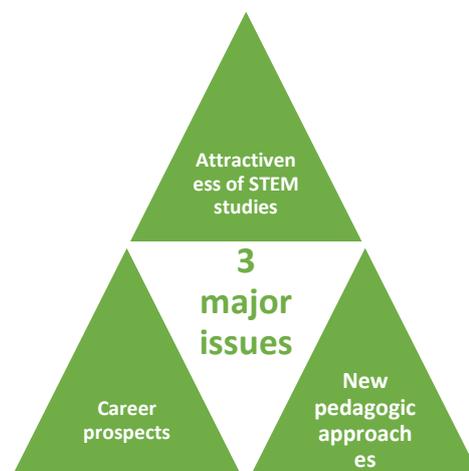


WHY THE EMPHASIS ON STEM EDUCATION?

Main critical aspects:

- 1) Attractiveness to STEM studies and careers remains relatively low;
- 2) Labor market needs in the STEM sector are projected to be high;
- 3) Pedagogical methods in STEM education need to be closer to the real world;
- 4) Science literacy for all citizens has to be widened for inclusion purposes;
- 5) Gender equity in accessing STEM education and careers must be ensured.



EU Students performance. Programme for International Student Assessment (PISA) 2015

PISA serves as the basis for the ET 2020 benchmark on underachievement of 15 year old in basic skills. The benchmark states that, in the EU, the share of 15-year-olds who are low achievers in reading, math and science should be less than 15% by 2020.

Regarding progress towards the **2020 benchmark of less than 15% low achievers**, the EU as a whole has **slipped in all domains (science, mathematics and reading)** and, compared to the PISA 2012 results, has taken a step backwards.

Low achievers cannot successfully complete basic tasks that are essential in current societies.
Consequences of underachievement can be extremely costly in the long term both for individuals and for society.



The gender gap in reading has reduced significantly (although at the cost of an overall higher level of low performers.)

The gap in the shares of low achievers in mathematics and science between boys and girls remains minor.

Labour market needs in the STEM sector

Demand for STEM professionals and associated professionals is expected to grow in the coming years while it is forecasted to expect recruiting difficulties in hiring staff with the needed STEM skills.

• This can result in a **STEM skills gap**, a lack of professionals with the necessary skills in STEM areas.

How to encourage younger generations to pursue STEM studies and careers?

Through the development of effective and attractive STEM curricular and teaching methods.

Through the enhancement of professional development and training for teachers.

By guiding younger generations towards STEM careers through initiatives that tackle the social perception of science and STEM professions, career guidance and information on the labor market.

Cooperation with employers

- Initiatives with the aim of encouraging students to follow STEM careers increasingly aim to develop further collaboration between companies and schools.
- Building relations between students and educators in schools and STEM professionals in the workplace is crucial in order to guide pupils towards STEM.
- In a number of countries, education reforms have also been implemented in order to strengthen links between education and the labor market sphere through "involving companies and social partners in curricula development in VET" as a way to ensure that provision of professionals is in line the varying economic needs.
- Marketing campaigns and initiatives to attract young people to relevant educational paths are being developed by a number of professional employers in sectors facing skills shortages.