Virtual Reality for Environment Impact Assessment: a Flipping Approach

INTRODUCTION

A flipped classroom approach was conducted with final year students of Environmental Impact Assessment course from the support of a cross-university UGC project fund. The final year students of the course were required to take a virtual reality (VR) field trip to Fung Yuen Village, a vital site for water quality monitoring, and then completed an online quiz as pre-class learning activities. A face-to-face class including a Q & A session, a traditional lecture and an in-class mini-research exercise followed to achieve the intended learning outcomes.

ONLINE LEARNING

Such immersive and enjoyable online learning experience was made accessible via students’ smart phones a week in advance. Meanwhile, graded online quiz was conducted as a complement to assess students’ self-learning.

FACE-TO-FACE LEARNING

After the class, students were asked to respond to two online surveys about their flipped learning experiences and the usefulness of the VR courseware. Of 18 responses to the flipped classroom survey, 14 believed that the pre-class and in-class learning activities were aligned with the intended learning outcomes but only one-third agreed that flipped classroom had helped them learn more effectively. On the use of VR for learning, at least 75% of the responses agreed or strongly agreed that VR provided (1) more in-depth learning opportunities and understanding of the topic, (2) more interaction with the teacher during class-time, (3) hands-on experience, and (4) incentive to increase students’ interest.

FEEDBACK FROM STUDENTS

Visit VRWQM website : http://www.cityu.edu.hk/vrwqm

For Virtual Reality (VR)
VR provides more in-depth learning and understanding about the topic.

VR allows more interaction with the teacher during flipped classroom activities.

VR offers a hands-on experience in exploring new knowledge.

VR increases my interests and awareness of the topics.

For Flipped Classroom
The activities pre-class and in the class are aligned with the learning outcomes.

The flipped classroom approach is more effective (to assist students’ in-class learning) than the traditional approach.

Enquiries:
Office of the Chief Information Officer
Tel: 3442 6727
Fax: 2628 2651
Email: elearn@cityu.edu.hk