



Сојуз на хемичарите и технолозите на Македонија

Society of Chemists and Technologists of Macedonia

Chemical Society Annual Report to the EuChemMS Division of Chemical Education for 2020-2021¹

1. Abstract

The activities of the Society of Chemists and Technologists of Macedonia, Division of Chemical Education in the period June 2020 – May 2021 involved:

- publication of the Macedonian Journal of Chemistry and Chemical Engineering with a section on chemical education;
- organization of chemistry competitions for primary and secondary school students;
- selection and preparation of secondary school students for the International Mendeleev Chemistry Olympiad (IMO), and
- selection and preparation of secondary school students for the International Chemistry Olympiad (IChO).

¹June 2020- May 2021, all levels of chemistry education: primary, secondary schools, universities, LLL, general and vocational education.

2. National educational policy

The implementation of the new modularly designed curricula in the secondary vocational education continues, but this year with an intensified promotion of the vocational education.

A new conception for primary education was announced, which envisages merging several subjects into one and changing the number of classes in some other subjects. Opinions regarding this concept of the professional and general public were divided, but despite the reactions and requests for inclusion of more competent individuals from the teaching faculties, as well as its postponement, the start of its implementation in September 2021 is in sight.

Due to the pandemic, most of the teaching process took place online. Namely, the students from first to third grade had the opportunity to attend classes with physical presence, but online attendance was left as an option. For students in the upper grades of primary and secondary education, teaching took place primarily online. Some schools, which have fewer students, received permission to work with physical presence. The practical teaching in the secondary vocational schools was partially realized, for example, the laboratory exercises in the secondary chemical or medical schools.

Also, in higher education, the recommendation for online teaching was valid and it was realized in this form wherever possible. However, at the Faculty of Natural Sciences and Mathematics, many of the courses also include experimental work. Part of this teaching was realized through recording the experiments and online discussion with the students, and part with physical presence.

Online teaching has caused a number of problems and shifts from the normal course of teaching organization, but it has also opened up new possibilities and a different way of thinking about teaching. Although the main disadvantage of online teaching is the objectivity of the assessment, the creativity of both teachers and students came to the fore.

The general opinion is that we would like to return to classes with physical presence, but still would use some of the benefits provided by distance learning.

3. Events in chemical education

26th Congress of the Society of Chemists and Technologists of Macedonia was postponed due to the pandemic, taking into consideration the personal safety of participants and possible problems of traveling to and from Macedonia.

4. Activities of the National Chemical Society

The lower and upper secondary school students (13-18 years old) were involved in **chemistry competitions** from March to June 2021. Municipal competitions were held online, and regional and state competitions with physical presence. In the same time **science competitions** for primary school students (9–11 years old) were organized as a joint activity with the Macedonian Biological Society and the Society of Physicists of Macedonia. Municipal and regional competitions were held online,

only the state competition was organized at the Faculty of Natural Sciences and Mathematics with physical presence.

Other activities, such as 'November – the month of science' and chemistry shows aimed at popularization of chemistry and science were not held because organizing events involving large numbers of people was prohibited.

5. Publications

The Society of Chemists and Technologists of Macedonia publishes the **Macedonian Journal of Chemistry and Chemical Engineering** (<http://www.mjcce.org.mk/index.php/MJCCE/index>) twice annually. It is a not-for-profit open access journal. The journal publishes original scientific papers, short communications, reviews and educational papers from all fields of chemistry, chemical engineering, food technology, biotechnology and material sciences, metallurgy and related fields as well as education in chemistry.

6. Liaison with the chemical industry

In the process of reforming the vocational education, a collaboration with the industry is planned as part of the school students' practice.

7. International and European initiatives

Due to the pandemic, both **International Mendeleev Chemistry Olympiad** and **International Olympiad in Chemistry** were held online, without competition in the experimental part. The theoretical part of the competition was held with the physical presence at the Institute of Chemistry in Skopje during constant video surveillance by the organizers. Our team won one bronze medal on IMO and one bronze medal on IChO. The **International Junior Science Olympiad** did not take place this year.

8. Other events and activities

Promotion of the events listed above in the media.

9. Name of delegate and deputy

Dr. Marina Stojanovska, the Society of Chemists and Technologists of Macedonia

10. Contact details of delegates.

Dr. Marina Stojanovska, associate professor Institute of chemistry, Faculty of Natural Sciences and Mathematics, Skopje, Republic of North Macedonia

11. CV of delegate.