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METHODOLOGY OF ORGANIZING AND ITS CONDUCT OF STUDY PRACTICE FOR PHYSICS IN HIGHER EDUCATION WITH PROBLEM CONTENT

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Educational practice is one of the forms of organizing the educational process. A practicum is a lesson that takes place outside the classroom to achieve a specific educational goal.

Teaching practice with physics students is of great importance. In particular, it is desirable to organize an educational practice in the second year. Learning practice helps to develop the mind and thinking of students. Forms practical skills and competencies in students.

If the educational practice is aimed at learning a problem, its value increases again. The day of such training practice is determined a week in advance, and a preliminary discussion is held about its topic, problem, purpose, equipment and procedure. The teacher prepares for the educational practice on the basis of a carefully developed plan. According to this plan, the problem to be studied in educational practice is taken into account, information and observations about the object, collection of materials, selection of objects that are more convenient for students are taken into account.

The most important thing in organizing physics training is to be able to put the problem in front of the students. The problem should be interesting and cover all the questions in the curriculum. For students of the institute, it is advisable to choose problems related to agriculture and problems related to industry and transport.

Depending on the problem to be solved during the educational practice, despite the fact that the object is different, the purpose of the educational practice should correspond to the requirements of the educational program.

The problem-based organization of educational practice in the study of topics related to the section "Electricity and magnetism" of physics is one of the means of connecting theoretical knowledge with practice. It is a complementary tool in the study of materials related to electricity and magnetism, which gives students a clear idea of the application of laws and phenomena in practice, life and industry. Instead, the laws and phenomena in the study of electricity and magnetism are closely observed during educational practice. Expands the polytechnic world view of students, helps them in career guidance.

The physics teacher chooses how long the educational practice will last, how many times it should be conducted for each class, based on the materials on electricity and magnetism.

In the study of the section "Electricity and magnetism" of physics, problem-based educational practices can be organized in general as follows:

I. Preparation for educational practice.

1. Physics teacher, students and experts participate in the process of educational practice.

2. A few days before the educational practice, the teacher goes to the object of study

and talks with experts about the problems to be studied during the educational practice.

II. Creating a plan of educational practice.

1. Problems to be studied are selected from educational practice.
2. The time of training practice is determined.
3. Presentations, graphs, tables, diagrams and drawings are prepared related to the object of educational practice.

III. A problematic conversation.

1. The interview is held in the auditorium or in the yard of the facility.
2. The problems to be studied during the educational practice are briefly described during the interview process.

3. During the training practice, instructions are given about the students' duties and technical safety.

IV. Carrying out educational practice.

1. Based on the nature of the educational practice, the teacher asks problematic questions.

2. Educational practice is conducted in cooperation with the teacher, specialist and students.

3. During the training, the specialist will tell about the physical principles and laws of the object.

V. Completion of training practice.

1. At the end of the educational practice, the teacher asks how the students found the answer to the problem.

2. Writing a final report on training practice.

For example: let's look at the educational practice conducted with second-year students in district, city electricity or electricity distribution station. This training practice is conducted before studying the topics "Power plants", "Electric current transmission", "Transformer", "Electromagnetic induction phenomenon".

Educational purpose.

- study topics related to electricity and magnetism in connection with practice;
- strengthening the practical direction in the study of electricity and magnetism.

Educational purpose:

- arousing students' interest in electrical and electrotechnical professions.
- forming the culture of using electricity in students.

Developer Objective:

- development of students' skills and abilities to apply theoretical knowledge of electricity and magnetism in practice.

The plan for the training practice can be as follows:

1. To acquaint students with problems in the production, transmission, and distribution of electricity and observe how they are solved in practice.

2. Introduction to the mechanism of distribution of electricity.

3. Asking questions in problematic content.

4. Homework: Prepare a written report on the achievement of the intended goal of the educational practice.

In the process of educational practice, students are asked the following questions and get short and concise answers:

1. Why is it easier to use electricity than other energies?
2. What principle and laws of physics is the structure of electric motors based on?
3. The principle of operation of electric generators is based on which law of physics?
4. What are distribution devices used for?
5. Explain from a physics point of view why oil circuit breakers are used in high



voltage devices.

6. For what purpose is the voltage increased during long-distance transmission of electricity?

7. The working principle of the transformer is based on which law of physics?

8. Explain the physical nature of why oil is used in transformers.

References:

1. Makhmutov M. I. *Prproblemnoe obuchenie* -M.: Pedagogika, 1975. -367 p.

2. Makhmutov M. I. *Theory and practice problem noe obuchenie*. -Kazan, 1972. -561 p.

3. Mahmudov Yu. G'. *A set of problems from physics*. -Tashkent: Teacher, 1994. -224 p.

4. Mashkov S.S. *A collection of experimental problems from physics*. -Tashkent, 2014. -123 p.

5. Medvetsky A.I., Rabinsky L.N. *The method is surface functional evolution and non-stationary object diffraction*. - Moscow: MAI, 2007. - 255 p.

6. Mirzakhmedov B.M. and other. *Methodology of teaching physics*. -T.: Teacher, 2010. -206 p.