

Особую роль компьютерные технологии играют при выполнении студентами расчетно-проектировочных работ. При их выполнении важно избежать слепого использования студентами компьютерных средств для численной реализации методов расчета без понимания сути того, что и как считается. С этой целью студентов, при выполнении расчетов, приучают руководствоваться двумя принципами, сформулированными известным специалистом в области вычислительной математики Ричардом Хеммингом. Первый принцип – «Прежде чем решать задачу, подумай, что делать с ее решением» и второй принцип – «Цель расчетов – не числа, а понимание».

Реализация этих принципов при использовании компьютерных средств расчета в учебном процессе наиболее естественно и просто осуществляется в математическом пакете MathCAD, который выбран в качестве базового средства при выполнении студентами расчетно-проектировочных работ. Этот пакет позволяет не утратить понимание сущностной стороны реализуемых методов расчета при выполнении расчетно-проектировочных работ. Запись алгоритма расчета в пакете MathCAD приближена к естественной математической форме с применением общепринятых обозначений для математических символов. Эта естественная запись алгоритма одновременно является для компьютера и программой численной реализации применяемого метода расчета. Такое объединение алгоритма и программы сохраняет у студентов понимание, что и как считается, и развивает способность к алгоритмическому мышлению.

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EDUCATIONAL GAME PROJECTING AS ONE OF INNOVATIVE METHODS OF HEALTHCARE WORKERS' TRAINING

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Higher education system in Ukraine, which is at the stage of reform in modern conditions, directs medical educational establishments at improving of educational process, due to the increase in the level of requirements to professional competence of future specialists, changing priorities in the society, social values, socio-political and socio-economic conditions of the country.

Existing traditional education system today is not able to provide the appropriate level of training of future health workers in the framework of the established approach to learning, as basic requirements for a medical school graduate, except professional knowledge and skills, are competence and mobility as well. In this regard, attention of a teacher while teaching subjects is focused not only on formation of knowledge, abilities and skills, but also on the process of learning itself, whose effectiveness depends on the cognitive activity of students. Successful achievement of the goal depends not only on the content of the educational process, but also from the way of its construction that provides a qualitatively new level of learning.

Training of future experts in the medical field needs new, modernized teaching methods that will contribute to deeper acquirement with professional knowledge and formation of personal, in particular, moral-volitional qualities of future doctors; to encourage a person to self-

development and self-improvement; to create the ability to use the acquired knowledge in accordance with professional situations; to develop desire to master new medical technologies; to encourage the acquisition of experience in making independent informed decisions. Significant role in the formation of the personality as a specialist is played by innovative teaching methods, among which educational game projecting takes an important place.

The aim of the article is the analysis of the nature of educational game projecting as one of the methods of training of medical professionals.

Analysis of scientific-pedagogical literature shows that the problem of development and introduction of effective technologies into pedagogical process was considered by scientists, beginning in the 20-30-ies of the 20th century. In particular, the psychological foundations of the concept of developmental education was laid in the works by L. Vygotsky, V. Davydov, O. Leontiev. The substantiation of theoretical and methodical bases of technological approaches to the organization of the learning process is presented in the researches by A. Aksenova, A. Pometun, L. Pirozhenko, O. Pehota, N. Pobirchenko, S. Sysoeva, P. Shcherban, who described methods and forms of teaching in higher education.

The problem of project activities organization in the educational process was considered in the works of P. Balabanov, E. Grigorieva, P. Orlov, F. Hanzin. Psychological characteristics and pedagogical bases of project activities organization are reflected in the works of S. Vasileisky, V. Moliako, V. Bezrukova, V. Guzeev, D. Levites, G. Kovalchuk, O. Pehota. The problem of content and methodology of projects implementation was elaborated by P. Kruchinina, N. Matyash, N. Pavlova, N. Semenova, V. Symonenko, V. Titova.

