Promoting Earth sciences teaching-learning in the Italian schools to improve the culture of geoscience and to enhance the sensitivity towards territory and natural risks

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The teaching learning of Earth science, particularly the Italian schools, where the research has been developed in the last ten years, has highlighted a widespread lack of knowledge among students, which corresponds to a lack of sensitivity in society towards geological and environmental issues, to its territory, moreover often characterized by widespread disruption phenomena and natural hazards. As a consequence, too often the culture of geosciences is understood as a culture of emergencies and not of prevention. It is a priority to promote a widespread and deep-rooted culture of natural hazards, the knowledge of natural phenomena, the danger inherent in the geological evolution of the territory, the responsible use of the environment, the perception of phenomenon as part of the dynamics of the Earth.

The training of students is therefore essential but must pass through more effective methodological and educational approaches, active teaching, inquiry and investigation, to increase interest and passion of students towards geosciences, promoting competences and skills. The research has highlighted the need of new and more effectives educational tools and paths, based on hands-on practices, that has product a widespread awareness towards the need of a repertory of practical activities, improving and supporting teachers’ work.

An interesting experience, also discovering new needs in the Earth sciences: the development of a unique epistemology of the discipline, the promotion of Earth science as the discipline that more develops the ideas of system and complexity, the understanding of which is essential to promote scientific skills.

Biography

Susanna Occhipinti Geologist - PhD in Teaching Earth Science: Models and guidelines for more effective tools and paths in an active teaching-learning in Earth Sciences: looking for a unifying principle Science teacher in secondary upper Schools, now School principal - coordinator of IESO and IGEO for Italy member of the educational commission of the Italian Geological Society

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