

# THE CHINESE UNIVERSITY OF HONG KONG

## Micro-Module Courseware Development Grant

### Scheme 1: Basic Scheme

#### Final Report (2017-18)

Report due 31 October 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 (Phase II)**

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

Co-supervisor(s): **Dr. Isabel Hwang, Mr. Tang Tsz Ming**

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

Project duration: **From December 2017 to October 2018**

Date report submitted: **October 30, 2018**

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

*Eleven interactive and self-directed bilingual sets of professional micro-modules (MMs) linked to the professional skills of Field Events, Tennis and Cycling have been completed.*

The MMs were created for flipped teaching and eLearning of professional sports skills courses (PSCs) at the Department of Sports Science and Physical Education (SSPE) and Physical Education Unit (PEU). Using them, students can take more responsibility for and control over their own learning, using the MMs in sequence to examine whether they can apply their knowledge to solving problems encountered during their practice and outside class time.

The project is on track to meet its objectives and the objectives have not been changed as a result of working on this MMs project. However, three Tennis MMs were produced instead of two after a recommendation from the course teacher and thorough discussion among the members. Therefore, the MMs should have higher effectiveness for student learning.

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

Six MMs have been developed for Teaching Field Events: Theory and Practice (SPED 2133). In addition, two MMs on cycling skills have been developed for Individual Sports (SPED 2110) and Alternative Sports (SPED 3220). The courses are professional skills courses provided by the SSPE, Faculty of Education and their target number of students is over 75 a year.

Three MMs on Tennis have been developed for PHED 1031 and PHED 1032, which are professional skills courses provided by the PEU, Faculty of Education. The total class sizes are over 400 each year, and they are required courses for year one students at CUHK.

Finally, the MMs have also acted as post-class supplementary learning materials for teaching “physiology of skeletal muscles and exercise physiology” in Anatomy and Physiology I (PHAR 1433), Fundamental Physiology I (BCME 1600), (SBMS 2103) and Science and Modern Society (GENA 2182). The total class sizes are over 130 each year, and are required courses for biomedical science students.

Overall, we did not encounter any major obstacles with this project. However, it has required extra caution to create appropriate scenarios aimed at comprehensive and in-depth teaching content. It would be more effective for students to use and share the MMs, with more available hardware, i.e. tablets, during class.

The download links for the MMs are shown below:

1. Field Events (Long Jump): [http://facs.med.cuhk.edu.hk/site/2018/sport2018/lj/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2018/sport2018/lj/story_html5.html)
2. Field Events (Triple Jump): [http://facs.med.cuhk.edu.hk/site/2018/sport2018/tj/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2018/sport2018/tj/story_html5.html)
3. Field Events (Shot Put): [http://facs.med.cuhk.edu.hk/site/2018/sport2018/sp/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2018/sport2018/sp/story_html5.html)
4. Field Events (Javelin Throw): [http://facs.med.cuhk.edu.hk/site/2018/sport2018/jt/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2018/sport2018/jt/story_html5.html)
5. Field Events (Discus Throw): [http://facs.med.cuhk.edu.hk/site/2018/sport2018/dt/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2018/sport2018/dt/story_html5.html)
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7. Cycling (Hand Signals): [http://facs.med.cuhk.edu.hk/site/2017/dl/cha/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/cha/story_html5.html)
8. Cycling (Assessments): [http://facs.med.cuhk.edu.hk/site/2017/dl/cpr/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2017/dl/cpr/story_html5.html)
9. Tennis (Ball Sense): [http://facs.med.cuhk.edu.hk/site/2018/sport2018/tbs/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2018/sport2018/tbs/story_html5.html)
10. Tennis (Ground Stroke): [http://facs.med.cuhk.edu.hk/site/2018/sport2018/tgs/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2018/sport2018/tgs/story_html5.html)
11. Tennis (Serve): [http://facs.med.cuhk.edu.hk/site/2018/sport2018/ts/story\\_html5.html](http://facs.med.cuhk.edu.hk/site/2018/sport2018/ts/story_html5.html)

The nature of the deliverables has not changed, and overall, the project has been satisfactorily completed.

### **3. Evaluation Plan**

As indicated in the application proposal, an e-form was developed to evaluate the current project and was distributed to the students for objective feedback on the MMs before the submission deadline for this report. The results of the evaluation are shown in the table below.

So far, we have conducted evaluations on eight MMs for Field Events and Cycling, and other MMs will be applied in the second semester of 2018.

The evaluation results for the eight MMs from students in the courses SPED 2133 and SPED 2110A/B (n=44) are shown in percentages (%).

