

Engaging Learners with Flipped Classroom:

*Progress and
initial findings*

**Speaker:
Dr. Eugenia Ng**

MIT Departmental
Seminar

30 December 2015



The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

Team Members

TDG Project (T0152): Engaging Learners with Flipped Classroom

 Search this site

- ▼ About the project
 - 1. The Project Timeline
 - 2. Evaluation
 - 3. Project Proposal
- ▼ Prior 1st Flipped Classroom Meeting
 - Further Videos
- Team Members**
- Useful Links
- Sitemap

Team Members

- [Dr. Ng Mee Wah Eugenia](#)
- [Dr. LAI, Yiu Chi](#)
- [Dr. MA, Wai Wing Ada](#)
- [Dr. NG, Mei Lee](#)
- [Dr. TSANG, Kwan Lan Vicky](#)
- [Dr. YANG, Chi Cheung Ruby](#)
- [Mr. YUEN, Tze Leung Raymond](#)



The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

Project Website

<https://sites.google.com/site/tdgt0152/>

The screenshot shows a web browser displaying the Google Sites page for the TDG Project (T0152). The page title is "TDG Project (T0152): Engaging Learners with Flipped Classroom". The left sidebar contains a navigation menu with links: "About the project", "1. The Project Timeline", "2. Evaluation", "3. Project Proposal", "Prior to Flipped Classroom Meeting", "Further Videos", "Team Members", "Useful Links", and "Sitemap". The main content area is titled "About the project" and includes a "Project Title:" field with the text "Engaging Learners with Flipped Classroom". Below this is an "Abstract of the Project:" section containing a paragraph about the flipped classroom pedagogy. At the bottom of the page is a large diagram titled "The Flipped Classroom" illustrating the learning process across three phases: "BEFORE" (Out of Class), "DURING" (In Class), and "AFTER" (Out of Class). The diagram uses icons to represent students and teachers, and arrows to show the flow of learning activities and goals.

TDG Project (T0152): Engaging Learners with Flipped Classroom

About the project

Project Title: *Engaging Learners with Flipped Classroom*

Abstract of the Project:

The pedagogy employed is called "flipped classroom" which emphasizes on flipping the directed instructions to online lectures but having group activities in classes. This project is aligned with the Institute's call for "one digital class for one course" and it also aims to foster learners' generic skills such as information technology, self-management and self-study. During a directed study week, learners will learn from different online materials prepared by their educators according to their online pre-test results. The online lecture materials may consist of a wide variety of digital formats such as videos, animations and pictures. Learners would attempt an online post-test after learning at their own pace and time. Thus, both learners and educators would be informed of participants' learning outcomes conveniently and quickly. To consolidate learners' knowledge, they would also apply their recent acquired knowledge to solve authentic problems in groups when they meet in class where the educator could provide more support to those learners who did not do well in the post-test. The series of activities proposed not only help learners to become more engaged in the learning process but also the individual differences could be better taken care of.

The Flipped Classroom

BEFORE (OUT OF CLASS): Students prepare to participate in class activities. **GOAL**

DURING (IN CLASS): Students practice applying key concepts with feedback. **GOAL**

AFTER (OUT OF CLASS): Students check their understanding and extend their learning. **GOAL**



The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

Project Timeline

TDG Project (T0152): Engaging Learners with Flipped Classroom

Search this site

About the project

- 1. The Project Timeline
- 2. Evaluation
- 3. Project Proposal

Prior to Flipped Classroom Meeting

Further Videos

Team Members

Useful Links

Sitemap

About the project >

1. The Project Timeline

The project will be carried out in the following steps:

