

資訊科技教育電子領導系列

如何在中學進行「課程規劃」  
以促進推行電子學習經驗分享會

2016/04/19



宣道會陳朱素華紀念中學

宣道會陳朱素華紀念中學

宣道會陳朱素華紀念中學

# 學校簡介

- 位於新界粉嶺
- 基督教中學
- 男女子津貼中學



<http://www.caswcmc.edu.hk>

# 學校簡介

[辦學團體]

香港九龍塘基督教  
中華宣道會  
(九龍塘宣道會)



# 學校簡介

[學校使命：全人教育]

本著基督精神，推行  
靈、德、智、體、群、美  
六育並重之全人教育。



# 學校簡介

## [學校信念]

- ✦ 每個人皆按神的形像被造
- ✦ 每個人皆具信心愛心盼望
- ✦ 每個人皆是獨特並具長處
- ✦ 每個人皆可發展抱負潛能
- ✦ 每個人皆有機會爭取成功
- ✦ 每個人皆有能能力貢獻社會



# 個人簡介 - 司徒華生

## [任教學科]

- 📌 體育科
- 📌 電腦科
- 📌 創意媒體
- 📌 英文科



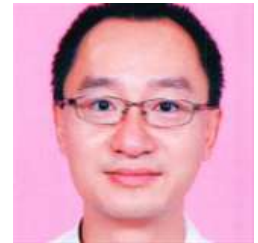
# 個人簡介 - 司徒華生

## [校內]

- 📌 體育科科主任
- 📌 資訊科技教育委員會副主任
- 📌 校園電影台負責老師

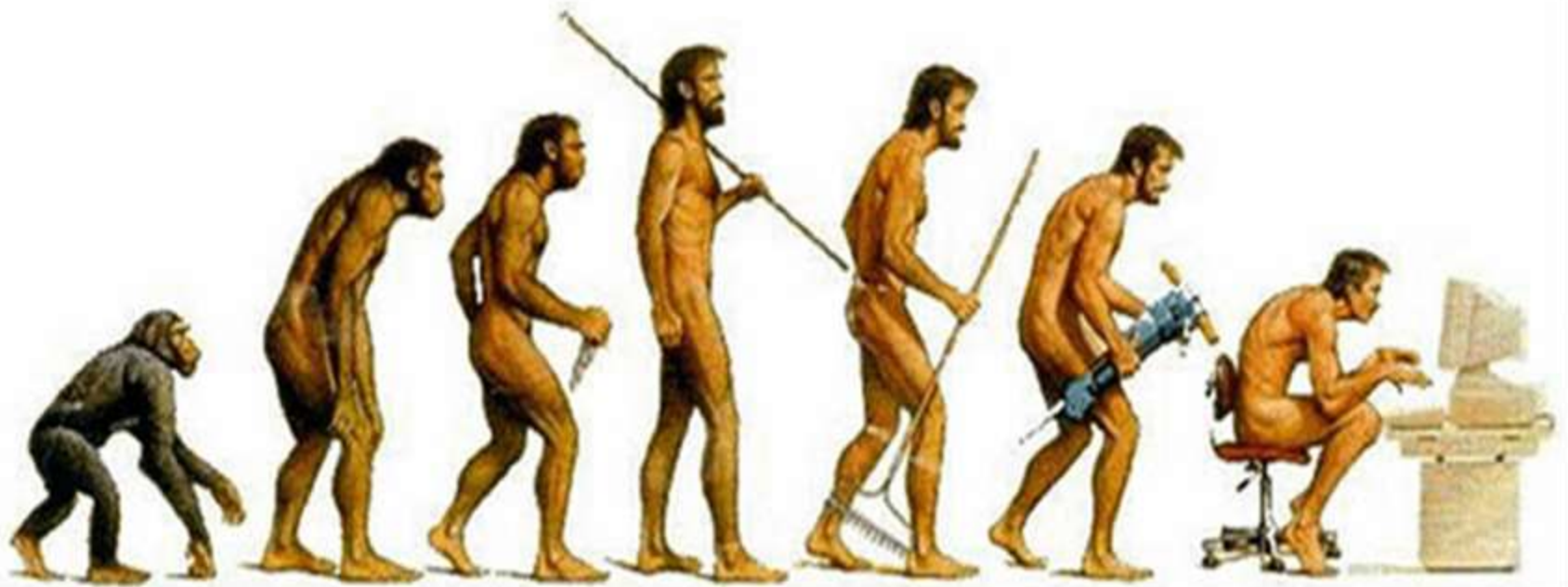
## [校外]

