



SCIENCE AND GLOBAL EDUCATION BEYOND THE BARRIERS OF LEARNING DIFFICULTIES



Erasmus+

Project number 2015-1-IT02-KA201-014774

The project aims to respond to two of the main challenges faced by modern societies:

1) The rapid obsolescence of all technical and scientific knowledge which makes it difficult to teach sciences at school even if sciences are a key factor for the understanding of climate change and for the sustainable economic development

2) The processes of social exclusion related to early school leaving. Early school leaving is often related to segregation in schools (2013, Eurydice Report)

Special Educational Needs often suffer from segregation in schools even if all European countries have ratified the UNESCO Salamanca Statement and Framework for Action in Special Needs Education (1994). One extract from the statement is used repeatedly as a guiding principle in policy level debates: Regular schools with an inclusive orientation are the most effective means of combating discriminatory attitudes, building an inclusive society and achieving education for all

Nevertheless an effective inclusion of SEN students in schools is far from being fully achieved

Inclusion of SEN and science teaching present similar criticisms

- The persisting difficulty in developing innovative inclusive practices useful to develop scientific thinking
- Inadequate use of ICT, which is an extraordinary means for fostering SEN students' communication and the development of self-help groups, but it is also an extraordinary means to develop science teaching
- Lack of connection between what students learn at school and the skills needed for managing their own lives, interacting effectively in heterogeneous groups and tackling complex global problems such as climate changes

Objectives

To enhance and disseminate innovative teaching methods such as flipped classroom and spaced learning associated with hands on activities in order to foster effective inclusion and science thinking. The prior objective is to reduce the school dropout rate

To promote scientific and technological excellence in Europe for a sustainable and inclusive growth of society, engaging students in scientific activities which pursue the objectives stated in the Covenant of Mayors

To develop a multilingual platform where teachers can share best practices, exchange science lessons and have support for a more successful approach to teach sciences and to special educational needs

To strengthen cooperation between partners and international experts on the project issues in order to improve learning sciences in schools and support professional development

To create innovative lessons in international groups of teachers

Participants

Participants are research organizations, Adi - Italian Teachers' Association, Italian, Polish and Turkish technical and vocational schools, public institutions involved in the Covenant of mayors (Bologna City Hall and Gdynia City Hall), Gdansk and Rome Universities

The project is addressed to teachers, educators and researchers

Activities

Development of an on-line multilingual platform and repository for relevant legislation on Special Educational Needs, guidelines and best practices for highly inclusive teaching strategies to develop scientific culture in schools and science lesson plans

Development of innovative inclusive lessons based on flipped and spaced techniques combined with hands on activities

Organization of :

One preparatory meeting

Three Joint staff training events combined with exchange of students, each of 7 days, to test and evaluate the lessons created by teachers in mixed international groups, to test the platform, verify its effectiveness and develop future plans to continue flipped and spaced trials

A seminar devoted to disseminating and sharing the use of the platform

The platform will be implemented through a constant collaboration between partners, through the exchange of ideas and teaching materials, using forums, dedicated social networks, e-mails, Skype conferences.

The educational material will be worked out by each partner according to his/her competence and evaluated in progress with the help of experts of didactics

Lessons will be focused on specific environmental issues relating to climate changes, as stated in the Covenant of Mayors and they will be tested during the meetings will monitor the delivery times for the production and uploading of the scheduled teaching materials.

The final evaluation will be performed by the project team

Results

Dissemination of innovative and inclusive teaching and learning strategies

Development of science lessons about climate change of high quality

Encouraging the introduction of issues relating to climate change in school curricula

Cooperation and exchange of best practice between European countries

Longer term

Increase in inclusion and school equality

Improvement in science teaching standards

Creation of transnational innovative teaching strategies