



EXECUTIVE SUMMARY - "INSPIRING THE NEXT GENERATION"

How to Harness the potential of MATHEMATICS, SCIENCE AND TECHNOLOGY to drive Innovation and Competitiveness in Europe

The European Round Table of Industrialists (ERT), an informal forum bringing together chief executives and chairs of major multinational companies of European parentage, has identified increasing young people's interest in Mathematics, Science and Technology (MST) as essential for sustainable economic growth in Europe. ERT hosted a multi-stakeholder event, "INSPIRING THE NEXT GENERATION", on 2 October 2008, in Brussels, which brought together high-level representatives from academia, business, government and the teaching profession and provided a platform to share experiences and gather feedback on possible business/education initiatives to tackle the potential shortfall in MST-trained people in the region.

The outcome of the multi-stakeholder meeting highlighted the following issues:

- MST is important for EU growth and welfare. In order to ensure its competitive position, Europe needs a much larger percentage of MST graduates. On a European basis, although the targets of the Lisbon Agenda have been surpassed, this will not suffice, as China and India are outstripping Europe, Japan and the US in terms of graduates in MST.
- Young people often have a misleading image of MST careers and misguidedly don't see MST education and careers as relevant to their lives and in line with their attitudes and values. A more humanitarian vision of MST, linked to solving the world's big challenges, would also help redress the gender gap, which sees insufficient numbers of girls taking MST career paths. Teachers play a key role in making MST relevant for their students but they often lack support and recognition. By the age of 14, students have already made choices that may exclude them from MST careers. In addition to the personal identity choices made by students, the school system requires, often at an increasingly early age, a choice of courses which may lead to students being excluded from MST careers in the future.
- New skills will be needed for new jobs in the future. Indeed, it is expected that jobs of the future will require higher skills; by 2020, it is predicted that there will be around 20 million high-skilled jobs and 30 million medium-skilled jobs in Europe. Action is needed now, irrespective of recession, so as to ensure that in 10 to 15 years time Europe has the skills base to push back the technological frontiers in order to improve economic growth and employment. It is socially responsible to equip young people today to be ready for our increasing knowledge-based societies, whatever the economic conditions.

- Industry and schools need to work together to address these issues. Industry is seen as being removed from MST education. Looking to the future, a high level of involvement from industry will be crucial and it is invited to partner with education to encourage more students to follow MST studies. Business must be clear in its role that it is not for commercial gain and neither is it about 'filling empty seats in industry', but as a true societal partner.

The stakeholders believed ERT member companies and industry more generally must be willing to:

- Communicate and explain what it means to work for industry and what a job as a technician, engineer, scientist or researcher involves on a daily basis and thereby demonstrate that MST will open up many more opportunities for careers than potentially any other educational path. Industry is encouraged to provide students with role models, both in the class but also in society more generally through the media and other channels. This does not mean industry taking on the role of teaching teachers how to teach, but providing access to a meaningful contextual knowledge of MST and the opportunities these subjects open up as well as supporting teachers and providing students with role models.
- Work to expand existing business/education partnerships to all European countries at a quicker speed than is currently happening and encourage effective legislation to make that happen. A European body should be created to act as an umbrella and coordination centre.
- Address all stakeholders, everyone in the community as, although this is a pan-European problem, the solution is national and local. Create meeting places, both physical and non-physical that can be replicated at different levels - local, national and European - thereby creating a complete concept that drives best practice.
- Use ERT's experience and insights to create new instruments to analyse labour market requirements to have the right skill sets for when new jobs (that we cannot predict now) come on stream. The ERT could engage with the OECD for more accurate metrics of supply and demand.

To answer the invitation to partnership that resulted from the multi-stakeholder meeting, ERT member companies will begin looking into how they can partner with the relevant stakeholders to:

- Help create a European coordination body to support business/education initiatives.
- Engage with the OECD to establish indicators that can help better guide decision making for both governments and business.
- Act as a catalyst for business/education initiatives at national and local levels.
- Continue to take leadership on promoting MST careers and engage with European and national stakeholders.

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