- 📌 教育局資訊科技教育組，  
資訊科技教育卓越中心借調老師





# 進入二十一世紀



# 21st Century Education

today's teachers  
yesterday's learners



**BENNET:**  
standards must  
be met before  
radical change is  
made on the  
basis of the  
digital  
native idea



**digital  
immigrants**

slower paced learning style.

less comfortable with technology



co-operative teaching / learning process needed

born into a technologically rich world : natural interaction with technology

**Digital Natives /  
Digital immigrants**



**digital natives**

today's learners  
tomorrow's teachers



**Prensky:** today's students  
think and process  
information fundamentally  
differently from their  
predecessors.

# 二十一世紀的學習者



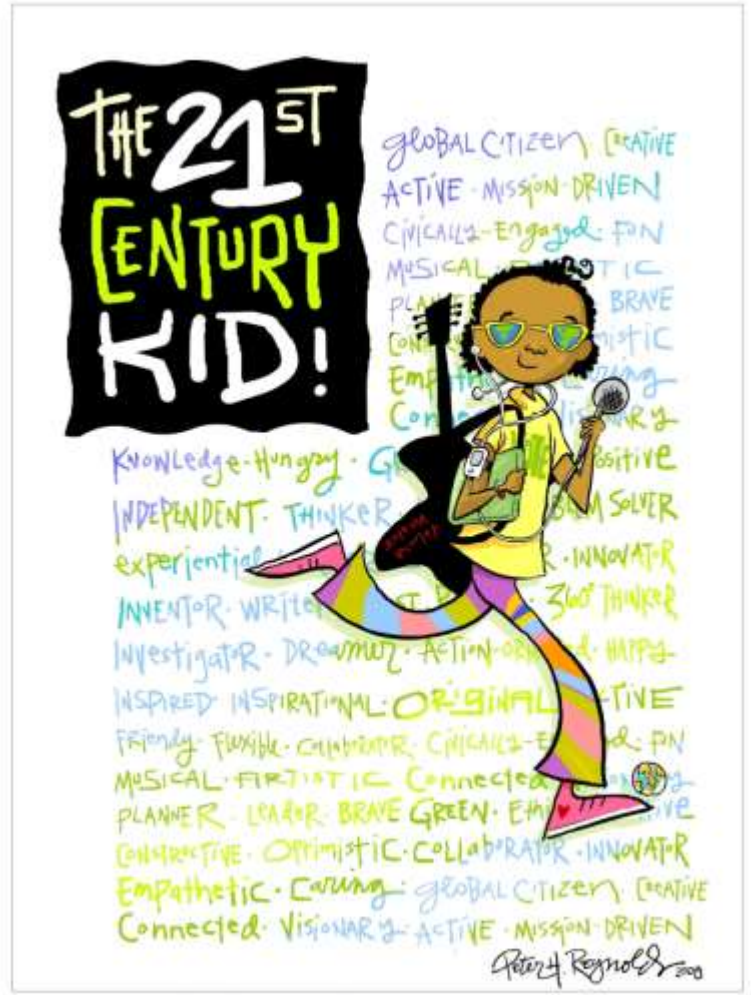
Learning in the class!



Beyond the four walls!

