

SMART PROJECT

Report on the 1st International Meeting

Topic: Opening conference and planning meetings

Location: Rome, Ministry of Education, viale Trastevere 74/A

Duration: 2nd - 4th February 2015

Participants:

Applicant/Beneficiary:

Carlo Anti School (Italy): Claudio Pardini, Laretta Zoccatelli, Chiara Tacconi

Partners:

MIUR (Italy): Anna Brancaccio, Massimo Esposito

University of Roma Tre (Italy): Settimio Mobilio, Carlo Meneghini

University of Torino (Italy): Marina Marchisio

Accademia delle Scienze (Italy): Alberto Conte, Chiara Mancinelli

Confindustria Vicenza (Italy): Isabella Tosatto, Anna Tombesi

TU Delft (Netherlands): Metha Keijzer-De-Ruijter

Chalmers University Goteborg (Sweden): Jan Stevens, Stefan Lemurell

St. Thomas Gymnasium (Germany): Ulrike Kempfle, Gunther Schindler

Radnoti School Pecs (Hungary): Andrea Banò, Marta Zsbanné Hamory

Activities performed:

2nd February

9.00-10.00: Introduction to the project and presentation of the activities to perform during the two following years: analysis of the Project Gantt Template by Mr Massimo Esposito

Anna Brancaccio, the coordinator of the project, welcomes all the participants and introduces the activities which are going to be performed during the three days of the first meeting. She also introduces all the Italian participants and asks the foreign hosts to give a brief introduction of themselves and of the organization they belong to. Finally, she gives the floor to Massimo Esposito, who presents the activities to be performed during the project life, the two following

years, by means of a Gantt template and a Work Breakdown Structure. Anna Brancaccio invites the participants to comment about the presentation: everyone agrees with what has been illustrated. The second topic in the agenda is then introduced:

10.00-11.00: Italian projects in progress which gave birth to the SMART Project:

- Report on the LS OSA Project by Mr Settimio Mobilio: National project on Science and Physics.
- Report on the PP&S Project by Mrs Marina Marchisio: National project on Mathematics.

Massimo Esposito gives a brief introduction of two important Italian projects in progress which gave origin to the SMART Project and then passes the floor to Settimio Mobilio and Carlo Meneghini who illustrate the first one, the LS OSA Project, regarding the teaching of Science with the use of new methodologies like itinerant laboratories and the experimental method.

Then Marina Marchisio speaks of the PP&S Project, regarding the teaching of Mathematics through Advanced Computing Environments and Maple.

The participants express positive comments on both projects.

11.00-12.30: Illustration of the Project work packages by Mrs Anna Brancaccio and Mrs Laretta Zoccatelli

Anna Brancaccio explains that one of the main aims of the project is to produce intellectual outputs, which means tangible products to be used by Maths and Science teachers and their students. The Work Packages for the first intellectual output, which is the development of learning/teaching materials, are illustrated by Anna Brancaccio. Laretta Zoccatelli introduces the WPs related to the second intellectual output, which is the implementation of open online courses. After a discussion between the partners, the WPs are signed by the responsible organisms: the University of Torino and the University of Roma Tre.

14.00-15.00: visit of the Ministry of Education Palace, with doct. Alessandro Ascoli, URP

15.00-16.00: Analysis of the training and educational needs of teachers of Mathematics and Science provided by each partner of the project through the questionnaires

Anna Brancaccio introduces the topic of the third intellectual output which is the analysis of the teacher training needs performed through a specific questionnaire administered to Mathematics and Science teachers in the third week of January. Results have been collected and Marina Marchisio illustrates the ones of Italian teachers.

After that, Marta Zsbanné Hamory illustrates the Hungarian results: the questionnaire has been administered to a small group of teachers of the Radnoti School and, in some ways, resemble the Italian results.

Ulrike Kempfle refers that the questionnaire has been administered to a small sample of German teachers and the results are very similar to the Italian and Hungarian ones.