The issues of educational game projecting is object for research of such scientists as A. Gorely, T. Kacherovska, N. Kichuk, A. Panfilova, E. Politahina. The problem of educational games applying in the training of future specialists is quite thoroughly developed in the works of M. Burstein, V. Bukatov, V. Platov, T. Khlebnikova, A. Shtepa, P. Shcherban. As one of the effective methods of teaching, educational games are discussed in the methodological writings of A. Vishnevsky, G. Kitaigorodsky, E. Pasov, G. Rogova.

Significant contribution to the development of the problem of technologies design was also made by foreign scientists, in particular, by D. Airing, D. Jones, J. Dietrich, D. Dewey, D. Jacques, W. Kilpatrick, N. Legutke, D. Newnan, H. Thomas, D. Fried, F. Stoler, S. Wedemeyer, G. Wellington, M. Wollman, M. Clark, P. Mitchel, F. Percival, S. Spolding, R. Thomas.

Educational game projecting is one of the newest and not enough considered educational technologies that combines three interrelated elements: teaching, gaming and projecting activities, turning the learning process of future specialists from a passive assimilation of knowledge and skills into active-cognitive, creative approach to solving of any task. According to N. Kichuk, educational game projecting is implemented in teaching through particular actions, in which a personality having a certain role has the opportunity to suggest ways for solution to the problems and implement it into life [1, 62].

The main feature of educational game projecting, compared to traditional learning methods, is that in the process of such classes there are positive changes in the relationship between a teacher and students because in this situation, the source of information is not only a teacher, but those who learn, who from the objects of study become the subjects of this process, because while correct applying of this method the students have the opportunity to teach each other.

The teacher, for his part, takes rather the position of the organizer of the activity of future specialists, that who develops the algorithm of classes and oversees the achievements of students, correcting, if necessary, their activities, rather than the transmitter of certain information. Due to this there is a deeper and more conscious assimilation of necessary

professional knowledge and skills and the formation of creative experience in problem solving [3, 417].

The contents of educational game projecting, according to N. Plahotnuk, are the following: creation of subject-subject relations between students and a teacher in which students are active subjects of educational process and the teacher acts as an organizer, leader and advisor of this process; reproduction of real situations that may arise in their professional activities; presence of problematic and educational training situation, which requires solution; using a creative approach to problem solving; creation of conditions that allow assess adequately own capabilities, generation of personal reflection and encouragement a person to self-development and self-improvement [2, 57].

Applying of educational game projecting in the process of professional training of future medical professionals provides: development of positive motivation of students to learning; development of abilities and skills in information processing (collection, analysis, systematization), defending and argumentation of a personal position on the decisions of simulated professional situation; acquisition of experience of independent and group work; activation of cognitive processes; development of creative and research abilities; culture of communication; acquisition of professional knowledge and skills in a relatively short period of time; autonomy in decision-making [2, 58].

Thus, applying of educational game projecting as innovative technologies in educational process of higher medical education gives the opportunity to achieve positive results in acquisition of necessary professional knowledge and skills with minimum expenses of time and forces of participants of project activities.

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МЕТОДИКА РАБОТЫ С ПОКАЗАТЕЛЬНЫМИ УРАВНЕНИЯМИ В КОНТЕКСТЕ УКРУПНЕНИЯ ДИДАКТИЧЕСКИХ ЕДИНИЦ

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Введение. Одной из технологий инновационного образовательного процесса является технология, основанная на укрупнении дидактических единиц (УДЕ). В проблеме практического использования приемов УДЕ рассматривается идея взаимосвязанных задач.

Примеры создания таких задач, объединяемых авторами в блоки, системы или наборы, можно встретить в работах П.М. Эрдниева, И.В. Ульяновой и др. Так П.М. Эрдниев рассматривает укрупненное упражнение, как главное оружие технологии УДЕ, которое представляет собой многокомпонентное задание, образующееся из нескольких логически разнородных, но психологически состыкованных в некоторую целостность частей [1].