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

1. Abstract

During this year, almost everything related to chemistry education has been influenced by Covid-19. Both teaching practice and research in chemistry education has changed into a fully digital version. Now we hope to find hybrid solutions for the future.

2. National educational policy

During 2020-2021, the chemistry curriculum for school grade 0-9 was supposed to change, the documents have been re-written by the National Agency for Education with intentions to have fewer core content areas and to make the knowledge requirements more explicit. The plan was to implement the new curriculum from autumn 2021, but due to Covid-19, the government had to postpone the decision to finalise the formal curriculum. The date for implementation is now autumn 2022.

3. Events in chemical education

In Sweden, most events are connected to all science subjects, for example national conferences are almost always held in science education. During this Covid-year, all events have become digital through Zoom, with some advantages such as less travel, and some disadvantages such as lower quality of the events. The Swedish Chemical Society has implemented Zoom lectures open for a larger audience.

One successful new event is the possibility to “Zoom with a chemistry PhD student”, where four universities have offered sessions where upper secondary schools can meet with chemistry PhD students, <https://www.krc.su.se/om-oss/evenemang/zooma-med-en-doktorand-i-kemi-ht21-1.556274> (only in Swedish). 37 doctoral students will present their research to school students. Some of the titles are presented in English

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

here: <https://www.krc.su.se/om-oss/evenemang/zooma-med-en-doktorand-i-kemi-ht21-1.556274#Foredrag%20hosten%202021>

4. Activities of the National Chemical Society

The society has unfortunately problems attracting new members. This decline has been ongoing over the last 10 years and today the society has fewer than 2000 paying members organized in 11 divisions, where the Chemistry Education Division was one until 2016. Today this Chem Ed division is a committee where the board only consists of 3 members with mainly me being active. Since the committee has no own funding, it has been problematic to be put time to work with chemical education issues.

- The Committee of Chemical Education co-hosts an annual two-day meeting (“Berzelius days”) where 300-400 students in the end of upper secondary school from the Natural Science Programme and Technology Programme meet and listen to chemistry lectures (often one Nobel laureate or similar). At the “Berzelius days” chemistry teachers are also having a program where they meet and discuss chemistry education. Moreover, one prize is annually given to an important person who has contributed to chemistry education.
<https://www.berzeliusdagarna.se>
- Last year’s Day of Chemistry was held in October with the theme of “plant health”. Schools can order free of charge experiment packs with things to do with students in school: <https://www.ikem.se/ikem-skola/kemins-dag/> In the autumn of 2021, the theme will be “creativity”, since the UN has declared 201 as the International Year of Creative Economy of Sustainable Development.
- In-service training days for chemistry teachers are given together with a section under The Royal Swedish Academy of Science <https://www.kva.se/en/startside> called Sveriges Nationalkommitté för kemi, <http://natkomkemi.se>. Every year the Swedish Chemical Society arrange two days for chemistry teachers in collaboration. The theme for October 2020 was a new context-based teaching material, Din Kemi (Your Chemistry, free to use for everyone, <https://dinkemi.se>).

5. Publications

The Swedish Chemical Society produce a chemistry magazine with four issues per year, unfortunately no one in English. <https://kemisamfundet.se/kemisk-tidskrift/>

6. Liaison with the chemical industry

The important collaboration between chemical industry and society is through IKEM, Innovation and Chemical Industries in Sweden is an industrial and employer

organization representing around 1 400 Swedish and foreign-owned companies with more than 70 000 employees. Member companies work in a broad cross-section of the chemical industry both as producers, distributors and users.

http://www.ikem.se/in_english

7. International and European initiatives

The Swedish Chemical Society has delegates as leaders in the International Chemistry Olympiad (IChO) and the European Science Olympiad (EUSO), where students participate every year.

8. Other events and activities

Due to Covid restrictions, new digital teaching material have been developed and implemented. One example described in English is the use of Virtual Reality and Zoom to visualise chemical structures.

<https://www.umu.se/en/feature/vr-glasses-help-students-visualize-molecules-/>

9. Name of delegate and deputy

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10. Contact details of delegates.

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11. CV of delegate.

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