

SYMPP - (18737) - DIFFERENT WAYS TO STEM EDUCATION CONCEPT AND CONTEXT – INTERNATIONAL CO-OPERATION ICSE

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Short Abstract

The concept and the context of STEM Education are a curricular approach for common educating students in four specific areas. Ways of STEM Education planning, realisation and evaluation could be different. It means that key words for the STEM implementation in different level of educational system are e.g.: interdisciplinarity or real-world application in case of content and creativity, critical thinking, or inquiry in case of methodology. Curricular systems in different countries have different traditions and their approaches to STEM are limited in extreme positions on the one hand in separate school subjects and on the other hand in integrated science or science and technology subjects. This diversity offers a possibility for fruitful discussion among representatives of both partly or fully applied paradigms. One platform for this kind of research was established at University of Education in Freiburg (International Centre of STEM Education-ICSE). International collaboration is the key to continuous improvements in European STEM education and it is reason, that ICSE has therefore initiated the foundation of an International Consortium for STEM Education, where 16 partners share a unique focus in their research in STEM education. ICSE members are working on various projects concerning environmental socio-scientific issues (MOST, ENSITE), the empowerment of girls in STEM (GEM) and the development of transversal skills in classrooms (STEMKey), as well as the professional development of teachers (3C4Life). Based on examples from elected mentioned projects we would like to discuss different ways to STEM implementation mainly in secondary curriculum and adequate teacher's education.