- Colleagues will identify the concepts that would be difficult to be taught using the "board and chalk" method;
- Educators to design pre-test, digital lecture materials and post-test which will be developed with the assistance of a senior research assistant;
- To prepare participants to be engaged in the "flipped classroom" activities, they will be asked to attempt an online pre-test during class hours and the educator will illustrate what videos to watch according to pre-test results. For example, there are 3 digital lecturing materials, namely DLMA, DLMB and DLMC which are presentation files that are narrated by the educator. There are 4 questions of the pre-tests that are related to one digital material. If they cannot get 3/4 of the answers correct for DLMA, they would be asked to learn from it accordingly. They would also be required to watch 1-2 videos which show how the concepts that are applied in the real world situation.
- Learners will be required to take an online post-test which has the same 12 questions as the pre-tests in addition to 3-4 closed-end questions related to the videos. Both the learners and educators would be informed of students' learning outcomes from post-tests results.
- Learners to solve problems in groups to apply of what they have learnt in authentic situations.
- Learners are required to reflect if they could attain the learning objectives of the topic which they learnt through flipped classroom at the end of the activity via an online questionnaire. Some of them will share the experiences of the flipped classroom through focus group meetings and to reflect on how this innovation experience could be transferred to other courses/the workplace.
- Educators to share the experiences of how this innovation approach could enhance learners' learning outcomes through interviews and sharing sessions and to reflect on how the experience could be transferred to other courses;
- Senior research assistant to assist the educators to revise the learning materials and tests if deemed necessary, and
- Team members to share their experiences by reference to pre-test and post-test results, learners' focus group groups opinions and their own observations through presentation and publications. Team members could also provide expert advice on the design elements such as music, special needs, health and languages to other team members when in needs.

The following project plan mainly elicits the actions required from educators and senior research assistance for this project.

Stage	Objectives	Activity Planned	Timeline
1	Preparation for meeting all objectives.	<u>Coordination and Preparation</u> The project team will meet to discuss the plan and timeline for project implementation. The Senior Research Assistant (SRA) will interview and discuss with the project members to obtain the detailed the requirements. The principal project supervisor (PI) will co-ordinate the required work with the assistance from the SRA.	June 2015
2	1.1. To co-ordinate with	1.1.1. To co-ordinate with	June - Dec 2015



The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

Project Evaluation

TDG Project (T0152): Engaging Learners with Flipped Classroom

 Search this site

About the project

1. The Project Timeline
2. Evaluation
3. Project Proposal

Prior 1st Flipped Classroom Meeting

Further Video

Team Members

Useful Links

Sitemap

About the project >

2. Evaluation

A. For learners:

Objectives	Evaluation
<ul style="list-style-type: none"> ➤ To be transformed from passive to active learners. 	<p>To compare the number of video clippings viewed with reference to the pre-test results.</p> <p>Observations by the educator during class activities.</p> <p>Evidences are gathered from multiple sources (pre- and post- test results, online questionnaire, focus group meetings and observations of face-to-face interactions) which form a holistic picture to support/not support if learners could be transformed from passive to active learners.</p>
<ul style="list-style-type: none"> ➤ To develop learners' generic skills, in particular, self-study, self-management, collaboration and information technology. 	<p>Comparison of the pre- and post-test results.</p> <p>Learners' experiences shared during focus group meetings.</p>



The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

Preparations prior to the first meeting

**TDG Project (T0152):
Engaging Learners with
Flipped Classroom**

Search this site

Prior 1st Flipped Classroom Meeting

We would like you to experience flipped classroom in this project prior to implementation so that you could have a better understanding of it.

1. You might like to watch 1 to 3 videos below to have some general ideas about flipped classroom pedagogy and to fill in the questionnaire afterward.
2. Please also fill in the project requirement questionnaire so that we could have a better understanding of your requirements as well.

Contents

- [1. Introductory Videos](#)
 - [1.1 Video 1 - Introduction to Flipped classroom \(English with Chinese subtitle\)](#)
 - [1.2 Video 2 - Introduction to Flipped classroom \(Cantonese Version\) \(English\)](#)
 - [1.3 Video 3 - A teacher's sharing about Flipped classroom \(香港區中學 - 夏永達老師\) \(Cantonese with real life examples\)](#)
 - [1.4 Video 4 - An Animation of Flipped classroom: The Full Picture \(English with animation\)](#)
 - [1.5 Flipped Classroom Requirements Questionnaire](#)

1. Introductory Videos

Video 1 - Introduction to flipped classroom (English with Chinese subtitle):

“翻轉教室” (Flipped classroom) (配中文字幕)

