

THE CHINESE UNIVERSITY OF HONG KONG

Micro-Module Courseware Development Grant

Scheme 1: Basic Scheme

Interim Report (2016-17)

Report due 31 October 2017.

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

PART I

Project title: A Flipped Classroom of System Dynamics Modelling for Public Health

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Department / Unit: The Jockey Club School of Public Health and Primary Care

Project duration: From May 2017 to April 2018

Date report submitted: 30 Oct 2017

1. Project objectives

The flipped classroom is to introduce concepts and shows examples on applying system dynamics modeling on practical health research, as to demonstrate statistical tools' applications, build connections between existing courses and encourage students to learn outside classroom. In chapters uploaded, concepts and definitions of terms of the technique or approach were first introduced, followed by raising a research question and demonstrating how to apply the techniques to solve the problem through software. The techniques and examples were well-suit for policy research question. Despite that objectives of chapters were changed according to the change of contents and topics for some chapters, the project did close the gap between statistical techniques and its application on policy research and did fulfill the objective of introducing and providing examples of system dynamics modeling as statistical techniques in practical applications.

2. Progress on process, outcomes or deliverables

Three chapters of micro-modules were built and made ready for use. They were centralized in the course website (<http://micromodule17.comuf.com/Index%20for%20DM.html>), and have chapter subpages for Ch1: Basic Concepts of System Dynamic Models, Ch2: System dynamics in infectious diseases transmission - Causal Loop Diagram, and Ch3: System dynamics in infectious diseases transmission - Stock and Flow.

As no major obstacles were encountered during the production of first 3 modules, the remaining 2 modules were expected to be produced, edited and disseminated on December as indicated in the proposal. The series of 5 modules were to be finalized in or before April, as predicted by the expected completion date in the proposal.

3. Evaluation Plan

The proposed evaluation plan included collecting feedback from focus group for interim evaluation and surveys for final evaluation, and was not altered. Feedback from a focus group comprising 5 students indicated that overall, the first three micro-modules were practical, well-organized and illustrated clearly, yet improvements could be made on content delivery (e.g. outline and subtitles) and visual impacts (e.g. focus on small or vague diagrams was needed). Detailed comments were listed below.

Assessment criteria	Comments
First impression	Practical and clearly illustrated
Impacts to their learning	Simple and clear
Workload	Moderate
Strength and weakness	Strength: well organized and illustrated clearly Weakness: Some diagrams are vague or too small
Expectations	To get a general idea of system dynamics modeling
Additional comments and improvements	Content comments: <ul style="list-style-type: none"> - Should have an outline for each chapter - Bullet point by point - Subtitles - Speaking/spelling mistakes - Speak too slowly - Shorter content Editing comments: <ul style="list-style-type: none"> - Larger focus for software demonstration - Arrows/pointers for illustration - Smaller slide's title

Overall, as the students expected to learn about system dynamics modeling through the modules, and found the modules practical and well-organized with clear and simple impacts on their learning, the objectives of helping students acquire SD modeling skills outside classroom were expected to be achieved.

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

Three chapters of micro-modules were built, uploaded and ready for use to-date; they can be found on the course website (<http://micromodule17.comuf.com/Index%20for%20DM.html>), and have chapter subpages where teaching videos and references can be found:

Ch1: Basic Concepts of System Dynamic Models

(http://micromodule17.comuf.com/Ch1_DM.html)

Ch2: System dynamics in infectious diseases transmission: Causal Loop Diagram

(http://micromodule17.comuf.com/Ch2_DM.html)

Ch3: System dynamics in infectious diseases transmission: Stock and Flow

(http://micromodule17.comuf.com/Ch3_DM.html)

A short video on this interim report can be found on <https://youtu.be/5tAyiTe3oc>.