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

PART I

Project title: Flipped teaching of culinary skills: use of demonstration videos to enhance hands-on practice of basic culinary skills
Principal supervisor: Gentiana Cheung
Co-supervisor(s): N/A
Department / Unit: School of Hotel and Tourism Management
Project duration: From May 2017 to April 2018
Date report submitted: 30 April 2018

1. Project objectives

Live demonstration is usually adopted to teach technical skills. Students learnt the best after watching how certain thing is done through demonstration. The only challenge is the how to deliver the demonstration effectively with a class size of 45 students per class. The objectives of this project are to produce videos which capture all demonstration process for students to preview at home before class starts, and more practice times can be planned for students. Video takes the advantage of explaining a technical skill or an object with different zoom in or zoom out effect, stop and rewind functions which increase the students understanding level.

The video taping process went very smoothly, the first draft of all 16 videos were taped before the semester started in January 2018. Few trial sample videos together with learning material were uploaded to blackboard prior to class. Students were requested to view the demonstration video prior to each class, and they were being reminded to watch the video as it would be tested in the beginning of the each class. After taking a quiz, students would then see the quick live demonstration (content same as video) with further discussion in class before they practice the respective skills on their own.

Students were being tracked on their video viewing pattern throughout the semester. It is found

that if students know that the videos contents would be tested, the overall pre-viewing records would be around 80-85%. Yet if there is no indication of quiz, the pre-viewing record dropped to 15%. Quiz seems to be the key motivational factor that would encourage students preview the videos prior to their attendance of the class.

Some students comments that more captions would be needed to further elaborate/explain certain actions captured on videos. It is decided that more explanation notes should be added to the videos and all 16 videos were further edited in the middle of the semester.

The objectives of the project shifted a bit from a goal of enhancing technical skill through video viewing, to improve motivation to view the video prior to class and improve the overall interactive experience throughout the video watching process.

2. Process, outcomes or deliverables

Totally 16 videos were produced (list on column 3 below) for the entire HTMG2070 F&B Management Course for 85 students on the 2nd term of 2017/2018. The videos were applicable to 6 modules throughout the semester. The below table indicate how videos were incorporated into each module to support the lessons, the length of the videos varies depend on the context of the demonstration.

Teaching period	Content	What videos were previewed before class
Week 2	1. Service areas and equipment 2. Essential service attributes, professional code of practice 3. Service attributes of F&B personnel 4. Basic technical skills 5. Menu design	*Video view before class* • Name of serviceware (00:50)
Week 3	1. Marketing cycle and marketing mix 2. Preparation for service (linen, cutlery, crockery, glassware, sideboard) 3. Service sequence application in different segments 4. Full fine dining service sequence 5. Table management	*Video view before class* • Napkin folding (02:30) • Table set up (00:36)
Week 4	1. Types of Cocktails 2. Cocktail terms 3. Basic coffee and tea knowledge 4. Basic wine knowledge 5. Uniform wearing standards	*Video view before class* • Wine bottle opening (01:48) • Coffee making (01:53) • Tie a neckerchief (01:00)

Week 5	1. Menu Development 2. Recipe standardization 3. Names of ingredients and measurement 4. Food sanitation and safety 5. Kitchen tools and equipment 6. Basic cutting of vegetables 7. Knife handling, maintenance & safety	***Video view before class*** • Kitchen equipment (01:38) • Knife safety usage (00:42) • Onion Cutting (00:50) • Vegetable cutting (04:53)

Week 6	1. Cooking methods
	  •Flavoring principles
	  •Main course cooking
	  •Grilling
	  •Panfried
	  •Braise
	  •Stew
	2. Plating techniques and presentation
		Video view before class
		• Kitchen utensils (00:49)
		• Chicken Cutting (01:00)
		• Chicken trussing (00:49)

Week 7	Dessert making principles
	  • Bread dough making
	  • Pastry dough making
	  • Croissant shaping
		Video view before class
		• Yeast bread dough making (02:06)
		• Roll up preparation (01:54)
		• Croissant shaping (01:38)

All videos were produced before the 2nd term started in January 2018, videos were able to uploaded to Blackboard learning platform prior to start of each class. Students were asked to preview the video before attending the class to see the live demonstration. It is interesting to note that if teacher specifies that the video would be tested, the video viewing rate maintains at 80%-85%. And if there is no quiz, the pre-viewing rate dropped to 15%. For technical skills video such as chicken cutting, chicken trussing, dough making for instance, students were expected to watch the video at home before they come to see the chef's life demonstration and then move on for practice sessions. Class teacher did not specify that they would be tested. Regardless knowing the fact that they need to cut the chicken and cook a dish right after watching the live demonstration, it was found that the pre-viewing rate was very low at 15%.

How to motivate and ensure students taking the pre-view action at home would therefore become a challenge. In this project, we found that linking the preview action with course grade is a very effective method. We also try to add forced questions and answers in one of the video, and students found that more interactive and interesting than just watching from the beginning to the end. Increase interactive elements in videos is one issue, how we ensure students get the motivation and willing to watch them before class is another important issue we need to tackle. Students will not know out video is interactive and interesting to watch if they do not have the motivation or willingness to watch in the beginning.

