

APR10-2009-000608

Abstract for an Invited Paper  
for the APR10 Meeting of  
the American Physical Society

**Are the Competencies of Science Teachers and the Scientific Literacy of Society Essential for Success of Physics Students?<sup>1</sup>**

JOZEFINA TURLO, Nicolaus Copernicu University, Institute of Physics

It is well known that students' interest in physics and technical subjects decreased dramatically in the USA and Europe during the recent years. Why did this happen?? Does the problem lie in wider socio-cultural changes, and the ways in which young people in developed countries now live and wish to shape their lives? Or is it due to failings within science education itself? To answer these questions the Nuffield Foundation (UK) took a decision to examine the actual state of art in science education in Europe and as the result a special Committee in January 2008 published a Report to the Nuffield Foundation on: "Science Education in Europe: Critical Reflections." The main messages of this report are: There are shortcomings in curriculum, pedagogy, assessment and especially in science teacher competencies, but the deeper problem is one of the fundamental purpose. School science education, has never provided a satisfactory education for the majority. Now the evidence is that it is failing in its original purpose, to provide a route into science for future scientists. In such a context, to do nothing is not an option! Thus, there will be some recommendations and conclusions elaborated by the experienced European team of science educators (19) under supervision of Prof. Osborne and Dr. Dillon described, discussed and commented. But as far as the enhancement of "scientific literacy" of students and society is concerned, I believe that teachers, in the first place, are the real "driving force" of educational change in schools and in the society. Though education of teachers in Europe is very diversified, some patterns can be observed, some trends and examples of good practice identified, and on these I am going to reflect.

<sup>1</sup>I would like to acknowledge support which has been given to me by the American Physical Society.