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ABSTRACT BOOK

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Geology for a sustainable management of our Planet

Building bridges between academia and high school: the experience of "Open river Laboratory" project (in the framework of Percorsi per le Competenze Trasversali e l'Orientamento)

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The study and monitoring of water resources are increasingly important, not only for better understanding natural processes but also for evaluating the human impact on ecosystems. The winning key for the study of environmental ecosystems is therefore a transversal and multidisciplinary approach, which requires technical-scientific skills but above all a strong propensity towards the surrounding environment. Added to this is the need for training aimed at all levels. Based on these considerations the research group coordinated by prof. Elena Comino, with the support of the AKANoah student team of the Department of Environmental, Land and Infrastructure Engineering (DIATI), proposed the "Open River Laboratory" training project for high school students. The project has two objectives: the first offer to the students an opportunity to better understand the value of water resources and environmental monitoring, with particular reference to the topic of micro and macroplastics, the second give to high school students a first opportunity to begin themself towards a university future.

In the framework of the whole school approach, the integration of university research with basic level education activities takes on a leading role in the process of greening the school and makes environmental education a central component of schools curricula. The value of academic research for the development of environmental education high school is often overlooked. However, what better utility could academic research have other than promoting awareness and spreading knowledge to the younger generations? There is a lack of research in the role of academia, in terms of its utility as a tool for social improvement through environmental education. Specifically, the creation of environmental and sustainable education programs will form the citizens for tomorrow world.

In the poster we will start by describing the project idea and the implemented methodology, which is not only for this specific project, but more generally the importance of creating a connection between Academia and High School will be underlined. The results achieved, both by the students and by the teachers involved in the "Open River Laboratory" project, will be referred, as a case study. The strengths of the project itself will be underlined by suggesting approaches to the integration of academic research in institutions of high school in the form of best practices

Findings show the benefits that can be obtained from the involvement of the academy in the creation of environmental and sustainable education programs. First, the academic involvement bridges the gap between high school and research world by providing continuity to the very role of teachers and educators alike. Second, the dissemination of results of pedagogy and sustainability research to a larger public and staff involved in the development of educational programs and their implementation, it would promote awareness and dissemination of knowledge on multiple levels, vertically and horizontally. Finally, the analysis of different experiences underlines the advantageous role of academia in facilitating the development of educational experiences which create critical reflective thinking.