

# THE CHINESE UNIVERSITY OF HONG KONG

## Micro-Module Courseware Development Grant

### Scheme 2: Studies in Foundation Courses

#### **Final Report (2015-16)**

Report due 31 December 2016

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: Using Micromodules and Flipped Classrooms to Standardize the Chemistry and Physics Foundation Knowledge of Year-1 Engineering and Science Students in Biology Courses**

Principal supervisor: **Dr. Lawrence Chiu**

Department / Unit: **School of Life Sciences**

Project duration: From January 2016 to December 2016

Date report submitted: 22 December 2016

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

*Is the project on track to meet its objectives?*

The objective of this project is to develop micromodules, followed by using flipped classroom activities to standardize students' foundation Chemistry and Physics knowledge in order to facilitate their Biology learning.

*Have the objectives been changed as a result of the experience of working on your MMCDG project?*

The above objective has been achieved in satisfaction.

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

*Please specify the number of micro modules produced, and the course(s) (with course codes and titles) that have used the micro modules in Part IV, and provide more detailed descriptions here.*

Two micromodules that consist of self-learning online videos on Chemistry and Physics have been produced, respectively. The flipped classroom activities comprise an online problem set for self-assessment, 2 in-class activities for group assessment, and a students' survey for evaluating our efficacy and novelty. The micromodules and flipped classroom activities have been used in LSCI1001 Basic Concepts in Biological Sciences (for 95 students) in the first semester, 2016-17. The micromodules have been used in BIOL2120 Cell Biology (for 232

students) in the first semester and are going to be used in UGEB2262 From Genes to Life (for about 60 students) in the second semester, 2016-17.

*Has the nature of the deliverables been changed?*

The nature of the deliverables remains unchanged.

*Have you adjusted your timeline?*

All the deliverables and outcomes have been achieved on time.

*Overall, was the project completed satisfactorily?*

The project was completed in satisfaction.

### 3. Evaluation Plan

*Have you altered your evaluation plans?*

Yes, because of the unexpected longer period spent for students' enrollment, we could only perform 1 survey after completion of the flipped classroom activities.

On the other hand, our class has also served as the population for a pedagogical study by a group of GEUC4011 students (Hiu Yee LEUNG, Ka Man NGAI, Pui Ying CHENG and Hung Yan CHAU) about the "Efficacy of Flipped Classroom in CUHK" (See appendix I).

*What monitoring data did you collect?*

We assessed our survey outcomes from 2 perspectives:

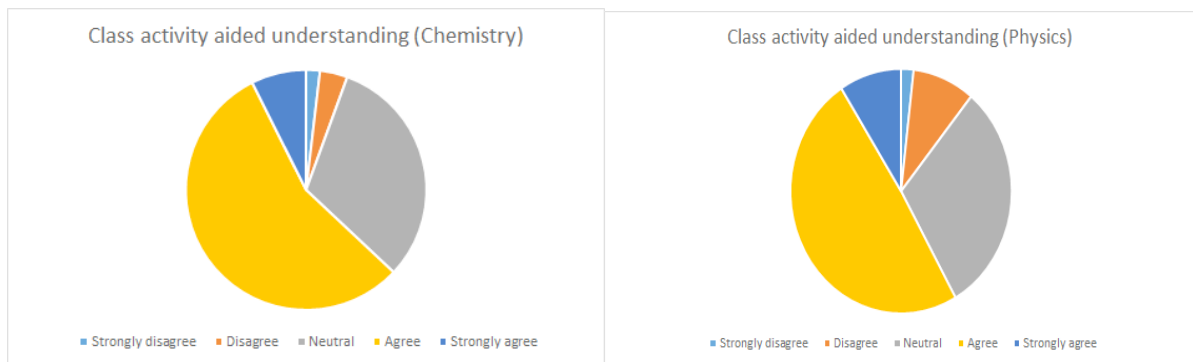
1. How effective our flipped classroom activities has been in aiding our students' knowledge understanding
2. How interesting and novelty our flipped classroom approach has been