Overall speaking, the video production process completed very satisfactory with very good quality. The filming times were all under control as planned and finished as expected. But through observation of the students viewing behaviors for about 2 months prior to the end of the semester, all 16 videos were sent back to the production company for additional editing. More captions were added to each video. I think further modification of the videos with more interactive elements will help forcing students finish viewing the video, increase their interaction level and hence increase the skills level. Quiz and assignment are must have

elements that should be attached to the preview tasks, otherwise motivational level to watch the videos prior to class would not be maintained.

3. Evaluation Plan

I originally expect that students would feel interested to watch the videos at home if the playing time of the video keep short at 1 minute to 2 minutes. Blackboard was used as platform to track viewing statistics throughout the semester. Quiz was adopted to test the preview effort. Results indicate that regardless the playing length of the video, students understanding level and preview records maintains high at 85% if the preview effort link to course grades.

4. Dissemination, diffusion and impact

All videos were uploaded to students' Blackboard platform. Impact can be shown from students' understanding level and technical skills performance level. If we need to compare, I would say the group project outcome is much better than the previous years, but it may also due to other alteration of the course group project design. One major impact is that students welcome the idea to have more practice time instead of watching the lengthy live demonstration. Preview efforts at home help increasing the understanding level for quiz, practice in class and revision. Because of the previewing efforts, live demonstration time can be shortened and focus on key points, more practice times can then be planned for students.

PART II

Financial data

Funds available:

Funds awarded from MMCDG $ 99,000

Funds secured from other sources $
(please specify_____)

                            Total: $ 99,000

Expenditure:

Item	Budget as per application	Expenditure	Balance
Video taping, editing and production	$90,000	$90,000	0
Student helpers	$9,000	9,000	0
Total:	$99,000	$99,000	0

PART III

Lessons learnt from the project

The quality of the produced videos were good and tested to be useful to aid students learning before class. All these videos will be further edited with video editing tools to incorporate more interactive elements to the content. They will be uploaded to blackboard together with other course material. The viewing efforts will be connected quiz or assignment. Flipped learning mode will be able to move forward with the assistance of all these 16 videos.

The main success factors of this project are the quality of the production team, the professional demonstrators being identified to do the demonstration in the videos, and the instant feedbacks from students and the data collect from blackboard on the students viewing behaviors.

The main challenge lies on the lengthy production process, I did not expect that taping a 2 mins video would take more than half day filming times. The scripts writing process is also very time consuming.

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: skills learning

Keyword 2: video learning

Keyword 3: interactive video learning

Keyword 4: flipped learning with video

(Least relevant)   Keyword 5: learning enhancement

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: N/A**
(b) **Webpage(s): N/A**
(c) **Tools / Services: N/A**
(d) **Pedagogical Uses:** 16 videos were used as pre-reading material for students to watch

before letting students seeing the live demonstration in class.
(c) **Others (please specify):** N/A

Table 2: Resources accessible to a target group of students (if any): N/A	
Table 3: Presentation (if any): N/A	
Table 4: Publication (if any): N/A	

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.

The traditional way of teaching technical skill is through live demonstration and lots of practice in class. Over the past years, it is always a challenge finding sufficient time for students to practice a skill immediately after they learn in class. Although theories and live demonstration always be a key element used to teach a skill, the practice times usually will be sacrificed if students need to watch a lengthy live demonstration session. The main goal of this project is to capture content that need to be explained through a live demonstration in class with a pre-record video. If students watch the videos before class, then after the delivery of a lecture, only a very short live demonstration would serve the purposes in learning enhancement instead of taking the role in teaching from scratch like the traditional method.

Regardless of the complicated filming process that were taken care by a production company, a total of 16 videos were produced. The production process went very smoothly and a wide range of content were filmed with from the shortest video length of 36 seconds to the longest of 4.5 minutes. It took 6 months to complete the filming and editing process. The video drafts were then uploaded to blackboard for trial on the 2nd term of this semester in the F&B Management subject with class size of 83 students. Verbal feedbacks were collected from students, students viewing statistics were also downloaded from Blackboard for analysis.

It is found that regardless the length of video from very short of 36 seconds to a very lengthy video of 4:55 minutes, students will be motivated to watch them before class if their efforts are link to the course grades. For the flipped learning to be successful, teachers need to provide linkage of home assignment (video watching) with course grades. It is found from this project that by linking the watching efforts with grades, students are more willing to do the flipped learning at home, the viewing rate is 80%-85%, yet if viewing efforts only link to practice outcome, the preview rate dropped to 15%.

The objective of this class to help students acquire required technical culinary and service skills within a 8-week learning period, and they will need to use the learnt skills to complete a group project. How can we ensure that students are willing to spent time to learn in advance (watch video before class), come to class to see a quick live demonstration and ready to practice acquiring a new skill? Videos seems be able to serve the purposes of providing visual records for preview and revision afterwards. But even it is known that video could be a good tool, students' willingness to watch a video is the key determining factor. To ensure the video watch efforts are not wasted, it is suggested that interactive elements be incorporated into the videos to aid learning. How videos content and interactive elements can help flipped learning from motivational perspective and skill learning can be further explore in future research.