

THE ROLE AND PROFESSIONAL DEVELOPMENT OF TEACHERS IN TEACHING ORGANIC COMPOUNDS

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Teaching organic compounds is very important in chemistry education because they are one of the main branches of chemistry, but also have a wide range of applications in biology, pharmacy, the environment, and other important fields. Teaching organic compounds is particularly difficult and complex because students must have a deep knowledge of the structures, reactions, and applications of these compounds. The role of teachers in this regard is significant and their professional development significantly affects the quality of teaching. This thesis examines the role of teachers and their professional development in teaching organic compounds.

Organic chemistry is the basis of all living organisms in nature and many industrial products. The teaching of organic compounds plays a major role in the development of sciences such as chemistry and biology. The teaching of organic compounds provides students with scientific thinking and problem-solving skills. Knowledge of their molecular structure and reactivity is important for both theoretical and practical teaching.

The approach teachers take to organic compounds is crucial to the success of teaching. Teachers should not only provide theoretical knowledge, but also introduce students to real-world applications. For example, providing information about the applications of organic compounds in pharmacy, biotechnology, and industry increases students' interest in the subject. The issue of teachers' teaching methods, how teachers explain the subject, and how they reinforce students' understanding is important.

Teachers' interactive interaction with students plays an important role in the students' learning process. Teachers should provide students with independent thinking and problem-solving skills, and provide them with practical tasks and laboratory work on the topic of organic oxygenates.

Regularly organizing discussions, seminars, and group work helps students better understand issues and develop their application skills.

Implementing modern teaching methods increases the quality of teachers' teaching. Interactive lessons, video materials, 3D modeling and virtual laboratories play an important role in this area. By using these methods, teachers can ensure that students understand the topics better. Updating teachers' teaching approaches and introducing innovations increases the effectiveness of teaching.

Teachers play a major role in teaching organic chemistry. They are responsible not only for imparting theoretical knowledge but also for developing students' practical skills. Professional development of teachers improves the quality of teaching, and their mastery of modern teaching methods ensures that students understand the subject better. Motivation of teachers, innovative teaching materials, and continuous professional development programs will increase the effectiveness of the teaching process and ensure that students have in-depth knowledge in the field of organic chemistry.

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