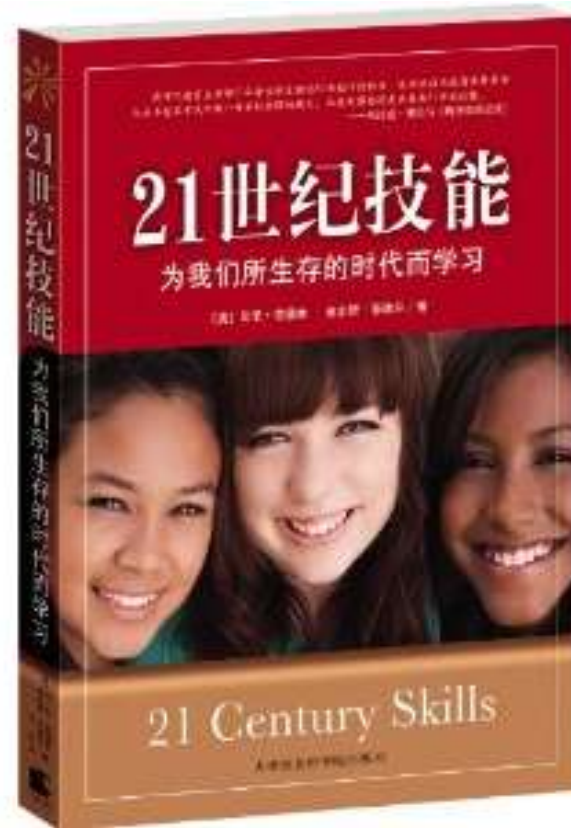


# 數碼新世代

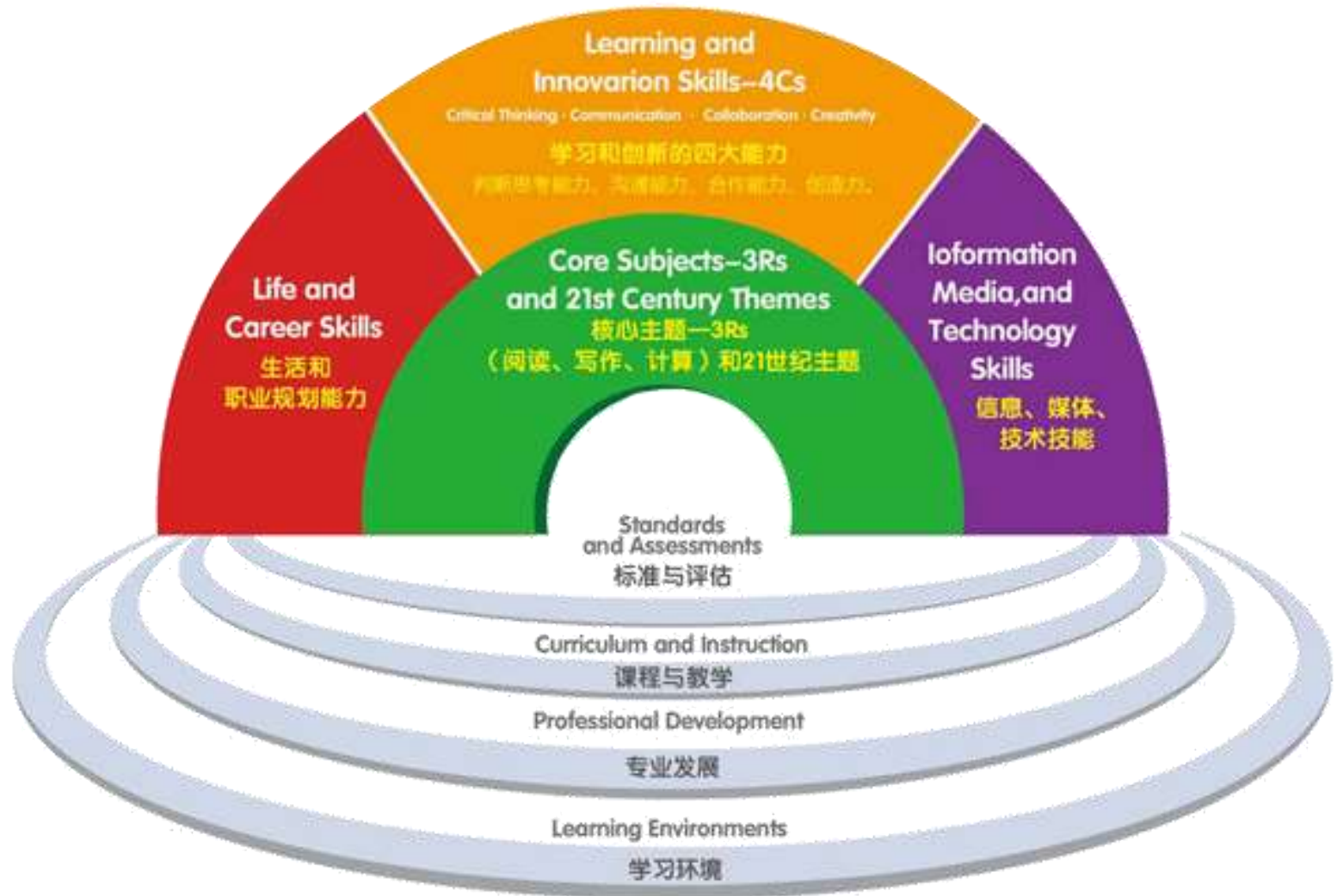


Permission granted to use for non-commercial, educational purposes. "21st Century Kid" © 2000, Peter H. Reynolds. For more info, visit [www.hubbarton.com](http://www.hubbarton.com) and [www.kidfamily.org](http://www.kidfamily.org)

# 21世紀技能學習



# 21世紀技能學習



# 21st Century Mobile Social Learning

TEACHER



FLIPPED TEACHING:  
EXPLAIN EVERYTHING APP



VIDEO CONTENT & SKILLS



BIG  
THINKING



CREATIVE THINKING



INDEPENDENT  
TEAMWORK  
PROJECTS RESEARCH  
SHARING - FORUMS  
BLOGS



EXPERTS

WORLD



WEB



“我喜歡返學，但我唔鍾意上堂。”

Engage students in the class

=

Invite students to join the class

為什麼 E-LEARNING?



# Why "Technology Adoption" in classroom ?

## Benefits of Technology Adoption:

- offer students new instructional and learning experiences;
- promote deep processing of ideas;
- increase students interaction with subject matter;
- provide students with significantly expanded learning opportunities;
- equip students to independently organize their learning process;
- :
- links with increased level of academic achievement.

Kurt, Serhat. (2013). Creating Technology-Enriched Classrooms: Implementation Challenges in Turkish Education. *Learning, Media and Technology, 39(1)*, 90 – 106.

# How can we use Technology to TRANSFORM Learning?

- Guiding Principle
- Bloom's Taxonomy (Revised)
- SAMR Model
- Technological Pedagogical Content Knowledge (TPACK) Framework



