

THE CHINESE UNIVERSITY OF HONG KONG

Micro-Module Courseware Development Grant

Scheme 3: eLearning Pedagogy Research

Interim Report (2015-16)

Report due 31 July 2016.

Please return by email to mmcd@cuhk.edu.hk

PART I

Project Title: E-Pilot Study (ePS) of the Micro-Modules in Teaching Anatomy and Physiology: Blended Learning Approach to the Health Professional Education in Faculty of Medicine

Principal supervisor: Dr Florence Tang

Department / Unit: School of Biomedical Sciences

Project duration: From February 2016 to January 2017

Date report submitted: 30 July, 2016

1. Project objectives

According to our proposal, we aimed to develop a new courseware and to assess its effectiveness in engaging learning among students. Starting from February to July, the first phase designed the content of the courseware targeting cardiovascular system, which shall support the teaching and learning in anatomy and physiology. The courseware composed of three elements, including narrative videos, clinical case studies, and quizzes that will then be launched in Blackboard Learn. In the second phase, evaluation study will assess the effectiveness of e-learning courseware for students' cognitive learning.

2. Progress on process, outcomes or deliverables

At present, our team is working on the design of the three micro-modules, including heart investigation, discussing the gross anatomical structures of the heart; Bullet Scanning test, tracing the circulatory pathway of the coronary circulation in the heart and the vessel micro-examination, examining the microscopic structures of the blood vessels. We renamed our courseware of e-Pilot Study as the eProfessional study, which is more appropriate to the target users of our courseware.

To attract students to access the ePS initiative, our team created a storyline-based introduction of the future space city to integrate all the learning materials of the micro-modules.

Our team has applied the idea of gamification, trying to add the interactive element in the formative assessment. In the simple terms, the courseware incorporate the "use of game design elements and game-play mechanics in non-game contexts", aiming to enhance students' learning interest and to prepare them for final examinations. The prototype of the first modules of the Heart Investigation has been buildup which has also been launched to the ITSC server in the web link as below for the reference:

http://137.189.27.142/mmc_d_eps/story.html (Please connect to VPN if you access the link outside campus network.)

3. Evaluation Plan

In related to our trial version of the content of the micro-modules, the questions in a questionnaire for the students have been reset. We had done the survey to address whether the content facilitates their self-reflection studies and students want to extend the topics in our newly developed platform.

We had collected feedbacks via the e-submission after their usage of the Heart Investigation. Overall, students have been expressed their opinions with the Likert scale which are set for five point scale. Therefore, student chose "SA" if he/she thought it always or almost always true of him/her; "A" if he/she thought it frequently true of him/her; "N" if he/she thought it is true to him/her about half the time; "D" if he/she thought it is sometimes true of him/her and "SD" if he/she thought it is never or only rarely true of him/her. The statements in the questionnaire are all about the content of the prototype and its effectiveness on the students' self-reflection studies. According to the data of the feedback as attached in the Appendix I, students agreed that the ePS as an interesting e-learning courseware with gamification approach for the study of the Cardiovascular System.

4. Dissemination Activities (reports, websites, video links, products, etc.)

So far, the prototype of the first modules of the Heart investigation has been uploaded to the Blackboard Learn for the trail run. The micro-modules of Heart Investigation in ePS are composed of three components, consisting of narrative videos, interactive structure

identification, and gamification. Learning should be regarded as active, cumulative, individual, self-regulated and goal-oriented. Therefore, all of the contents are to increase the enjoyment of personal psychological needs. We sincerely hope it can engage students' learning behaviour outside the classroom to motivate student achievement.

