CAN THE SDGS HELP TO ESTABLISH RESEARCH-SCHOOL COLLABORATION?

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Abstract

In times of global change, the communication of scientific results to the society is highly important. However, while science-policy interfaces are increasingly utilized, there is still a gap between the research and education sectors. Facing the complex nature of transformation to sustainability the Sustainable Development Goals (SDGs) of the United Nations can be regarded as the most prominent agenda for understanding and achieving environmental and social development objectives up to the year 2030 and beyond. SDG 4 raises the issue of “Quality Education” emphasizing priority areas such as “Transforming learning environments” and “Empowering youth”.

Pursuing of achieving those goals, we asked how to initiate and manage “Quality collaboration” where researchers and educational experts act on equal foot.

Seeking to realize a co-creative process, we developed the educational software SITAS (SImulation of buTterflies and scenArios for Schools). Our approach included collaborative design, production and dissemination phases. A new learning environment has been developed where the impact of climate change on European butterfly habitats was taken as an example to deal with the subjects of uncertainty and risk assessment. The software addresses scientific methods such as climate niche modeling and scenario-based assessments. It provides a simulation tool to identify consequences of changing climates for suitability of butterfly habitats from the year 2000 to 2100 and includes suggestions for students’ own activities. In this way, SITAS aims at imparting competencies like critical thinking, systems thinking and integrated problem solving.

We learned that focusing on competencies and learning outcomes addressed by the SDGs helps to establish close collaboration between scientists and educators. Such “Quality collaboration” bears a large potential to achieve much more than elementary communication of research results and can lead to real empowering of young people - future citizens and decision makers.

Keywords: Research-school collaboration, educational software, co-creation, biodiversity, climate change, butterflies, scenarios, modeling.