THE CHINESE UNIVERSITY OF HONG KONG

Micro-Module Courseware Development Grant

Scheme 2: Studies in Foundation Courses

<u>Final Report (2015-16)</u>

Report due 31 December 2016
Please return by email to The Ad hoc Committee on Planning of eLearning Infrastructure
<u>mmcd@cuhk.edu.hk</u>

<u>PART I</u>

Project title: **Post-Class Assignment Micromodule in Health Sciences Education**
Post-Class Assignment Micromodule in Health Sciences Education
Principal supervisor: **Dr Isabel Hwang**
Co-supervisor(s): NA
Department / Unit: Teaching and Learning Unit, School of Biomedical Sciences, Faculty of Medicine
Project duration: From January 2016 to December 2016
Date report submitted: 30 Dec 2016

1. Project objectives

Six post-class micromodules linked to specific topic areas have been completed. The micromodules are created as case-based scenarios and will be used to lead students to apply both the chemical and physical concepts learned in the pre-class assignments (http://facs.med.cuhk.edu.hk/site/2015/micromodule/cdg/index.html) and lectures to understand simplified medical conditions and important medical applications. Student users will be instructed to work through the post-class micromodules in steps and in sequence to test whether they can apply their knowledge and problem-solving skills.

The project is on track to meet its objectives. The objectives have not been changed as a result of the experience of working on this micromodule project.

2. Process, outcomes or deliverables

Six post-class micromodules have been developed for Health Sciences I which is a Year 1 Foundation Course provided by the Faculty of Medicine. The course (MEDF1010 and MEDF1011) is run in parallel sessions each year. The total class size is over 500 this year. We have not encountered any major obstacle in this project but it requires extra caution to

create suitable case-based scenarios to year 1 students in terms of difficulty and depth of contents. The download links for the post-class micromodules are shown below:

Micromodule 1: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo1/story.html
Micromodule 2: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo2/story.html
Micromodule 3: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo3/story.html
Micromodule 4: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo4/story.html
Micromodule 5: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo5/story.html
Micromodule 6: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo6/story.html

The nature of the deliverables has not been changed at all and overall the project was completed satisfactorily.

3. Evaluation Plan

- ❖ **As indicated in the application proposal,** we do not wish to overload year 1 students with too many evaluations as this course comprises multiple e-learning resources. Evaluation of this project will be mainly based on

  - ✓ Online survey in Blackboard (embedded per post-class micromodule)
  - ✓ Access rate obtained from Blackboard upon completion of the courses
  - ✓ Open ended questions written in the end-of-course evaluation form
  - ✓ Group interviews will be arranged after completion of the courses (students from both courses will be invited to take part in the group interviews to obtain more specific feedback from the student users)

So far, we collected some raw data for post-class micromodules 1-2 which were able to be introduced into the course in September 2016:

Data collected on 12 Dec 2016 (after course exam was conducted):

Course code	Class size	% access rate of Micromodule 1	% access rate of Micromodule 2
MEDF1010 (medical students only)	194	44	37
MEDF1011 (non-medical students)	360	51	37

More data will be available upon analysis in near future.

4. Dissemination, diffusion and impact

Example of dissemination: *A poster related to this project will be reported to the 14th Asia Medical Education Conference (APMEC) in Singapore in Jan 2017.*

Impact of this project: *Colleagues from Department of Sport Science (Mr Daniel CW LEE) will use this project as a reference to create new micromodules for his course teaching in sport skills. He shall apply for a CDG proposal for his plan to enrich e-learning in his teaching.*

PART II

Financial data

Funds available:

Funds awarded from MMCDG	$ 81,638
Funds secured from other sources	$ NIL
(please specify_____)	
Total:	$ 81,638

Expenditure: Balance is calculated as of 30 Dec 2016 as payment/reimbursement of some expenditure are still being processed

Item	Budget as per application	Expenditure	Balance
Office of Medical Education	30000	30000	0
Macbook,	7488	8459	−971
VGA adaptor, protective pouch and 3 year protection plan	0	2066	−2066
Editing	6400	4661.25	+1738.75
Medical images and animations	16000	16634.53	−634.53
Student helpers	8250	6857.5	+1392.5
Large memory hard disk, memory cards, and USB (for large size image and animation storage and revisions), stationary, stationary, etc.	2000	4477.04	−2477.04
Storyline articulate (1 license)	5500	5592	−92
Total:	75638	75747.32	

PART III

<u>Lessons learnt from the project</u>

Students of different disciplines have different study needs and the design of case based scenarios delivered as post-class micromodules can be used as a suitable tool to train critical analysis and problem solving skills. However, more caution needs to be exercised in future when introducing these micromodules into the course as some students may treat it as additional workload. Next year, when the course commences again, more effort and instruction will be given to students about how (and probably when) these post-class micromodules should be used.

<u>Key success factors</u> of this project are that we are able to team up with people from different units and background who possess the right skills and knowledge

- Collaborators or service team with the right skills (Office of Medical Education)
- Colleagues from Department of Chemistry (Dr Kendrew Mak) and Department of Physics (Dr SS Tong) who provided valuable input on chemical and physics laws and their applications
- Some students (especially from the non-medical session) told me that they do appreciate the introduction of post-class micromodules to aid their study but they found that they were not able to complete the micromodules before the course exam as the study load may be too heavy for some students with weaker background. Next year, when the same course commences again, we may make all the micromodules ready in Blackboard so that students have more flexibility to complete them whenever they find suitable. In other words, they need not wait to have the live lectures to be completed before the post-class micromodules can be viewed. We will see if this helps to improve usage for some students in the course.

