



There is a solution for Europe's growing shortage of engineers

According to Business Europe, an organisation which represents more than 20 million companies from 35 countries, the lack of skilled labour in science and engineering is halting economic growth in Europe.

Leif Johansson, chairman of the European Roundtable of Industrialists (ERT), thinks Europe is facing a "dearth" of people with engineering skills and calls for urgent action to encourage young people to become engineers.

One way of tackling this problem is to address primary schools which is exactly what a new European Commission funded project, ENGINEER, is doing. The goal is to introduce engineering to 27,000 students and 1,000 teachers in primary schools and museums in nine European countries and Israel. Twenty-six institutions from twelve countries have joined forces to develop innovative ways to excite children about science and engineering.

ENGINEER, coordinated by Bloomfield Science Museum Jerusalem, is a 3.1 million EUR project based on the successful Engineering is Elementary® (EiE®) model developed by the Museum of Science in Boston (USA), which is currently part of the curriculum in schools in all 50 US states, used by 4.5 million students.

This is how ENGINEER works: Ten Design Challenges are being developed by science museum specialists and school teachers in ten different disciplines. In class, students will follow a five-step design process using engineering principles to solve problems impacting their everyday lives such as building a glider to carry messages between friends or constructing a system to water plants.

Ioannis Miaoulis, Director of the Museum of Science in Boston, is convinced that young people should not only be taught natural science but also applied science, which influences 95 per cent of our lives.

In his article "Holistic Engineering Education" Miaoulis writes, ***"Students in middle school can spend weeks learning how a volcano works, and no time understanding how a car works. How often will they find themselves in a volcano compared to a car? Understanding the natural world is essential, but ignoring the engineered world which forms about 95 per cent of our day to day experience is simply wrong."***

ENGINEER's key objective is to increase young people's engineering literacy thereby sparking their interest in science and technology. The hope is also to weave engineering into primary school science curriculums across Europe. By wisely investing in young people, ENGINEER is supporting and helping to sustain Europe's knowledge-based economy en route to Horizon 2020.

www.engineer-project.eu

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