	PESH	ESHE	PEU	SBS	Others
Student	40.5	59.5	0	0	0
	<5 min	6-10 min	11-15 min	16-20 min	>20 min
Time spent watching each MM	14.4	50.0	0	16.6	0
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
I enjoy using the MMs	11.9	64.3	21.4	2.4	0
I am going to use the MMs to help me prepare for the exam	19.0	57.2	21.4	2.4	0
The MMs helped me further understand the skills taught in the course	31.0	50	19.0	0	0
I would like to see this MMs approach in other PSCs	16.7	64.3	19.0	0	0

Remarks: Data collected by October 30, 2018 (the courses were on-going during the survey)  
MMs: professional interactive and self-directed bilingual sets micro-modules;  
PSCs: Professional Skills Courses

Overall, the results of the evaluation have indicated that the MMs have achieved the objectives of this project (the survey on three tennis MMs will be conducted in the second semester and the report will be submitted later).

#### 4. Dissemination, diffusion and impact

**Example of dissemination:** A webpage ([http://www.cuhk.edu.hk/culive/p\\_sport/](http://www.cuhk.edu.hk/culive/p_sport/)) containing all of the MMs produced from this project has been established and is open to the public. Further, a poster and an oral presentation on this project will be delivered at the Teaching and Learning Innovation EXPO 2018, on December 07, 2018 at CUHK.

**Examples of diffusion:** An eLearning task force has been developed to discuss and plan the further adoption of flipped teaching and eLearning development in the SSPE. The experience of producing and disseminating MMs will be shared among the colleagues. In addition, the project supervisor (Mr. Lee Chi Wo Daniel) has joined the eLearning Community of Practice Micro-Module Courseware subgroup. He has used this project as an example to encourage his colleagues at CUHK to proactively produce materials for flipped teaching and eLearning. The aim is to enhance learning and teaching effectiveness and align the university education strategies for 2016-2020.

[https://gocuhk-my.sharepoint.com/:v:/g/personal/dcwlee\\_cuhk\\_edu\\_hk/EU9Xu1vaIMFEn-KfpBLaEP8BzZZQeQWEbKE\\_pYsEsQkicw?e=EsnLGY](https://gocuhk-my.sharepoint.com/:v:/g/personal/dcwlee_cuhk_edu_hk/EU9Xu1vaIMFEn-KfpBLaEP8BzZZQeQWEbKE_pYsEsQkicw?e=EsnLGY)

**Impact of this project:** A colleague from the Physical Education Unit (Mr. Tang Tsz Ming) will use this project as an initiative for flipped teaching and eLearning in PEU courses. Meanwhile, project members will continue to enrich flipped teaching and eLearning in professional sports skills teaching at the SSPE and CUHK.

## **PART II**

### **Financial data**

Funds available:

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

Total:	\$ 100,000
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Expenditure:

<b>Item</b>	<b>Budget as per application</b>	<b>Expenditure</b>	<b>Balance</b>
Student helpers	6,600.00	6,600.00	0.00
Project Evaluation	3,432.00	3,905.00	-473.00
Photo and Video shooting	43,200.00	43,200.00	0.00
Design work	14,920.00	14,920.00	0.00
eLearning & Education Conference	23,848.00	0.00	23,848.00
Editing/proof reading	5,500.00	5,561.00	-61.00
Miscellaneous & Travelling	2,500.00	3,039.35	-539.35
<b>Total:</b>	100,000.00	77,225.35	22,774.65

## **PART III**

### **Lessons learned from the project**

The MMs offer unlimited review in slow motion for specific exercises. In this way, the students can focus on their individual needs, given that students in different disciplines have different study needs. For example, SSPE students are busy with their training schedules at college, university and for national teams. The MMs facilitate these students' self-practice, and crucially, enable them to re-examine their professional sports skills.

The interactive and self-directed scenarios have been highly effective at preparing students for their course assessments (from the MMs evaluation results). However, more caution should be exercised in the future when introducing these MMs in courses. Some students may rely solely on self-practice using the MMs and not attend the class, even though skills analysis, teaching methods and safety are emphasized during class time.

***The key success factors*** of this project are that colleagues from different units and departments with essential skills and knowledge have been brought into it. Further, the MMs have effectively initiated students' self-practice before, during, and after class time (flipped classroom and eLearning) and stimulated their interest in the courses.