# The Guiding Principle

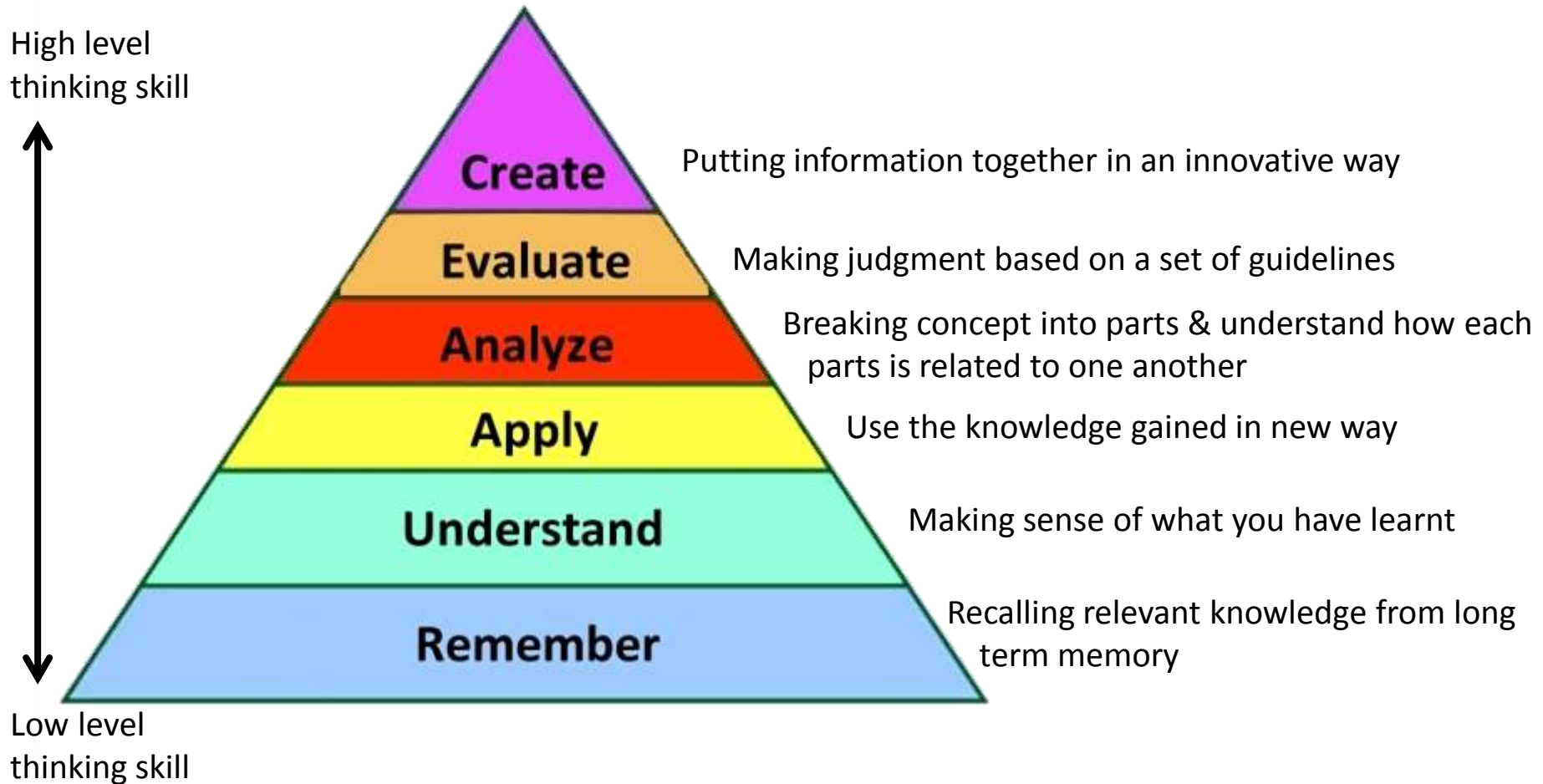
e-learning should always be driven by

**PEDAGOGICAL**  
**CONSIDERATIONS**

and not the demands of the technologies  
themselves.

