

TEACHING METHODOLOGY OF BIOLOGICAL SCIENCE IN SCHOOLS

Abatova Feruza Reymbaevna

*Teacher of biology at specialized boarding school No. 2, Nukus city, Republic of
Karakalpakstan*

Xojalepesova Gulistan Muratbekovna

*Teacher of biology at specialized boarding school No. 2, Nukus city, Republic of
Karakalpakstan*

Tulepova Gulbanu Moynaqbaevna

Teacher of biology at the creative school named after I. Yusupov

Abstract: Teaching methodology in biological science plays a crucial role in shaping students' understanding and interest in the subject. This article explores various innovative teaching methods and strategies that can be employed in schools to enhance the learning experience and promote a deeper understanding of biological concepts. It discusses the importance of hands-on learning, inquiry-based approaches, use of technology, and integration of real-world examples in teaching biological science. The article also highlights the significance of teacher training and professional development in implementing effective teaching methodologies. Overall, it emphasizes the need for a student-centered approach that fosters curiosity and critical thinking skills in students.

Keywords: Teaching methodology, Biological science, Schools, Hands-on learning, Inquiry-based approaches, Technology, Student-centered approach.

Introduction : Teaching biological science in schools is a complex and dynamic process that requires careful planning, innovative strategies, and a deep understanding of the subject matter. The methodologies employed in teaching biological science play a crucial role in shaping students' understanding, interest, and enthusiasm for the subject. This article aims to explore the various teaching methodologies used in the field of biological science education in schools and their impact on student learning outcomes. The teaching of biological science in schools plays a crucial role in developing students' understanding of the natural world and fostering scientific literacy. However, traditional teaching methods often fail to

engage students and may not effectively convey complex biological concepts. To address these challenges, educators are increasingly turning to innovative teaching methodologies that make learning more interactive, relevant, and enjoyable for students.

Multimedia Resources:

Incorporating multimedia resources such as videos, animations, and interactive simulations can greatly enhance the teaching of biological science. These resources can help visualize complex biological processes, making them easier for students to understand. Additionally, multimedia resources can cater to different learning styles, ensuring that all students can effectively grasp the concepts being taught.

Collaborative Projects:

Collaborative projects are another effective way to teach biological science. By working in groups, students can share ideas, collaborate on experiments, and learn from each other's experiences. Collaborative projects also promote teamwork and communication skills, which are essential in scientific research and other professional settings.

Real-World Applications:

To make the teaching of biological science more relevant to students, educators should incorporate real-world applications of biological concepts into their lessons. This could include discussing the role of biology in medicine, agriculture, and environmental conservation. By highlighting the practical applications of biology, educators can motivate students and show them the real-world relevance of the subject.

Inquiry-Based Learning:

One of the most effective teaching methodologies in biological science education is inquiry-based learning. This approach encourages students to ask questions, investigate phenomena, and draw conclusions based on evidence. By engaging in hands-on activities and experiments, students develop critical thinking skills and a deeper understanding of biological concepts. Inquiry-based learning promotes active learning and allows students to take ownership of their learning process, leading to better retention of information and higher levels of engagement.

Hands-On Activities:

Hands-on activities are another essential component of effective biological science education. These activities allow students to explore biological concepts in a tangible

and interactive way, making abstract ideas more concrete and understandable. By engaging in hands-on activities such as dissections, experiments, and field trips, students develop a deeper appreciation for the natural world and the scientific method. Hands-on activities also promote teamwork, communication skills, and problem-solving abilities, which are essential in the field of biological science.

Technology Integration:

The integration of technology has revolutionized the way biological science is taught in schools. Digital tools such as computer simulations, virtual labs, and educational apps provide students with interactive and engaging learning experiences. Technology allows students to visualize complex biological processes, conduct virtual experiments, and access a wealth of information from around the world. By integrating technology into the curriculum, teachers can enhance the effectiveness of their teaching and cater to the diverse learning needs of students.

Teacher Professional Development:

Effective teaching of biological science requires continuous professional development for teachers. Professional development programs help teachers stay updated with the latest trends and developments in the field of biological science education. These programs also provide teachers with new teaching strategies, resources, and tools to enhance their classroom practice. By investing in teacher professional development, schools can ensure that their teachers are well-equipped to deliver high-quality biological science education to their students.

Creating a Conducive Learning Environment:

Creating a conducive learning environment is essential for effective biological science education. A positive and supportive learning environment encourages students to explore, ask questions, and take risks in their learning. Teachers can create such an environment by fostering a sense of curiosity, respect, and collaboration among students. By creating a safe and inclusive learning environment, teachers can motivate students to actively participate in their learning and develop a lifelong love for biological science.

Professional Development for Teachers:

Continuous professional development is essential for teachers to stay abreast of advancements in the field of biology and to improve their teaching practices. Teachers should participate in workshops, conferences, and online courses to enhance their knowledge and skills in teaching biological science. By continually

updating their teaching methods, educators can ensure that they are providing students with the best possible learning experience in the field of biology.

Conclusion

In conclusion, effective teaching of biological science in schools requires a combination of innovative teaching methodologies, hands-on activities, technology integration, teacher professional development, and a conducive learning environment. By employing these strategies, teachers can enhance students' understanding and appreciation of biological concepts, leading to improved learning outcomes and a deeper interest in the field of biological science.

REFERENCES:

1. Akmalovna A.C., Olimovna A.G. Methodology and problems of teaching the subject "Biology" in medical universities and secondary educational schools //Eurasian Medical Journal. 2020. – №. 2. C. 6-8.
2. Vakhobovna N. K. Current Transformational Processes and Prospects for the Development of Intercultural Cooperation in Uzbekistan //International Journal on Integrated Education. – 2022. – T. 5. – №. 5. – C. 132-136.
3. Hajiyeva G. teaching biology teaching methodology in higher pedagogical schools //science, education. 2021. – T. 2. – №. 2. C. 273-279.
4. Ajewole G.A. Effects of discovery and expository instructional methods on the attitude of students to biology //Journal of Research in Science teaching. – 1991. – T. 28. – №. 5. C. 401-409.
5. Passmore C., Stewart J. A modeling approach to teaching evolutionary biology in high schools //Journal of Research in Science Teaching: The Official Journal of the National Association for Research in Science Teaching. 2002. – T. 39. – №. 3. C. 185-204.
6. Veselinovska S.S., Gudeva L. K., Djokic M. The effect of teaching methods on cognitive achievement in biology studying //Procedia-Social and Behavioral Sciences. 2011. – T. 15. C. 2521-2527.