



Specific Aspects Of Organizing Practical Preparations Of Students Of Technical Specialties From Electrical Engineering

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ABSTRACT

It is important to clarify its goals and objectives, teaching content, form, methods and tools in order to organize electrical engineering education for students. From this point of view, in this article, specific aspects of organizing students' practical training in electrical engineering have been considered.

Keywords:

technique, specialty, electrical engineering, principle, activity, methodological, engineer.

In the conditions of an informed society, the methodology for organizing the preparation of engineering personnel for future activities for the organization of training in electrical engineering education, scientific research work on the development of modern educational technologies and activation of the educational and cognitive process in the conditions of Higher Education, tutorials and monographs were analyzed.

In the organization of training of modern engineering personnel from electrical engineering education:

- identification of contradictions that determine the need to carry out the intended task;
- determination of the role and significance of the competent implementation of the training of modern engineer personnel;
- it is required to set goals and determine the content, stages, methods and forms of Electrical Engineering Education.

To this end, it will be necessary to consider methodological approaches in the

modeling process and develop a model for organizing training.

The general scientific methodology for the study of pedagogical phenomena, expressed by a systematic approach, implements the principle of the integrity of pedagogical theory, experience and practice. The systematic approach is aimed at the study and formation of something stable and variable, basic and secondary in the pedagogical system and in the distribution of interactions and relationships that make up the Integrative invariant system of the developing individual, first of all in the system. According to researchers who carry out research work on systems theory, this approach is intended to clarify the process of systematic development of individual components - personality. In this regard, this process is closely related to the personal approach, and in the implementation of the composition of this pedagogical process, it is understood that the individual is directed to the individual as the main criterion of the goal, subject, result and its effectiveness. With this, it is required to recognize the individual's own characteristics,

his intellectual and spiritual freedom, his own right and right to self-esteem, to rely on the natural process of self-development of personality inclinations and creative capabilities in education, to create appropriate conditions for this.

Activity is the main tool and decisive condition for the development of the individual. This argument assumes the implementation of an active approach closely related to the individual in pedagogical research and practice. The implementation of methodological principles is carried out in interconnection with a cultural approach. Culture is understood as a specific mode of activity. There is a universal description of the activity, which in turn determines the social program. Determines in advance the direction of this or that type of activity, its valuable typological peculiarities and results. Thus, the development of culture by a person implies the development of methods of creative activity by him. The methodological principles of pedagogy, first of all, help to distinguish between its pressing problems and, therefore, determine the main methods of solving them. Secondly, it provides the opportunity to analyze the totality of the most important educational problems in a holistic and dialectical integrity and establish their hierarchy. Finally, thirdly, these methodological principles provide an opportunity for objective knowledge in our research work as well as pedagogical imitation that exists [3, 102-b].

Based on the results of the study of the social order, it was determined that in the process of training modern engineers in Ravish in accordance with the requirements of the period in higher education institutions, one should rely on the implementation of personal activities and personality-oriented educational approaches. By ensuring independence, creativity, flexibility and the formation of specific characteristics and capabilities, he showed that the development of Engineers in the future is important not only new types, but also methods of activity in expanding their personal capabilities and implementing the ideas of their continuous improvement.

For the training of modern engineers, we have identified external factors that make up the

basic system that makes up the social order of society. These factors determine the requirements for students - to have competitive knowledge of society, to the level of professional competence and professional culture in a social order to improve intellectual abilities, training of a modern engineer and a person for increasing professional culture.

As a criterion for assessing the effectiveness of the organization of training of a modern engineer in electrical engineering, we have adopted a certain level of formation of the professional culture of modern engineering personnel. Taking as a basis the levels of formation of professional culture of specialist personnel determined by researchers from the point of view of professional activity of the educator, in our research work, we studied the main features of the levels of formation of professional culture of modern engineers - flexibility, reproductive, heuristic and creative aspects [2].

The degree of flexibility is characterized by the attitude of uncertainty in training. The goals, objectives of engineering activities are determined in a general way, and it is not a manual for professional activities, the system of professional knowledge is formed at the level of awareness and is not considered a basis for solving professional tasks. Preparation for practice is mainly determined by the use of existing experience in finding a relatively successful solution to practical tasks, it uses certain types of equipment, technologies, production processes and the like to find a positive solution to simple tasks. Activity is based on a pre-worked algorithm, and creativity in this case cannot manifest itself.

At the reproductive level, it is manifested in the tendency of modern engineers to value relationships of their needs for preparations for production practices. Students will have an interest in comprehensively acquiring knowledge, skills and qualifications in order to optimize the process of finding a positive solution to professional tasks, more highly assessing the professional development capabilities of the engineer's personality. The student successfully solves the tasks set to him (using ready-made algorithms). Creative

activity manifests itself in the framework of reproductive activity with the help of elements of the search for non-standard solutions. In the field of professional activity, improvement works are carried out in education.

The heuristic level is characterized by awareness of methods and tools for carrying out engineering activities in finding a positive solution to purposefulness, stability, practical tasks. From the point of view of the future profession, reflection prevails in the content of thinking, the transfer and transformation of the acquired knowledge into practical activities is carried out taking into account the situation. Practical activity is characterized by innovation, the ability to carry out research work. Both the skills of working on the basis of modern technological processes and the possibilities of choosing technologies of the production process will be at a high level.

The creative level is characterized by high efficiency of professional engineering activity, stability of knowledge, which encourages the transition to a stable formation of the professional culture of a modern engineer. System, flexibility and creativity appear in thinking. Formation will be holistic and complete description. If the student has creative independence, then he creates conditions for the effective implementation of the psychological intellectual capabilities of the personality traits.

When, in the context of our research work, the training of modern engineers in the field of electrical engineering education is called, it is understood the organization of preparations for the formation of a certain level of competency and culture of students of non-electrical technical specialties of the specialty.

Electrical engineering education-murkkab consists in the formation in students of knowledge about electrical circuits, single and three-phase alternating current circuits, Transformers, asynchronous and synchronous machines, fixed current machines and electrical drives.

The course of theoretical foundations of electrical engineering education is the basis of all specialties in the direction of electrical

engineering education of higher educational institutions.

Of particular importance in institutions of higher education in the technical direction are general engineering disciplines, in particular, "electrical engineering", "theoretical foundations of Electrical Engineering", "Electrical Machines" and the like. They are considered a "transition from natural science to special and basic sciences" [1]. These disciplines constitute the theoretical provision of professional training of modern engineering personnel in Electrical Engineering Education. Theoretical foundations of Electrical Engineering for the main fundamental engineering disciplines of the direction, for example, electrical engineering specialties; includes theoretical principles with a developed theoretical level. Ideal objects and models are constructed in them, objective scientific laws are applied and developed. Their subject of research is the artificial material environment (technical devices and systems) and the phenomena inherent in them. However, these disciplines are clearly oriented towards solving engineering problems and have clear distinctive features. In such disciplines, the description of calculations and methodological recommendations are important. The main objective of the main fundamental engineering disciplines of the direction is to develop practical and methodological recommendations for the application of theoretical derived scientific knowledge in engineering practice. In particular, the peculiarities of the course of theoretical foundations of electrotechnics are the use of its results not to explain natural processes, but to design and research electrical systems [1].

In place of the conclusion, we can say that engineering activities are directly related to the application of scientific knowledge in practice to create and improve technologies and technical systems. From this it follows that the organization of modern production in the conditions of a well-organized society-must be carried out dynamically through various approaches in accordance with the requirements of the period.

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