### ***Knowledge Understanding***

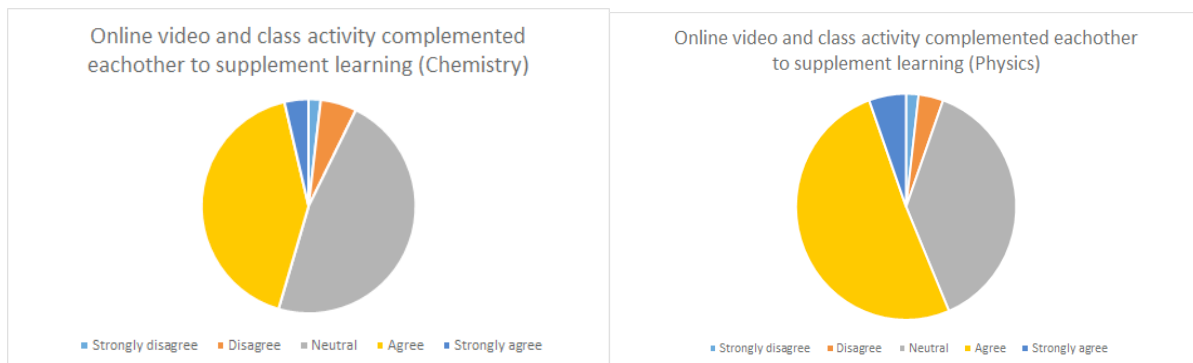
#### **1. Online video was clear and useful**



