My Earth science educator story – Michael Streifinger
What I did, why I did it and what happened

This was also the time when I started my publishing activities, first concentrating on school book chapters about glacial environments and geomorphology and articles on teaching Bilingual Geography at school.

My first crucial step into the world of science was when I participated in a congress of geography education in 2006 targeted on outdoor learning. I took part in many sessions with a number of enthusiastic researchers, and as a result, the idea was born of starting my own research in this field, too.

Chapter 2: Scientific fascination
In 2008 I started working on a PhD thesis on outdoor learning and teaching in Alpine environments, gaining my PhD at Munich University (LMU) in 2010. Triggered by the success of winning the PhD Prize of the Geographical Society Munich (GGM), I continued along the research road by through my habilitation (post-doctoral) thesis. This time I focused on outdoor learning and teaching through the eyes of a film team. This involved A-level pupils from four different Bavarian grammar schools producing explainity clips for fifth grade pupils about the Alps in the context of changing environments.

Looking for suitable film sets in the Alps in 2011.

© The International Geoscience Education Organisation (IGEO). Copyright for any included images remains with the author.
Empirical checks showed an obvious link between learning and teaching success, the degree of personal motivation and the amount of individual activity. This study was finished in 2013, surprisingly winning the European Comenius Award in the category “Innovative explainity clips”.

Chapter 3: Science meets education
Since 2013 I have been working as both a private lecturer and grammar school teacher. This enables me to connect scientific knowledge with earth science education, for example by organizing field research days in the Bavarian Alps for 6th grade pupils. In this Alpine context, the young researchers learn to deal with natural risks, climate change and human influence. Skimming and scanning through natural environments enables them to take an active part in explaining geographical phenomena while solving complex tasks in open field contexts.

This is also true for students at higher grades and levels. Each year I take my student groups from LMU to Mittenwald in the Karwendel region, with an emphasis on geotourism and sustainable land use.

Hence, one of our most thrilling experiences frequently takes place in the Wadden Sea. Both pupils and students are amazed when confronted by this extraordinary marine environment for the first time. One of the major targets during this field trip week is not only to present to them one of the most outstanding fragile ecosystems, but moreover to help them to feel, smell and taste the North Sea!

Chapter 4: Future perspectives
At times of implementing a competence-based curriculum, changing examination culture and curricular progression on a large scale, school geography must not be weakened as a social science discipline. In contrast, it should emphasize its best-practice experience, by putting physical approaches, as described above, into action. Outdoor learning and teaching enables pupils, students and teaching staff to develop geographical perspectives both regionally and globally. In this way, the scale of innovative challenges in the future will not weaken our beloved subject, but will keep it alive as a crucial and vital contribution to earth sciences.
Outlook
Geography has always been a pendulum between natural and social sciences. As a consequence, educating future geography teachers implies more than just transforming the geographical facts and figures needed for classroom activities. It is just as important to strengthen their enthusiasm for geosciences through expeditionary contexts, such as outdoor learning and teaching.

Or in other words:

Michael Streifinger, aged 43, Munich, Germany, December 2016, michael.streifinger@geographie.uni-muenchen.de

References (Selection)