DESCRIPTION OF THE LEVELS OF FORMATION OF INTELLECTUAL SKILLS IN THE IMPLEMENTATION OF EDUCATION FROM THE COURSE OF ELECTRICAL ENGINEERING

Norqulov Usman
Shahrisabz branch of Tashkent Institute of Chemical Technologies.

Abstract
This article discusses the evaluation of the quality of organization of practical preparation of education from the electrical engineering course, the level of formation of professional culture of modern engineer personnel.

Keywords: electrical engineering, skill, skill, practice, engineer, degree, model, method.

The problems of the interdependence of fundamental and special disciplines of preparing future engineers for practice have not yet been sufficiently developed. From this point of view, the stage of cognition, which consists in combining, synthesizing acquired knowledge in various disciplines, is referred to the student himself. The results of the observations carried out and the results of the pedagogical experiment-test carried out on our research work show that it is noticeable that most students are not ready for such a situation.

The fundamentalization of engineering education, the performance of student activity and independent work, the selection and compilation of the content of the teaching of electrical engineering can be carried out in the context of the widespread use of modern technologies in the educational process.

To study the course" electrical engineering", the main subjects should be mastered in Physics, Mathematics, Computer Science and Information Technology. The theoretical foundations of electrotechnics continue the "electrical and magnetism" sections of the general physics course, relying on higher mathematics and computer science. Electrical Engineering with a practical orientation combines the theory of physics and the abstraction of mathematics with the problems of electrical practice.

The course "electrical engineering" is the theoretical basis of electrical engineering, it has a large load. It helps future engineers to understand the interconnectedness and similarities of various courses, to determine the values of the chosen specialty in the general system of practical activities. Electrical engineering education in the system of practical training of modern engineers - determines the place and importance of general engineering disciplines.

In the implementation of its preparation for electrical education - the purpose, content, pedagogical process, its management and coverage of the result, it can be considered as a complex system that works on the basis of the implementation of both pedagogical and

production laws. Thus, the professional training of engineering personnel can be considered a phenomenon of a higher level than the educational process.

The content of teaching is determined by the activities of a managed educator, who organizes the activities of students in accordance with the established pedagogical purpose.

The development of the educational process is associated with the confrontation between the goals and objectives of teaching developed by the educator and the actual result obtained. Achieving the desired result involves setting a new goal, and therefore a positive result becomes a means of achieving a new goal. Assessment of the results of activities can be carried out with the clarification of the correctness of achieving the goal, as well as the search for ways to achieve a result close to a pedagogical diagnosis.

The educational process begins with the compilation of software documents, and this task cannot be solved without the creation of a specialist model. The specialist model is a reflection of the content of training in the specialty in educational programs, working plan and other documents that characterize and implement the procedure for teaching in higher education. The content of the teaching is presented in the form of a complete list of all subjects included in the curriculum in the selected specialty. Therefore, the development of a specialist model can be carried out only on the basis of a detailed study of the model of activity of these specialties. The model of specialist activity mainly reflects the qualification requirements for the skills of these specialties. It can be practical skills and automatism of intellectual activity.

In the future, obtaining the result of quality education, organizing training so that the result achieved at one stage helps to move forward at the next stages, should become the most important goal of Education. Achieving a high result in understanding - requires a step-by-step understanding of the academic discipline. In order to successfully master the structure of each academic discipline, it is necessary to achieve an understanding of all the main interdependence in its composition. In order for students to acquire knowledge, skills and competencies in accordance with their independent thinking characteristics, it is advisable to first give them an understanding of the basic structure of the discipline, which includes this knowledge, skills and competencies [2]. When a particular argument is not related to a general structure, it is impossible not only to understand it deeply, but also to master it strictly, since individual Dalis are stored in memory only by inserting them into a particular scheme. Teaching common, basic principles makes it easier to incorporate material into the appropriate “memory fields” and helps students integrate the information they need, make interconnections, and remember as needed. Therefore, a good theory, as a reflection of the communication system, is not only a means of understanding the phenomenon, but also accurate storage in memory, ensuring its subsequent repetition. Practice-related activity intellectualization skills are usually described as gradual development from the first to the fourth level in the educational process.

The first level is the level of establishing emotional - motor correspondence. This allows for activity based on emotional cues and motor responses based on professional skills and skills.

The second level is analytical and synthetic analysis. Through this analysis, synthetic analysis skills are achieved. This is understood as the initial level of activity of a specialist with a higher education, since without mastering this level, the specialist is constantly forced to use the method of “trial and error”. The psychological mechanism of analytical synthetic activity in thinking is associated with connections, the establishment of associations and the formation of consistent goals. For this purpose, with fundamental general scientific preparation, the basic case goes through mechanical memorization of formulas and conclusions. By mastering the operations of analysis and synthesis, the student strictly occupies the first level of intellectualization of professional activities.

The third level is the intellectual motor (algorithmic). He provides the specialist with higher education with the Bank of the necessary algorithms in the field of professional activity. At this stage, algorithmic skills and qualifications in the field of general technical training of mainly engineering personnel are formed, which provides a solid basis for preparing specialists active in professional creative activities for the next stage.

The fourth level is creativity. This is the highest level of activation associated with the effective creativity of specialists in the field of professional activity.

When creating a model of the activities of a modern engineer, he relies on ideas about the organization, understanding of knowledge, the peculiarities of decision-making, the competence and personal knowledge of specialist personnel as a result of long-term training and extensive experience. When developing all the above-mentioned characteristics of engineering personnel, it is crucial to master both the internal structure of individual subjects during training and the external interaction between them. This form of communication acquisition is the possibility of transferring principles from one field of knowledge to another. Management of students ' academic and cognitive activities is achieved by the pdagog's choice of appropriate forms of material reinforcement and methods of its placement. In the future, there are two ways to use educational results, namely, the level of “transfer” [1]. The first of these is to apply certain results to find solutions to problems similar in some ways to those previously solved. Educators understand this method as “conducting exercises” or generalizing skills and competencies. It is a method of unconsciously activating contacts and associations to transfer the technique by analogy to another field. It is mainly used to develop and strengthen skills.

The second method is the transmission of principles and relationships. It consists in the preliminary preparation of such a principle, which can be used so that the tasks that follow are taken as separate cases of this general principle. At the same time, the similarity of the original and new work is clearly and consciously demonstrated by the educator in the process of teaching students to independently identify and acquire the skills of use in new situations. This

type of transmission is the core of the pedagogical process, in which it will be possible to constantly expand and deepen knowledge. Conducting the second round involves students mastering the structure of the academic discipline, since the deeper and simpler the concept the student has mastered, the easier it will be to apply it to new tasks. The features of the science presentation listed above are reflected in the general scheme of its organization. An effective model of modern engineering personnel should be focused on the mechanisms of transfer development, that is, the identification of a number of common factors that affect the effectiveness of the educational and cognitive activities of each student.

So, in addition to the general characteristics inherent in all students, it turns out that the specialist model should help to take into account some personal qualities and parameters of a separate style.

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