## 2. Class activity aided understanding

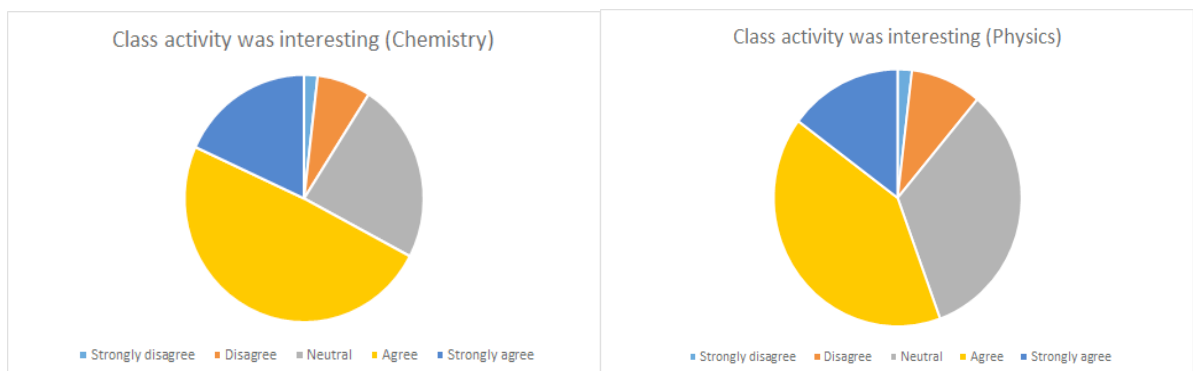


## 3. Online video and class activity complemented each other to supplement our learning

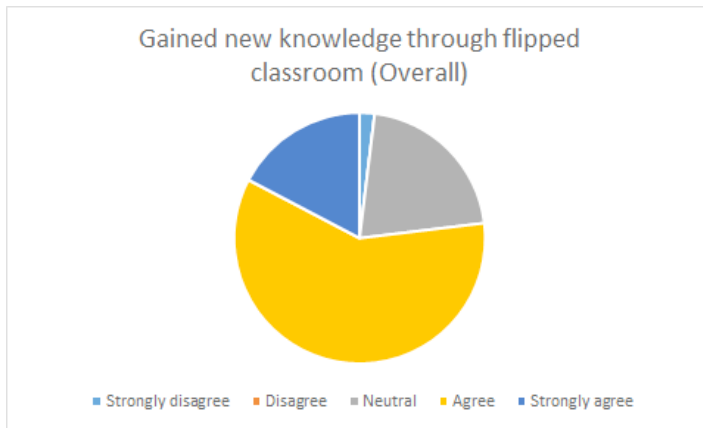


## *Interesting and Novelty*

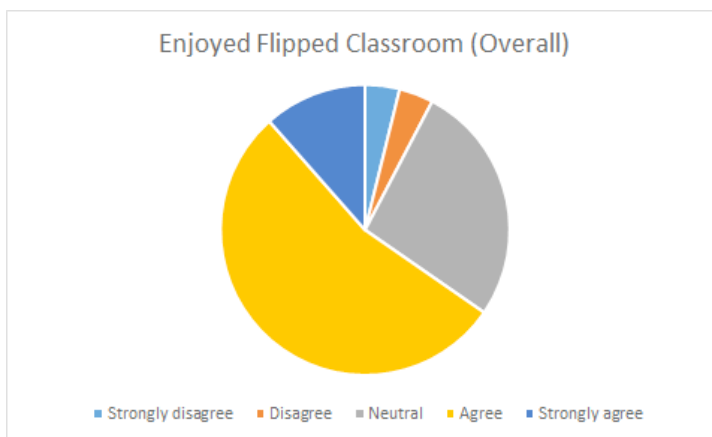
### 1. Class activity was interesting



## 2. Overall, gained new knowledge through Flipped Classroom



## 3. Overall, enjoyed learning through Flipped Classroom



*Does your evaluation indicate that you have achieved your objectives?*

About 60% of students participated in our survey agreed / strongly agreed that our Flipped Classroom activities facilitated their understanding of knowledge. In particular, 77% of them agreed / strongly agreed that they gained new knowledge through these activities, and a solid 65% agreed / strongly agreed that they enjoyed this new mode of learning.

#### 4. Dissemination, diffusion and impact

*Please provide examples of dissemination: website, presentations in workshops or conferences, or publications.*

We have used Blackboard to disseminate our products in courses:

LSCI1001 Basic Concepts in Biological Sciences

[https://elearn.cuhk.edu.hk/webapps/blackboard/content/listContentEditable.jsp?content\\_id=1644811\\_1&course\\_id=67948\\_1](https://elearn.cuhk.edu.hk/webapps/blackboard/content/listContentEditable.jsp?content_id=1644811_1&course_id=67948_1)

BIOL2120 Cell Biology

[https://elearn.cuhk.edu.hk/webapps/blackboard/content/listContentEditable.jsp?content\\_id=1644778\\_1&course\\_id=67947\\_1](https://elearn.cuhk.edu.hk/webapps/blackboard/content/listContentEditable.jsp?content_id=1644778_1&course_id=67947_1)

In addition, our class has also served as the population for a pedagogical study by a group of GEUC4011 students about the “Efficacy of Flipped Classroom in CUHK”. They had presented a poster entitled “Flipped Classroom: The New Learning Mode for CUHK Students” in the Teaching and Learning Innovation EXPO 2016, CUHK. (See appendix II)

*Please provide examples of diffusion: how the project results/process/outcomes/deliverables have been used in your unit and other parts of CUHK or other institutions?*

Besides being used in the Science Faculty package course LSCI1001 for both Science and Engineering students, the deliverables of this project have also been used in the Life Sciences major-required course BIOL2120 Cell Biology. They are also going to be used in a University General Education course UGEB2262 From Genes to Life.

*Please provide examples of impact: how the project results (micro modules) can be adapted to other disciplines.*

Our class has served as the population for a pedagogical study by GEUC4011 students about the “Efficacy of Flipped Classroom in CUHK”. They had presented a poster entitled “Flipped Classroom: The New Learning Mode for CUHK Students” in the Teaching and Learning Innovation EXPO 2016, CUHK.

#### PART II

##### Financial data

Funds available:

Funds awarded from MMCDG	\$ 91,000
Funds secured from other sources (please specify _____)	\$ 0
Total:	\$ 91,000

Expenditure:

Item	Budget as per application	Expenditure	Balance
RA and student helpers	61,000	47,438	13,562
Computer and software	30,000	30,672	-672
Accessories, stationaries and others for the computer system and flipped classroom activities		11,515	-11,515
Total:	91,000	89,625	+1,375 until 22/12/16

### PART III

#### Lessons learnt from the project

*Please describe your way forward.*

*Please describe any of the following item(s) accordingly:*

- *Key success factors, if any*
- *Difficulties encountered and remedial actions taken, if any*
- *The role of other units in providing support, if any*
- *Suggestions to CUHK, if any*
  - *Example: what should be done differently?*

Although the result of students' survey evidenced that the objective of this project has been attained in satisfaction, we have found during the process that having flipped classroom activities in a large class (95 students) was challenging because it was very hard to engage a large number of students to participate actively in the activities. We were lucky this year for being able to find a group of senior Biology students, who are passionate to help their descendants, to work as group leaders. However, it is not a guarantee that we could still be able to find enough number of senior Biology students to help the flipped classroom activities in the coming years. A system has to be developed to ensure the sustainability of our flipped classroom approach.

