

ERASMUS + Project “**SMART**” **Science and Mathematics Advanced Research for good Teaching**

Intellectual Output (O3): Analysis and implementation of a European database on training needs

In the preliminary phases of the project, the components of the international partnership will agree and elaborate a format for the collection of the training needs; questionnaires will be prepared and administered to teachers.

The collection of data will be focused on local training needs: each project partner will get electronic forms for the collection of the training and educational needs of teachers of Mathematics and Science; the educational needs of students will be obtained from the analysis of the results and collected in a report.

The outputs which will be implemented are:

1. Development of a European database on training needs;
2. Definition of common educational models and of one or more possible paths of intervention built on the basis of educational polycentricism.

Information about the context

Type of school you are teaching in

State school or private school

Socio-economic area of your school¹

Group:

Number of students

Number of teachers

Subject you are teaching

Teaching qualification in

Degree in

Number of teaching years

Gender

Introduction

The aim of the following questionnaire is to verify the *status quo* both of the perception that teachers have of their teaching practice, and of the quantity and quality of activities put in place in the last two years for their own professional development (First Part). Another aim (Second Part) is to investigate the areas of interest that the teachers have, among those which are the object of the SMART Project (acquisition of STEM - Science, Technology, Engineering, Mathematics - skills, teaching with e-learning activities).

At the end of the project, a similar questionnaire will be administered to the teachers who will have been engaged in the product experimentation phase within the partner schools.

¹ Classification of urban areas – Socio-economic clusters (Territorial classification based on welfare grade, education level, economic structure; source: www.valuelab.it)

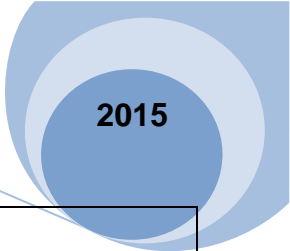
- Group 1: Areas with a high welfare grade, higher levels of education, a well organized local economic system
- Group 2: Areas with a non-high welfare grade, low levels of education, a poorly developed local economic system mainly based on commercial activities
- Group 3: Areas with a high urbanization, a remarkable welfare grade, higher levels of education, characterized by local systems with advanced tertiary services
- Group 4: Areas characterized by the presence of little villages with a distinctly artigianal organization of the production activities and a medium welfare level
- Group 5: Areas characterized by a strong economic underdevelopment, a low welfare grade and poorly developed education

First Part**Perception of the teaching practice**

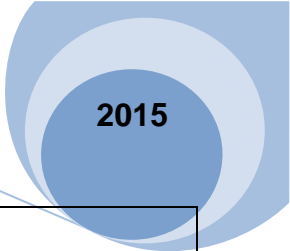
1. Does your teaching action produce significant changes in your students' attitudes in a definite didactic period (a term or the entire school year)?	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Unsure	<input type="checkbox"/> Difficult
2. Are you able to let your most difficult and less motivated students improve?	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Unsure	<input type="checkbox"/> Difficult
3. How do you rate your use of time in the class work?	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Unsure	<input type="checkbox"/> Difficult
4. To what extent are your didactic choices coherent with your students' interest?	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Unsure	<input type="checkbox"/> Difficult
5. How do you perceive the classroom "climate"?	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Unsure	<input type="checkbox"/> Difficult
6. How efficient do you rate your practice of students' evaluation?	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Unsure	<input type="checkbox"/> Difficult
7. How updated do you consider your disciplinary preparation?	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Unsure	<input type="checkbox"/> Difficult
8. How updated do you consider your methodological preparation?	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Unsure	<input type="checkbox"/> Difficult
9. How much do you use the new technologies in your didactic action?	<input type="checkbox"/> Very good	<input type="checkbox"/> Good	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Unsure	<input type="checkbox"/> Difficult
10. Do you consider your teaching practice referable to a traditional didactic model of transmissive type?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> In part		
11. Do you agree with the choice of reducing the quantity of specific Mathematical topics in the Curriculum in favor of cross-curricular links, problem solving and application of knowledge?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> In part		

