Fundamental improvements in hydrology education are required for future advances in hydrologic research and its practice. Hydrology is a relatively new field of study, still evolving in understanding, theory, and methods. The integration between engineering and scientific approaches to hydrology is ongoing and new challenges such as global environmental change are already altering approaches to hydrological problem solving. These issues are magnified by and reflected in the immense heterogeneity in educational material currently used by instructors around the world. Can progress in hydrology education facilitate the integration of hydrological methods towards a coherent vision for our field? In this talk we will discuss our efforts toward multi-authored hydrology education modules that can be tailored to accommodate different teaching strategies as well as different student backgrounds and learning styles. These open-source modules can then be iteratively improved leading to a continuous evolution as new material and insights become available. Initial educator assessments of the MOCHA material as experienced in the classroom are presented. We seek to improve the philosophy and coherence of global hydrology education to support a holistic and evolving science of hydrology.