The noise-insulating quality of the Elite Studio was poor and nearly no technical advice or support had been provided to us during the first time of recording for our online videos. Because of their poor quality, we recorded the videos again in the ITSC Studio with full technical advice and support from Judy Lo and Daisy Chen.

## PART IV

### Information for public access

*Summary information and brief write-ups of individual projects will be uploaded to a publicly accessible CUHK MMCDG website. Please extract from Part I the relevant information to facilitate the compilation of the publicly accessible website and reports.*

#### **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: Flipped Classrooms

Keyword 2: Self-learning

Keyword 3: Biology

Keyword 4: Chemistry

(Least relevant)      Keyword 5: Physics

#### **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):**

NA

**(c) Tools / Services:**

An online video for Chemistry self-learning (a micromodule)

An online video for Physics self-learning (a micromodule)

An online problem set for individual self-assessment

An in-class Chemistry activity “**Sentence Decoding**” for group assessment

An in-class Physics activity “**Graphic Presentations**” for group assessment

**(d) Pedagogical Uses:**

Our micromodules comprises 2 online videos, approximately 25 minutes each for Chemistry and Physics, for self-learning. Students are expected to watch the videos, and then attempt an online problem for self-assessment. For the flipped classroom activities, whole class is split into groups, and each is assigned to a senior student, who will follow up on the video content with in-class activities to reinforce students’ understanding. These activities include a

“Sentence Decoding” game to show the complementarity and universal nature of DNA’s base sequence and a “Graphic Presentations” game to visually demonstrate a Physics concept. The online problem set and flipped classroom activities are assessed, and constitute 10% of the overall grade.

(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 &amp; Year of offering</u>	<u>Approximate No. of students</u>	<u>Platform</u>
<i>LSCI1001/ Science and Engineering students</i>	<i>1<sup>st</sup> term 2016</i>	<i>95</i>	<i>Blackboard</i>
<i>BIOL2120/ Science students</i>	<i>1<sup>st</sup> term 2016</i>	<i>232</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>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 (Flipped Classroom: The New Learning Mode for CUHK Students)</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>



<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	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 a referred journal	NA
(h) Others (please specify)	NA

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

LSCI1001 is a biology course offered to Year-1 Science and Engineering students. They come from different backgrounds in terms of where they received their high school education and the curriculum/examinations they took. Further, there is variation among them in regard to which science subject they studied. We recognize that a basic understanding of certain Chemistry and Physics concepts are essential as a foundation for them to further in any specialized area of biological science. Our objective therefore is to standardize their basic concepts in chemistry and physics at the start of the course for fairness and consistency.

Our micromodules comprise 2 online videos on Chemistry and Physics for students' self-learning. After watching the videos, the students are required to attempt an online problem set for self-assessment. For the flipped classroom activities, the class is split into groups, and each is assigned to a senior student, who will follow up on the video content with in-class activities to reinforce students' understanding. These activities include a "**Sentence Decoding**" game to show the complementarity and universal nature of DNA's base sequence and a "**Graphic Presentation**" game to visually demonstrate a Physics concept. The online problem set and in-class activities are assessed, and constitute 10% of the overall grade.

We evaluated the students' survey from 2 perspectives: **1. How effective our Flipped Classroom has been in aiding their knowledge understanding.** Over 50% of students agreed/strongly agreed that the online video was clear and useful, and about 60% agreed/strongly agreed that class activities further aided their understanding. The opinion towards how closely-related the class activities were in relation to the online video were more neutral, particularly for the Chemistry part. Students who disagreed/strongly disagreed with the objectives in this section constituted less than 10% for both Chemistry and Physics. It is

encouraging to see that flipped classroom approach has facilitated student's learning for the majority. **2. *How interesting and novelty the Flipped Classroom approach has been.*** Close to 70% of students agreed/strongly agreed that the class activity for Chemistry was interesting, and indeed – our senior students also reported that they were engaged and enthusiastic throughout. In particular, 77% of students agreed/strongly agreed that they gained new knowledge through flipped classroom activities and a solid 65% agreed/strongly agreed that they enjoyed this new mode of learning. It is worthy to note that “strongly agrees” in regard to the interest and novelty of flipped classroom approach constituted the largest portion relative to other “strongly agreed” aspects of our flipped classroom initiative, which shows that a different approach adds color and variety to students' learning experience.

