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Dynamic interactions for lectures, field works and assessments using the “InterAct” platform

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Abstract:

Teachers always share an expectation for motivating student learning and encouraging students to participate actively in class activities. Apart from pedagogy developments in teaching and assessment, the rapid developments in computer-aided education, e-learning and mobile communication in the last decade encourage in-class dynamic, self-learning and on-line assessments etc. The PI developed various new pedagogies along with internet-based technology to promote self-study and assessments, such as the GeoEngine, DESLA-Package, IMPACWS and the STDMC (details are shown in Section J). PI observes that Hong Kong students are still passive when compare with western students and the use of in-class on-line assessment tools may improve and encourage participation. However, the interactions are based primarily on the pre-set questions or scopes of discussions. The ideal situation would be teachers and students could share and discuss in a real-time presentation platform. In teaching for construction students, site visits, technical visits and field trips are essential co-curriculum activities to enhance understanding of construction details and features through inspection of the real products, and the use of VR could help in certain areas. Communication is always a problem on site or in an outdoor environment even with the aid of a loudspeaker. To further enhance in-class participation and facilitate out-of-classroom, the proposed ‘InterAct’ platform would offer new features to promote a flipped classroom. The platform will consist of three major features. ‘Our Presentation’ is a real-time two-way dynamic internet-based presentation platform allowing teacher and students to highlight, comment or send queries directly in a presentation power point or documents during the presentation. ‘Follow me’, is an audio communication channel for outdoor activity enabling teachers, students and receiving parties to discuss during outdoor activities. ‘Your understanding’ is an on-line assessment platform providing various type of formative or summative assessments such as short questions, MC questions and fill-in-the-blanks for reviewing the progress of learning. The objective of this project is to develop the ‘InterAct’ for enhancing deep learning and nourishing discovery and innovative culture through active participation in lectures and out-of-class activities.