



香港大學

THE UNIVERSITY OF HONG KONG

Project-Based Experiential Learning for Sustainability Embedded Higher Education

Research background

Experiential learning and project-based learning share their pedagogic foundation, while there is insufficient research on exploring their integration for enhancing student learning in real-life projects. This gap in knowledge is coupled with a paucity of sustainability pedagogy in higher education. Although project-based learning and experiential learning are sometimes found to be used interchangeably both in literature as well as in practice, there are differences between the two, particularly in the areas of construction and sustainability. In the context of this study, Project-based learning (PjBL) involves real-life projects, with examples like case studies, field trips and site visits. Experiential learning (EL) may include in-class demonstrations, field trips, site visits and other forms of hands-on student participation as part of the learning process, which however may not necessarily be based on real-life projects. Their integration should enhance learning in sustainability embedded higher education.

Project aim and objectives

This project aims to address the knowledge gaps by developing an innovative 'project-based experiential learning' model and contextualize it in HKU's sustainability embedded Common Core courses. Two underlying rationales are to explore innovative pedagogy that effectively integrates experiential learning and project-based learning in real-life projects and to enhance sustainability embedded learning curriculum.

The project objectives are:

1. To explore the theoretical grounds, and to review the practical applications, of the pedagogic approaches of experiential learning and project-based learning, in higher education;
2. To identify the opportunities introduced, and constraints imposed, by sustainability embedded learning curriculum for project-based experiential learning;
3. To develop an application framework (based on the derived conceptual model) for optimising the structure and assessment of project-based experiential learning in sustainability embedded education

Research plan

This research study is conducted at two levels. At the first level, it is based on an existing Common Core Course (CCST9020 - Sustainable Development of the Built Environment). Research activities at this level include: i) an initial questionnaire survey with students to identify the students' expectations and initial perceptions of the sustainability component of the learning curriculum and the structure and assessment of EL and PjBL for the course; ii) group-based discussions with students to capture and explore the students' expectations and perceptions on the PjBEL for the course on an interim basis; and iii) a second-round questionnaire survey with the students at the end of the course

At the second level, teachers and students from other university common core courses are engaged. Research activities at this level include: i) interviews with teachers and/or course coordinators to identify the opportunities and constraints imposed, by sustainability embedded learning curriculum for PjBEL; and ii) a questionnaire survey with students registered in other relevant University Common Core Courses to capture their feedback on sustainability learning, their evaluation of the structure and assessment of their EL/PjBL, and their comments on the developed PjBEL model and framework and recommendations for enhancement. Research activities from this level serve as validation of the research outputs from the first level of the study.

Key deliverables

The key deliverables from this study include:

1. Conceptual models for PjBEL at: i) the course level (CCST9020); ii) university-wide CCC level; and iii) community level and the associated framework for implementation;
2. Comparison Matrix of sustainability-related programs overseas;
3. Matrix of Opportunities and Constraints;
4. Seminar for presenting and promoting the project findings; and
5. Journal article to present the project findings

Acknowledgements

This project is funded by The University of Hong Kong through the Teaching Development Grants Scheme. It is supported by a University-wide team including the Faculty of Engineering, Centre for the Enhancement of Teaching and Learning, University Common Core Programme, Gallant Ho Experiential Learning Centre, and Estates Office.

Contact

Dr Wei Pan
Department of Civil Engineering
The University of Hong Kong
Pokfulam Road, Hong Kong
Tel: +852 2859 2671
Email: wpan@hku.hk