

# THE CHINESE UNIVERSITY OF HONG KONG

## Micro-Module Courseware Development Grant

### Scheme 1: Basic Scheme

#### Final Report (2016-17)

Report due 30 April 2018

Please return by email to The Ad hoc Committee on Planning of eLearning Infrastructure  
[mmcd@cuhk.edu.hk](mailto:mmcd@cuhk.edu.hk)

#### PART I

Project title: **Flipped Micro-Module for Professional Sports Skills Courses**

Principal supervisor: **Mr. Lee Chi Wo Daniel**

Co-supervisor(s): **NA**

Department / Unit: **Sports Science and Physical Education (SSPE), Faculty of Education**

Project duration: **From May 2017 to April 2018**

Date report submitted: **25 April 2018**

#### **1. Project objectives**

*Eleven short, interactive and self-directed bilingual sets of professional micro-modules (MMs) linked to specific topic areas have been completed. The MMs are created for flipped teaching and learning for Professional Sports Skills Courses related to swimming, cycling and woodball ([http://www.cuhk.edu.hk/culive/p\\_sports/#top](http://www.cuhk.edu.hk/culive/p_sports/#top)). Student users could take more responsibility for and control of their own learning using the MMs and in sequence to test whether they can apply their knowledge and solve problems encountered during their practice.*

The project is on track to meet its objectives and the objectives have not been changed as a result of the experience of working on this micro-module project. In addition, three woodball MMs were produced instead of four after recommendation from course teacher and thorough discussion among members, and therefore the MMs should have higher effectiveness for student's learning.

#### **2. Process, outcomes or deliverables**

Firstly, eight MMs have been developed for Individual Sports (SPED 2110), Teaching in Swimming: Theory and Practice (SPED 2111), and Swimming (Men: PHED 1015) and Swimming (Women: PHED 1016), which are Professional Skills Courses provided by the SSPE and Physical Education Unit (PEU), Faculty of Education. Those courses are run in parallel sessions and the total class size is over 360 each year.

Furthermore, three MMs on Woodball have been developed for PHED 1040, which is Professional Skills Course provided by the PEU, Faculty of Education. The total class sizes are over 140 each year, which are required courses for students at CUHK.

Finally, the MMs also acted as post-class supplementary learning materials after teaching “physiology of skeletal muscles and exercise physiology” for Anatomy and Physiology I (PHAR 1433), Fundamental Physiology I (BCME 1600) and (SBMS 2103). The total class sizes are over 100 each year, which are required courses for Biomedical Science students.

Overall, we did not encounter any major obstacle in this project but, it requires extra caution to create appropriate scenarios that aims at comprehensive and in-depth of teaching content. The download links for the MMs are shown below:

1. Swimming (Breaststroke): [http://facs.med.cuhk.edu.hk/site/2017/dl/sbr/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/sbr/story_html5.html)
2. Swimming (Front Crawl): [http://facs.med.cuhk.edu.hk/site/2017/dl/sfr/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/sfr/story_html5.html)
3. Swimming (Backstroke): [http://facs.med.cuhk.edu.hk/site/2017/dl/sba/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/sba/story_html5.html)
4. Swimming (Butterfly): [http://facs.med.cuhk.edu.hk/site/2017/dl/sbu/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/sbu/story_html5.html)
5. Swimming (Diving): [http://facs.med.cuhk.edu.hk/site/2017/dl/sdi/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/sdi/story_html5.html)
6. Swimming (Treading Water): [http://facs.med.cuhk.edu.hk/site/2017/dl/str/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/str/story_html5.html)
7. Cycling (Introduction): [http://facs.med.cuhk.edu.hk/site/2017/dl/cin/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/cin/story_html5.html)
8. Cycling (Gear Shifting): [http://facs.med.cuhk.edu.hk/site/2017/dl/cge/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/cge/story_html5.html)
9. Woodball (Aiming): <http://facs.med.cuhk.edu.hk/site/2017/dl/wb1/story.html>
10. Woodball (Shooting): <http://facs.med.cuhk.edu.hk/site/2017/dl/wb2/story.html>
11. Woodball (Completion): <http://facs.med.cuhk.edu.hk/site/2017/dl/wb3/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, an evaluation form has been developed and has been distributed to students for objective feedback on the MMs at the end of the 1<sup>st</sup> semester in 2017-18. The results of the evaluation are shown at below table:

So far, we conducted the evaluation on eight MMs as other MMs were in production phase during 2017-18 semester.