Overall, we believe that flipped classroom approach is a breath of fresh air for our incoming students, and the fact that it was carried out and conducted by senior students, with supervision from the instructor, meant the atmosphere was relaxed but also engaging - *an appreciable balance that facilitates cohesion among students and effective learning.*

## Questionnaire Result

For the case study of the course, 47 students from the class ?? have received the survey once they have finished the Flipped Classroom.

For the aspect of learning motivation of the flipped class, expect for the indicator concerning the difficulties when learning the class materials themselves before the lecture, more than half of the students agree on 7 indicators concerning the efficacy of Flipped Classroom and give positive feedbacks.

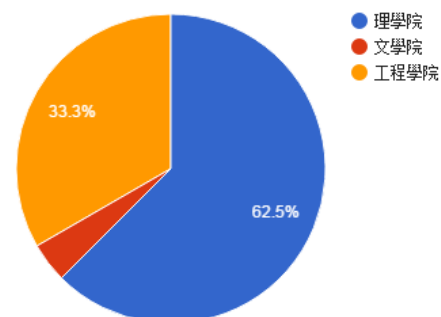
**Table 1.1** 課前自習的網上教學資源是  
有助你學習

		Frequency	Percent
Valid	非常不同意	6	12.8
	不同意	1	2.1
	沒意見	10	21.3
	同意	30	63.8
	Total	47	100.0

**Table 1.2** 你覺得網上自習的教學資源與課堂活動  
之間有緊密關係

		Frequency	Percent
Valid	非常不同意	4	8.5
	不同意	5	10.6
	沒意見	6	12.8
	同意	32	68.1
	Total	47	100.0

**Fig.1** 各學系對「在自習網上教學資源的過程中你不感到困難。」這個陳述的分佈。



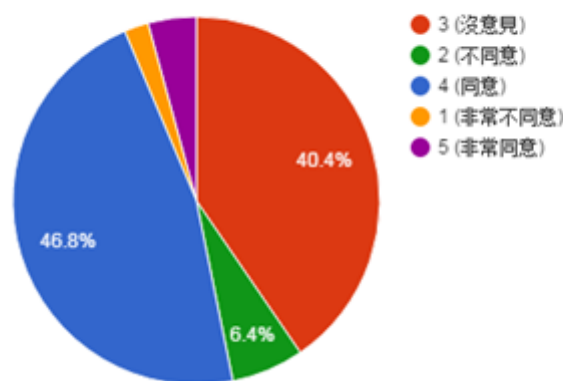
More particularly, Table 1.1 and Table 1.2 shows that nearly 70% agree that study the learning materials could help their study and it is highly related to their class activity in the lecturer. Hence, it reflects that the learning the materials before class are applicable and helpful. However, when students are asked on the hardness when learning the materials themselves, 42.6% students disagree that it is not

difficult and even 8.5% students find it very difficult (Table 1.3). Together, there are about 50% students find it difficult in learning the materials themselves while only 23.4% think it is not difficult. And if take a closer look on the students who found there is difficulties, Fig. 1 shows that the distribution of faculties are very similar to the distribution of faculty of the whole class. Hence, it means that it is not a problem only appear on certain students, rather, it would be an overall problem that may create the obstacle on the efficacy of the Flapped Classroom may affect the perceptions of Flapped Classroom.

After reviewing the efficacy of the Flapped Classroom, the survey moves to the part concerning the comparison between the Flapped Classroom and Traditional Classroom.

On concerning the aspect of active-learning, most students found that Flapped Classroom could promote active-learning. More than 80% of the students think that the Flapped Classroom would cultivate the culture of active learning and more than 70% students were more willing to find extra learning materials themselves when they found something they do not understand.

