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THE FUNDAMENTAL IMPORTANCE OF INTERDISCIPLINARY PROJECTS IN THE STUDY OF CLINICAL PHARMACOLOGY

Vlasova Olena Viktorivna,

Candidate of Medical Sciences,

Associate Professor at the Department of Internal Medicine № 2,

Poltava State Medical University

ORCID: 0000-0002-4175-5341

Moisieieva Natalia Vitaliivna,

Candidate of Medical Sciences,

Department of Disaster and Military Medicine,

Poltava State Medical University

ORCID: 0000-0001-8901-3710

Yarmola Tetiana Ivanivna,

Candidate of Medical Sciences,

Associate Professor at the Department of Internal Medicine № 2,

Poltava State Medical University

ORCID: 0000-0002-7428-0223

Vakhnenko Andrii Viktorovych,

Candidate of Medical Sciences,

Associate Professor at the Department of Internal Medicine № 2,

Poltava State Medical University

ORCID: 0000-0003-1040-7042

The article is devoted to the study of the problem of the development of cognitive activity of students of higher medical education in the context of the study of clinical pharmacology. In modern conditions high requirements to the quality of human capital determine the necessity to transform the system of training of medical specialists. In particular, we are talking about doctors, from whom society expects not only in-depth professional knowledge, but also the ability for continuous self-improvement and professional mobility. In this regard, it is important to focus on the transition to an educational model aimed at the formation of multifunctional skills and readiness to learn new knowledge, which meets the modern requirements of the labour market and society.

The aim of the study is to examine the effectiveness of mastering interdisciplinary tasks as a means of developing students' cognitive activity. It involved 100 students of the 5th year of the Faculty of Medicine, who will study in 2022–2024. A number of methods, including interviews, questionnaires and tests, were used to determine the level of cognitive activity. According to the results of the study, three levels of cognitive activity were found: low, medium and high. Each is characterized by a different level of motivation, willpower and readiness to solve interdisciplinary tasks.

As part of the study, the Department of Internal Medicine No. 2 developed a system of interdisciplinary tasks that integrate clinical pharmacology with other medical disciplines. These tasks are divided into three blocks according to their level of complexity and cover various aspects of a doctor's professional activity. The results of the experiment proved that the use of such tasks increases the cognitive activity of students, which was confirmed by the methods of mathematical statistics.

Thus, the necessity of using pedagogical methods focused on subjective and meaningful learning and the development of cognitive activity for the formation of highly qualified doctors has been established.

Key words: interdisciplinary projects, cognitive activity.

Власова Олена, Моїсєєва Наталія, Ярмола Тетяна, Вахненко Андрій. Фундаментальне значення міждисциплінарних проєктів у вивченні клінічної фармакології

Стаття присвячена дослідженню проблеми розвитку пізнавальної активності здобувачів вищої медичної освіти в контексті вивчення клінічної фармакології. У сучасних умовах високі вимоги до якості людського капіталу обумовлюють необхідність трансформації системи підготовки медичних фахівців. Зокрема, йдеться про лікарів, від яких суспільство очікує не лише глибоких професійних знань, але й здатності до безперервного самовдосконалення та професійної мобільності. У зв'язку з цим актуальним є акцент на перехід до моделі освіти,

яка спрямована на формування багатофункціональних умінь і готовності до освоєння нових знань, що відповідає сучасним вимогам ринку праці та суспільства.

Дослідження спрямоване на вивчення ефективності засвоєння міждисциплінарних завдань як засобу розвитку пізнавальної активності студентів. У ньому взяли участь 100 студентів 5 курсу медичного факультету, які проходили навчання у 2022–2024 роках. Застосовано низку методів, зокрема бесіди, анкетування та тестування, для визначення рівня пізнавальної активності. За результатами дослідження виявлено три рівні пізнавальної активності: низький, середній та високий. Кожен з них характеризується різним рівнем мотивації, вольових зусиль та готовністю до вирішення міждисциплінарних завдань. У рамках дослідження кафедрою внутрішньої медицини № 2 розроблено систему міждисциплінарних завдань, які інтегрують клінічну фармакологію з іншими медичними дисциплінами. Ці завдання поділено на три блоки за рівнем складності, що охоплюють різні аспекти професійної діяльності лікаря. Результати експерименту засвідчили, що застосування таких завдань підвищує пізнавальну активність студентів, що підтверджено методами математичної статистики.

Таким чином, встановлено необхідність застосування педагогічних методик, орієнтованих на суб'єктно-сміслову навчання та розвиток пізнавальної активності для формування висококваліфікованих лікарів.

Ключові слова: міждисциплінарні завдання, пізнавальна активність.

The contemporary global society is undergoing a period of significant transformation in terms of state-political and socio-economic development. This is accompanied by the formation of civil society, the expansion of the market sector of the economy, changes in the field of employment, the regrouping of demand for labour, and an increase in societal expectations regarding the quality and competitiveness of human resources. This has led to an increase in the social significance of higher education institutions, particularly those with a medical profile. In the present era, higher education institutions are broadening the scope of their educational services. They are not only ensuring that prospective medical practitioners attain the requisite specialization, but also establishing the conditions for their subsequent advancement within the educational system. In order to optimally satisfy these requirements, it is necessary to transition to an advanced education model that is not solely focused on preparing a doctor for a specific professional role, but also on fostering readiness to acquire new knowledge, develop multifunctional skills, and ensure professional mobility and high competitiveness. The formation of the future doctor in the context of modern education must be conceived not only as a process of accumulating subject knowledge, but also as an enhancement of the overall professional and personal training. This is achieved through the enhanced formation of the cognitive activity of the students of higher medical education as a future professional, thereby creating the prerequisites for their continuous self-improvement and productive self-development throughout their professional life.

