

Understanding the development of teaching chemistry at university in Croatia

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Last year we marked the 140th anniversary of University Chemistry Education in Croatia. In this paper we will investigate the circumstances and the development of teaching chemistry at university level.

In the second half of the 19th century natural sciences in Croatia were developing more intensively than ever before. Chemistry in Croatia was introduced with inclusion of chemistry in the secondary schools curriculum in the middle of the 19th century, but not at higher level. The favourable circumstances in which chemistry in Croatia evolved was the renewal of the University of Zagreb (1874) and the founding of the Yugoslav Academy of Sciences and Arts in Zagreb (1866). The newly founded educational institutions in the year 1866 did not have at the beginning of their activity a sufficient number of teaching experts so scientists from other countries were sought to apply for these positions. So far there has been no detailed and overall study of these circumstances on the Croatian territory.

Our work will examine the circumstances related to the construction of the first Croatian Chemical Institute (Lučbeni zavod) which was used in experimental chemistry classes and also to conduct scientific research. The programs of teaching chemistry at that time at the universities in Europe were under a strong influence of J. Liebig. His teachings gave a special attention to the chemistry exercises during which the students participated in conducting chemical experiments. It will be shown how from its beginning chemistry education was connected with laboratory work and inquiry-based chemistry education was always stressed as a cornerstone of chemical education.

The paper will focus on investigating the first university textbooks and manuals in chemistry written in Croatian language and display the reception and transmission of the knowledge in the field of chemistry which the newly appointed professors passed on to students with a special interest to the periodic table of elements. Presented results of our investigations will give a contribution to understanding the development of European chemistry at the beginning of the nineteenth century since each university has its own specific history.

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