- Collaborators with the right skills (Dr. Isabel Hwang and Mr. Tang Tsz Ming)
- Service team with the right skills (Office of Medical Education Department and ITSC)

***The difficulties encountered in this project*** are first, that when students have used the MMs during class on their own devices (i.e., cell phones) they have been unable to share them with their classmates because the screen is too small. It would be very helpful if more hardware, i.e. tablets with large screens, could be supported by the project. Further, the funding expired two months before the project deadline, and we might still need to pay the student helpers to complete the task. In addition, the sport facilities and venues (e.g., swimming pool and track; HCF was under renovation from May to Mid-October 2018) on campus have been limited and busy with other users. Therefore, the available time slots for sports skills video-recording have been limited. Nonetheless, team members have coordinated and scheduled the video recordings during lunch time and non-office hours. We would like to acknowledge the support for this project from the unit and department listed below:

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

## **PART IV**

### **Information for public access**

***Eleven interactive and self-directed bilingual sets of professional micro-modules (MMs) linked to the professional skills of Field Events, Tennis and Cycling have been completed.***

The MMs were created for flipped teaching and eLearning of professional sports skills courses (PSCs) at the Department of Sports Science and Physical Education (SSPE) and Physical Education Unit (PEU). Because of them, student users can now take more responsibility for and control over their own learning, using the MMs in sequence to examine whether they can apply their knowledge and solve problems encountered during practice and outside class time. In addition to the Blackboard access, the public can access the MMs via an open access webpage, ([http://www.cuhk.edu.hk/culive/p\\_sport/](http://www.cuhk.edu.hk/culive/p_sport/)), making them more available to the public.

### **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: eLearning  
                                 Keyword 2: Flipped Teaching  
                                 Keyword 3: Field Events  
                                 Keyword 4: Tennis  
  
(Least relevant)      Keyword 5: Cycling

### **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>
<b>(a) Project website:</b> <a href="http://www.cuhk.edu.hk/culive/p_sport/">http://www.cuhk.edu.hk/culive/p_sport/</a>
<b>(b) Webpage(s):</b> Field Events (Long Jump): <a href="http://facs.med.cuhk.edu.hk/site/2018/sport2018/lj/story_html5.html">http://facs.med.cuhk.edu.hk/site/2018/sport2018/lj/story_html5.html</a> Field Events (Triple Jump): <a href="http://facs.med.cuhk.edu.hk/site/2018/sport2018/tj/story_html5.html">http://facs.med.cuhk.edu.hk/site/2018/sport2018/tj/story_html5.html</a> Field Events (Shot Put): <a href="http://facs.med.cuhk.edu.hk/site/2018/sport2018/sp/story_html5.html">http://facs.med.cuhk.edu.hk/site/2018/sport2018/sp/story_html5.html</a> Field Events (Javelin Throw): <a href="http://facs.med.cuhk.edu.hk/site/2018/sport2018/jt/story_html5.html">http://facs.med.cuhk.edu.hk/site/2018/sport2018/jt/story_html5.html</a> Field Events (Discus Throw): <a href="http://facs.med.cuhk.edu.hk/site/2018/sport2018/dt/story_html5.html">http://facs.med.cuhk.edu.hk/site/2018/sport2018/dt/story_html5.html</a> Field Events (High Jump): <a href="http://facs.med.cuhk.edu.hk/site/2018/sport2018/hj/story_html5.html">http://facs.med.cuhk.edu.hk/site/2018/sport2018/hj/story_html5.html</a> Cycling (Hand Signals): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/cha/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/cha/story_html5.html</a> Cycling (Assessments): <a href="http://facs.med.cuhk.edu.hk/site/2017/dl/cpr/story_html5.html">http://facs.med.cuhk.edu.hk/site/2017/dl/cpr/story_html5.html</a>

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Tennis (Serve): <a href="http://facs.med.cuhk.edu.hk/site/2018/sport2018/ts/story_html5.html">http://facs.med.cuhk.edu.hk/site/2018/sport2018/ts/story_html5.html</a>
<b>(c) Tools / Services:</b>
<ul style="list-style-type: none"> <li>• Articulate Storyline</li> <li>• Audacity (recording software)</li> <li>• SCORM to generate accessible data and other analytics</li> </ul>
<b>(d) Pedagogical Uses:</b>
The MMs from this project have been uploaded to Blackboard, and the students can access them during the semester. The students are highly encouraged to use the MMs before and after class time to refine their sports skills through further self-practice. Therefore, flipped classroom and eLearning are encouraged.
<b>(c) Others (please specify):</b>

<b>Table 2: Resources accessible to a target group of students (if any)</b>			
<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>			
<u>Course Code/ Target Students</u>	<u>Term &amp; Year of offering</u>	<u>Approximate No. of students</u>	<u>Platform</u>
SPED 2110 A/B	Term 1, Year 1	47	Blackboard
SPED 2133	Term 1, Year 3, 4 & 5	20	Blackboard
PHED 1031	All 1 <sup>st</sup> year students	200	Blackboard
PHED 1032	All 1 <sup>st</sup> year students	200	Blackboard
PHAR 1433	Year 2	50	Blackboard
BCME 1600	Year 2	30	Blackboard
SBMS 2103	Year 2	20	Blackboard
GENA 2182	Year 2	25-35	Blackboard

<b>Table 3: Presentation (if any)</b>	
<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>

<b>Table 4: Publication (if any)</b>	
<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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