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STATE OF ART IN BELGIUM : students' motivation

Young People's Disaffection for Scientific and Technological Studies
Diagnosis & remedies

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Abstract

Since the disaffection for scientific and technological fields has started to be deplored, numerous national and international studies have been dedicated to the analysis of the necessarily various causes of this phenomenon.

The low attractiveness of S&T sectors

The image of science has evolved from a "*main vehicle for progress to the cause of health risks, mass destruction and environmental degradation*".

Moreover, young people choose their higher education based on two main factors: first, their interest in a particular subject and, secondly, their idea of career prospects in that field. Young people are then tempted to follow some more fashionable disciplines in higher education and /or society (communication, psychology, business, finance, sports, ...), these sectors being considered as less demanding and however more promising in terms of career and salaries. But they can also choose studies that are deemed long and difficult, but then focusing on sectors that are seen as more profitable on the long run (medicine, management...).

Young students still face negative stereotypes. Thus, girls are not or little encouraged by their school environment (teacher, guidance counsellors...) and family into choosing a scientific career. A research program in cognitive psychology on prejudice, held by the departments of psychology at Harvard, Virginia and Washington Universities, showed that "men have difficulties to associate women and career or woman and science, but so have women".

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Teaching

The interest and motivation for science are directly linked to how they are taught. It was observed that the earlier the contact with science is made in the curriculum (at the fundamental level), the more the motivation for these subjects is important: “The taste for science must be asserted before the youth are faced with the choice of subjects”.

Remedies

2.1 Improving the image of science and technology

2.2 Rethinking science teaching from primary to secondary education

2.3 Rethinking contents and programs in S&T

Using computer tools to enhance scientific learning.

2.4 Training teachers better

2.5 Informing the youth better

Creating a website of the French Community of Belgium for higher education, regardless of the category (public and free schools), should be considered. This site would gather educational (aimed at teachers in the broad sense) as well as descriptive and informative data (type of trainings, practice organization, job opportunities...) about all the higher education training possibilities.

2.6 Improving the dissemination of scientific culture

The educational world can count on museums, exhibitions, the PASS (science theme park in Belgium), cultural associations, the Royal Academy of Sciences, organizations such as Essenscia or the Royal Society or Chemistry.

Conclusion

Science is a never-ending modernity and progress issue. It is currently at the heart of the most advanced innovations and the most burning social issues. For these two reasons,

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science education needs to be rethought from top to bottom especially to make it accessible to all.

To take one obvious example, environment has become THE global issue which conditions the future population of our planet. And world peace directly follows from it. This is what the Nobel Committee sought to emphasize when they assigned the Nobel Prize in 2007 to the Intergovernmental Panel on Climate Change (IPCC) and former Vice President Al Gore for their role of warning givers on climate change issues. Now, science and technology are at the heart of this issue, both as tools to understand and describe phenomena and as technology solutions support to be developed. It is therefore difficult to imagine that young people have not been made aware of this issue during their studies, even only to develop their critical citizenship on a basis of firm information. Aware of this issue and its scientific and technological features, young people would probably turn more often towards S&T sectors, aware of their wide and current social issues.

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