Fig. 2.2 相比傳統教學模式，在「反轉教室」模式中，你會在課堂上更能取得滿足感。



On concerning the indicators of acquiring the knowledge, more than half of the students agree that Flapped Classroom could give positive influence on pursuing, learning the knowledge than the Traditional Classroom. Among those indicators, most students agree that the class activities in Flapped Classroom could help to consolidate the what have been learnt. While on the statement “Compared to the Tradition Classroom, you believe that the knowledge learnt in the Flapped Class is more important”, same percentage (48.9%) of students agreed and have no opinion on that (Fig. 2.1). For those who agree with the statement, 72% of the students think that it is because they found that the knowledge they have learnt have more area could rethink. However, when it talks about the academic result students expected to

have, more than half students have no opinion on which types of classroom could help them get a better result.

It creates a contrast that even the students think that they could a more positive view on the knowledge they have learnt, it does not create a more confident view on the grade they expected to get.

Apart from the above objective aspect, the survey also shows a high acceptance of the students on the Flapped Classroom. Although 40.4% students have no opinion on gaining the satisfaction, still 46.8% of the students still found that they gain more satisfaction on Flapped Classroom. Reasons including that they could think more, solve the question themselves and there would be direct feedback in the Flapped Classroom. Besides, more than half of the students like Flapped Classroom more than the traditional one. The reasons behind are that they think Flapped Classroom are funnier and the atmosphere are more relaxing.

At last, when asked the feasibility of implementing the Flapped Classroom in their faculty, more than half of the students think that the feasibility is fair and more than 25% of students think there is a high feasibility to implement the Flapped Classroom due to a better atmosphere and better learning style. When asked what could be improved in the Flapped Classroom, some students suggested that there could be more games and the games could change into a not grading purpose.

Overall, it shows that after experienced the Flapped Classroom, students generally give possible feedback and would like to choose Flapped Classroom more than the Traditional Classroom. "Relaxing" would be the major reasons that make students think that why they like Flapped Classroom more and why they could raise more opinion. On the other hand, students raised the concern that they find difficulties on learning materials themselves and hence professor may provide more support in solving this problem.

## List of Presenters

Abstract #	Presenter(s)	Unit	Title	Poster	Talk
1	Prof. Ann HUSS Rashon CLARK Pauline DAY Nathan FABER	Morningside College	The Design and Implementation of Complex Micro-modules and their Impact on College General Education Tutorial Teaching and Learning	P1	T16
2	Prof. Kit-Tai HAU	Department of Educational Psychology	Flip and the Ultimate Goal of Flip: Experience with Research Methodology Courses	P2	T5
3	Prof. Eunice Lai-yiu TANG Dr. Eric Mau-yuen NG	Department of Curriculum and Instruction	Teaching Awareness Enhancement: A Video Repository for Chinese Language Teacher Education (教學觸覺提升計劃: 中文教師教學錄影專頁)	P3	T32
4	Prof. Cecilia CHUN Kin Chi WONG	Centre for Learning Enhancement And Research	Preliminary Findings of the CUHK Undergraduate Exit Survey	P4	T11
5	Dr. Yvonne LOONG Dr. Felix CHAO	Independent Learning Centre	ISDS Ex: Promoting Independent Learning and Improving Students' Interview Performance via a One-Stop Online Platform	P5	T17
6	Prof. Irwin KING Bo ZHU Anne HU Raymond YUEN	Department of Computer Science and Engineering	KEEP Learning for Life	P6	T1
7	Dr. John O'REILLY Prof. A.S. HA Prof. W.C. SO Prof. C.S. TSE Prof. Y.L. WONG	Department of Sports Science and Physical Education	Examining the Effectiveness of "The Flipped Classroom" in Teacher Education Profession	P7	T26
8	Prof. Sharon Wai-yee WONG	Department of Anthropology	Studying Archaeology and Cultural Heritage Out of the Classroom: An Experiential Learning Project in Lei Yue Mun Museum and its Community	P8	T22
9	Chi Leung CHAN Kwun Hung CHANG Ka Yee SHUM	Yale-China Chinese Language Centre	Flipping Second Language Classrooms with Audio-visual Materials: Design, Production, and Evaluation of Developing Audio-visual Materials for Cantonese Second Language Learners	P9	T7
10	Dr. Kiu Tung POON	Department of Music	Shifting from Teacher-centered to Student-centered Education: A Project-based Approach to Piano Pedagogy	P10	T27
11	Prof. King-Ming CHAN <sup>1</sup> Prof. Morris S.Y. JONG <sup>2</sup>	<sup>1</sup> School of Life Sciences <sup>2</sup> Department of Curriculum and Instruction	Field Venture: Mobile Electronic Work Sheet for Field Study	P11	T29
12	Prof. Charles GOMERSALL <sup>1</sup> Prof. Wai Tat WONG <sup>1</sup> Prof. Czarina LEUNG <sup>1</sup> Prof. Gavin JOYNT <sup>1</sup> Prof. Colin GRAHAM <sup>2</sup>	<sup>1</sup> Department of Anaesthesia & Intensive Care <sup>2</sup> Academic Emergency Medicine	Experience of a Flipped Classroom Course to Teach Care of Critically Ill Patients	P12	T3
13	Prof. Czarina LEUNG	Department of Anaesthesia and Intensive Care	Complex Skills Training via Blended Learning	P13	T8
14	Dr. Wai Tat WONG Prof. Czarina LEUNG Prof. Charles GOMERSALL Prof. Gavin JOYNT	Department of Anaesthesia and Intensive Care	Controlled Trial to Evaluate the Effectiveness of a Computer Application in Teaching Chest Compression as an Adjunct to the Usual Cardiopulmonary Resuscitation Training on Medical Student	P14	T13
15	Prof. Carmen WONG <sup>1,2</sup> Prof. Shekhar KUMTA <sup>2</sup> Prof. Paul LAI <sup>2,3</sup> Prof. Samuel WONG <sup>1</sup> Wai Yan KAM <sup>3</sup> Sandra WONG <sup>1</sup>	<sup>1</sup> Family Medicine And Primary Healthcare <sup>2</sup> Task force for Clinical Communication Skills <sup>3</sup> Office of Medical Education	Blended Learning of Clinical Communications Skills Using eLearning Modules, Role Play Workshops and Video Review	P15	T14

