

THE USE OF MODERN PEDAGOGICAL TECHNOLOGIES IN TEACHING CHEMISTRY

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Annotation: This article analyzes the use of modern pedagogical technologies in teaching chemistry and its impact on the educational process. The article shows the importance of interactive methods, virtual laboratories, multimedia tools and online platforms in deepening students' knowledge and developing practical skills. Modern technologies are presented as an effective tool in improving the quality of education and motivating students to actively learn.

Keywords

- Chemistry education
- Pedagogical technologies
- Modern teaching methods
- Virtual laboratory
- Interactive teaching
- Multimedia tools
- Educational efficiency

Introduction: Chemistry occupies an important place in the modern education system. Through this subject, students gain a deep understanding of natural phenomena and develop practical skills. However, traditional methods are not enough to effectively teach complex and abstract concepts of chemistry. Therefore, the use of modern pedagogical technologies is becoming an urgent issue. This article analyzes the effectiveness, advantages and practical aspects of using modern technologies in chemistry lessons.

The concept of modern pedagogical technologies Pedagogical technology is a set of methods, tools and approaches that help organize the educational process effectively, systematically and efficiently. In chemistry, these technologies ensure the active participation of students through interactive lessons, electronic laboratories, virtual experiments, multimedia educational resources, online platforms.

Advantages of modern technologies in teaching chemistry

1. Increase visualization and understanding: Demonstrating complex chemical processes and molecular structures through graphic and animated tools helps students better understand the subject.
2. Ensure active student participation: Interactive tests, simulations and problem tasks develop students' thinking and independent work skills.
3. Individualization of the learning process: Through online platforms, each student has the opportunity to work with materials appropriate to their level.
4. Formation of practical skills: With the help of virtual laboratories, experiments can be carried out without violating safety rules.

Application of modern technologies in chemistry lessons

- Multimedia presentations: Making the lesson interesting and effective using slides, videos and animations.
- Virtual laboratories: Using programs such as ChemLab, Labster, students perform various experiments online.
- Interactive tests and quizzes: Strengthening students' knowledge through platforms such as Google Forms, Kahoot.
- Online learning platforms: Obtaining additional knowledge using resources such as Coursera, Khan Academy.

Result: Modern pedagogical technologies are an effective tool in teaching chemistry. They encourage students to be active, independent and creative, and help them understand the topics in depth. At the same time, teachers will be able to organize their activities more effectively. In the future, the wider introduction of these technologies will be of great importance in improving the quality of education.

Conclusion: The use of modern pedagogical technologies in teaching chemistry increases the quality and efficiency of the educational process. Teachers, having mastered innovative approaches, make a great contribution to attracting students to chemical knowledge and developing their independent thinking skills. Therefore, research and practical work in this area should be continued.

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