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METHODOLOGY FOR TEACHING TECHNOLOGY LESSONS BASED ON THE STEAM EDUCATION PROGRAM

D. Sh. Muradova
3rd-year student, Group "D", Technological Education program, Navoi State University

S. N. Khamroyeva
Scientific Advisor, Associate Professor,
Navoi State University

At present, in the field of education, special attention is being paid to the implementation and adoption of the STEM program, as well as to the use of open, flexible, individualized, and modern educational technologies. In accordance with the Resolution of the President of the Republic of Uzbekistan dated September 5, 2018, No. PQ–3931, titled *"On Measures to Further Improve the Public Education System of the Republic of Uzbekistan for 2018–2021,"* the tasks of improving the quality of education and introducing innovative educational technologies were defined. Based on this resolution, it is planned to gradually introduce and improve new state educational standards and general secondary education curricula, including the STEAM approach, relying on advanced international experience [1].

The subject of Technology is an applied discipline that serves as a bridge between science and production, formed on the basis of the practical components of fundamental natural sciences. Furthermore, technology lessons aim to develop students' technical creativity, abilities, and thinking, as well as to strengthen career guidance. This is achieved by teaching methods of processing natural, metal, and non-metal materials during lessons, introducing the basics of folk

crafts, household management, and electrical work, and forming the skills and competencies necessary for applying this knowledge in real life [2].

The acronym STEAM (Science, Technology, Engineering, Art, and Mathematics) подразумевает the acquisition of knowledge related to these fields and the ability to apply them in practice.

Organizing technology lessons based on STEAM educational technology requires experience, pedagogical mastery, and well-developed subject knowledge from the teacher. Before implementing this approach in the classroom, the teacher must carefully plan and design the lesson. During the lesson preparation process, the teacher should not only rely on textbook materials but also collect additional information and integrate it with subjects such as mathematics, natural sciences, and art (including visual arts and music in primary education).

STEAM educational technology represents the integration of theory and practice. This approach can be effectively incorporated into the teaching process of technology education in general secondary schools.

Technology as a subject is inherently interdisciplinary, integrating multiple fields. In particular, teaching the sewing section of technology through the STEAM approach increases students' interest in the subject and ensures a deeper understanding of the material.

Teaching a selected topic using the STEAM method not only ensures mastery of the subject but also integrates students' knowledge across disciplines.

The application of the STEAM method in technology education:

- helps students understand the integration of different subjects;
- enables the practical application of theoretical knowledge;
- enhances students' intellectual development;
- teaches time management and efficient use of materials and resources during the creation of products;

- ensures the simultaneous development of cognitive and manual skills.

The profession of sewing remains one of the important fields that continues to retain its relevance both in industry and as a form of manual labor. It can also be considered among the developing professions of the modern era. Sewing is one of the oldest professions in human history, and its development is closely linked to the progress of society.

The origins of sewing date back to the Stone Age, when people stitched animal skins to create clothing and shelter. At that time, bones were used as needles, while plant fibers or animal sinews served as thread. Today, however, there is a wide range of advanced sewing tools and equipment. Before teaching sewing technology, students should be introduced to the tools and equipment used in sewing and instructed on their proper use. Sewing tools vary depending on whether the work is performed manually or by machine. A wide variety of tools are used in sewing, all of which play an important role in simplifying the process and ensuring high-quality results.

In the sewing field, applying theoretical knowledge in practice and integrating it with design and drafting disciplines leads to a deeper understanding of the subject among students. Students learn about materials used in sewing and their properties, become familiar with sewing equipment and their structure, and apply mathematical knowledge when taking measurements. They acquire skills in using scissors and finishing garments, learn design and construction techniques, and understand how to select fabrics based on properties such as density, strength, shrinkage, elasticity, and weight. This also helps them connect their knowledge with natural sciences. Additionally, students learn to take measurements using various pattern rulers and to work with scaled drawings.

References

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