



How to Communicate Science with Secondary Science Teachers? Bridging Science Education with Science Research

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Abstract

The present position paper aims at identifying the communications needs between science teachers and science researchers and industry. The paper focuses on the lack of interest by youth for science and technology studies and careers in Switzerland. This situation reflects a disconnection between classroom teaching and science and technology in everyday life. As a result, science curricula have become too theory-focused, something that pupils see as unrelated to their lives – present and future. Science teachers in secondary schools in Switzerland lack the resources to identify and integrate information about science and technology culture and innovation into their lessons. At the same time, research and development in science education are becoming more important in Switzerland and, appropriately, this research is often closely linked to the daily practice of science teaching. The communication between researchers in science education and teachers is therefore critical. However do these two communities speak the same language? Are teachers and pupils only laboratory subjects for researchers and developers? And on their side of things, are researchers no more than theorists in their ivory towers? Turning from these deliberately provocative questions to real solutions, this paper will attempt to provide a reflection about the delicate issue of communication between the academic world, science researchers, industry and teacher communities, with a focus on Europe's research and education. It describes, for example, approaches for culturally anchoring scientific content for secondary school teaching and learning that should enable teachers and pupils to better understand the development of scientific methods that govern the current scientific practice.