7.21 million

但這需要學校無法提供的額外時間跟資源

Name: *

I have fully understood the contents of the video. *

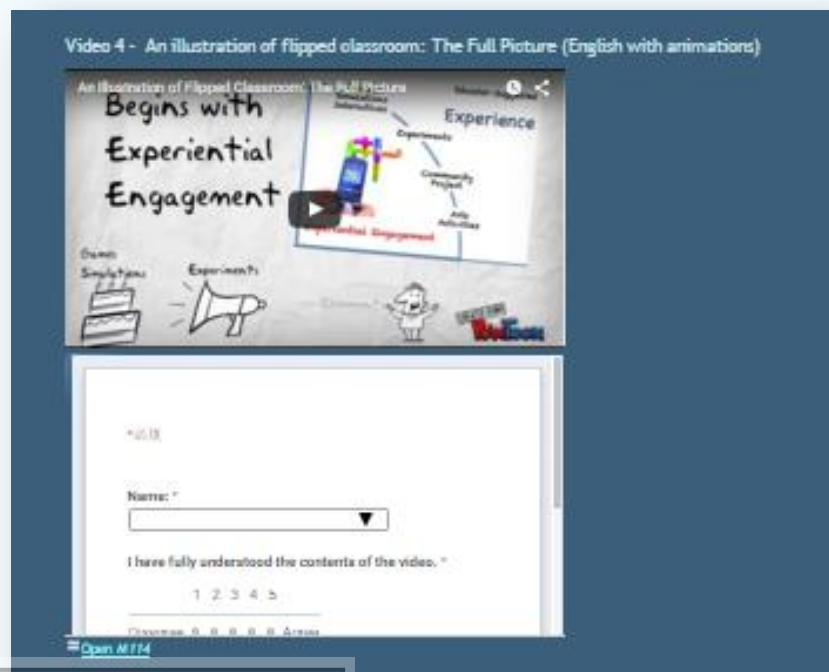
1 2 3 4 5

Disagree Agree

提交

Open M111

Sample of Video & Sample of Questionnaire



Flipped Classroom Requirements Questionnaire

*必填

Name: *

I would like to try to design flipped classroom activities on the topic of *

I would like assistance to edit/produce the following resources: (multiple answers allowed)

☐ Animations

☐ Pictures

☐ PowerPoint materials

☐ Sound

☐ Videos

☐ 其他:

I would like assistance to produce the following quizzes: (multiple answers allowed)

☐ Discussion forum

☐ Fill in the blanks

☐ Matching

☐ Multiple choice

☐ True/false

☐ 其他:

Which month and year do you expect to use flipped classroom activities?

Month:

Year:

Which month and year do you expect to require video recording for classroom activities?