In the context of existing conditions, the issue of identifying optimal conditions and methodologies for fostering cognitive development in higher education learners assumes particular significance, as it represents a fundamental foundation for personality formation [4]. It can be argued that the formation and development of cognitive activity represents a cen-

tral line of personality formation in the educational process of higher educational institutions. This is because it allows the future specialist to demonstrate their individuality as fully as possible, to engage in processes of self-development and self-improvement in order to achieve the highest levels of professional and personal growth. This underscores the necessity for the implementation of efficacious pedagogical techniques that facilitate the acquisition of not only fundamental, but also intricate (interdisciplinary) professional competencies and capabilities throughout the learning process, thereby fostering integrative knowledge. A distinctive feature of these productive technologies is their capacity to address educational and cognitive tasks within the context of future professional activity, facilitating the utilization of interdisciplinary connections for a comprehensive examination of professional processes.

The objective of this study is to examine the efficacy of interdisciplinary project-based learning as a strategy for enhancing the cognitive engagement of higher education students in the context of clinical pharmacology.

The level and nature of the students' cognitive activity during their study of clinical pharmacology was identified during the 2022–2024 academic years, with a sample of 100 students from the 5th year of the medical faculty. The following methods were employed: conversations with group curators and teachers; an analysis of applicants' performance based on a study of performance logs; questionnaires (the questionnaires "Tell me about yourself", "Why I chose the profession of a doctor" and "Motives for educational activity") and testing (the test-questionnaire "Dominant value orientations").

In light of the data obtained, and in alignment with the structural components of cognitive activity at the individual level, we have identified the following indicators of its formation: the nature of the motivational focus on mastering interdiscipli-

nary tasks; the nature of willpower manifested by an individual in the process of solving interdisciplinary problems; and the nature and methods of solving interdisciplinary problems. The analysis of the ratio of these indicators in the personality structure of a higher education student enabled the identification and description of different levels of cognitive activity formation in the future specialist: low, medium and high. Those exhibiting low levels of cognitive activity displayed inconsistency in their goals and motives, which resulted in a lack of motivation to complete educational and cognitive tasks. This, in turn, influenced the nature of the knowledge and skills they possessed. Therefore, the capacity to discern the essential elements is exemplified by the replication of superfluous details and, concurrently, the inability to identify the pivotal aspects within the context of the problem at hand. The study of clinical pharmacology is not perceived as a valuable component of future professional activity, leading to a lack of cognitive interest. The average level of cognitive activity was characterized by a consistent focus on the acquisition of diverse cognitive skills. Consequently, the student readily acknowledges the objective of educational and cognitive activity, as defined by external sources, and evinces a keen interest in resolving interdisciplinary challenges. Nevertheless, they merely reproduce the acquired knowledge in order to solve tasks in accordance with a known algorithm, and does not apply it for the purposes of professional and personal self-development. Those at the higher level demonstrate a consistent focus on enhancing their knowledge acquisition methods. Professional self-education is purposeful and systematic in nature. The correspondence between goals and motives is a key factor in determining the desire to complete any educational and cognitive activity, regardless of the degree of cognitive difficulties. The completion of interdisciplinary tasks is regarded as an essential component of future professional activity, and is effectively utilized for the purposes of self-education.

A variety of interdisciplinary tasks and projects were developed at the Department of Internal Medicine No. 2, integrating program material on clinical

pharmacology and other subjects. These tasks encompass diverse educational and cognitive activities for applicants, including lectures, practical classes, independent work, and control and diagnostic computer testing. The interdisciplinary tasks were developed with the objective of establishing a correlation between the tasks and the program material of general and special medical disciplines, as well as reflecting the main aspects of the professional activity of a medical specialist. The system of interdisciplinary tasks was constructed with three blocks, each designed to reflect a different level of complexity. The first block focused on applying theoretical disciplines in clinical pharmacology, including calculations related to dosage forms, concentration of liquids, and the measurement of substances in solutions. The second block explored the integration of clinical pharmacology with the treatment of internal diseases. The third block delved into the intersection of clinical pharmacology and surgical procedures.

Control and diagnostic tests were employed during the course of the experiment. The test results were correlated with the data obtained from the administration of the questionnaire “Motives of Educational Activity” and the questionnaire test “Dominant Value Orientations”. The analysis of the obtained results demonstrated that the students in the experimental group exhibited a higher level of cognitive development, a finding that was also corroborated by the results of the mathematical statistical analysis. The results obtained during the formative experiment confirmed the effectiveness of applying various forms of interdisciplinary tasks and thus provide a basis for further expansion of the research area concerning the professional training of the future doctor within the context of the educational process in a professional school.

It can be concluded that in order to effectively train future highly qualified doctors, it is necessary to utilize pedagogical methods that ensure the primacy of subjective and meaningful learning. Such methods should stimulate the development of the individual’s cognitive activity and be based on the inclusion of educational and cognitive tasks within the context of professional problems and current aspects of professional activity.

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