16	Dr. Willmann LIANG	School of Biomedical Sciences	PictoPharm: An Innovative Approach to Learn Drug Names	P16	T18
17	Dr. Wai Kai WONG Dr. Ann Sin Nga LAU Dr. Sam Hong Kit POON Dr. Rebecca Kit Ying LEE Dr. Willmann LIANG	School of Biomedical Sciences	Learning Through Discovery: The Use of First-Person-Immersive Illustration (Augmented Reality, Virtual Reality and Mixed Reality) On a Variety of Biomedical Sciences Teaching	P17	T9
18	Dr. Cho Lee WONG Prof. Carmen W.H. CHAN Prof. Helen Yue Lai CHAN	The Nethersole School of Nursing	A Flipped Classroom with Micro-modules in a Foundation Nursing Course	P18	T24
19	Prof. Vivian LEE <sup>1</sup> Prof. Janita CHAU <sup>2</sup> Prof. Bryan YAN <sup>3</sup> Ann LAU <sup>4</sup> Michael CHUNG <sup>5</sup> Prof. Wallace CHAN <sup>6</sup> Franco CHENG <sup>1</sup> Enoch NG <sup>1</sup> Laadan LO <sup>1</sup> Felix FONG <sup>1</sup> Livia NGAI <sup>1</sup>	<sup>1</sup> School of Pharmacy <sup>2</sup> Nethersole School of Nursing <sup>3</sup> Department of Medicine and Therapeutics <sup>4</sup> School of Biomedical Sciences <sup>5</sup> School of Chinese Medicine <sup>6</sup> Department of Social Work	Use of a Collaborative Approach to Improve Teaching And Learning Yielding Sustainable and Translational Outcomes (CATALYST)	P19	T19
20	Dr. Sandy Wan Heng HOI Dr. Wing Hung WONG Dr. Kam Moon PANG	Office of University General Education	Confronting Science Anxiety through In Dialogue with Nature	P20	T30
21	Dr. Kenneth Ming LI Dr. Kevin Chi Wai LAI Dr. Wai Man SZETO	Office of University General Education	UGFN Animated – Flipped Classroom with Whiteboard Animations	P21	T10
22	Dr. Kai Ming KIANG Dr. Derek Hang Cheong CHEUNG Dr. Andy Ka Leung NG Dr. Vivian Jun WU	Office of University General Education	Micro-modules for UGFN1000 Classroom Flipping	P22	T15
23	Dr. Derek Hang Cheong CHEUNG Dr. Andy Ka Leung NG Dr. Kai Ming KIANG Hin Yan CHAN	Office of University General Education	Effects and Risks of Micro-module Implementation in UGFN1000	P23	T20
24	Dr. Jie YANG	Office of University General Education	Bilingual Mechanism for University General Education in Classic Reading and Discussion	P24	T25
25	Dr. Wai Man SZETO Prof. Mei Yee LEUNG Dr. Kenneth Ming LI Dr. Vivian Jun WU Dr. Amber Lo Ming YIP Isaac Ka Tai WONG Ann Ka Yu LAI	Office of University General Education	How PASS works in the General Education Foundation Programme: A Mixed Methods Study	P25	-
26	Dr. Ka Wai Kevin IP Dr. Kam Moon PANG Dr. Wing Hung WONG	Office of University General Education	Micro-modules in a Pilot Development of the “MOIRE” Platform for GEFP	P26	-
27	Dr. Kevin K. W. IP	Office of University General Education	UGFH1010 Beyond the Dialogue with Humanity	P27	-
28	Dr. Paula HODGSON <sup>1</sup> Betty HUI <sup>1</sup> Dr. Masato KAJIMOTO <sup>2</sup> Xiangyu HOU <sup>3</sup>	<sup>1</sup> Centre for Learning Enhancement And Research <sup>2</sup> Journalism and Media Studies Centre, The University of Hong Kong <sup>3</sup> Technology-Enriched Learning Initiative, The University of Hong Kong	Cognitive Exchange and Dissonance in a MOOC Forum	P28	T21
29	Betty HUI Dr. Paula HODGSON Cindi TANG	Center for Learning Enhancement And Research	Maximizing Student Engagement: Variations in Assessment Tasks	P29	T31

