing the level of knowledge due to the special occupational requirements for physical therapy specialists, which are associated with high levels of psycho-emotional stress and responsibility due to decision-making in a short period of time [1].

Competency-based approach is an approach in which the results of training are considered significant outside the education system.

The essence of the competence approach is to focus the educational process on a specific goal – formation of professional competencies, including: the ability to implement the acquired knowledge and experience in further activities, the acquisition of individual knowledge, skills and abilities that make up a single whole in the form of readiness, learning to effectively solve problems through the performance of individual actions, etc. [9].

Thus, the result of training in accordance with the competence approach is the achievement of a certain result: actual formation of professional competence. In our study, we consider professional competence to be the readiness to implement the acquired knowledge, skills, and abilities to use clinical assessment tools in real and constantly changing conditions.

The explanatory and illustrative method of teaching is recommended to ensure that students understand the content of the educational material. Understanding is a process in which a student comprehends the connection between the unknown and the known matters, brings an unknown concept to an already known one, and can compare the unknown with known knowledge, not just the result of perception. According to this method, the teacher establishes the students' perception and awareness of the information provided, and the students work on its assimilation, comprehension and memorization.

The advantages of the explanatory and illustrative method in training specialists are the presentation and assimilation of knowledge that occurs in the system, consistently, in an economical mode, and at an effective pace [6].

The reproductive method is a teaching method aimed at reproducing the ways of doing things according to an algorithm defined by the teacher. It provides the ability to transmit a large amount of educational information in the shortest possible time without great effort. The reproductive method is used to develop the ability to apply knowledge.

The system of reproductive methods helps students to enrich their knowledge and abilities, to form their skills in basic mental operations, and to develop creative abilities. The essence of the method is to obtain knowledge in a ready-made form in a word, teacher's lecture, textbook, manual, popular science books, and articles. The value of the reproductive method is not only in communicating new knowledge, but also in revealing the prospects of the profession that is being acquired [10].

The need to develop the skills to act in non-standard situations and respond quickly to changing conditions necessitates a pedagogical tool that will provide students with the knowledge and skills to solve problems that may arise in the course of their professional activities. According to the author's idea, this task can be accomplished using problem-based learning.

Problem-based learning is a form of organizing the interaction of teachers and students, the purpose of which is to create problem situations in the educational process and to facilitate their solution by students.

The essence of the problem-based approach is that the teacher does not offer information in a ready-made form, and complex tasks and the process of solving them arouse increased interest in students' search and cognitive work. New knowledge is provided specifically for a particular task.

Problem-solving requires creative thinking, not the reproduction of memorized information, but is based on existing theoretical knowledge [10].

Problem-based learning ensures the emergence of the so-called «special thinking» – the process of solving certain problems. It is based on the students' theoretical knowledge, and contains a way to solve the problem and a motive for completing the task.

Activation of creative thinking and motivation occurs during the collective fulfillment of tasks (subject-subject relations). The concept of collective learning can be used to better accomplish this task, as well as to develop communication skills, the ability to interact and reflect, and pedagogical skills, and to acquire new professionally important information.

The essence of the concept of collective learning (CCL) is to create specific conditions for the exchange of knowledge, skills and experience between students. It is believed that communication between them in the process of studying disciplines contributes to the intensification and improvement of the quality of the cognitive process and the level of interest.

CCL is based on the principles of completeness, differential approach, general cooperation and mutual assistance, multilevel, pedagogical education of the population, immediate and continuous transfer of knowledge [3].

The purpose of the CCL is to acquire knowledge and develop communication skills. The outcome of the collective learning method should be the achievement of the results specified in the curriculum and the promotion of adaptation to professional activities. It should be noted that the highest effectiveness of collective learning is ensured by the simultaneous use of four forms of learning methods: collective, group, pair and individual [2; 3].

Conclusions. The training of physical therapists should comprise five components of a quality educational process. According to the author, their realization is possible through the introduction of pedagogical conditions based on the activity and competence approaches, explanatory and illustrative and reproductive methods, concepts of problem-based learning and collective learning.

It has been substantiated that the «motivation» component can be formed and maintained by introducing aspects of the activity and competence approaches into the training process; «formation of knowledge, skills and abilities» – using all these scientific principles; «quasi-professional methods» and «practice» – using activity, competence approaches, concepts of problem-based learning and collective learning; and «evaluation criteria» – using competence approach.

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