



543223-LLP-1-2013-1-LV-KA4- KA4MP

Collection of Students' and Teachers' Experiences In Poland



This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

COLLECTION OF STUDENTS' AND TEACHERS' EXPERIENCES IN POLAND

GRZEGORZ GRODEK
36,6 COMPETENCE CENTRE
LODZ, POLAND

Introduction

Before starting the recruitment and collecting of teachers' and students' experience related to scientific subjects database of schools from Lodz was created to facilitate the implementation process. Headmasters of school were contacted through different channels. We organized face to face meetings with some of the headmasters. E-mail invitations were followed by telephone conversations. We also took advantage of good contacts to Lodz Centre for Teachers' Training and Continuing Education that provides training for teachers from Lodzkie region. Kuratorium Oświaty in Lodz (regional educational authority) was also contacted to select schools.

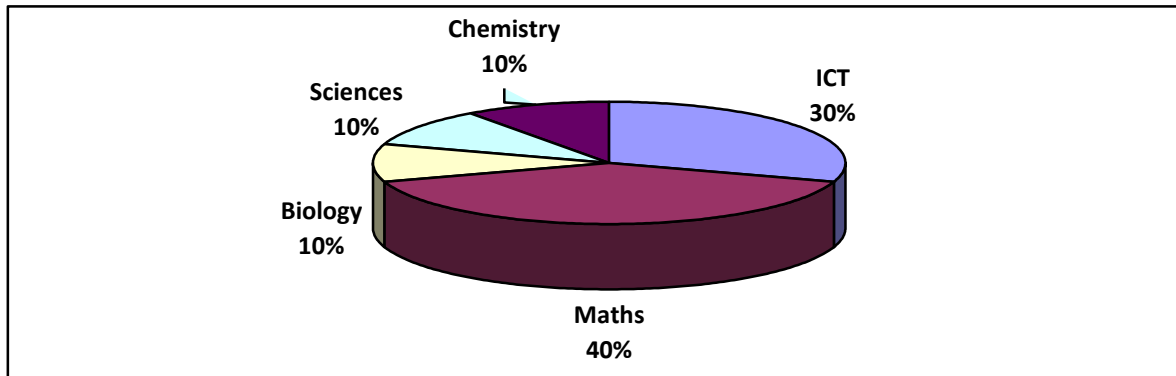
During the recruitment and dissemination to schools and local bodies dealing with education it appeared that language barrier might be a problem. Some headmasters and teachers do not have sufficient skills in English. To facilitate the process all documents related to the WP1 Teaching and Learning experience were translated into Polish. Schools at different level were contacted and teachers of different subject so the experiences collected provide the comprehensive overview of innovative methods that can be shared to increase the interest and the motivation of students. The experience we collected relate to Maths, Chemistry, Biology, ICT, Technology and Science.

Recruiting of the Portal users

The target group addressed by 36,6 Competence Centre were schools of different types from Lodz. In total we contacted 5 Primary Schools, 35 Lower Secondary Schools, 25 Upper Secondary Schools. We managed to organize face to face meetings with headmasters of the schools. We send e-mails with invitations, pointing out the benefits from the participation in Goerudio project followed by telephone conversations. We received positive feedback from schools headmasters supporting the initiative to foster the science education in their schools. However, there was problem to convince the teachers to participate because they have a lot of administrative obligations which consume a lot of time and didn't want to take new obligations (and in some cases schools rejected). Finally we found schools with committed management as well as teaching staff and students.

As far as the results of the recruitment are concerned, 5 schools are involved. These includes schools of different educational levels (3 primary schools, 1 lower secondary schools, 1 higher secondary school).

In relation to the teachers participating, we have 4 of Maths, 3 of ICT and technology, 1 of Science, 1 of Chemistry and 1 of Biology, which is shown on graph below:



Goerudio project involves 201 students as direct participants.

Collection of teachers' and students' experiences

The collection of experiences was facilitated by translation of forms to collect the experience into Polish. At each school involved in project meetings and small workshops were organized. In total five meetings with schools headmasters and scientific teachers were organized. They involved the participation of the headmasters and at least two teachers to collect the experience of their didactic work and from their students. Goerudio brochure in Polish was handed in to the participants so they could understand the objectives of the project and be aware of the activities.