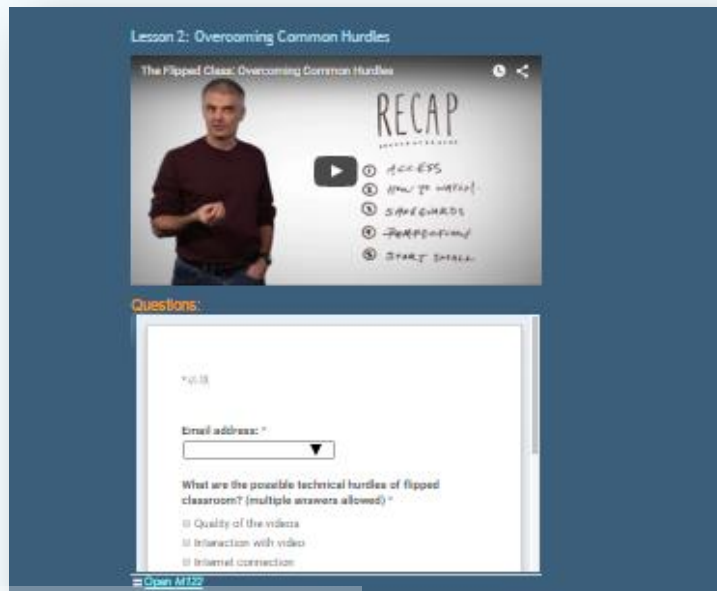
Open M115



The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

Further Videos



Project Progress

Teacher's Name	Course Name	Topic	No. of Topics	No. of Students
NG, Mee Wah Eugenia	IT in Education	<ul style="list-style-type: none"> Photo Editing 	1	74
MA, Wai Wing Ada	Health Behavior-Theory and Programme Planning	<ul style="list-style-type: none"> Health Belief Model Social Cognitive Theory Diffusion of Innovations Theory Precede-Proceed Planning Model 	4	46
NG, Mei Lee	Early Experiences in English	<ul style="list-style-type: none"> ESL and EFL Children Characteristics PA & Phonics Oral vocabulary 	4	51
YANG, Chi Cheung Ruby	English I	<ul style="list-style-type: none"> Stress and Intonation 	1	62
YUEN, Tze Leung Raymond	中國樂器	<ul style="list-style-type: none"> 三分損益法 	1	67



Learning Activities

Teacher's Name	Online resources	Online Assessment	Activities in the Classroom
NG, Mee Wah Eugenia	19 videos	<ul style="list-style-type: none"> 1 pre-test 1 post-test 	Individual exercise: editing individual photos Group work: editing photos for websites
MA, Wai Wing Ada	4 Online PPT 9 videos	<ul style="list-style-type: none"> 4 pre-tests 4 post-tests 	Students were required to complete the quiz that was conducted via flipped classroom after the student-led seminars had been conducted in the classroom. Content that students had most problem with were identified and were revisited/revised in the classroom after data analysis of the flipped classroom activities.
NG, Mei Lee	5 videos	<ul style="list-style-type: none"> 4 pre-tests 4 post-tests 	Group exercise : play and critique vocabulary/phonic games Group work : inventing their own rhymes
YANG, Chi Cheung Ruby	3 videos 3 websites	<ul style="list-style-type: none"> 1 pre-test 1 post-test 3 quizzes 1 exercise 	Students read aloud a prose passage assigned by teacher (a story extracted from a science fiction). They recorded their reading aloud and uploaded their recording to Moodle. After that, students had to apply the knowledge they had learned to give comments (both positive and negative) to their peers' reading aloud performance.
YUEN, Tze Leung Raymond	1 Flash animation	<ul style="list-style-type: none"> 1 pre-test 1 post-test 	Group work: Use a straw to produce pentatonic scale



Case Study

Course - INT1037
IT in Education

Topic: Image Editing



The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

The Study

Participants

- The current study was conducted during the first semester of 2015 at the HKIEd
- It involved student teachers (hereafter, participants) enrolled in the Higher Diploma in Early Childhood Education during the first semester of their studies.
- Almost all the participants were female students who expected to teach in kindergartens (K1-K3).
- All the participants had recently completed their secondary school education.
- Two classes participated in the study: one class had 38 students, while the other had 36 students.

The Study

- The participants were taking an “Information Technology in Education” course taught by the presenter during the study period.
- At the end of lesson three, students were introduced to the flipped classroom pedagogy and attempted a pre-test.
- They were required to learn about a web-based photo editing software called Pixlr in their own time prior to attending classes next week.
- There were a total of 19 video clips which were created by a research assistant supervised by the presenter.
- The short videos show various editing functions of Pixlr as shown in Figure 1. Students could view any video based on their own needs and they were reminded that it was not necessary to watch them all.



Figure 1: Online video clips

Screen shot

內容

- [1 開啟Pixlr](#)
- [2 註冊](#)
- [3 登入](#)
- [4 語言設置](#)
- [5 打開圖片](#)
- [6 選擇工具、拷貝、粘貼](#)
- [7 魔棒工具、清除](#)
- [8 套索工具、透明背景](#)
- [9 保存PNG](#)
- [10 圖片合併、變換和變形](#)
- [11 複製圖層、圖層位置](#)
- [12 更換背景](#)
- [13 歷史記錄](#)
- [14 保存JPG](#)
- [15 圖片格式](#)
- [16 濾鏡](#)
- [17 調節像素](#)
- [18 亮度、對比度](#)
- [19 色相、色彩平衡、飽和度](#)

Translation

Contents

1. Open [Pixlr](#)
2. Sign Up
3. Login
4. Select language
5. Select images
6. Select tools, copy and paste
7. Wand tool, clear
8. Marquee tool, transparent background
9. Save images in PNG format
10. Merge images, change images, and shapes
11. Create layers, move layers
12. Change background
13. Editing history
14. Save images in JPG format
15. Formats of images
16. Using filter
17. Adjust pixels
18. Adjust brightness, contrast
19. Adjust hue, color balance, and saturation



