

**TOPIC: SCIENTIFIC METHODOLOGICAL BASES OF THE SCIENCE OF  
ELECTRIC MACHINES**

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**DOI: 10.5958/2249-7137.2022.00787.X**

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**ABSTRACT**

*In the article, reforming the content of education and bringing it into line with world educational standards is of great importance in further improving the educational process. In this sense, choosing the content and structural structure of education is a complex issue of practical importance*

**KEYWORDS:** *Carousel, Aquarium, Debates, Interactive, Intellectual, Integrative, Ideology.*

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**INTRODUCTION**

In the conditions of developing innovative education, it is our highest goal to educate students based on a separate approach and structural criteria for each subject.

As our president noted, "In order to train experts, young people with knowledge and skills, in line with world development, the education system is being developed consistently. Reforms in the field of higher education are primarily aimed at increasing coverage, improving the financial condition of institutes and universities, and providing material support for professors and teachers. Currently, each university has its own small problems. In order to solve these problems, we need to further improve our current educational structure. Currently, the processes of the developing higher education system are organized on the basis of the following documents: State Education Standard, qualification requirements, curriculum and science program.

At the moment, the structure of these documents is left to the discretion of HEIs. This means that each institution should prepare these documents based on its internal material and technical base. One of the shortcomings we have now is that the education process is not carried out together with the material and technical bases of the production enterprises, because the students consolidate the topics learned in the lectures in technical fields through experience and practical training. The lesson is considered to have achieved its purpose if the students have experience and practical training directly at the production enterprise. A small pilot test was conducted among 600,602-20 EEE students of BuxMTI in the innovative educational environment. 600-20 EEE group lectures, experiments and practical training were held in the classroom, and 602-20 EEE group was held in a production facility. The results of the experiment can be seen in the diagram below. A small pilot test was conducted among 600,602-20 EEE students of BuxMTI in the innovative educational environment. 600-20 EEE group lectures, experiments and practical

training were held in the classroom, and 602-20 EEE group was held in a production facility. The results of the experiment can be seen in the diagram below.

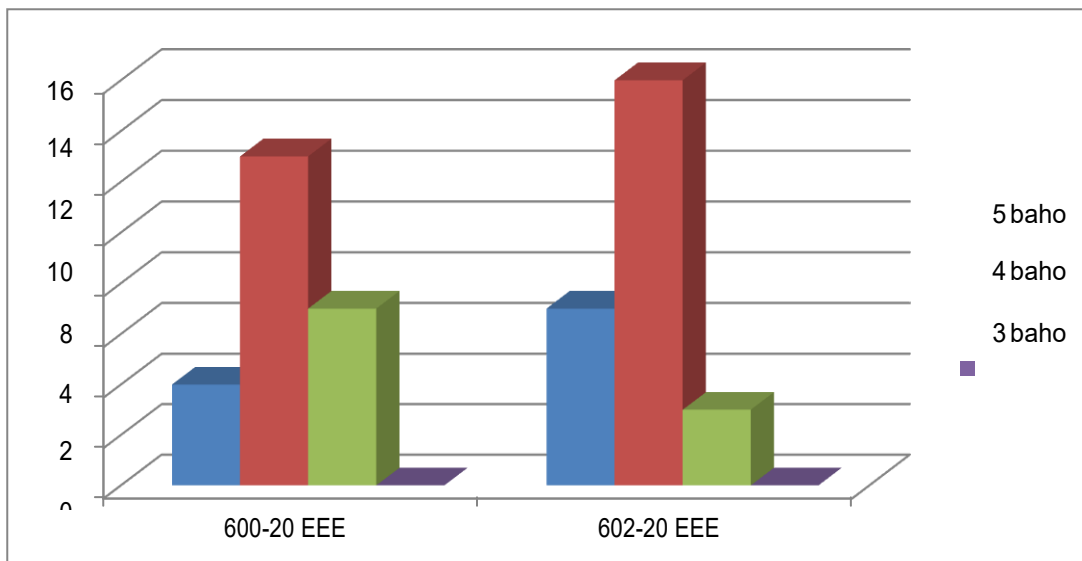


Diagram 1. Results of experimental tests conducted in 600,602-20 EEE groups

These experimental tests showed that it is appropriate to conduct lectures using pedagogical technologies in a production enterprise.

If every student examines the information he has learned in a production enterprise, this knowledge will serve as an important factor for his development as a competitive staff in the process of the currently developing market economy. In addition, there will be an opportunity for students to exchange ideas in the production enterprise, and we can see this from the educational pyramid depicted below.



Figure 1. Educational pyramid.

The main goal of the higher education system is to prepare science and work science programs based on the production base of modern enterprises so that these processes can be applied more quickly. The world is changing, so science, education, experience, and new technologies are coming. To adapt to these changes, the knowledge taught in higher education is lacking. That is why it is necessary for each student to improve his knowledge in the enterprise that is assigned to him individually.

Based on the essence of the educational process, we would like to note the importance of the structural structure of the subject in teaching students the methodological foundations of the subject common to students. At the same time, the content of science for students, taking into account the unique nature of science, should form a logical structural structure aimed at perfecting the scientific outlook of students, being able to scientifically analyze evidence, cultivating independent thinking, thinking skills, and acquiring the skills to use them in practice. A student's worldview is not so much his relationship to objective reality, but his place in society, his attitude to social and political life, his understanding of the essence of the laws of nature, and his ability to apply them in practice. Educational programs play an important in it.

Improving the content of educational programs and textbooks in education, especially determining its structural structure with new content, reviewing the appropriate placement of educational materials in each section and topic, are the main factors of the education and training process.

The logical structural structure of the educational material is usually understood as the internal relations of concepts and opinions in the studied subjects and their influence on each other and their mutual dependence.

