



Study visit group report

Group	455
Title	Laboratory sciences, a rapidly developing field
Theme	Making science education more attractive
City, Country	Copenhagen, Denmark
Type of visit	Mixed
Group reporter	Rejsek Franck

I. Findings

This section summarises the findings that the group makes while visiting host institutions, discussing issues with the hosts and in the group. You will be reflecting about the things you learnt during each day. But to put them together and give an overall picture, you need to devote a special session to preparing the final report on the last day of the visit.

In this section, it is important that you describe not only things you learnt about the host country but also what you learnt about the countries which you represent.

1. Summarising your impressions, please describe what in your opinion are the 3 most important things you learned during the visit.

We learned:

- About how to equip laboratories in the best way.
 - That our national education systems are very different.
 - MUC has a good relationship with the companies we have visited. Research and development institutes create an enriching and vibrant learning environment for all students
2. One of the objectives of the study visits programmes is exchange of good practices among the hosts and participants. Cedefop will select examples of good practices and disseminate them among former participants and wider public, including potential partners for future projects.

Describe each of the good practices you learn about during the visit (both from the hosts and from each other) indicating the following:

title of the project/programme/initiative/ ...	name of the institution that implements it (website)	contact person (if possible), who presented the programme to the group	whom the project/programme/initiative addresses	what features of the project/programme/initiative make it an example of good practice
Open days at school	Direction of secondary	Panagiotidou Barbara	All the Students of	Students engaged hands-on experiments

	education of Karditsa, Thessalia, Greece http://ekfe.kar.sch.gr	School advisor of science	primary and secondary education, parents and general public	Outdoor events addressed to general public
Validation of instruments and methods	Plantijnhogeschool (Belgium) http://www.plantijn.be	Nijole Ruziene A head of study department	For college students	3 stages of Intensive program project involved preliminary work, practice period, lectures and visits to certified laboratories. Students gained 4,5 ECTS credits.
New technologies in teaching of chemistry and biology at elementary and secondary schools towards sustainable development	http://kekule.science.upjs.sk Tatiana Busova	Creation of information – communication, chemical – environmental laboratory (IKCHEL) to the selected problems of topic Sustainable development in the education process of chemistry and biology teachers	Using laboratory as a platform in distance education of students of elementary and secondary schools in school and after-school	teaching of chemistry and biology Announcement and realization of project contest for students on the themes of sustainable development
Junior Waterprize	www.norskjuniorvannpris.no	Anne Hox	Students up to 20 years old	Relevant project with practical work
Guidance and Entrepreneurship	Leonardo project www.cgse.eu	Anne Hox	Students in secondary school, teachers and mentors	Guidelines ready to use for entrepreneurship and placement in companies.

* You can describe as many good practices as you find necessary. You can add rows to the table.

3. The study visits programme aims to promote and support policy development and cooperation in the field of lifelong learning. That is why it is important to know what you learnt about such policies and their implementation during your visit. You are invited to describe your findings concerning the following:

3.1. common approaches, if any, that are met in all or some countries (both host and participants') regarding the theme of the visit:

Practical training in laboratories is important to make science education more attractive. It is also important that the students find the objective and the solutions of problems themselves, develop critical thinking and analytical skills.

3.2. common challenges that are faced by all or some countries (both host and participants') in their effort to implement policies related to the theme of the visit:

The results of students' admission during the recent years show that fewer students choose science education studies in the host country and in some participants' countries. It is difficult to get students interested in science. We need more time for teaching Chemistry and Biology. Also, Science education is very theoretical.

However, it is very hard to make science education in Chemistry and Biology more attractive because we need more money to equip our laboratories properly to give our students more practice because sciences education is a fast developing field and laboratory equipments are very expensive.

- 3.3. effective and innovative solutions you have identified that the countries (both host and participants') apply to meet the challenges you mentioned in question 3.2:

We saw in Copenhagen that pupils are introduced to science early from elementary school, by being able to do attractive experiments in Experimentarium, a national Science centre, whose purpose it is to promote interest in natural science and technology.

Companies communicate to young people that they need qualified scientific employers.

- 3.4. policies and practices that can be further explored and possibly transferred to other countries:

Increase cooperation among education institutions and companies in order to have practice periods for the students and help from external experts in project.

To organize science festival in order to share knowledge an experience in science area among students and teachers.

4. Creating networks of experts, building partnerships for future projects is another important objective of the study visit programme.

Please state whether ideas for future cooperation have evolved during meetings and discussions.

We have discussed the possibilities for student and teacher exchange between countries.

To arrange a conference or a study visit for laboratory technicians of all levels in educational institutions.