



Towards a coherent, holistic and evolving approach to hydrology education

Thorsten Wagener (1), Brian McGlynn (2), Michael Gooseff (1), Kevin McGuire (3), Lucy Marshall (2), Tom Meixner (4), Christa Kelleher (1), and Susan Gregg (1)

(1) Pennsylvania State University, Civil and Environmental Engineering, University Park PA, USA (thorsten@enr.psu.edu, +1-(0)814-8637304), (2) Montana State University, Land Resources & Environmental Sciences, Bozeman MT, USA, (3) VA Water Resources Research Center, Blacksburg VA, USA, (4) University of Arizona, Hydrology and Water Resources, Tucson AZ, USA

The future application of and advances in hydrology are, to a large extent, a function of fundamental improvements in hydrology education. Hydrology is a relatively new field of study, still evolving in understanding, theory and methods. The integration between engineering and science approaches to hydrology is ongoing while new challenges such as global environmental change are already altering approaches to hydrological problem solving. All these issues are exemplified by a great heterogeneity in educational material currently used by instructors around the world. An important question is whether progress in hydrology education can help facilitate the integration of hydrological methods towards a coherent image of our field. In this talk we will discuss how we are developing multi-authored hydrology education modules that can be tailored to accommodate different teaching strategies and different student backgrounds and learning styles. At the same time these modules remain open for improvement so that they can continuously evolve when new material or insights become available. We include an initial assessment of the material by educators who applied it in their lectures. Our aim is to change the philosophy of global hydrology education, which in turn should lead to a coherent, holistic and evolving approach.