The Education University
of Hong Kong Library

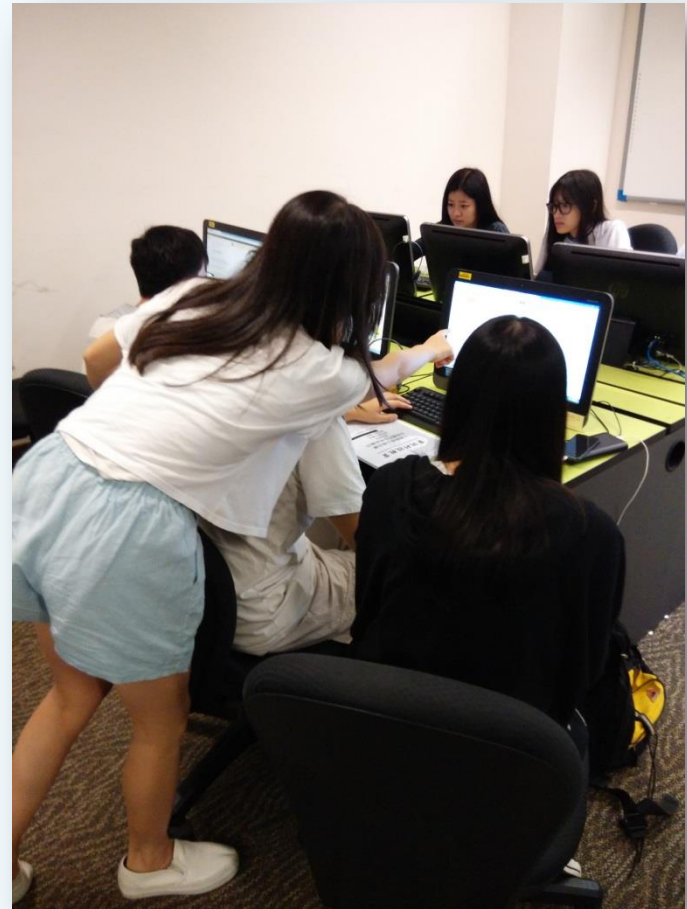
For private study or research only.
Not for publication or further reproduction.

The Study

- When the participants attended classes the following week, they were asked to apply the learned techniques in classes:
- Group work: editing photos for websites
- Individual work: editing individual photos



Learning Activities in Class



The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

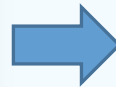
Learning Activities in Class



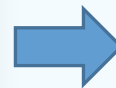
Outcome - Example of edited photos (Group)



Original image



Edited image



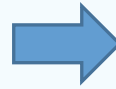
The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

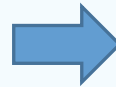
Outcome - Example of edited photos (Individual)



Original image



Edited image



Outcome - Focus Group Meetings

- 我覺得翻轉教室學東西沒有這麼悶，因為傳統是老師給什麼，我就要學什麼，但是這次是自己可以選自己想看的東西.....
- I think learning with flipped classroom is less boring. It is because I only learn what teachers teach using the traditional teaching method. However, this time I can choose what I want to watch...

Video 1

- 如果只是在課堂教，老師會因為課堂的時間講得快，有些同學未必跟到，就錯過一些東西，學不到了。如果在家自學的話，可以一步一步來，跟著自己的進度.....
- Some students may not be able to follow and may miss something because teachers may be speaking too fast within limited teaching time when they teach in classes. If I study at home, I can learn step by step at my own pace...

Video 2

- 翻轉教室的教學方法可以增加我對這科的興趣.....
- Flipped classroom can increase my interest in this subject...

Video 3



The Education University
of Hong Kong Library

For private study or research only.
Not for publication or further reproduction.

Next Step

1. Sharing Seminar with team members (Jan 2016)
2. 2nd Phase of Implementation (Dr. Lai, Dr. Tsang, Dr. Yang)
3. Publication
4. Seminar
5. Final report



Q&A

Thank you for attending!



**The Education University
of Hong Kong Library**

For private study or research only.
Not for publication or further reproduction.