

THE CHINESE UNIVERSITY OF HONG KONG

Courseware Development Grant (2018-19)

Final Report

Report due 31 May 2019

Please return by email to CUHK cdgs@cuhk.edu.hk

PART I

Project title: Sugar and Oil – Friend or Foe of Diabetes Mellitus?

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Co-supervisor(s): Dr. Florence Tang, Dr. Olivia Ngan

Department / Unit: School of Biomedical Sciences; Jockey Club School of Public Health and Primary Care of CUHK

Project duration: From September 2018 to May 2019

Date report submitted: 27 May, 2019

1. Project objectives

The project was able to meet all the objectives without changes. The contents delivered on each animation were aligned with the corresponding lecture materials.

2. Process, outcomes or deliverables

All 3 animations were produced and delivered to year 2 medical students in Term II of academic year 2018-2019 (course code: MEDU2600 – Molecular Medicine and Genetics).

Animation number	Title
1	Fates of dietary sugar and oil inside our body
2	Developments of type 1 and type 2 diabetes mellitus
3	Chronic implications of diabetes mellitus and HbA1c monitoring

The duration of each video was around 3-5 minutes (total duration for all videos approximately 20 minutes). The style of each video was formatted as 2D animations, annotative power-point and narrative animation videos to attract the student's interests. All the texts provided on the videos were synchronized with audio narrations. The nature of the deliverables was to provide some general concepts and facilitate their understanding of dietary nutrients intake and implications on diabetes mellitus and also stimulate the peer discussions and interactions. The timeline of the project development met smoothly. Overall our team members and students were very enjoyed by this courseware development project.

3. Evaluation Plan

We collected some e-survey from our students for this project and we will keep collecting the data in 2019-20 year 2 medical students who will enroll in MEDU2600 – Molecular Medicine and Genetics. Overall the e-survey indicated that this project had a very positive feedback from students to learn about the relationship between diabetes mellitus and dietary sugar and oil intake.

4. Dissemination, diffusion and impact

Since we had very good comments from our medical students on this project and we expected that there will be a great potential to launch those videos to other non-medical programmes with similar teaching topics covered. This project will be presented at CUHK Orientation Day 2019-20, Teaching and Learning Expo 2019 CUHK and any other local medical education conferences in future.

PART II

Financial data

Funds available:

Funds awarded from CDG	\$ 82,250
Funds secured from other sources (please specify _____)	\$ 0
Total:	\$ 82,250

Expenditure:

Item	Budget as per application	Expenditure	Balance
ITSC service charges for this courseware development project	\$57,250	\$63,375	-\$6,125
Cost of student helpers (\$57.75/hour including MPF)	\$15,000	\$7,045.5	\$7,954.5
Other expenses	\$10,000	\$9,750	\$250
Total:	\$82,250	\$80,170.5	\$2,079.5

PART III

Lessons learnt from the project

Students appreciated this user-friendly courseware explaining the complicated

concepts of diabetes mellitus and dietary nutrients intake which are very important and correlated to their preclinical studies in the medical curriculum.

Key success factors:

1. A very professional working team with preclinical study teacher and CUHK ITSC colleagues.
2. Accessible animated videos to refresh student's learning before and after face-to-face lectures.
3. Additional information which is not covered in the face-to-face lectures to enrich student's knowledge on specific areas of study.

Difficulties encountered and suggestions to CUHK:

1. The project duration was a bit short (< 1year) which might limit any further development to promote or nourish the present project's contents.
2. The budget of each project could be up to 150,000 – 200,000 in order to balance the expenses of courseware development and other administration fee.

PART IV

Information for public access

Our project produced total 3 animations for year 2 medical students. These videos were aligned with the lecture contents to be delivered by the course teacher as follows:

Animation number	Title
1	Fates of dietary sugar and oil inside our body
2	Developments of type 1 and type 2 diabetes mellitus
3	Chronic implications of diabetes mellitus and HbA1c monitoring

1. Keywords

(Most relevant) Keyword 1: Diabetes mellitus

Keyword 2: Insulin

Keyword 3: Glucose

Keyword 4: Triacylglycerol

(Least relevant) Keyword 5: Lancet

2. Summary statistics

Table 1: Publicly accessible online resources (if any)
(a) Project website: <i>Not available.</i>
(b) Webpage(s): <i>Not available.</i>
(c) Others (please specify):

Table 2: Resource accessible to a target group of students (if any)			
<u>Course Code/ Target Students</u>	<u>Term & Year of offering</u>	<u>Approximate No. of students</u>	<u>Platform</u>
MEDU2600 for Year 2 Medical Students	1 st term 2018 onwards	250-280	<i>Blackboard</i>

Table 3: Presentation (if any)	
<i>Please classify each of the (oral/poster) presentations into one and only one of the following categories</i>	Number
(a) In workshop/retreat within your unit (e.g. department, faculty)	<i>NA</i>
(b) In workshop/retreat organized for CUHK teachers (e.g. CLEAR workshop, workshop organized by other CUHK units)	<i>NA</i>
(c) In CUHK ExPo jointly organized by CLEAR and ITSC	<i>1</i>
(d) In any other event held in HK (e.g. UGC symposium, talks delivered to units of other institutions)	<i>NA</i>
(e) In international conference	<i>NA</i>
(f) Others (please specify)	<i>NA</i>

Table 4: Publication (if any)	
<i>Please classify each piece of publications into one and only</i>	Number

<i>one of the following categories</i>	
(a) Project CD/DVD	NA
(b) Project leaflet	NA
(c) Project booklet	NA
(d) A section/chapter in a booklet/book distributed to a limited group of audience	NA
(e) Conference proceeding	NA
(f) A chapter in a book accessible internationally	NA
(g) A paper in refereed journal	NA
(h) Others (please specify)	NA

3. A one-page brief write up

Dietary sugar and oil are those important nutrients to all of us, especially to those patients who are pre-diabetes or chronic diabetes. It is important to provide clear concepts about the relationship between diabetes and dietary nutrients intake to the medical/non-medical students. While studying about those areas, students may feel frustrated as the mechanisms are not easy to understand.

Our project created total 3 videos describing the relationship between diabetes and dietary nutrients intake and how we can monitor the diabetic index in patients. In each video, the contents were covering the basic knowledge and necessary information to equip year 2 medical students with their preclinical studies.

The orders of each video were aligned with the lecture contents of corresponding course (MEDU2600 – Molecular Medicine and Genetics) and the students were encouraged to review the videos before and after face-to-face lectures.

The videos were accessible all the time at CUHK blackboard and feedbacks from students via e-survey would be accumulated for completed data analysis. The main areas of e-survey were reflecting the (i) usefulness, (ii) impact and (iii) effectiveness of all 3 videos from the year 2 medical students during the study of dietary nutrients intake and development of diabetes mellitus at MEDU2600 – Molecular Medicine and Genetics.

We expected that the data collected for analysis would indicate the strengths and weaknesses of this project so we could improve our future e-learning projects based on the student's recommendations.