Walk to learn, learn to walk: an educational practice to reconnect geology with sustainability

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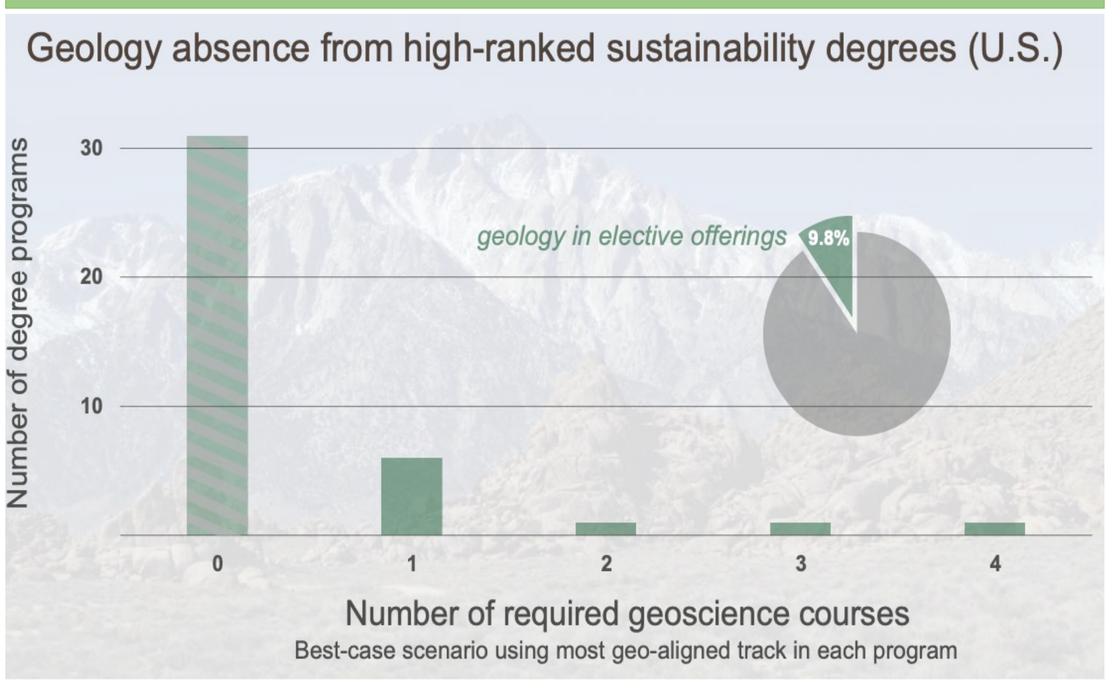
1. INTRO

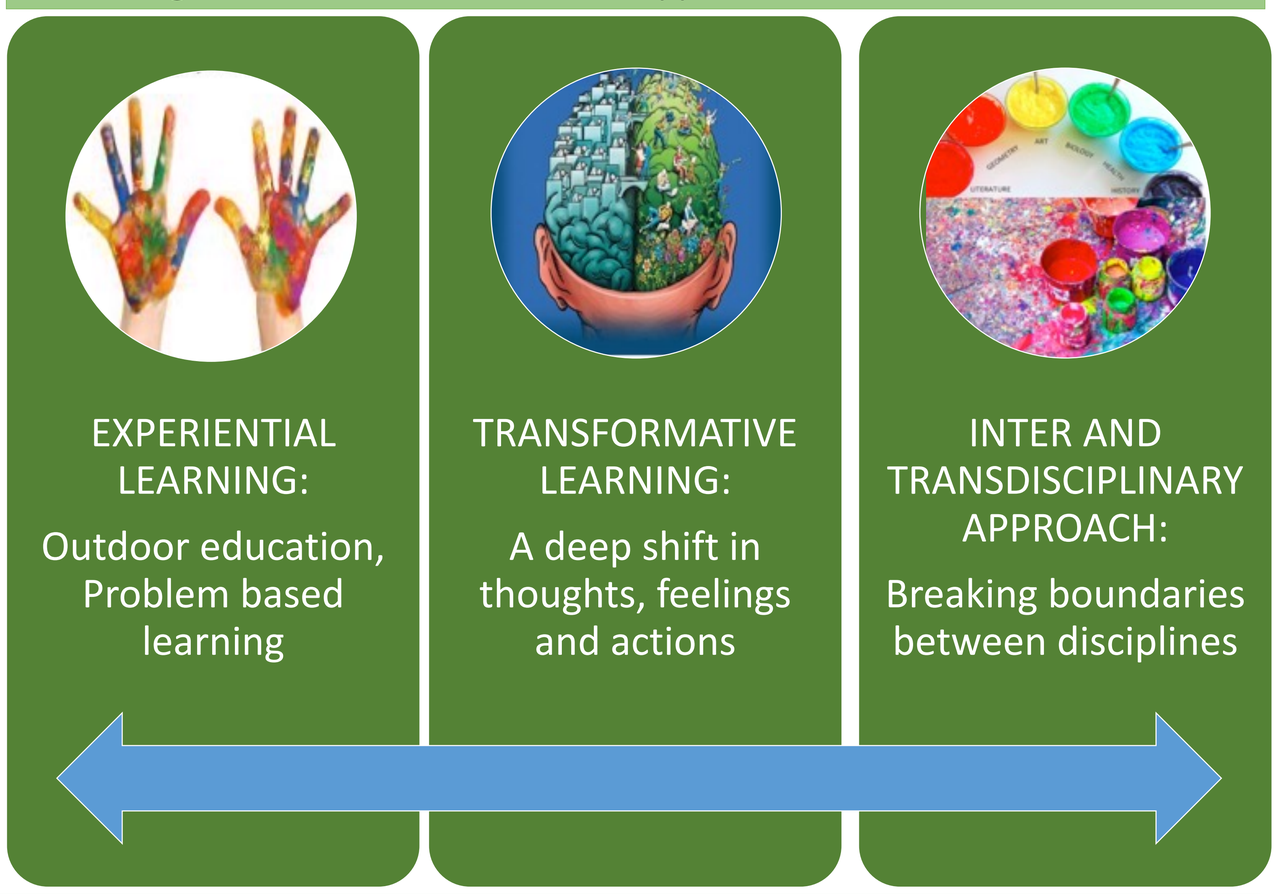
Despite the fact that twenty years ago there was a big confidence about the role of geology for the future, geoscience education is missing the sustainability wave: this figure shows that in 40 top ranked universities in United States offering degree courses about sustainability, only 9 are requiring a geoscience course; also the offer of elective geoscience courses is under 10%.



