



Innovation Networks in Science, Technology, Engineering & Mathematics

Romanian National workshop: Analysis on the impact and dissemination of European projects December 2013

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The project INSTEM has received funding from the European Union LIFELONG LEARNING Programme (2012-2015) under Grant Agreement no 2012 -4827 / 001 - 001. The report only reflects the author's - the INSTEM consortium - views. The European Union is not liable for any use made of the information contained herein.

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Lifelong Learning Programme

The organisation frame of the national workshop

According to the INSTEM project planning, during November 2013 and December 2013 the Romanian team organized several workshops under the umbrella the “National workshop of INSTEM project”. We choose this approach for several reasons:

- We plan to associate the workshop meetings with our teachers and teachers trainers activities.
- We tried to organize these sessions in various educational media.
- We looked for different locations, in different towns, where there are teachers organizations partners in our previous or present projects.

The workshop sessions were designed to:

- inform the attendees about the INSTEM project and its goals;
- clarify the project main lines of action;
- introduce the project partners and their experience;
- described the project target groups.

The activities developed according to a common scheme which included:

- Power Point presentations by the Romanian INSTEM team;
- reference to Internet resources to support the discourse;
- distribution of some materials;
- distribution of questionnaires to the participants who have to provide a feedback;
- run of some school children demo sessions on hands-on and/or inquiry-based activities;
- preparation of a list of attendees.

Considering the interest and the number of participants to these events we decided to develop this type of dialog and exchange of opinions with the educational community, in the frame and with the support of the national educational project we coordinate “Inquiry-Based Education in Science and Technology (i-BEST)’.

Locations

The workshop meetings took part in different days, in five locations:

- Ramnicu Valcea: Happy Kids kindergarten;
- Pitesti: Mechanics Vocational High school;
- Pitesti: Electronics Vocational High school;
- Galati: Middle School No. 3;
- Galati: Theoretical High School “Al. I. Cuza”.

The locations were selected in order to interact with various members of the educational community, having different backgrounds, interests, expertise and interests.

In the first case, the event was a satellite activity to the first meeting of the Comenius project “All began with a question”, project coordinated by our hosts. We had the opportunity to present the INSTEM project and to discuss the topics of interest with Comenius project partners from France, Poland, Austria, Turkey, along with the exchange of opinions we had with the kindergarten staff and management.

The other two events targeted teachers from the vocational education system, while the last two had participants from the theoretical (middle and high school) organizations.

Participants

The diversity of participants to all these meetings was quite high:

- preschool and kindergarten educators
- primary school teachers
- middle school Physics and Chemistry teachers
- high school teachers (Physics)
- teachers from vocational schools (Mechanics, Electric/ Electronic)
- school inspectors in charge with private education
- school and kindergarten managers
- school inspectors for Physics and Chemistry
- guests from foreign countries.

Discussed issues

The topics debated gravitated around several questions we posed to the audience such as:

- Can you list the most interesting results and experiences of prior projects to which you took part?
- What is in your opinion the best way to bring previous project knowledge to the public at large?
- What do you think about inquiry teaching?
- Do you have specific questions/ requirements/ needs in relation to inquiry-based science and mathematics teaching?
- Where do teachers look for information?
- What teachers need to make projects attractive to students?
- How could the outcomes from projects have an effect on national policies?

Conclusions

At first glance, the discussions and the feedback to our questionnaire brought a large spectrum of opinions most of them for the end-users side – the teachers. They are concerned about:

- A. the opportunities offered by the participation to European projects (acquiring new information on science pedagogy; development of school infrastructure; access to teaching resources; teaching and pedagogical exchanges with partners; site visits; acquisition of knowledge on modern assessment methods; the use in the classroom of tests we learn about; the use of virtual laboratories; learning to work in a group and to experiment);
- B. the possibilities to bring the new knowledge to the general public;
- C. their questions and doubts about the way inquiry teaching methods have to be implemented in the classroom;
- D. the variety of sources available to them in order to improve IBT (the Internet; specific sites dedicated to teaching and learning; virtual libraries; fellow teachers; books on pedagogy; meeting and symposia; projects outcomes; textbooks; from industrial partners; school inspectorates);

- E. the means they can use to make the science teaching more attractive to students (a better knowledge of science related pedagogy; assistance in preparing and running projects; knowledge of the scientific content and good management of students during group work; understanding the way IBT can be applied to various subjects; participation to practical technical sessions; by involving them in various applied projects; organizing group work; by organizing science contests).

As all these issues proved to be of interest to our activities to support science teaching in school at pre-university level and as they had positive feedback from the participating teachers we decided to continue and expand this study in the frame of our national project “i-BEST”, is time and funding will permit.