The Dutch and the Swedish universities haven't administered the questionnaire yet because the time reserved for it (one week) was too short. Moreover, Jan Stevens of Chalmers University refers that they didn't have the material time to translate it in the Swedish language for the local teachers and above all to adapt some questions to the Swedish educational context, which is very different from the Italian one, with the possibility for teachers of misunderstanding terms and expressions like "traditional methods of teaching". Anna Brancaccio suggests that it could also be possible to look for and refer to the results of other questionnaires on the same topic already administered at local level in the partner countries: this should be done before the next webinar of 27th February or at least by the beginning of the second international meeting.

16.00-18.30 Start-up phase of the investigation for the production of new educational resources.

Implementation possibilities for Intellectual Outputs 1 and 2 according to the questionnaire results: Chairman: Mr Claudio Pardini

All participants are now asked to propose ideas for the implementation of teaching/learning materials and open online courses for Maths and Science teachers: in particular, modules, topics, competences will have to be defined, chosen and shared. After a long discussion among all participants, everyone agrees on the necessity to define some general topics and then focus on more specific modules, activities and competences related to them.

The issue is so important that it is unanimously decided to prosecute the discussion on the meeting last day.

3rd February

9.00-14.00: Sala Comunicazione of the Ministry of Education Palace,

Conference presentation of the Project to the Italian stakeholders

Chairman: Massimo Esposito, Ministry Inspector

Contributions:

Carmela Palumbo, Ministry General Director

National Projects supporting the acquisition of competences in Mathematics and Science

Claudia Villante, Erasmus + National Agency

Erasmus Plus Program Action KA2 – VET

Claudio Pardini, IS Carlo Anti, Applicant of SMART Project

SMART Project and the acquisition of key European competences by students

Anna Brancaccio, Ministry Director

SMART Project. Initial and in-service training of Maths and Science teachers

Settimio Mobilio, Director of the Department of Science at University of Roma Tre

Actions for the diffusion of the experimental method in the teaching of Science

Alberto Conte, President of Accademia delle Scienze, Torino

The Accademia delle Scienze for the dissemination of the scientific thought

Marina Marchisio, Professor of Mathematics Department, University of Torino

Advanced Computing Environment and problem solving in the teaching of Mathematics

Isabella Tosatto, Confindustria Vicenza

European Key competences for the world of work

Metha Keijzer-De-Ruijter, TU Delft (Netherlands)

TU Delft and the SMART Project

Stefan Lemurell, Chalmers University, Goteborg (Sweden)

Maths Projects at Chalmers University

Ulrike Kempfle, St. Thomas Gymnasium, Wettenhausen (Germany)

St. Thomas Gymnasium and SMART Project

Marta Zsbanné Hamory, Radnoti School Pecs (Hungary)

Science and Mathematics in Hungary and at Radnoti

In the first part of the meeting, the General Director of the Ministry DGO (General Directorate for School Regulations), a representative of the Erasmus + National Agency and the headteacher of the applicant/beneficiary school illustrate the context and the background of the SMART Project.

In the second part, the Italian partners explain what their specific role in the project is, according to the organism they belong to and to their specific competences.

In the last part, after a short presentation of their organizations, the Swedish, Dutch, German and Hungarian partners illustrate their role in the SMART Project.

About 90 people took part in the conference: headteachers, teachers, representatives of the world of work and of many other organizations interested in education issues.

16.00-18.00: Cultural visit to the National Roman Museum in Rome, with the Museum's Education Service

4th February

9.00-10.00, Evaluation of the meeting. Chairman: Mr Massimo Esposito

First of all, there is a prosecution of the discussion which started on the first day on ideas for the implementation of teaching/learning materials and open online courses for Maths and Science teachers: in particular, modules, topics, competences have to be defined, chosen and shared.

Anna Brancaccio will email all the participant a document on learning objects so that everyone can have an idea of what open online courses are. Then it is necessary to decide the number of videos, modules, activities which will constitute each open online course. There will also be a paper version of the course (which will not be open/free) as well as a pdf document of each activity.

A logical sequence of modules will have to be decided for the paper version; as regards the online courses, the starting point will be indicated and a number of different paths for the teachers will be suggested.

