

THE CHINESE UNIVERSITY OF HONG KONG

Micro-Module Courseware Development Grant

Scheme 1: Basic Scheme

Interim Report (2016-17)

Report due 31 October 2017.

Please return by email to mmcd@cuhk.edu.hk

PART I

Project title: Flipped classroom implementation for Subject, Curriculum and Teaching in Primary Mathematics

Principal supervisor: Dr. Chan Yip Cheung

Department / Unit: Department of Curriculum and Instruction

Project duration: From May 2017 to April 2018

Date report submitted: 31 October 2017

1. Project objectives

The project was proposed to design six micro-modules with flipped classroom approach for the target course “Subject, Curriculum and Teaching (Major: Mathematics)” offered for students of Postgraduate Diploma in Education (Primary). The objective of this project is to enable the students to have prior exposure to the key theoretical concepts and the case sharing of experienced practitioners of the field (frontline mathematics teachers) before they attend the lectures. The project is on track to meet its objective. There are slight modifications to the topics of the micro-modules. The topic “eLearning and mobile learning in mathematics pedagogy” will be replaced by “Use of teaching aids in math pedagogy”. The reason is that there will be other pre-class activity for the “Use of teaching aids in math pedagogy” in the target course. The students will be overloaded if they also need to work on the micro-module before attending this lecture. Furthermore, it is a common practice that primary mathematics teachers use teaching aids to assist their teaching. It will be more valuable to have frontline teacher sharing their experience on this topic in the micro-module. Overall speaking, such changes do not have significant deviation from the proposed objective. Indeed, it can enhance the practicability of the micro-modules.

2. Progress on process, outcomes or deliverables

Since hardware is not supported by the allocated fund, some technologies mentioned in the proposal cannot be used. Instead of developing a project website, a free online platform (schoolgy) is used to disseminate the micro-modules. The layout of the project outputs may not be very elegant but it is still user friendly and can achieve the project objectives and pedagogy goals.

Five micro-modules have been fully accomplished. Each micro-module consists of a video of 15-20 minutes. In each video, a frontline primary mathematics teacher presents the theoretical concepts and/or case sharing related to the topic. An online quiz is accompanied with the video in which the students will need to complete after watching the video and before attending the class. Furthermore, there are two reflection questions at the end of each module. These questions would facilitate the class discussion of the coming lecture of that topic. The five topics that have been fully accomplished are:

1. Primary math curriculum
2. Planning math lessons
3. Basic techniques on math pedagogy
4. Use of teaching aids in math pedagogy
5. Preparation of Teaching Practice

In the coming months before end of February 2018, five more micro-modules will be produced. It is expected that a total of 10 micro-modules, which is more than the proposed number, will be produced by the completion of the project. Final touch-up including evaluation and refinement of the micro-modules as well as writing up of the report will be conducted in March and April 2018. The project will be completed on time before the grant expiry date.

3. Evaluation Plan

No amendments are made to the proposed evaluation plan at current stage. The evaluation plan will be executed with the progress of the project and teaching schedule of the course.

4. Dissemination Activities (reports, websites, video links, products, etc.)

- Video links and online quizzes (under the schoology platform) are disseminated according to the teaching schedule of the topics covered in the project.
- Project sharing session (abstract submitted for CUHK Teaching and Learning Innovation EXPO 2017)