Teachers were presented what kinds of experiences we are looking for and how they should describe them. Problems that teacher encounter during work were discussed. Teachers also expressed their expectations from Goerudio project. Teachers were informed about the state of art of the project and about the future project activities. They were very interested in the project and they participated in an active and productive way, talking about their experiences in teaching scientific subjects.

As far as the contact method is concerned, the main strategy adopted was to send e-mails to the teachers, calling them by telephone. Database of teachers was created to facilitate the communication process. Most of experiences were sent directly in Polish and 36,6 CC took care of the translation into English.

Conclusion

The implementation of the first WP1 and collection of experience showed that there is demand on finding good ways to encourage students to learn scientific subjects in Poland. Results of the final exams in upper secondary schools in 2014 (Matura exam) revealed a big problem. 25% of the students failed to pass the exam in mathematics. That shows that the educational system fails and innovative methods to foster the motivation of students to learn and new teaching methods should be applied. The teachers and headmasters express big concern about their students' results.

As far as the strategy to collect the teachers' and students' experiences is concerned, we developed the database of schools from Lodz. The recruitment of schools was initialised by direct contacts to headmasters. Then teachers were addressed by phones and e-mails. The problem that we faced was the lack of time expressed by some teacher so therefore they rejected to take new obligations and to participate in Goerudio project (although headmasters were positive about the participation). This resulted in the extended time for recruitment of schools and teachers. When we managed to find

schools and teacher devoted to the project the process of collection went smooth. The contact with teachers was very good and they show interest in the next stages of Goerudio project.

The teachers' experience that we collected in Poland presented very interesting ways of teaching scientific subjects, through games that implied change of roles and perspective between teacher and students, organizing the classes in laboratories, factories or other facilities outside the classroom, applying computer programmes and applications to facilitate the education, cross-sectoral lessons involving knowledge of several subjects, different kinds of competitions involving students. Thanks to cooperation with teachers and involvement of their students we collected experience form the following subjects: Maths, ICT, Technology, Sciences, Biology, Chemistry.

After the analysis of the teachers' experience we found that trouble making factors are:

- Incomprehension of the processes and the texts (13 indications)
- Lack of basic and consecutive knowledge (13 indications)
- Lack of attention (7 indications)
- Variety of students (1 indication)
- Old study and visual materials (6 indications)
- Rather inadequate evaluation system where comprehension is not evaluated (2 indications)
- Lack of students motivation (5 indications)
- Lack of time to present the content (1 indication)

The solutions indicated by Polish teachers to solve the problems:

- Using the links with the real life (13 indications)
- Presentations (9 indications)
- Games and competitions involving students (9 indications)
- Practical work (8 indications)
- Work in groups (7 indications)
- Laboratory work (6 indications)
- Work in nature (6 indications)
- Use of computer programmes (6 indications)
- Research (5 indications)
- Application of comprehension models (5 indications)
- Application of technical means (3 indications)
- Interdisciplinary lessons (3 indications)
- Taking part in working out study materials (1 indication)
- Application of research projects (1 indication)
- Application of analogically working study aids (1 indication)

The students' experiences revealed both successes and difficulties in learning scientific subjects. As far as problems are concerned students have difficulties in understanding abstract concepts from mathematics. They often have to learn by heart and are not able to solve the problems. Some expressed they require more attention and individual approach. On the contrary, they appreciate if classes involve active participation of students and creation of some works. We found that all students find it interesting to visit laboratories, factories, shops or other facilities where they could learn by touching and seeing processes. That helps to master and remember some concepts from mathematics or chemistry. Individual approach to students and extracurricular classes are very much appreciated and let to successes in understanding.

Non-traditional approach, supported by examples from everyday life helps to motivate the students to learn and effects of such education are more lasting than just memorizing by heart.

Analysis of Polish students' experience show that the trouble making factors are

- It is difficult to understand and to remember the terms (9 indications)
- During the lessons we have difficulties understanding the rules and regulations (2 indications)
- It is difficult to imagine the discussed processes in the real life (4 indications)
- Learning by heart, not understanding the concepts (3 indications)
- More attention from teacher required, individual approach (6 indications)

The success experiences indicated by Polish students show the following factors of success:

- The theory is complemented by a practical part (experiments, touching the object with your own hands, etc.) (31 indications)
- Examples from the nature are obligatory (20 indications)
- Active participation of students in classes (competition, work in groups, presentations) (22 indications)
- Individual approach towards student (4 indications)
- More laboratory work in order to connect the theory with practice (5 indications)