

Title: Making Learning Science Fun [SciFUN]

Project type: Erasmus+ / KA2 – Strategic Partnerships for school education

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Promoter /Coordinator: University of Pitesti (Romania)

Duration: 31.12.2015 – 30.12.2017

Total project grant: 163392 Euro

Total grant for the University of Pitesti: 25324 Euro

Local coordinator for the University of Pitesti: Dr. Georgeta CHIRLEȘAN

Summary:

Many countries have seen declining numbers of students choosing to pursue the study of physical sciences, engineering and mathematics at university, while the percentage of Science & Technology graduates has fallen in several EU countries. The consequence is that the supply

of scientists to sustain knowledge economies, which are heavily dependent on science and technology, is perceived as a significant problem. “Science Education in Europe: Critical Reflections and Recommendations” report speaks to the need for “innovative curricula and ways of organizing the teaching of science that address the issue of low student motivation” (p. 8). In spite of this pressing need, research findings in the area of science education show a number of problematic issues:

i) negative attitudes, low self-efficacy, and declining interest about science and relevant subjects;

ii) low achievement in international surveys on science literacy in numerous EU countries;

iii) inadequate and stereotypic conceptions about science and scientists and

iv) gender, race, and socio-economic status differences. In a recent report (2012), the Eurydice network asserts that much more needs to be done to help schools tackle low achievement in mathematics and science.

The purpose of the project is to address the aforementioned problem. Built upon literature in the area of urban science education, educational technology, comics in education, learning design research, this project proposes that an approach to enhancing student interest for science can be conceptualized through the design of science curriculum materials that focus on making learning science fun, by supporting personalized, meaningful, situated, and contextual learning. The proposed project builds upon pedagogical approaches, which have the potential to promote engagement in science through a conceptualization of science-as-practice over science-as-learning, which takes place in a variety of formal and informal learning contexts and incorporates fun and motivating activities.

Aim and objectives:

The aim of the SciFUN project is to address the challenge of engagement in science as described in through an innovative approach to science teaching and learning and make learning science Fun and Relevant to students' contexts. The project aims to increase pupils' motivation and achievement in science and other subjects and to prepare European educators to better engage pupils in science education. The specific objectives are:

1. To provide educators with analytical information regarding acclaimed international and European best practices in science teaching and learning, integrating informal and authentic learning, outdoor activities, and collaboration with scientists.
2. To support educators in utilizing social media, mobile devices, comics, digital storytelling, multimedia, and Web 2.0 technologies to engage students in science education.
3. To design sample cross-curricular teaching units enriched with digital tools that may function as models for building new teaching units.
4. To develop and disseminate the "Making Learning Science Fun" Toolkit and relevant resources to European educators.

Outcomes:

Partners will work in order to bring together information accumulated from diverse external sources through bibliographic research, input from other experts, analysis of existing case studies, discussions, etc. and design new material and resources.

The project methodology, activities and outcomes are:

1. State of the art research report on Science Education that will be developed through a research on science education o and a focus group in order to identify the specific needs of students and its educators and therefore to present recommendations that will be useful for subsequent project outputs and activities.
2. Report with collection of Best Practices for making learning science education and fun through a thoroughly review of past programmes and research reports.
3. Guidelines and ideas for designing learning activities that will developed through a literature review and a focus group with stakeholders in order to assure that the educational content is relevant to the needs and settings of target group.
4. Recommendations for utilizing comics, mobile devices, digital storytelling, and social media that will be developed through a review of relevant projects.
5. Sample Cross-Curricular Units that will be developed through curriculum review in each country and design of units that can incorporate in the curriculum of country partners.
6. Making Learning Science Fun toolkit that will be developed based on the aforementioned activities. Toolkit will be Localization based on each partner countries needs and context.
7. Developed of Curricula and training material for Teachers Professional Development

8. E-services and e-learning platform will support the wide dissemination and project results exploitation.

9. Pilots and case studies will be conducted in each country partner.

10. National dissemination seminar and a European conference at the end of the project will support project dissemination and exploitation of its outputs and results.

Partnership:

1. Universitatea din Pitesti – UPIT (coordinator), Romania
2. Grupul pentru Integrare Europeană – GIE, Romania
3. Centre for the Advancement of Research and Development In Educational Technology - CARDET, Cyprus
4. University of Peloponnese – UoP, Greece
5. INNOVADE L.I. LTD, Cyprus
6. Uniwersytet Lodzki – ULO, Poland
7. Louth& Meath Education & Training Board – LMETB, Ireland

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