

# TEACHER'S TRAINING IN THE CZECH REPUBLIC II

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## Pre-service training

- Pre-service training (undergraduate education system) is currently **very fragmented**.
- **Graduates** of **high quality** are becoming increasingly **rare**, and the best ones often end up in other professions. This affects the quality of education.
- There are **various ways** to become a certified chemistry teacher. Possible ways to obtain teaching certification follows:

### **Option 1**

- Bachelor degree: Pedagogical-psychological preparation, inspection of classes, basics of natural sciences.
- Master degree: Development of natural sciences knowledge. The emphasis is put on teachers' competencies.

### **Option 2**

- Bachelor degree: Focus on science (one or two areas), pedagogy as an optional subject only.
- Master degree: Follows the bachelor's degree and develops it, inclusion of teaching focus.

### **Option 3**

- Bachelor degree: only of non-teaching character, focused solely on science.
- Master degree: focused on teaching subjects and teaching experience.

### **Option 4**

*very different from the previous ones, designed for chemistry graduates who decide to become a chemistry teacher*

- First they study a non-teaching master study program.
- It is followed by a further bachelor program focused on methodology of chemistry and pedagogical-psychological basics.

### **Option 5**

*very unusual but possible way*

- Teachers at vocational schools can gain their teaching certificate by studying for a bachelor degree after finishing their secondary school of chemistry .
- There they obtain teaching basics and further develop their professional knowledge.
- They become so called ‘masters’ at vocational schools.

- The requirement for becoming a teacher is graduation from a university (master degree), but reality often leads directors of schools to **recruit teachers without proper approvals**, and sometimes without a university degree.
- **Graduates** of different universities can **differ** significantly in their knowledge, skills, teaching experience and motivation for their work.
- The creation of a standard of teaching profession is the aim of a special project under the Ministry of Education, Youth and Sport “*National programme of education development in the Czech Republic*”.
- As an example of good approach we can mention the project “*Innovation of professional preparation of prospective chemistry teachers*” at Palacký University in Olomouc.



- The aim is to allow prospective chemistry teachers to be in **close contact with pupils** at primary and secondary schools, through management of **student's projects** directly in chemistry lessons, **tutoring** laboratory lessons, organizing **Olympiad** in chemistry etc.

## In-service training (LLL)

### Questionnaire to determine teachers' views in practice

- **usefulness** and availability of activities for teachers,
- what **achievements** and **difficulties** in LLL they experienced,
- what would they like to **change** in practice.



The questionnaire was given to 150 teachers (78 returned) attending Summer school for chemistry teachers at ICT Prague in August 2013. Conclusions from questionnaires:

- ✓ Participating teachers had practiced for **20 years** on average.
- ✓ Absolute majority of the participants (62.8 %) said they had **enough knowledge and skills from their university**. Some respondents added that the lifelong learning is needed.
- ✓ Almost all the teachers (85.9 %) were **motivated** to participate in lifelong learning programs (conferences, meeting, workshops etc.).

- ✓ Three quarters of the participating chemistry teachers (74.4 %) had **enough information** about ongoing trainings, meetings and workshops.

Some teachers had too much information about trainings, and 25 % did not have enough. The question is: did all the teachers try to search for information?

- ✓ The trainings were **available** for 73.1 % of teachers. Problems should be removed for the rest of teachers.

- ❖ The problems are: **long journey**, time press, etc.,
- ❖ The main problem was **lack of funding** (for journey, course fee, remuneration for substitute teachers etc.),
- ❖ Training time takes time to teach students.

- ✓ Teachers are most interested in these topics:

- Chemistry all around us,
- Chemistry of everyday life,
- Chemistry in practice,
- Chemical experiments (legal, safe, interesting, modern).

## What is the biggest problem in teachers' practice?

- **Lack of funding** leads to: poorly equipped laboratories, outdated classrooms, lack of chemicals, small wages, and unavailability of materials. Textbooks are outdated (with outdated terminology and information).
- **Lack of interconnection** among science subjects.
- **Time** for educational process is not sufficient. There is not enough time for understanding, repetition and practice of new information.
- **Laws** restrict chemical **experiments**.
- **Number of students** is declining. The directors of prestigious schools have to accept less motivated students. The level has been falling.
- **Morality of students** is also problematical. Students are focusing on their personal benefits and cheat. **Communication with some parents** is problematical as well.

## Possibilities to improve the current state

- There are enough projects focused on lifelong learning of chemistry teachers.
- The Czech Republic participates in EU education programs regularly. The Ministry of Education, Youth and Sports tries to support these projects as much as possible. The National Agency unites these programs.

The results of this support are:

- 1) **availability of information** to all potential participants,
- 2) enhance **transparency** and **coordination** in the administration of programs,
- 3) the use of the **experience** gained from the implementation of programs,
- 4) effective and average use of **financial and human resources**.



**Thank you for your attention!**