

METHODS OF TEACHING ROBOTECHNICAL CLASSES IN PRIMARY EDUCATION IN TECHNOLOGICAL CLASSES ON THE BASIS OF STEAM EDUCATION

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In the process of modern education, it is important to form the technological knowledge of students and prepare them for future professions. In particular, Steam (Science, Technology, Engineering, Art, Mathematics) is one of the most effective ways to achieve these goals. Integrating the robotics of robotechnics in technological classes will serve to develop technical thinking, formulate the ability to solve problems, and improve collective operation skills. In the Primary Education, in the primary education, the methods of teaching robotechnicals based on Steam on technological classes will be covered in technological classes.

1. The content and importance of Steam education

Steam Education is a approach to students through the integration of traditional disciplines with technology, engineering, art and mathematics. This method is:

- develops students' creative thinking skills;
- forms the skills to solve logical thinking and problems;
- increases interest in technology and directs to future occupations.

2. The role of robotechnicals in primary education

Teaching robotechnicals in primary schools has the following advantages:

- helps students learn programming and engineering basics;
- Interesting and interactive learning environments for young children;
- Develops critical thinking, collective work and creativity.

3. Methods of teaching robotechnics based on Steam

Based on the STEAM approach, the following methods can be used to teach robotëhnic:

- Learning on the project (Project-Based Learning): Students are given the task of creating a robot under a particular project.
- Based on the problem (Problem-Based Lear): The lesson is given problems and the students decide them using robots.
- Integrative Approach: Teaching Robotechnics with Mathematics, Natural Sciences, Technology and Art.

Experimental approach: students spend experiments with robotics elements in laboratory work.

4. Practical training and classrooms

The following tools can be used in teaching robotics:

- LEGO MINDSTORMS AND LEGO Education Wedo Constructionists;
- Arduino and Raspberry PI Platforms;
- Scratch and Blockly visual programming languages.

For example:

- Topic: Create a simple mechanical robot.
- Purpose: Students learn to make a simple touch robot and control it.
- Interactive: divided into groups, students design the structure, functions and mechanism of movement of the robot.

5. The results and prospects of robotics education

- Increases technological skills of students;
- the interest in engineering increased;
- Preparations for future professions are intensified;
- Independent and critical thinking develops.

Conclusion

In primary education, teaching robotechnical and technical skills helps in technological classes in technology classes. This method is of great importance for the next generation, just because it includes not only theoretical knowledge, but also practical experience. Through the integration of Steam and robotics, you can increase interest in innovative thinking and interest in science, technology and engineering areas.

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