After a confrontation among the partners, the general topics for two online courses are defined: "Measurement and modelling" and "Mathematical modelling". Before the next webinar, within 25th February, all partners will have to prepare a document containing their proposals for both general topics, according to their role within the project and related to the three points listed below:

1. Intellectual output 2 (Open online course): Measurement and modelling
 1. Mathematics and Science topics (Intellectual output 1)
 2. For each topic, the number of modules
 3. Description of teaching/learning materials relevant to each module

2. Intellectual output 2 (Open online course): Mathematical modelling
 1. Mathematics and Science topics (Intellectual output 1)
 2. For each topic, the number of modules
 3. Description of teaching/learning materials relevant to each module

As regards the open online courses, some videos will have to be prepared: University of Roma Tre will make them on experiments within the itinerant laboratories; University of Torino will prepare some video tutorials on how to use Maple and Moodle.

10.00-11.00: discussion on the logical structure and organization of the project website proposed by Mr Claudio Pardini. Definition of the webmaster.

A website of the project (a Moodle-like platform) will be implemented: it will contain an area for the materials, accessible to anyone, which is to be considered as a "show window" of the project; there will also be a reserved access area containing the "in progress activities" and some thematic forums.

The University of Torino will manage the implementation, the maintenance and the updating of the site; Carlo Anti School will provide a webmaster and choose the most convenient medium (a server or a cloud).

The representatives of the two foreign universities underline the problems of compatibility which may occur with the structures they are used to work with: Anna Brancaccio invites them to send some example materials already prepared in order to check the possibility of finding a system to convert them.

There will also be some synchronous tutoring lessons for the partner schools so that teachers could learn how to use Moodle, Maple and ACE: in this way, they will be able to experiment the didactic materials.

11.00-12.30: Analysis of the project results. Project Financial Analysis of the eligible expenses by Mrs Anna Brancaccio

Anna Brancaccio illustrates what the eligible expenses are according to the Cost Table in the Erasmus + Project Guide, referred to “Project Management and Implementation”, “Transnational project meetings”, “Intellectual outputs”, “Multiplier events” and “Exceptional costs”. In particular, the schools will use part of the grant for the “Project Management and Implementation” to pay for the Maple licenses and for the Moodle tutoring lessons. The costs for subcontracting (translator, webmaster, etc.) are eligible under “Exceptional costs”. Each partner’s grant portion is specified and illustrated in the Project Application Form and in the “Costi” Excel file presented during the first webinar. As soon as the beneficiary receives the grant from the National Agency, it will be transferred to all partners.

A global evaluation of the meeting is done by all the participants. Then the Meeting table is analysed and the names of the participants to the second international meeting, which will take place in Delft, are collected:

Ministry of Education: Anna Brancaccio and Massimo Esposito

TU Delft: Metha Keijzer-De-Ruijter

Chalmers University: Jan Stevens

University of Torino: Marina Marchisio

Accademia delle Scienze: Alberto Conte

Confindustria: Isabella Tosatto and Anna Tombesi

University of Roma Tre: Settimio Mobilio and Carlo Meneghini

St. Thomas Gymnasium: U. Kempfle or G. Schindler and another teacher

Radnoti School: Marte Zsbanné Hamory and another Maths Teacher

Carlo Anti School: Claudio Pardini, Laretta Zoccatelli and Chiara Tacconi

Mrs Metha Keijzer-De-Ruijter will book the hotel rooms for all participants, find a place for the meeting activities and prepare the agenda, which will be discussed during the second webinar on 27th February (2.00-4.00 p.m. Rome Time, GMT +1).

All international meetings will start at 2.00 p.m. on the first day and finish at 1.00 p.m. on the last day.

Finally, a proposal for the agenda of the second webinar is made with the contribution of all partners:

1. Presentation of a document containing proposals for the open online courses
2. Analysis of the training needs of local teachers by the partners who haven’t presented them yet
3. Presentation of ideas for the project website
4. Proposal of the second meeting agenda by Mrs Metha Keijzer-De-Ruijter (TU Delft)

Finally, Mr Claudio Pardini thanks everyone for their participation and contribution to the meeting and distributes the certificates of attendance.

13.00: Departure of all project partners