Evaluation of eight MMs with students from the course SPED 2110A/B/C (n=66), results are shown in percentage (%).

	<5 min	6-10 min	11-15 min	16-20 min	>20 min
Time spent on watching each MMs	27.3	39.4	9.1	6.1	18.2
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I enjoy using the MMs	45.5	43.9	9.1	0	1.5
I am going to use the MMs to help me prepare for the exam	57.6	33.3	7.6	0	1.5
The MMs help me further understand the skills taught in the course	53.0	36.4	9.1	0	1.5
I would like to see this MMs approach to other PSCs	59.1	33.3	6.1	1.5	0

Remarks: Data collected on 04 December 2017 (after course examination was conducted)  
 MMs: professional interactive and self-directed bilingual sets micro-modules;  
 PCSs: Professional Skills Courses

Overall, the result of evaluation indicated that the produced MMs achieved the objectives of this project (the Survey on Woodball MMs will be conducted in May, report will submit later).

#### 4. Dissemination, diffusion and impact

**Example of dissemination:** A poster and an oral presentation on this project has been reported at the Teaching and Learning Innovation EXPO 2017, on 07 December 2017 at CUHK.

**Examples of diffusion:** An e-learning task force will be developed for discussing and planning further adoption of e-learning and -teaching development, in SSPE. The experiences in producing and dissemination of MMs will be shared among colleagues.

**Impact of this project:** Colleagues from Physical Education Unit (PEU: Mr. TM Tang) will use this project as an initiative for flipped-teaching and -learning in courses of PEU, meanwhile project members will continue to enrich e-learning in Professional Sports Skills teaching at CUHK.

#### PART II

##### Financial data

Funds available:

Funds awarded from MMCDG	\$ 100,000
Funds secured from other sources (please specify _____)	\$ NIL
Total:	\$ 100,000

Expenditure:

Item	Budget as per application	Expenditure	Balance
Photo and video shooting	43,200	43,200	0
Design work	26,800	26,800	0
Other necessities (equipment)	21,786	20,976	810
Editing/proof reading	4,800	2,592.5	2,207.5
Student helpers, project evaluation and others (photocopying)	8,125	6,431.5	1,693.5
Total:	104,711	100,000	4,711

#### PART III

##### Lessons learnt from the project

Students of different disciplines have different study needs particular SSPE students are busy with training schedule at College, University and National Teams. Therefore, the MMs that facilitate students self-practice and re-examine on professional sports skills are crucial.

Furthermore, the interactive and self-directed scenarios are highly effective in preparing students for the course assessments (from MMs evaluation results). However, more caution needs to be exercised in future when introducing these MMs to the course as some students may solely rely on self-practice with the MMs but not attending the class, indeed teaching methods and safety would be emphasized during class time.

**Key success factors** of this project are that colleagues from different units and departments are gathered and possess essential skills and knowledge into the project. Furthermore, the MMs effectively initiate students' before and after class time self-practice (Flipped classroom) and their interest toward the courses.

- Collaborators with the right skills (Dr Isabel Hwang, Mr. TM Tang and Mr. Ray Lee)
- Service team with the right skills (Office of Medical Education Department)

**Difficulties encountered of this project** are that the sport facilities and venues e.g. swimming pool and track, are limited on campus and busy with other users. Therefore, the available time slots for sports skills video-recording were limited, nonetheless team members have coordinated and scheduled the video recording during lunch time and non-office hour. We would like to acknowledge the support from below unit and department toward this project:

- Physical Education Unit (Sir Philip Haddon-Cave Sports Field)
- Office of Student Affairs (Swimming pool)

## PART IV

### Information for public access

***Eleven short, interactive and self-directed bilingual sets of professional micromodules (MMs)*** linked to specific topic areas have been completed. The MMs are created for flipped teaching and learning for Professional Sports Skills Courses related to swimming, cycling and woodball ([http://www.cuhk.edu.hk/culive/p\\_sports/#top](http://www.cuhk.edu.hk/culive/p_sports/#top)). Student users could take more responsibility for and control of their own learning using the MMs and in sequence to test whether they can apply their knowledge and solve problems encountered during their practice.