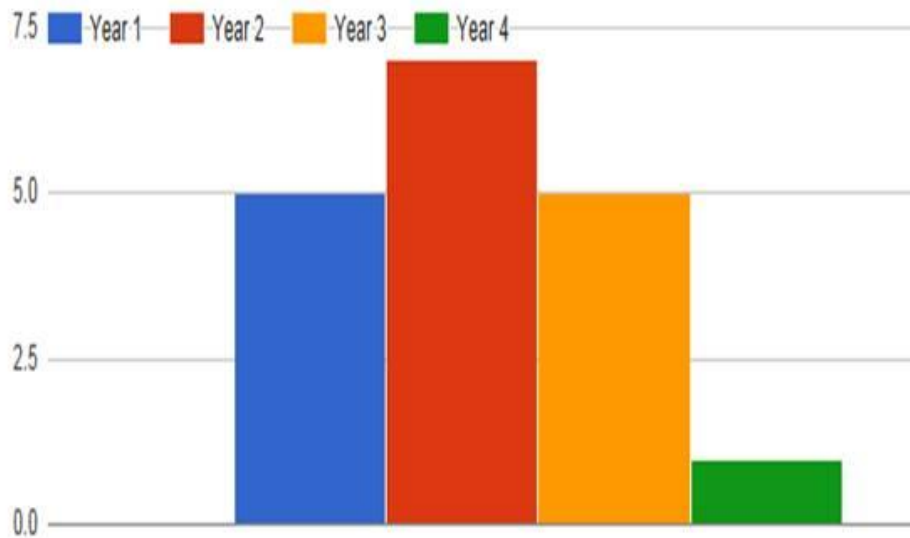
In the coming six months, we will further develop two other micro-modules and implement the ePS in the web-based system. We will encourage students to play with it within the period of lectures and practical sessions. Furthermore, the strategic plans for conducting the evaluation to collect all the evidenced based data will be launched for a research study.

Overall, our progress in the development of this project is on schedule and ePS should be a new innovative teaching courseware for the health professional students in our Faculty of Medicine.

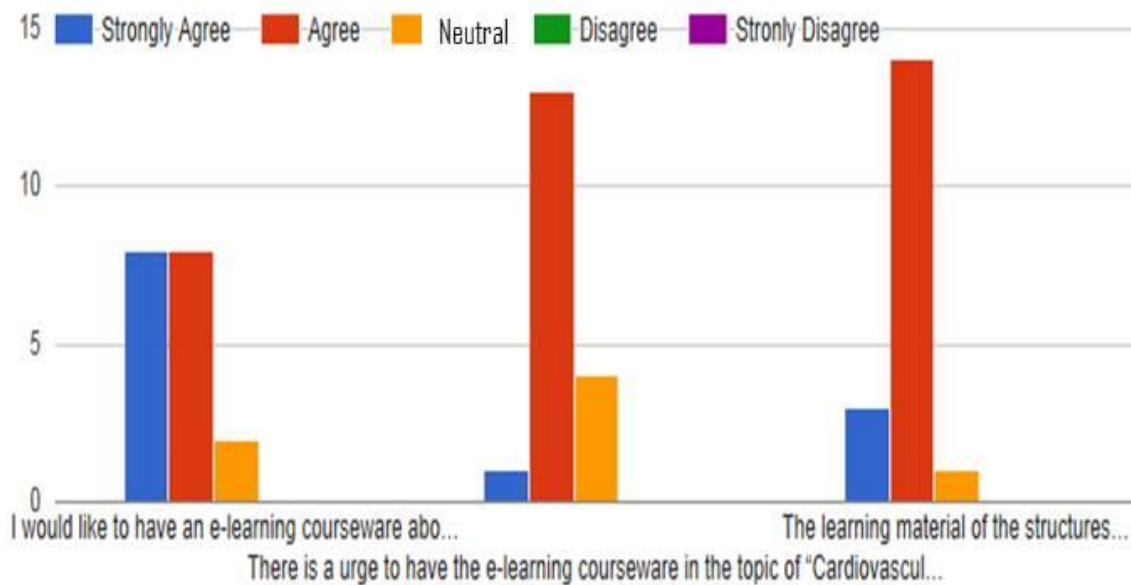
You can also visit the following web link for the interim report of our project:

