

VOCATIONAL TRAINING FOR FUTURE TEACHERS

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In modern pedagogical science it is fairly believed that students of pedagogical specialties need to be equipped with applied, purely technological knowledge, which would enable to overcome a significant gap between the knowledge of theory and skills for their practical application. The mastering of new educational technologies enables not only to enrich the base of theoretical and methodological knowledge of students, but also to form a bundle of professional skills to design, develop the learning process, analyze its results in accordance with new information technology teaching.

However, at present the problem of technological literacy and culture of a teaching engineer is not sufficiently developed in the science and practice of national pedagogical education. This fact requires the need for students to master theoretical and methodological fundamentals of the training technology that has already been developed. It provides an opportunity to independently solve the problem of developing new information technology teaching and its practical application. In the 1960s, thanks to the works of B. Blum, D. Bruner, J. Carol, S. Spalding, D. Hamblyn, Y. Babansky, V. Bepalka, P. Halperin, N. Shturkova, and in Ukrainian pedagogy – A. Alexiuk, V. Bondar, V. Vonsovykh, V. Lozova, I. Pidlaso, A. Furman an introduction of pedagogical technologies came into practice. “The concept of pedagogical education” in 1999 drew the attention of scientists and practitioners to strengthening the technological aspect of teachers training.

Studying the materials provided helps students to formulate ideas about learning technology as a balanced system and a sequence of methods and processes that ensure implementation of didactic process project and achievement of the diagnosed result; to highlight consistency, scientific character, conceptual importance, reproducibility, diagnosticity, efficiency of training, its reasonableness, as the main characteristics of teaching technologies.

Such Ukrainian scientists as Bekh, O. Padalka, I. Prokopenko, V. Yevdokimov devoted their works to ideas that are fully focused on the training of future teachers on theoretical and methodological levels. According to these researchers the creation of such an educational and developing environment, where the future teacher creates a willingness to work on the basis of modern pedagogical technologies knowledge, understanding of their individual essence is important. On the basis of this environment a personal pedagogical concept and personal technology are developed.

However, in addition to forming the necessary motivation for mastering and use of modern learning technologies, the future teaching engineer, teacher of physics and technology should keep up with wide range, goals, conceptual positions, and features of the methodology.

In preparing students for the application of new information technologies, it is necessary to proceed from their understanding of methods system and technical means for exploring, organization, storage, processing, transmission and presentation of

information. It enriches people's knowledge and develops their ability to manage technical and social problems.

From this definition follows also the logic of further new information technologies study, because their components are the goals of learning, its laws and principles, methods and tools of new information technologies. Thus, the goals of education, its purpose are determined by the influence of society informational support. And therefore the main purpose of new information technology training is the training of students to full life-sustaining activity in the conditions of information-oriented society. This involves the formation of skills in working with data, research skills, ability to make optimal decisions, implement integral information support, and finally the formation of students information culture, development of their creative potential, abilities for communicative actions. These tasks should be solved in accordance with the general-didactic legalities and principles of teaching, and with the laws and principles of teaching inherent in new information technologies of learning.

Of course, the most important component of preparing students for the use of new information technologies is their mastering of the main means of new information technologies, such as hardware (computers, personal computers, local and global networks, input / output devices, storage media, other peripheral equipment), and software (software complexes, information systems, computer graphics systems, multimedia systems, artificial intelligence systems, etc.). On the basis of mastering the theoretical material, developed skills and hardware and software grasp, students work on drawing up lessons projects from the standpoint of new information technologies. This allows them to acquire the initial experience in practical application of new information technology teaching. Drawn-up projects of lessons are not only discussed at practical lessons, but also necessarily used in pedagogical practice with the following analysis of the results of their application.

Thus, a deep understanding of social and pedagogical significance, goals and objectives of the new information technologies, knowledge of inherent laws and principles, proper mastery of their methodology, hardware and software will allow students in the future to effectively solve the problem of training specialists in the field of physical and mathematical, computer and technological education, training of users for new information technologies.