30	Dr. Paula HODGSON <sup>1</sup> Agnes FONG <sup>2</sup> Coco LAM <sup>1</sup> Irene LEUNG <sup>1</sup> Flora LEUNG <sup>1</sup> Mavis CHAN <sup>1</sup>	<sup>1</sup> Centre for Learning Enhancement And Research <sup>2</sup> Centre for eLearning Innovation and Technology	Rapid Prototyping to Optimize Animated Cases for Effective Learning	P30	-
31	Queenie LAI	Faculty of Law	Making Law Students Client Ready: Training Students Lawyering Skills in a Substantive Law Course	-	T23
32	Prof. Michael LOWER	Faculty of Law	Student Control of the Means of Knowledge Production	-	T28
33	Raymond LEUNG <sup>1</sup> Dr. Jacqueline WONG <sup>2</sup>	<sup>1</sup> Office of Student Affairs <sup>2</sup> Department of Decision Sciences and Managerial Economics	Student Control of the Means of Knowledge Production	P31	-
34	Prof. Chung CHAN	Institute of Network Coding	HTML Slides: An Alternative to Video Lectures	P32	-
35	Prof. Rosanna Yuen-Yan CHAN <sup>1</sup> Dr. Cecilia Ka Yuk, CHAN <sup>2</sup> Carmen Ka Man LAU <sup>3</sup> Lillian, LUK <sup>1</sup> Lavina, LUK <sup>1</sup>	<sup>1</sup> Department of Information Engineering <sup>2</sup> Centre for the Enhancement of Teaching and Learning, The University of Hong Kong <sup>3</sup> Centre for Learning Enhancement And Research	Developing, Assessing and Providing Direct Evidence of Engineering Student Learning in Generic Skills	P33	-
36	Dr. Sally Wai-Yan WAN Yuen-Shan TSE Ylena Yan WONG Archie Chong-Kwai YEUNG Leo Lik-Chung WONG Jacky Chun WONG Kelvin Shing-Pan CHONG Thomas Wing-Ki LEE	Department of Curriculum and Instruction	Understanding Undergraduate Students' Intercultural Sensitivity and International Experiences	P34	-
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