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MODERN METHODOLOGY OF ORGANIZING PRACTICAL LESSONS IN TECHNOLOGY EDUCATION

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Annotatsiya

Ushbu maqolada texnologiya fanida amaliy mashg‘ulotlarni tashkil etishning zamonaviy metodik asoslari yoritilgan. Shuningdek, texnologiya darslarida interfaol metodlar, loyiha asosida o‘qitish, STEAM yondashuvi va raqamli texnologiyalardan foydalanishning ahamiyati tahlil qilingan. Amaliy mashg‘ulotlarni samarali tashkil etish orqali o‘quvchilarning texnologik kompetensiyalari, ijodiy fikrlashi hamda kasbiy ko‘nikmalarini rivojlantirish imkoniyatlari ko‘rsatib berilgan.

Kalit so‘zlar: texnologiya fani, amaliy mashg‘ulot, zamonaviy metodika, interfaol metodlar, STEAM ta’limi, loyiha metodi, kompetensiyaviy yondashuv, ijodkorlik.

Аннотация

В данной статье рассмотрены современные методические основы организации практических занятий по технологии. Проанализирована роль интерактивных методов, проектного обучения, STEAM-подхода и цифровых технологий в образовательном процессе. Показаны возможности развития технологических компетенций, творческого мышления и профессиональных навыков учащихся посредством эффективной организации практических занятий.

Ключевые слова: технология, практическое занятие, современная методика, интерактивные методы, STEAM-образование, проектный метод, компетентностный подход, творчество.

Annotation

This article discusses modern methodological approaches to organizing practical lessons in technology education. The importance of interactive methods, project-based learning, STEAM education, and digital technologies is analyzed. The study highlights opportunities for developing students’ technological competencies, creative thinking, and professional skills through effective practical training.

Keywords: technology education, practical training, modern methodology, interactive methods, STEAM education, project-based learning, competency-based approach, creativity.

Introduction

Educational reforms require the development of students’ knowledge, skills, and competencies through practical activities. In this regard, technology education plays a significant role in preparing students for real-life and professional challenges. The primary objective of technology education is to develop students’ technological literacy, practical skills, creativity, and work culture. Therefore, the effective organization of practical training is considered one of the most important tasks in the teaching process. Modern educational approaches emphasize learner-centered instruction, active participation, and the integration of innovative teaching methods. As a result, practical lessons in technology education should be organized using contemporary pedagogical approaches that enhance students’ engagement and learning outcomes.

The Importance of Practical Training in Technology Education

Technology education is distinguished from many other subjects by its practical orientation. Students not only acquire theoretical knowledge but also apply it in real-life situations through

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practical activities. During practical lessons, learners develop skills in designing, constructing, modeling, and producing various products.

The main objectives of practical training include:

- Connecting theoretical knowledge with practice;
- Developing technical and technological skills;
- Enhancing creative thinking abilities;
- Encouraging independent problem-solving;
- Supporting career orientation and vocational awareness;
- Promoting teamwork and communication skills.

The successful implementation of these objectives requires well-planned practical activities and the use of modern teaching methodologies.

Modern Methodological Approaches to Organizing Practical Lessons

Competency-Based Approach

The competency-based approach has become one of the leading directions in contemporary education. This approach focuses not only on the acquisition of knowledge but also on the ability to apply that knowledge effectively in practical situations.

In technology education, competency-based learning can be implemented through:

- Practical assignments and workshops;
- Technological problem-solving activities;
- Project development tasks;
- Independent decision-making during product creation.

As a result, students develop essential life and professional competencies that prepare them for future educational and occupational opportunities.

Interactive Teaching Methods

Interactive methods increase student participation and engagement during practical lessons. These methods encourage learners to think critically, collaborate with peers, and actively contribute to the learning process.

Some commonly used interactive methods include:

- Brainstorming;
- Cluster Mapping;
- Fishbone Diagram;
- Venn Diagram;
- Small Group Work;
- Problem-Based Learning.

The application of these methods helps students become active participants rather than passive recipients of information.

Project-Based Learning

Project-based learning is considered one of the most effective instructional approaches in technology education. Through projects, students work on real-world problems and create meaningful products.

The project process generally includes the following stages:

1. Identifying a problem;
2. Defining objectives;
3. Planning project activities;
4. Selecting materials and resources;
5. Creating the final product;

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6. Evaluating and presenting results.

Project-based learning develops students' independence, responsibility, creativity, and research skills.

The Role of STEAM Education in Practical Training

STEAM education integrates Science, Technology, Engineering, Arts, and Mathematics into a unified learning approach. This model provides opportunities for interdisciplinary learning and practical application of knowledge.

For example, while creating a wooden product, students may apply:

- Mathematical calculations and measurements;
- Physical principles related to mechanics;
- Artistic and design concepts;
- Technological production processes.

Such integration allows students to connect theoretical concepts with practical experiences and promotes a deeper understanding of technological processes.

Organizing Practical Lessons through Digital Technologies

Digital technologies have become an essential component of modern education. In technology lessons, various digital tools can be used to improve learning outcomes and facilitate practical activities.

These tools include:

- Multimedia presentations;
- 3D modeling software;
- Virtual laboratories;
- Educational videos;
- Online learning platforms.

Digital resources enable students to visualize complex technological processes, improve their understanding of technical concepts, and develop digital competencies required in the twenty-first century.

Furthermore, computer-aided design programs allow students to create digital models and technical drawings before producing physical products, thereby enhancing their planning and design skills.

Conditions for Increasing the Effectiveness of Practical Training

The effectiveness of practical lessons in technology education depends on several important factors:

- Careful lesson planning;
- Compliance with safety regulations;
- Availability of modern equipment and materials;
- Application of interactive teaching methods;
- Consideration of individual student characteristics;
- Fair and objective assessment procedures.

In addition, teachers should create a supportive and motivating learning environment that encourages creativity, experimentation, and active participation.

Conclusion

The organization of practical training is a crucial component of technology education. Modern methodological approaches such as competency-based education, project-based learning, interactive teaching methods, STEAM integration, and digital technologies significantly enhance the effectiveness of practical lessons.

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These approaches contribute to the development of students' technological knowledge, practical skills, creative thinking, and professional competencies. Therefore, the widespread implementation of modern methodologies in technology education is essential for improving educational quality and preparing students for future professional and social activities.

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