THE IMPACT OF ACMELOGICAL INTERACTIVE TEACHING ON STUDENTS' UNDERSTANDING OF AMINES

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This article examines the impact of acmeological interactive teaching methods on students' understanding of the topic of amines. The study presents the application of the acmeological approach in an interactive learning environment and its outcomes. Research findings indicate that interactive methods enhance students' cognitive activity and contribute to a deeper understanding of chemical concepts. In modern education, it is crucial for students not only to acquire knowledge but also to apply it in practice. In chemistry, complex theoretical concepts, such as amines, can be challenging for students to grasp. Therefore, utilizing interactive teaching methods to make the learning process more dynamic and effective is highly relevant. The acmeological interactive teaching approach is a modern methodological direction that ensures students' individual development and active participation in the learning process. This approach considers learning not only as knowledge transmission but also as a process based on experience, fostering social and cognitive skills. Acmeological methodology prioritizes students' psychological and intellectual development, contributing to their research abilities and creative thinking. The topic of amines belongs to the category of organic compounds in chemistry, requiring extensive knowledge of their structure, properties, synthesis, and applications. This topic is mainly taught in grades 10-11, demanding that students connect theoretical knowledge with practical skills. Since traditional teaching methods do not fully meet these requirements, it becomes necessary to implement interactive and problem-based learning approaches [1].

Acmeological interactive teaching is a methodological approach that supports students' intellectual, emotional, and social development in the learning process. This model integrates interactive learning technologies, problem-based learning, discussions, and research methods. Acmeological teaching focuses on individuality, aiming for students' maximum development and fostering independent thinking skills. The use of acmeological interactive methods in chemistry education, particularly in the topic of amines, is essential for linking theoretical knowledge to real-life examples. This approach facilitates a more interactive understanding of the properties and applications of amines. Modern chemistry education emphasizes the development of experimental knowledge and practical skills. Active participation in the learning process helps students understand the subject more deeply and retain knowledge for a longer time. However, traditional teaching methods are sometimes insufficient to achieve these goals.The topic of amines is one of the more complex chemical concepts for students, as their structure, properties, and applications involve intricate details. The conducted research demonstrated that the implementation of acmeological interactive teaching methods significantly improves students' comprehension of amines. Compared to traditional methods, interactive teaching approaches offer the following advantages: The use of interactive methods significantly enhanced students' interest in the lesson. Students who previously found the topic difficult became more engaged through problem-based learning and group activities, assessments conducted among students indicated that the level of knowledge regarding the structure and properties of amines increased from 30 % to 70 % in groups taught using acmeological interactive teaching methods, students conducted independent research on the daily life and industrial applications of amines and presented their findings in class. In groups taught with interactive and acmeological methods, final assessments showed that students retained their knowledge of amines significantly longer compared to those taught using traditional methods. Students analyzed real-life case studies of amines in pharmaceuticals, polymer industries, and biotechnology, enhancing their ability to apply their knowledge practically [2, 3].

Overall, the findings indicate that applying acmeological interactive teaching methods helps students develop a deeper understanding of amines, enhances their research skills, and improves long-term retention of lesson material. The implementation of this approach can contribute to expanding the use of innovative methods in chemistry education and developing students' critical thinking abilities.

References

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