### **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: Sports Skills     |
|                  | Keyword 2: Flipped classroom |
|                  | Keyword 3: Swimming          |
|                  | Keyword 4: Cycling           |
| (Least relevant) | Keyword 5: Woodball          |

## 2. Summary

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

<b>Table 1: Publicly accessible online resources (if any)</b>
<p>(a) <b>Project website:</b></p> <p><a href="http://www.cuhk.edu.hk/culive/p_sports/#top">http://www.cuhk.edu.hk/culive/p_sports/#top</a></p>
<p>(b) <b>Webpage(s):</b></p> <ol style="list-style-type: none"> <li>Swimming (Breaststroke): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/sbr/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/sbr/story_html5.html</a></li> <li>Swimming (Front Crawl): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/sfr/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/sfr/story_html5.html</a></li> <li>Swimming (Backstroke): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/sba/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/sba/story_html5.html</a></li> <li>Swimming (Butterfly): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/sbu/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/sbu/story_html5.html</a></li> <li>Swimming (Diving): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/sdi/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/sdi/story_html5.html</a></li> <li>Swimming (Treading Water): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/str/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/str/story_html5.html</a></li> <li>Cycling (Introduction): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/cin/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/cin/story_html5.html</a></li> <li>Cycling (Gear Shifting): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/cge/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/cge/story_html5.html</a></li> <li>Woodball (Aiming): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/wb1/story.html">http://facs.med.cuhk.edu.hk/site/2017/dl/wb1/story.html</a></li> <li>Woodball (Shooting): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/wb2/story.html">http://facs.med.cuhk.edu.hk/site/2017/dl/wb2/story.html</a></li> <li>Woodball (Completion): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/wb3/story.html">http://facs.med.cuhk.edu.hk/site/2017/dl/wb3/story.html</a></li> </ol>
<p>(c) <b>Tools / Services:</b></p> <ul style="list-style-type: none"> <li>Articulate Storyline</li> <li>Audacity (recording software)</li> <li>SCORM to generate access data and other analytics</li> </ul>
<p>(d) <b>Pedagogical Uses:</b></p> <p>The MMs from this project have been uploaded to Blackboard students can access them during the semester. Meanwhile, students are highly encouraged to use the MMs before and after class time to refine the sports skills through further self-practice, therefore flipped-classroom and self-learning are encouraged.</p>
<p>(c) <b>Others (please specify):</b></p>

<b>Table 2: Resources accessible to a target group of students (if any)</b>			
<p><i>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.</i></p>			
<u>Course Code/ Target Students</u>	<u>Term &amp; Year of offering</u>	<u>Approximate No. of students</u>	<u>Platform</u>
<i>SPED 2110 A/B/C</i>	<i>Term 1, Year 1</i>	<i>70</i>	<i>Blackboard</i>
<i>SPED 2111</i>	<i>Term 1, Year 4</i>	<i>20</i>	<i>Blackboard</i>
<i>PHED 1015</i>	<i>All 1<sup>st</sup> year students</i>	<i>150</i>	<i>Blackboard</i>

<i>PHED 1016</i>	<i>All 1<sup>st</sup> year students</i>	<i>125</i>	<i>Blackboard</i>
<i>PHED 1040</i>	<i>All 1<sup>st</sup> year students</i>	<i>140</i>	<i>Blackboard</i>
<i>PHAR 1433</i>	<i>Year 2</i>	<i>50</i>	<i>Blackboard</i>
<i>BCME 1600</i>	<i>Year 2</i>	<i>30</i>	<i>Blackboard</i>
<i>SBMS 2103</i>	<i>Year 2</i>	<i>20</i>	<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>	<b>Number</b>
(a) In workshop/retreat within your unit (e.g. department, faculty)	<i>One</i>
(b) In workshop/retreat organized for CUHK teachers (e.g. CLEAR workshop, workshop organized by other CUHK units)	<i>No</i>
(c) In CUHK ExPo jointly organized by CLEAR and ITSC	<i>One</i>
(d) In any other event held in HK (e.g. UGC symposium, talks delivered to units of other institutions)	<i>No</i>
(e) In international conference	<i>No</i>
(f) Others (please specify)	<i>No</i>

**Table 4: Publication (if any)**

<i>Please classify each piece of publication into one and only one of the following categories</i>	<b>Number</b>
(a) Project CD/DVD	<i>No</i>
(b) Project leaflet	<i>No</i>
(c) Project booklet	<i>No</i>
(d) A section/chapter in a booklet/ book distributed to a limited group of audience	<i>No</i>
(e) Conference proceeding	<i>No</i>
(f) A chapter in a book accessible internationally	<i>No</i>
(g) A paper in a referred journal	<i>No</i>
(h) Others (please specify)	<i>No</i>

### 3. A one-page brief write up

Please provide a one-page brief write-up of no more than 500 words and a short video.

**Video-reporting** is appended in another file.

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~ End of this report ~