Fildani and Hessler (2021), *Sustainability without geology?*

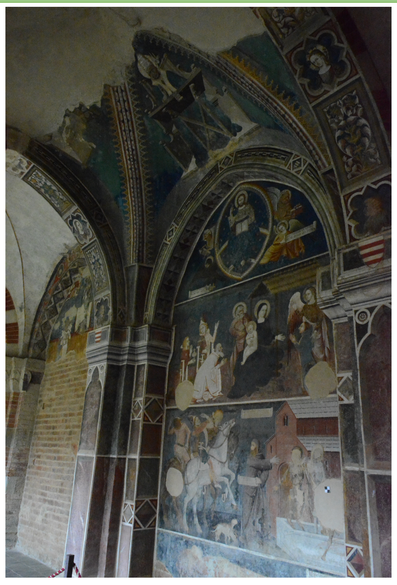
2. HYPOTHESIS

We need a reconnection between geosciences, education and sustainability. What does it mean to go towards education for sustainability? In brief, it means to go towards these educational approaches.



3. METHODS

In May 21/22 2021 we organized a two-day trek around Turin hills and Western Monferrato, called *Walking Hills*. The general purposes of this workshop were to connect the geological aspects with other disciplines and also to go beyond the classic one way transmission of notions, to find new ways of sharing knowledges. The activities we proposed went towards a systemic approach, where geology education is strictly connected with arts, literature, history in a ecological perspective.



4. PRELIMINARY RESULTS

Data collection was made by income and outcome questionnaires. Data analysis is still going on using both quantitative and qualitative methods. Preliminary results show that the effectiveness of this approach is good in terms of changing the point of view on education, as much as in reflecting on our relationship with nature

Quali sono a parer tuo i pro di questo approccio transdisciplinare alle scienze, rispetto a quello tradizionale?

Porsi domande, pensare in modo critico, stimolare curiosità ed interesse, far emergere creatività, sentirsi parte di un gruppo, cooperare, rispettare sia l'uomo che l'ambiente.

Si oltrepassa l'idea di suddividere le diverse discipline, si mette al centro l'allievo con le sue riflessioni, la sua attività pratica e le sue riflessioni e insicurezze permettendogli di crescere anche dal punto di vista emotivo e relazionale.

Aiuta a comprendere di essere parte attiva di un ambiente e di un territorio che si modifica; spinge ad impegnarsi nell'ascolto di sé stessi attraverso l'ascolto dell'ambiente intorno.

Acquisire una maggiore consapevolezza della propria persona, del proprio spazio, fisico e mentale, attraverso il diretto contatto con l'ambiente in cui si è immersi, nonché di cui si è parte.

5. DISCUSSION

If "educate", referring to the original Latin *educere*, means to experience "outside" in the world (Masschelein 2010), it means also to be able to discover a territory with a sensorial approach. Geoscientists know, more than others, the importance of reading a territory as a complex system, where geological aspects are connected with others. Surely there's a problem with geosciences education in national curricula: nonetheless, it's time to change our approach as educators and give more importance to the complex and systemic abilities that we can develop. Earth Sciences education needs a shift to move towards a sustainable, transdisciplinary and more experiential approach.