

Towards 2020: Priorities for STEM Education and careers in Europe

17th November 2013 - European Economic and Social Committee, Brussels

inGenious - the European Coordinating Body for Science, Technology, Engineering and Maths (STEM) organised its first European conference, unveiling the results of a unique study analysing school-industry collaboration in STEM education, and to debate the future of STEM education in Europe.

inGenious is a joint initiative launched by European Schoolnet and the European Round Table of Industrialists to reinforce young European's interest in science education and careers and thus address anticipated future skills gaps within the European Union

the round table was opened by Marc Durando, Executive Director of European School Network, hereby is the summary of his presentation:

1. STEM shortages in Europe
2. National strategies
3. Role and contribution of Ingenious

STEM shortages in Europe

The shortages refer to:

1. the number of people who apply for technical jobs
2. the shortage of STEM teachers
3. the low percentage of girls who choose STEM education and career.

This situation will have a dramatic economic impact in many European countries:

In Germany there 200,000 less graduates than required

In the Netherlands 25,000

In France 200,000

In Switzerland there will be only 2000 graduates for 16,000 jobs

It is also important to consider that we'll need to replace the 20% of the staff of engineers who will be more than 50 years old.

It is also a challenge for teachers since the gap between the age of students and teacher is increasing, moreover since technology develops more quickly than professional training.

National strategies

1. Reasons of the declining interest in STEM studies and professions
2. Aims: to promote a positive image of Science, improve public knowledge, improve school

5 MEASURES proposed:

1. implementing curriculum reforms
2. create partnership between schools and companies providing particular guidance to encourage youth and girls in particular to choose scientific careers.
3. set up science centres

COMMON TRENDS IN NATIONAL STRATEGIES:

There are very few initiatives dealing with career advisors: we need to strengthen high quality career advice in schools.

There are very few initiatives on recruiting new STEM teachers

INITIATIVES IN EUROPE:

Role and contribution of Ingenious:

4 major questions:

1. attractiveness of STEM
2. STEM educators
3. stereotypes
4. cooperation

High STEM performance does not lead to a higher level of interest in order to justify the choice of future careers. It is not easy to find a balance between performance and interest.