

INNOVATIVE PEDAGOGICAL TECHNOLOGIES IN TEACHING THE SUBJECT OF TECHNOLOGY

Khanifa Berdieva

Head of the Department of Applied Sciences and Extracurricular Education
Methodologies, Candidate of Pedagogical Sciences, Associate Professor

Abstract

This article explores the significance of applying innovative pedagogical technologies in teaching the subject of Technology. Modern teaching methods, information and communication technologies, interactive approaches, project-based learning, and STEAM education are analyzed for their role in developing students' practical skills, creative thinking, and critical thinking abilities. The study emphasizes that the use of innovative pedagogical technologies is a key factor in improving the quality of education.

Keywords: Technology education, innovative pedagogical technologies, interactive methods, ICT, project-based learning, STEAM education.

Introduction

In the modern educational system, the implementation of innovative pedagogical technologies has become increasingly important. In particular, the use of contemporary teaching methods in the instruction of the subject of Technology plays a significant role in developing students' practical skills, creative thinking, and independent learning abilities. Rapid technological development and the growing demands of society require the education system to prepare competitive, competent, and creative individuals.

Innovative pedagogical technologies are aimed at increasing the effectiveness of the teaching and learning process through the application of new ideas, methods, tools, and information and communication technologies.

These approaches transform students from passive recipients of knowledge into active participants in the learning process. As a result, students acquire skills such as independent inquiry, analysis, and decision-making.

Teaching the subject of Technology using innovative methods allows the integration of theoretical knowledge with practical activities.

The application of interactive methods, project-based learning, and modern educational technologies enhances students' interest in the subject and contributes to the formation of essential competencies required in contemporary education. Therefore, the effective use of innovative pedagogical technologies in teaching Technology is considered a key factor in improving the quality of education.

Main Part

At present, the introduction of innovative pedagogical technologies in the education system is of great importance. Especially in teaching the subject of Technology, the use of modern instructional methods plays a significant role in developing students' practical skills, creative thinking, and independent reasoning abilities.

The importance of Technology as a school subject is steadily increasing in training competitive specialists who meet the requirements of modern society.

Innovative pedagogical technologies are a system of teaching based on the effective use of new ideas, methods, tools, as well as information and communication technologies in the educational process. Such technologies turn the student not into a passive listener of the educational process, but into an active participant. As a result, students develop skills of independent inquiry, analysis, and decision-making.

Among the innovative methods used in teaching the subject of Technology, project-based learning has particular importance. Through this method, students develop projects with the aim of solving a specific problem, which develops their skills in teamwork, planning, and practical activities.

In addition, the use of information and communication technologies, including computers, multimedia presentations, video lessons, and online platforms in the teaching process increases the effectiveness of education.

Interactive methods such as "Brainstorming," "Clustering," "Blitz questioning," and "Debates" increase students' activity during lessons and teach them to think freely and defend their own viewpoints. At the same time, STEAM education technology, which involves teaching through the integration of science, technology, engineering, art, and mathematics, further develops students' creative abilities.

The use of elements of distance education, including online lessons and virtual laboratories, makes it possible to organize the educational process based on modern requirements.

The use of innovative pedagogical technologies increases students' interest in the subject, links theoretical knowledge with practical activities, develops creative and critical thinking abilities, and contributes to improving the quality of education.

Discussion

The analysis of innovative pedagogical technologies in teaching the subject of Technology demonstrates their significant impact on the educational process. The implementation of project-based learning, interactive methods, STEAM approaches, and information and communication technologies not only enhances students' engagement but also fosters the development of practical, creative, and critical thinking skills.

Project-based learning allows students to actively participate in problem-solving activities, which strengthens their teamwork, planning, and analytical skills. This approach aligns with the principles of learner-centered education, emphasizing students' active role rather than passive reception of knowledge. Such methods prepare students to face real-life challenges and encourage independent decision-making.

Interactive methods, including brainstorming, clustering, blitz questioning, and debates, stimulate students' cognitive activity and improve their ability to articulate and defend their viewpoints. These techniques also develop communication skills, which are essential in both academic and professional contexts.

The integration of ICT tools—computers, multimedia presentations, online platforms, and virtual laboratories—enables teachers to diversify instructional methods and maintain student interest. Distance learning technologies offer flexibility, allowing continuous learning and access to educational resources, which is particularly valuable in modern, technology-driven educational environments.

STEAM education, which integrates science, technology, engineering, art, and mathematics, encourages interdisciplinary learning and supports the development of both technical and creative competencies. This approach helps students to connect theoretical knowledge with practical application, fostering innovation and creative problem-solving skills.

Overall, the discussion confirms that the use of innovative pedagogical technologies in teaching Technology improves the quality of education, promotes student engagement, and develops essential 21st-century skills.

These findings suggest that educators should continuously adopt and adapt innovative strategies, combining traditional teaching methods with modern technological tools to create a balanced and effective learning environment.

Conclusion

In conclusion, the effective use of innovative pedagogical technologies in teaching the subject of Technology plays a crucial role in improving the quality of education. These technologies enhance students' interest in the subject, integrate theoretical knowledge with practical activities, and foster the development of creative and critical thinking skills. Methods such as project-based learning, interactive techniques, STEAM education, and the use of information and communication technologies provide opportunities for students to engage actively in the learning process, develop problem-solving and teamwork skills, and cultivate independent learning abilities.

Thus, the integration of innovative pedagogical approaches into Technology education not only meets the modern demands of society but also prepares students to become competent, competitive, and creative professionals. It is essential for educators to continuously update their teaching methods and incorporate innovative strategies into classroom practice to achieve sustainable educational outcomes.

References

1. Azizkhodjaeva, N.N. Pedagogical Technologies and Pedagogical Mastery. Tashkent: O'qituvchi, 2018.
2. Saidov, Q., Qodirov, A. Modern Pedagogical Technologies. Tashkent: Fan va Texnologiya, 2019.
3. Tolipov, O.Q., Usmonboeva, M. Pedagogical Technologies: Theory and Practice. Tashkent: Ilm-Ziyo, 2017.
4. Klarin, M.V. Innovative Models of Education. Moscow: Pedagogika, 2016.
5. Polat, E.S. Modern Pedagogical and Information Technologies in Education. Moscow: Akademiya, 2018.



6. Robert, I.V. Information Technologies in Education. Moscow: BINOM, 2019.
7. Bybee, R. STEM Education: Challenges and Opportunities. New York: NSTA Press, 2013.
8. Bell, S. Project-Based Learning for the 21st Century. The Clearing House, 2010.
9. Ministry of Public Education of the Republic of Uzbekistan. State Education Standard for Teaching Technology. Tashkent, 2021.
10. Decrees and Regulations of the President of the Republic of Uzbekistan on Education Development.