<https://drive.google.com/open?id=0Bwe393FJsAywa243cXVKUW1WbVk>

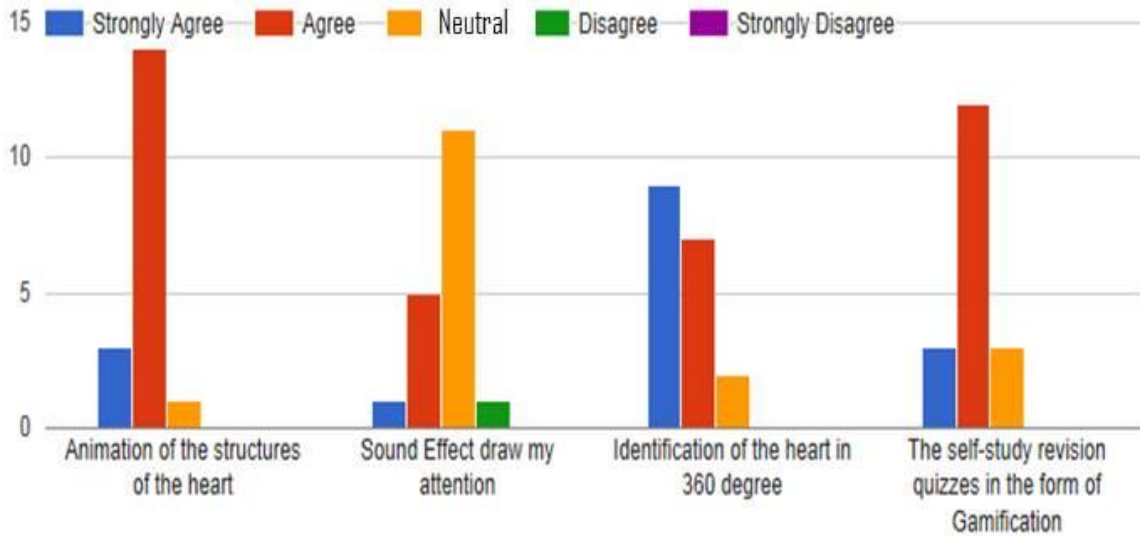
The Study year of the Participants



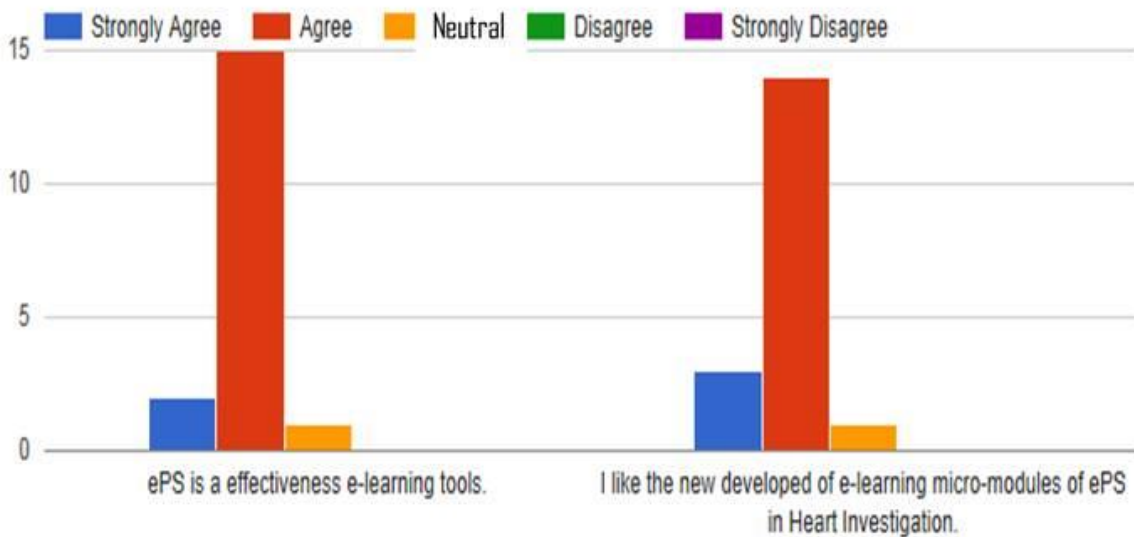
Generally, the attitude to use the e-learning course:



The contents of the structures of the heart listed below are good and facilitated for my self-reflection study.



Overall Comment:



Do you have any other comment? (18 responses)

It's quite lag. I have to wait for a while once I click a new button.
It would be better if I could rotate it by myself.

NA

None

I could not know the right answers for the quiz

The introduction is a bit too long and can be more interesting.

The video "check out more info. of the heart" is the most useful part. The background story is boring and waste the time. But once I skip the story, I cannot find the video. The "ERROR" screen really scares me.

not really

N/A

Overall interesting and new technology used to teach us. Be better if the correct answers be shown after each quiz answer submitted.

It is better to see the specimen on computer rather than in laboratory.

The story is quite interesting

appreciate the animation which is engaging. Perhaps for the 3D view of the heart it is helpful to label whether it is the front/back of the heart as I wasn't sure by how much degrees the heart was turned for each successive photo.

The label of 'left ventricle' of the heart in the 8th photo may be accidentally written as 'right ventricle'.

/

I like this software since it is helpful for my learning. Though when I clicked to reach the second stage, a page which says 'error' showed for a few seconds. Overall, this is a useful and fun way for revision, and I hope there would be more questions and in various types.