

THE CHINESE UNIVERSITY OF HONG KONG

Micro-Module Courseware Development Grant

Scheme 3: eLearning Pedagogy Research

Interim Report (2016-17)

Report due 31 October 2017.

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

PART I

Project title:

The Research Study on the Innovative Pedagogical Method for teaching of Clinical Skills in Preparation of Objective Structured Clinical Examination (OSCE): The Flipped Micro-Modules of OSCE stations

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Project duration: From May 2017 to April 2018

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1. Project objectives

The project meets the planned schedule as proposed to achieve our study goal. The objectives of our micro-module course entitled, *Flipped CExam*, is to apply the interactive learning during clinical teaching in the Faculty of Medicine. It aims to 1) equip students with the accurate pre-clinical knowledge and essential post-clinical counselling skills for clinical examination and consultation, and 2) to the medical clerkships promoting clinical competencies for the Objective Structure Clinical Examination (OSCE) of all the clinical examinations confidently. In this project, the *Flipped CExam* will be developed as a study guide of OSCE with three levels, including **Level 1** – preclinical knowledge, **Level 2** – clinical skills, and **Level 3** – OSCE for clinical competence.

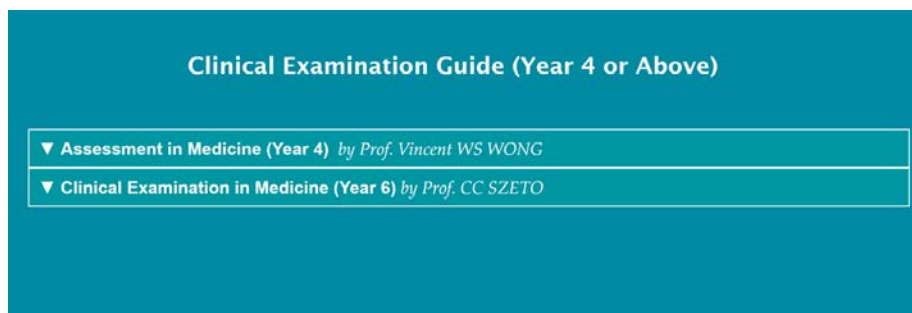
The Flipped *CExam* may also be regarded as continuity of the learning environment fosters learner-centeredness of the medical clerkships by establishing more opportunities for connections with clinical examinations by integrating the essential knowledges of core clinical competencies. Since the final approved funding is reduced from the proposed budget, in considering the importance of keeping up with the quality instead of breath of topics we cover, we intend to develop three instead of five topics as proposed.

2. Progress on process, outcomes or deliverables

During the six-month development period, the project activities focus on developing topics content, designing a user-friendly computer interface. In upcoming months, we begin to work on the developed the elements according to the list below.

Examination Topic	The Progress moved Forward
<ol style="list-style-type: none"> 1. General Lumps and Bumps – How to examine a lesion 2. Abdomen examination 3. Vascular- Lower limb arterial and venous 	<ul style="list-style-type: none"> – Level 1: Prepare the micro-modules in clinical anatomical structures and functions – Level 2: Prepare the Content of the Clinical Examination and role play for the physical examination – Level 3: Prepare the keynotes for the sit for the clinical examination and learning assessment (on-line quizzes)

Below is a preliminary design the level 3 guide the junior and senior clerkships to facilitate their preparations listed below; other materials of those topics are now being compiled for the installation in *Flipped CExam*.



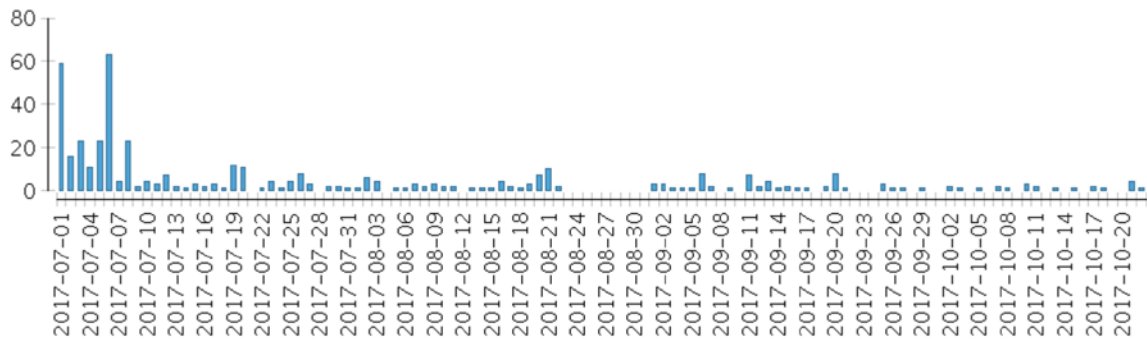
During the development, we encountered several difficulties and now working on the solution. Nonetheless, our project is on the smooth progress and the project will be completed in due course.

- Drawing a huge amount of illustrations;
- Seeking for the real patients for the golden standard setting in the clinical examination;
- Inviting the specialists for the chromakeyings; and
- Scripts for the role plays

3. Evaluation Plan

As the action of feedback is crucial in building up a successful novel micro-module courseware for the medical clerkship usage in medical education, our team will conduct evaluation plans.

Over the summer, our team implemented the preliminary guide in the Blackboard Learn and pilot tested among Year 4. The track record of the accession rate for the trial run as shown below. As the lectures was early July, you can found that there was a high accession rate within this period but students are on and off to watch the Guide at the end of Oct; the periodic access after the class may suggest that students find it useful in revision.



Evaluation phase will begin upon the completion of the micro-module development. It composed of student’s questionnaire and focus group. The descriptive analyses will be used to show the distribution of the study measures once the implementation of the *Flipped CExam* to all students enrolled in the classes. Univariate and bivariate analyses will be applied to examine the difference in examination outcomes by courseware usage, student characteristics and perceived effectiveness of teaching outcome. Multiple regression models will be used to explore the factors associated with outcome variables of students’ exam performance and perceived effectiveness of *Flipped CExam*. More importantly, research on our objectives will be conducted and performed for exploring the strategic pedagogy of clinical clerkship training in medical education.

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

As clinical skills learning, and teaching is a vital part in medical education, we not only develop an e-learning platform but also share the experiences to showcase Faculty teaching capacity. The abstract entitled ‘An Innovative Pedagogical e-Learning Micro-module Courseware in Preparation of Objective Structured Clinical Examination (OSCE): The Flipped Classroom in Clinical Examination’ will be presented both in poster and oral sessions in the coming ‘Teaching and Learning Innovation Expo 2017, CUHK’.

Our team has also filed a short video introducing our micro-module in the following link: https://gocuhk-my.sharepoint.com/personal/taylor-tang_cuhk_edu_hk/_layouts/15/guestaccess.aspx?guestacesstoken=d4462fboOz9i%2B%2BcHgQfvd6cdiCGpktPZOtCgfPRsXIw%3D&docid=2_06ff5516aafb74bf8ad69564a3e138e1f&rev=1&e=9eeba60d03fa4b2a871bdb24ad965084