Examples for School Reference-Geography Series Example (3): Using Google Earth and EduVenture VR for conducting virtual pre-trip preparatory activities and data collection in fluvial fieldwork

Introduction:

Fieldwork is one of the core elements of geography. By capturing the field environment with digital videos or photographs, and uploading them onto websites, virtual field trips allow students to experience the field environment, observe and identify geographical features, phenomena and patterns, and collect and interpret data in front of computer screens. Although virtual field trips cannot be treated as a "substitute" to real fieldwork, they permit the possibility of experiencing a wider range of field environments, including those distant and remote places that are inaccessible to students.

Virtual field trips with virtual reality (VR) technology, such as using 360° panoramic photographs in this example, can immerse students in places of the real world or an imagined world. With such web-based immersive field study, students can continue to conduct virtual fieldwork even in periods of class suspension (including the suspension of real/authentic fieldwork). These virtual field trips can also be treated as supplementary training opportunities to authentic fieldwork to enhance the development of fieldwork skills of students after class resumption.

In this Example (3), Google Earth presentation and web-based VR 360° photographs on EduVenture VR platform are used to design a set of virtual fluvial fieldwork materials at Ng Tung River (see Appendixes 1 and 2). This set of virtual fieldwork materials can help students to learn various fluvial fieldwork skills through virtual pre-trip (e.g. identifying possible danger / difficulties at field sites) and data collection (e.g. via observation and field sketching) effectively. Related fieldwork-based questions are also prepared in the materials to further stretch the potentials of students on fieldwork enquiry.