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The Hungarian Chemical Society Chemistry Teachers' Division Annual Report to the EuChemS Division of Chemical Education for 2014-2015

1. Abstract

The significant changes have continued in both the higher and public educational systems of Hungary in 2014-2015. Large-scale projects are going on to develop teaching materials for teacher education. The Hungarian Chemical Society (HCS) Chemistry Teachers' Division has further developed a website to help the chemistry teachers' work and maintained the previously started mailing list, all of which increased the number of the active chemistry teacher members of the HCS again. Several competitions and talent nurturing camps for students have been successfully organised (as well as the usual annual competitions and other events) by the HCS. The HCS financially supported the participation of chemistry teachers on Science on Stage.

2. National educational policy

The new training system of chemistry teachers has been continued this school year. The increased number of would-be chemistry teacher students remained more or less the same as in the previous year and many of them had brought much more thorough knowledge from the secondary school than the previous year students. The best teacher trainees who want to teach science subjects like chemistry and physics still could apply to get a significant state-provided scholarship to help their studies.

The national project (titled: National coordination for the renewal of teacher education; No.: TÁMOP- 4.1.2.B.2) aiming to develop teacher education and some other similarly large-scale projects are near to be finished. Among many other things, they have provided opportunities to produce materials to help initial and in-service teacher training that will be published on websites and as teaching materials for e-learning courses.

A yet again new chemistry content of the National curriculum has been written and offered to the educational politicians to consider as an alternative of the presently valid ones.

Changes of the textbook market have been continued. The process of writing and piloting the so called 'experimental textbooks' is still not reassuring.

The teacher carrier model introduced in the previous school year has been continued, which meant a salary raise for many teachers, increasing their workload at the same time. The quality of

the teachers' work will be checked regularly according to the new system. This could be a positive change, provided the new system will be fair and rewards the high quality teaching indeed. However, much complains and uncertainty have been heard concerning the conditions. A pilot project to work out the conditions and the process of certain teachers becoming "master teachers" and "research teachers" was started. This means extra requirements and obligations for the participants, but offers exceptional salaries too. However, there are still many questions to be answered. The mere fact that it is financially more rewarding to be a teacher than a teacher educator has caused some tension.

A complex programme that was started earlier to meet the special needs of talented and gifted children has been continued and broadened. Several more projects, programmes, organisations and institutions (new and established earlier) serve this purpose in Hungary and a national network of the individual efforts keeps working too. There were several calls for proposals and the schools could apply for grants to help their various programmes, competitions, camps, visits to science museums or university laboratories etc.

3. Events in chemical education

The annual national Olympiads for age groups of 13-14, 15-16, and 17-18 have been held at the universities of Eger, Szeged and Budapest, respectively.

Regional organisations of the Hungarian Chemical Society organised several competitions on chemistry and environmental sciences for students.

The Science Research Centre of the Hungarian Academy of Sciences has organised a 'research camp' this summer again for talented students (see its website in Hungarian here: <http://www.ttk.mta.hu/intezetek/anyag-es-kornyezetkemiai-intezet/nyari-kutatotabor-2/>).

Several new science laboratories for primary and secondary school students were built or refurbished in the country under the initiative called 'Öveges Programme'.

4. Activities of the national chemistry society

In this academic year the Hungarian Chemical Society also

- organised the Irinyi János Chemistry Competition for secondary school students (that is the national Olympiad for age group of 15-16) in Szeged, on 24-26th April 2014;
- published five issues of the Chemical Journal for Secondary School Students;
- supported the participation of young chemists at international scientific conferences;
- supported the participation of the chemistry teachers on the Science on Stage;
- awarded the best diploma works (theses) of students graduated from chemistry or as chemistry teachers;
- organised a special chemistry summer school for secondary school students called "*Magical chemistry*" in Gödöllő, 7-11th Jule 2014);
- has maintained the website to help the chemistry teachers' work, see at the following link: <http://www.kemtan.mke.org.hu/> (in Hungarian). Its content is managed by the HCS Chemistry Teachers Division. The HCS member chemistry teachers also have a mailing list where we can discuss the most important subjects in that the teachers are interested in and send information about the various professional events. As a result of this, the number of the members of the HCS

Chemistry Teachers Division has increased again (at present it is 327). We improve the quality of the website regularly.

5. Publications

Five issues of the Chemical Journal for Secondary School Students were published. The new problem solving competitions initiated in the previous school year have proved to be a success.

The publisher of the journal called 'Teaching of chemistry' (in Hungarian) has been struggling to publish the issues regularly. The earlier issues are still available online on the following website: <http://www.mozaik.info.hu/Homepage/Mozaportal/MPfolyoirat.php?op=kemia>

From time to time the Journal of Hungarian Chemists (see website in Hungarian: <http://www.mkl.mke.org.hu/>) publishes articles that are interesting for teachers and secondary school students too.

6. Liaison with the chemical industry

The "chemgeneration.com" website (<http://www.chemgeneration.com/>) is sponsored and/or supported by several companies (BASF, Gedeon Richter Ltd., MOL, sanofi-aventis/Chinoin, TEVA, TVK), the American Chemical Society (ACS), the HCS and the University of Szeged, Department of Physical Chemistry and Material sciences. This website advertised the "Future Heroes" competition for secondary school students. The campaign was organised to invite students and teachers to participate in the Hungarian round between 3rd February – 13th April 2015 (<http://www.chemgeneration.com/hu/futureheroes/index.html>). The main themes were the environmental issues and sustainable development. The Chemistry Teachers' Division of HCS helped to organise the group that worked out the various tasks of the competition.

'Teacher Rátz Life Achievement Award' and 'For Hungarian Chemistry Education Prize' found by Richter Gedeon Pharmaceutical Ltd. awarded six chemistry teachers again in 2014.

Many various events and competitions mentioned above are generously sponsored by the factories of the chemical industry, the MOL Hungarian Oil and Gas Public Limited Company etc.

7. International and European initiatives

The president of the Chemistry Teachers' Division of HCS representing the organisation at the EuCheMS DivCEd council meeting in Jyväskylä on 8th July 2014 initiated the collection of the best ideas of the national report handed in to the EuCheMS DivCEd.

8. Other events and activities

Hungarian chemistry teachers and university professors continuously help the Hungarian chemistry teachers living and working beyond the frontier (in Romania, Ukraine, Serbia and Slovakia) with training courses, teaching materials and staff exchanges).