**Title: Preparing Science Educators for Everyday Science [PreSEES]**

**Project type**: LLP / Comenius – Multilateral Project
**Ref. no.:** 527602-LLP-2012-CY-COMENIUS-CMP

**Promoter /Coordinator:** University of Nicosia, Cyprus

**Actual stage:** Finalised

Total value of the grant: 237 806 €

Grant value for University of Pitesti: 15 752 €

Co-financing of the University of Piteşti: 5 251 €

Local coordinator for the University of Piteşti: Assoc. Professor Dr. Georgeta CHIRLEŞAN

**Summary:**

The aim of the project is to engage elementary and secondary pre-service teachers in critical discussions of everyday science through socio-scientific issues (SSI), and prepare them to teach SSI.

Engaging in critical discussions of SSI has been recognized as an important goal of science education since it enables students to understand the relevance of science to everyday life, understand the humanistic face of science, and see the connections of science to everyday life. When engaged with SSI students are prepared to understand and make decisions about issues that will be a part of their everyday lives.

Studies have shown that teachers do not include SSI issues in their teaching since they find it difficult to coordinate between scientific data and the social aspects of the problem which bring uncertainty into the discussions. They are more comfortable applying ideas and approaches they engaged in as learners. Hence the aim of this project is to design and implement curriculum materials to engage pre-service teachers in critical discussions of SSI and prepare them to teach SSI in their classes providing examples of pedagogical approaches. Each partner country will design one module in their own language based on social constructivist theories of learning. An extra collaborative module will also be developed in English with all partners contributing. The modules will be implemented with pre-service teachers and a main output will be a book with the modules and theoretical approaches that can be used for pre and in service training for SSI, and a report from the implementation of the curriculum. The curriculum will be translated in English for dissemination. We envisage that the curriculum and proposed pedagogical approach will (a) support teachers in their effort to engage students with everyday science (b) will be an exemplar for institutions that are engaged in teacher professional development and (c) provide insight into how teachers understand and engage in SSI.

**Objectives:**

The main aim of the project is to explore how pre-service teachers (elementary and secondary) engage with everyday science and socio-scientific issues, and how they transfer their knowledge of SSI as a way to promote everyday science into their teaching practices.
More specifically, during the lifetime of the project we aim to achieve the following:

1. Design an initial framework on which the SSI modules will be developed. This framework will include pedagogical guidelines to teach SSI, and theoretical aspects concerning SSI and everyday science approaches. The framework will be informed by published research and relevant policies in the partner countries.
2. Design three modules for pre-service teacher training (elementary and secondary) to promote SSI as a means to promote everyday science, and other aspects of science (e.g. argumentation, history of science, nature of science, attitude change, use of technology). All modules will be collaboratively developed by the partner institutions and will be focusing on issues that are common across Europe (e.g. climate change) to emphasize in this way the European dimension and European identity.
3. Implement the modules and collect data that will help evaluate SSI learning, and other related areas of interest (NOS, argumentation, history of science etc) as described in the work packages.
4. Re-design the modules based on the data collected and publish the revised modules along with a short theoretical introduction, and a summary of the results. The modules will be published in the languages of the partner institutions and in English and will also be posted on the project's web site.
5. Provide case studies about how pre-service teachers transfer their SSI knowledge into their teaching practices.
6. Provide evidence of how pre-service teachers can collaborate to provide answers regarding SSI issues of concern for all partner countries.
7. Revisit and publish the SSI framework (see step 1) after the implementation of the modules and the analysis of the data.
8. Develop and maintain an online community that will support interested parties (e.g. teachers, professionals in the field of teacher education) in the implementation of the designed curriculum. We expect that in this way we will create a network of researchers interested in the area of SSI in science education, and in that way support European initiatives for teacher professional development.

The aims and objectives of the proposed project have been set in such a way as to address the gaps in research (and development) that we have identified.

**Outcomes:**

1. Framework for designing SSI modules

2. SSI modules and booklet with modules

3. Report from Modules Implementation

4. Report on the Case Studies of pre-service teachers teaching SSI

5. Seminars for training

6. International Conference & Local Conferences

7. Project website

**Partnership:**

1. University of Nicosia, CY (coordinator)

2. University of Copenhagen, DK

3. Universitat Autònoma de Barcelona, ES

4. Bogazici University, TR

5. Ecole Normale Supérieure de Cachan, FR

6. Universitatea din Piteşti, RO

7. King's College London, UK