



## **Lessons learned from 30 years engaging next-generation geoscientists**

Elisabeth Rushworth, Maggie Williams, and Janine Kavanagh  
University of Liverpool, United Kingdom (lisrush@liverpool.ac.uk)

Geoscience is an essential occupation field in the UK, and more than 40% of applicants for undergraduate geology degrees have studied A-level Geology. It is thus essential that A-Level Geology teaching is supported to meet the demand for Geoscience skills in the UK. The University of Liverpool Continuing Professional Development (CPD) course for A-Level Geology Teachers is the longest running course of its type in the UK, having run for 30 years. It is endorsed by the Geological Society of London and is designed to match A-Level geology examination specifications covering a wide range of topics including natural hazards, natural resources, environmental engineering, pollution control and environmental planning. The course is supported by GeoHubLiverpool, an open-access online educational resource which provides digital geological skills training for A-Level students, teachers and undergraduates.

The course brings geology teachers together, building a strong, UK-wide geoscience community that supports innovative curriculum delivery and sharing of best practice between secondary and higher education. The course is delivered through seminars, practical sessions and fieldwork activities provided by lecturers from the University of Liverpool, who are at the cutting edge of research in geoscience. GeoHubLiverpool provides additional supporting teaching materials such as videos of technical skills and fieldwork safety that can be used by students, or by teachers directly in the classroom all year round.

The course is updated every two years, responding to changes in the A-Level curricula, teacher needs and the changing direction of geoscience. As a result, the course draws new and returning delegates every year and the close collaboration built between teachers and academics informs future teaching materials, addressing teacher requirements and A-Level students' skills development. This close working relationship with the school community has also led to the development of additional year-round engagement activities to support teaching, including A-Level revision sessions, school visits to Liverpool undergraduate teaching facilities and visits to schools to provide practical sessions, lectures, field excursions and the provision of teaching resources such as maps and hand specimens. Importantly, Liverpool's CPD course for A-Level geology teachers has also engaged leaders in curriculum development, contributing to the content update of the geology A-Level curriculum and exam specifications based on current research in the geosciences.

In this contribution we share lessons learned through running the CPD course and GeoHubLiverpool and comment on how activities such as these play a significant role in engaging aspiring future geologists and supporting future challenges in the geosciences.