<u>Suggestions to CUHK</u>

Please kindly consider to approve grants to project members who are the <u>direct teachers/coordinators</u> of the course(s) specified in the proposal. This will have added benefits to both the grant provider and grant receiver. The course teacher knows best what to prepare and deliver to the students as he or she is the subject expert and knows the differed needs of students from different disciplines. The course coordinator can exercise more power or control to decide whether additional e-learning resources will be beneficial to the students in his/her course. This way, funds and resources provided by the university can be better used. The CDG and micromodule grants are not designed to pursue personal interest of teachers to create products that cannot be maximally utilized by students who should always be the end-user of the grant exercise. If the completed product cannot be introduced to the courses because the project leader does not teach (e.g. without the prior agreement of the course teacher/coordinator), both effort and money will be wasted.

<u>PART IV</u>

Six post-class micromodules linked to specific topic areas have been completed. The micromodules are created as case-based scenarios and will be used to lead students to apply both the chemical and physical concepts learned in the pre-class assignments (http://facs.med.cuhk.edu.hk/site/2015/micromodule/cdg/index.html) and lectures to understand simplified medical conditions and important medical applications. Student users will be instructed to work through the post-class micromodules in steps and in sequence to test whether they can apply their knowledge and problem-solving skills.

1. Keywords

Please provide five keywords (in the order of most relevant to your project to least relevant) to describe your micro-modules/pedagogies adopted.

(Most relevant)   Keyword 1: Health Sciences

Keyword 2: case scenario

Keyword 3: micromodule

Keyword 4: Faculty package

(Least relevant)   Keyword 5: Foundation course

2. Summary

Please provide information, if any, in the following tables, and provide the details in Part I.

Table 1: Publicly accessible online resources (if any)
(a) **Project website:**   *NA*
(b) **Webpage(s):**   Micromodule 1: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo1/story.html   Micromodule 2: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo2/story.html   Micromodule 3: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo3/story.html   Micromodule 4: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo4/story.html   Micromodule 5: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo5/story.html   Micromodule 6: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo6/story.html
(c) **Tools / Services:**   • *Articulate Storyline*   • *Audacity (recording software)*   • *SCORM to generate access data and other analytics*

(d) **Pedagogical Uses:**
The completed products are mainly for post-class viewing as they contain case scenarios that require knowledge retrieval and higher order skill analysis

(c) **Others (please specify):**

Table 2: Resources accessible to a target group of students (if any)
If resources (e.g. software) have been developed for a target group of students (e.g. in a course, in a department) to gain access through specific platforms (e.g. Blackboard, facebook), please specify.

<u>**Course Code/ Target Students**</u>	<u>**Term & Year of offering**</u>	<u>**Approximate No. of students**</u>	**Platform**
MEDF1010 *(medical students)*	*Term I, year 1*	*194*	*Blackboard for the first two years of introduction*
MEDF1011 *(nursing, pharmacy, public health, Chinese medicine and biomedical students)*	*Term I, year 1*	*360*	*Blackboard for the first two years of introduction*

Table 3: Presentation (if any)	
Please classify each of the (oral/poster) presentations into one and only one of the following categories	**Number**
(a) In workshop/retreat within your unit (e.g. department, faculty)	*Please insert no*
(b) In workshop/retreat organized for CUHK teachers (e.g. CLEAR workshop, workshop organized by other CUHK units)	*Please insert no*
(c) In CUHK ExPo jointly organized by CLEAR and ITSC	*Please insert no*
(d) In any other event held in HK (e.g. UGC symposium, talks delivered to units of other institutions)	*Please insert no*
(e) In international conference **A poster will be presented in the 14th Asia Medical Education Conference (APMEC) in Jan 2017 in Singapore.** <u>**Title of abstract:**</u> **Linking Pre-class Micro-module (Flipped Classroom) with**	***One***

Post-class Micro-module in a Faculty Foundation Course Authors in order: **Isabel Hwang***, XQ Yao, Kendrew Mak, Shiu Sing Tong, Maria Sen Mun Wai and Yan Jin *presenting author	
(f) Others (please specify)	*Please insert no*

Table 4: Publication (if any)	
We are still at the early stage of collecting data and thus publication of more solid results will be done in future	**Number**
(a) Project CD/DVD	*Please insert no*
(b) Project leaflet	*Please insert no*
(c) Project booklet	*Please insert no*
(d) A section/chapter in a booklet/ book distributed to a limited group of audience	*Please insert no*
(e) Conference proceeding	*Please insert no*
(f) A chapter in a book accessible internationally	*Please insert no*
(g) A paper in a referred journal	*Please insert no*
(h) Others (please specify)	*Please insert no*

3. A one-page brief write up

Video reporting:

https://gocuhk-my.sharepoint.com/personal/taylor-tang_cuhk_edu_hk/_layouts/15/guestaccess.aspx?guestaccesstoken=Jjr2l2qhBSM5cz7Y19PRt%2fdk%2fqvjSUwKjYJV%2f5hgZLY%3d&docid=2_0c7f6db945c7745a7892c3f1baa650408&rev=1

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Micromodule 3: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo3/story.html

Micromodule 4: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo4/story.html

Micromodule 5: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo5/story.html

Micromodule 6: http://facs.med.cuhk.edu.hk/site/2016/micromodule/otebo6/story.html

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