

**Chemistry is All Around Network
Workshop on "Teacher Training"
Prague, Czech Republic, 13 June 2013**

Minutes

Participants

The workshop on Teacher Training was held on Thursday, 13 June 2013 at institute of Chemical Technology Prague. It was attended by 16 teachers of primary and secondary schools from various parts of the Czech Republic. Note that there were mostly new teachers; some of them have joined the project recently as associated teachers:

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|--------------------|---|
| Karel Chytka | ZŠ Kostelec nad Černými lesy |
| Jana Kočanová | Gymnázium Český Krumlov |
| Jitka Bláhová | Gymnázium J.S.Machara Brandýs nad Labem |
| Drahomíra Grinová | Gymnázium Sedlčany |
| Eva Roztočilová | SOŠ obchodu, služeb a řemesel Tábor |
| Anna Buřičová | Gymnázium a SOŠPg Čáslav |
| Kateřina Žáková | Gymnázium a SOŠPg Čáslav |
| Kateřina Wernerová | ZŠ Kladno, Norská 2633 |
| Alžběta Kováčiková | SOŠ a SOU Kralupy nad Vltavou |
| Blanka Haišmanová | Gymnázium a SOŠ Poděbrady |
| Marie Vlková | Gymnázium Havlíčkův Brod |
| Květa Novotná | ZŠ Kolín Prokopa Velikého |
| Šárka Trnovská | ZŠ Příbram, Jiráskovy sady |
| Magda Zemanková | ZŠ Šumice, okr. Uherské Hradiště |
| Soňa Foretová | ZŠ Králův Dvůr – Počaply |
| Petr Koloros | Gymnázium Pierra de Coubertina Tábor |

Minutes

Czech team, as well as the other national teams of Chemistry Is All Around Network project, was to organize a workshop related to teacher's training for teachers and experts till 31 May 2013. However, we experienced huge difficulties trying to invite the teachers since they were extremely busy due to the school leaving examinations. We collaborate mostly with secondary school teachers. The leaving examinations at secondary schools ("*maturita*") present currently an important issue in the Czech Republic. The rules have been changed recently. The exam conditions used to be the competence and responsibility of individual schools, leading to uneven quality of provided secondary education, impossibility to compare the schools and facilitate the admission at universities. Usually, oral exams prevailed.

Thus, a new system of leaving examinations certified by the state has been created recently. It comprises two parts, the first, written exam, is certified by the state and unified for all schools. The second part is usually oral and the level of knowledge and other conditions are scheduled by

a particular school. Because some severe problems occurred in the first years, the system is being developed and adopted. For instance, at first, the written tests were evaluated by the company governed by the state. After series of complaints, some of the tests were evaluated by the teachers again but due to the enormous business this obligation has been returned to the company. So, the teachers have to cope with constantly changing conditions and have to study new schedules. This together with the second, school part of the exams causes that the teachers are extremely busy in the period of leaving examinations that lasts usually all the month of May. Although we did our best to make them come, many of them did not want or were not allowed to take part in our workshop.

Finally, the workshop was held on **Thursday, 13 June 2013** at institute of Chemical Technology Prague. The main findings and conclusions are specified below.

Training of teachers once they have graduated from universities is not spread and obvious activity in Czech Republic. Of course, some workshops and training lessons are organized but the general interest is not high. We would like to emphasize that courses for teachers are not mandatory. There are no rules of systematic teachers' training and career growth.

Some principals try to improve the reputation of their schools by encouraging the teachers to attend professional courses. However, permanent busyness of Czech teachers is a major problem which is actual not only in the period of leaving examinations (as described in the introduction). They have no time for trainings and for partnership with our project.

Some of the courses are certified by the Ministry of Education and the graduates get a diploma. Individual workshops could be divided according to their focus on various competencies of teachers:

1. Teachers training in the chemical area

a) News in science: *Otevřená věda* (Open science): Workshop connects the world of science and teachers. It shows new trends in science and finds new ways how to motivate students. <http://www.otevrena-veda.cz/kurzy-pro-pedagogy/ov-kurzy-pro-pedagogy.html>

b) News from the rules of working with chemicals - safety of teachers' and students' work

c) Innovation training of future teachers of chemistry: Palacký University (Olomouc), (1.1. 2011 – 31.12. 2013) <http://ucitelchemie.upol.cz/>

2. Training of pedagogical competencies

a) New teaching methodology: Project *Čtyřlístek* (Quatrefoil) in the Liberec region

<http://www.portal-ctyrlistek.cz/cs/fotogalerie/skoleni-ucitelu-chemie.html>

b) New *maturita* (leaving examination) training: it is necessary to instruct teachers how to work with new *maturita* which is time-consuming and teachers feel more busy.

<http://www.novamaturita.cz/vzdelavani-pedagoqu-1404033799.html>

c) Methodological Portal RVP (general education programs): online workshops, databases, information sources, handbook for teachers. (www.rvp.cz)

3. Training in new technologies:

a) How to work with an interactive whiteboard (from February 2012, high school Teplice):

<http://www.gymtce.cz/index.php?sectionID=100>

b) How to create a presentation, how to use new media, etc. (Google, May 2013, but many other terms in different cities)

<http://google-cz.blogspot.cz/2013/05/granty-google-sance-az-pro-tri-stovky.html>

c) Video website at chemistry teacher's work: Book

<http://www.muni.cz/research/publications/952384/>

4. Language competences

Learning English is necessary to be able to cooperate with international projects and seek new knowledge in the field of chemistry in international databases. The insufficient teachers' knowledge of English is an issue also in CIAAN project. There are teachers who would like to cooperate but they do not speak English at all or only a little. Although the main parts of the portal have been translated to national languages, everything cannot be translated. For instance, these teachers cannot comment some teaching materials available in other languages only.

-Course for Chemists in Pilsen, October 2012: http://www.nidv.cz/cs/kontakty/krajaska-pracoviste/plzen/plzen.ep/237_1055-odborna-stredoskolska-anglictina-pro-chemiky-a-strojare/1/?PHPSESSID=d6ea8af8fd51bfe72dc55e0341d2530d

5. Books targeted to teachers

a) First steps of teacher (Podlahová) - instructions for graduates to get your bearings in a new school, how do you ensure that the authority to be included in the teaching staff and manage climate in the classroom.

b) An educational experiment in chemistry (Karel Holada) - Paper comes within UN -Year of Chemistry 2011- at the Charles University. Paper is targeted to students and teachers in practice.

Who trains?

a) Universities that have grants from the European Commission

b) Independent entrepreneurs (e.g. Google, language schools)

c) Training organized by the Ministry of Education, Youth and Sports (MEYS)

and others