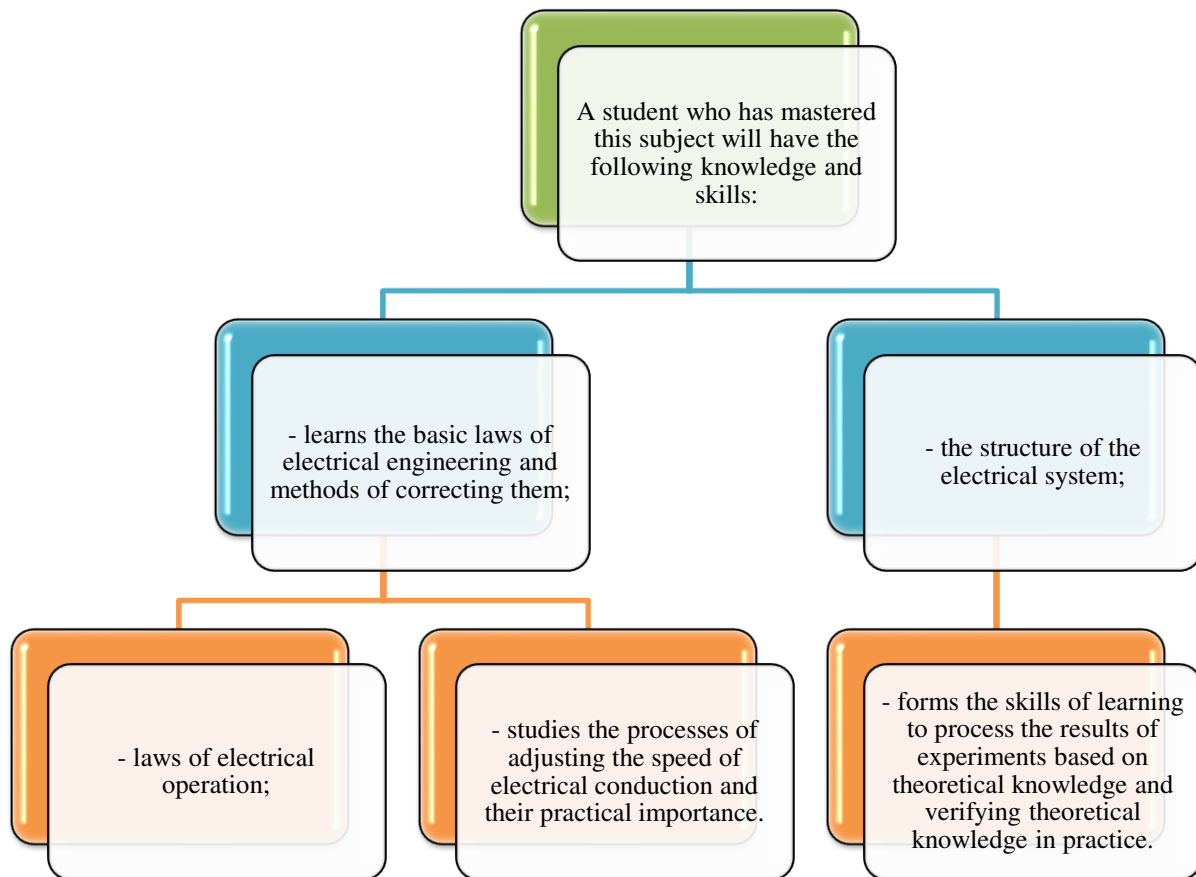
Educational material is a set of knowledge that is formed in a certain way and needs to be mastered. In general, educational material occupies a central place in the educational process. In this sense, the issue of the logical structure of the educational material is of great importance in the educational process. Therefore, the structural structure of the subject is important for each subject. In many cases, the concept of structure is explained as addition or reduction of the constituent parts of the whole, or the order in which the parts are placed, combining them into a whole or, on the contrary, breaking them up, sometimes affecting the essence of the system by adding an element to the whole or removing it from the whole. A structured system is a complete whole. The parts and elements of the whole are closely connected with each other, and the structure is manifested as a result of their interaction, in the form of the location of the elements, the rigidity of a certain order. Thus, structure is a fixed, stable arrangement of interacting elements in a whole system. That is why the educational material has a certain structure, which is determined based on the structure and content of the educational subject. Even if content and structure form an inseparable internal unit, this does not mean exactly the same thing, because the same content can be inside different structures or it can be in the form of content without structure. The structure of the educational material in each discipline has a certain structure, its parts are located and connected in such a way that they interact with each other and have a significant effect. omitting or adding one of them completely changes the logical structure of the educational material. The structure of each subject method is perfected in the deepening of educational materials in the process of pedagogical phenomena - education and upbringing.

Internal parts-structural elements and connections in the teaching method determine its structure. In other words, any teaching method of an educational subject has a certain structure and

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consists of internal and external, micro and macro structure, a set of structures that make it up. The main structural elements of the teaching method are the content of the subject, methods and forms of education, which form a single whole, and the number of methodological structural elements, the content and structural structure of the subject are not constant, and meet the need for social development, changes and develops under the influence of science achievements and advanced pedagogical practice.

The purpose of teaching students studying "electrical machines" is to form theoretical concepts of electromagnetic processes in students, to understand the basic laws of alternating and constant current circuits and magnetic circuits, constant current machines, alternating current machines is to teach. One of the main tasks of studying this science is to learn knowledge about the electromagnetic field and its processes in various devices, analytical methods, and DC machines.



In conclusion, it can be said that in making education effective, the set of documents that form its basis is of great importance, therefore, when preparing such documents, it is appropriate to take into account the conditions in higher educational institutions and the situation in production.

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