Professional development activities

12.1 What activities of professional development did you take part in during the last two years?	1 <input type="checkbox"/> training courses/seminars 2 <input type="checkbox"/> National/regional programmes of requalification 3 <input type="checkbox"/> observation visits to other schools 4 <input type="checkbox"/> individual research 5 <input type="checkbox"/> online courses 6 <input type="checkbox"/> tutoring experiences
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	<p>7 <input type="checkbox"/> training practice with other colleagues</p> <p>8 <input type="checkbox"/> participation to teachers networks</p> <p>9 <input type="checkbox"/> participation to online communities of practice</p> <p>9 <input type="checkbox"/> Other (please specify)</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>12.2 How many days did you dedicate to your professional development activities in the last two years?</p>	<p><input type="checkbox"/> <=5 days</p> <p><input type="checkbox"/> >5 days e <=20 days</p> <p><input type="checkbox"/> >20 days</p>
<p>12.3 Which of the following topics were the object of your professional development?</p>	<p>1 <input type="checkbox"/> disciplinary contents</p> <p>2 <input type="checkbox"/> use of ICT</p> <p>3 <input type="checkbox"/> use of professional SW</p> <p>4 <input type="checkbox"/> use of innovative methodologies</p> <p>5 <input type="checkbox"/> teaching to students with special needs</p> <p>6 <input type="checkbox"/> evaluation practices</p> <p>7 <input type="checkbox"/> production of multimedia and online didactic materials</p> <p>8 <input type="checkbox"/> didactic planning</p> <p>9 <input type="checkbox"/> Other (please specify)</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>12.4. Which training needs were at the basis of your participation to the training activities?</p>	<p>1 <input type="checkbox"/> To acquire new competences in a new sector</p> <p>2 <input type="checkbox"/> To deepen the competences in a sector previously consolidated</p> <p>3 <input type="checkbox"/> For a professional requalification</p> <p>4 <input type="checkbox"/> Other (please specify _____)</p>
<p>12.5 Did you get a formal certification at the end of the professional development activities?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>12.6 Did the professional development activities have an impact on your teaching practice?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> NO</p>
<p>12.7 Were there any obstacles in the participation to the</p>	

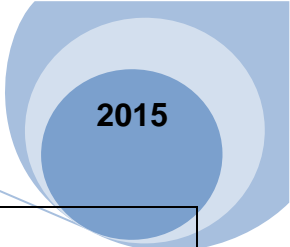


<p>activities?</p> <p>12.8 Were there any incentives for the participation to the activities?</p>	<p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>(if YES, please specify) _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p><input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>(if YES, please specify) _____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>13. What was the level of commitment of your school in the permanent training?</p> <p>14. How do you rate the added value of permanent training implemented by your school in the last two years for your personal activity? (please answer only if you rated question number 13 Very good/Good/Satisfactory)</p>	<p><input type="checkbox"/> Very good <input type="checkbox"/> Good <input type="checkbox"/> Satisfactory <input type="checkbox"/> Poor <input type="checkbox"/> Insignificant</p> <p><input type="checkbox"/> Very good <input type="checkbox"/> Good <input type="checkbox"/> Satisfactory <input type="checkbox"/> Poor <input type="checkbox"/> Insignificant</p> <p><input type="checkbox"/> No answer</p>

Second Part

TRAINING NEEDS

<p>15.1 What professional development activities would you like to take part in?</p>	<p>1 <input type="checkbox"/> training courses/seminars</p> <p>2 <input type="checkbox"/> National/regional programmes of requalification</p> <p>3 <input type="checkbox"/> observation visits to other schools</p> <p>4 <input type="checkbox"/> individual research</p> <p>5 <input type="checkbox"/> online courses</p> <p>6 <input type="checkbox"/> tutoring experiences</p> <p>7 <input type="checkbox"/> training practice with other colleagues</p> <p>8 <input type="checkbox"/> participation to teachers networks</p> <p>9 <input type="checkbox"/> participation to online communities of practice</p> <p>9 <input type="checkbox"/> Other (please specify)</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>15.2 Which of the following topics would you like to be the object of your professional development?</p>	<p>1 <input type="checkbox"/> disciplinary contents</p> <p>2 <input type="checkbox"/> use of ICT</p> <p>3 <input type="checkbox"/> use of professional SW</p>



	<p>4 <input type="checkbox"/> use of innovative methodologies</p> <p>5 <input type="checkbox"/> teaching to students with special needs</p> <p>6 <input type="checkbox"/> evaluation practices</p> <p>7 <input type="checkbox"/> production of multimedia and online didactic materials</p> <p>8 <input type="checkbox"/> didactic planning</p> <p>9 <input type="checkbox"/> Other (please specify)</p> <p>_____</p> <p>_____</p> <p>_____</p>
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TRAINING AREA	TRAINING ACTIONS OF INTEREST	Yes/No
Mathematics	Use of advanced computing environments	
Mathematics	Use of SW of numerical calculation	
Mathematics	Use of SW of graphical representation	
Mathematics	Modelling	
Mathematics	Problem Posing and Solving	
Mathematics	Specific contents	
Physics	Modelling	
Physics	Modern physics	
Science	Integrated sciences	
Science	Laboratory methodology	
Science	Poor laboratory	
ICT	Use of e-learning platforms	
ICT	Information security	
ICT	Algorithmic computation	
ICT	Programming languages	
ICT	Management of IT applications	
Cross-curricular area	Creativity and innovation	
Cross-curricular area	Competence evaluation and assessment	
Cross-curricular area	Development of relational competences	
Cross-curricular area	Project management techniques	
Cross-curricular area	Constructivist learning	
Cross-curricular area	Didactics for students with special needs	
Other (please specify)		

Date _____