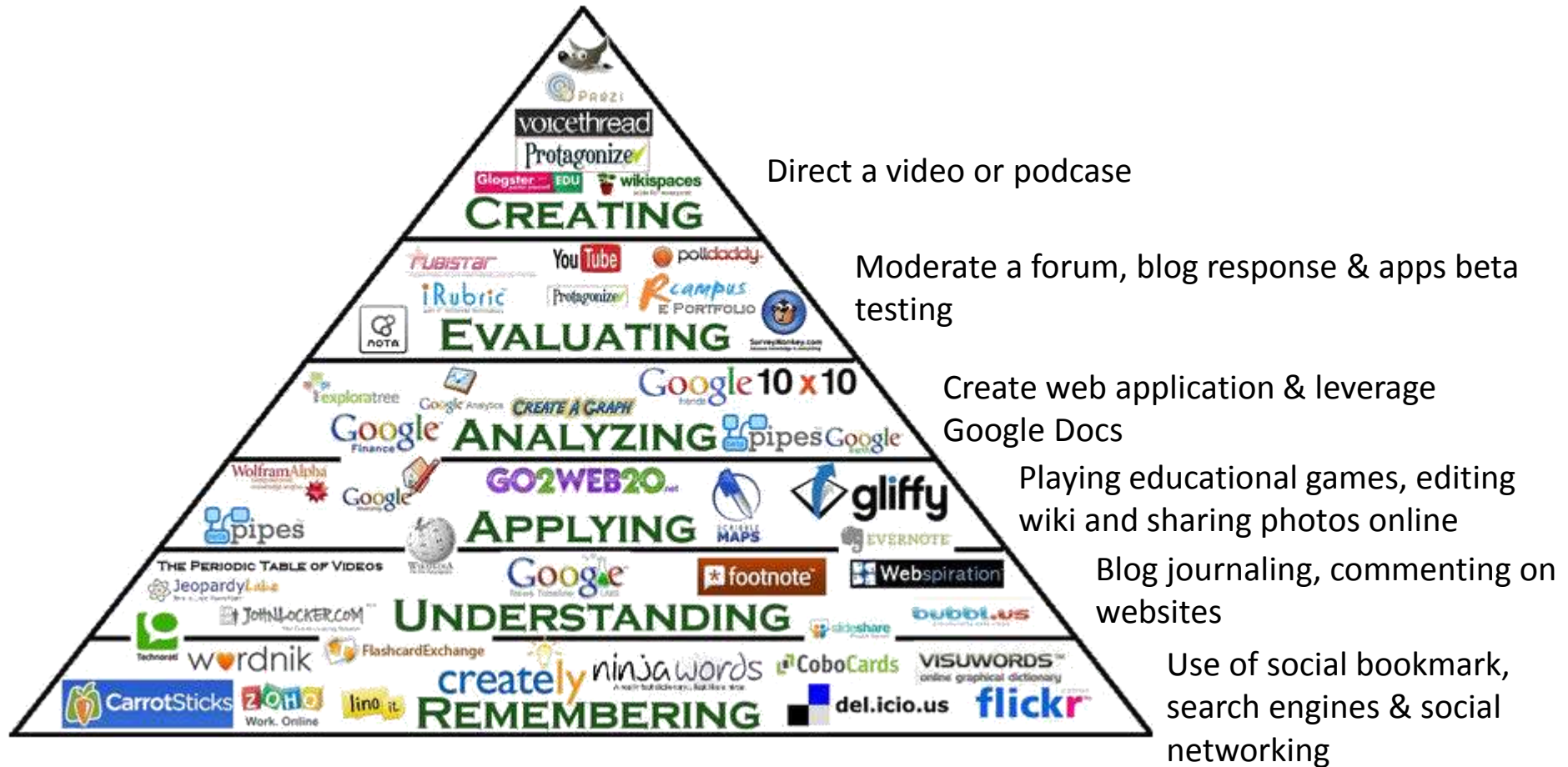


# Bloom's Taxonomy (Revised Version)









Based on APA adaption of Anderson, L. W. & Krathwohl, D.R.  
(Source: <http://www.apa.org>)

# Bloom's Interactive Pyramid



Churches, Andrew. "Bloom's Taxonomy Blooms Digitally." 2008. Tech & Learning.  
 <<http://www.techlearning.com/article/Blooms-Taxonomy-Blooms-Digitally/44988>>.

# iPad Apps to Support Bloom's Revised Taxonomy

<b>C</b>	<b>CREATING</b>	 Storytelling	 Video Editing	 Videocasting	 Mixing	 Animating	 Podcasting
<b>E</b>	<b>EVALUATING</b>	 Moderating	 Conferencing	 Networking	 Posting	 Collaborating	 Cribiquing
<b>An</b>	<b>ANALYZING</b>	 Outlining	 Structuring	 Organizing	 Surveying	 Deconstructing	 Mashing
<b>Ap</b>	<b>APPLYING</b>	 Interviewing	 Simulating	 Demonstrating	 Presenting	 Editing	 Illustrating
<b>U</b>	<b>UNDERSTANDING</b>	 Categorizing	 Annotating	 Tweeting	 Blogging	 Subscribing	 Explaining
<b>R</b>	<b>REMEMBERING</b>	 Recalling	 Listing	 Bookmarking	 Searching	 Mindmapping	 Word Processing

Blooms' Apps – Kathy Schrock's Guide to Everything.  
 < <http://www.schrockguide.net/bloomin-apps.html> >

# ANDROID APPS TO SUPPORT BLOOM'S REVISED TAXONOMY

## ASSEMBLED BY KATHY SCHROCK

CREATING	 Storytelling	 Video Editing	 Videocasting	 Mixing	 Animating	 Podcasting
EVALUATING	 Moderating	 Conferencing	 Networking	 Posting	 Collaborating	 Critiquing
ANALYZING	 Outlining	 Structuring	 Organizing	 Surveying	 Deconstructing	 Mashing
APPLYING	 Interviewing	 Simulating	 Demonstrating	 Presenting	 Editing	 Illustrating
UNDERSTANDING	 Categorizing	 Annotating	 Tweeting	 Blogging	 Subscribing	 Explaining
REMEMBERING	 Recalling	 Listing	 Bookmarking	 Searching	 Mindmapping	 Word Processing

# SAMR Model

## Redefinition

*Tech allows for the creation of new tasks, previously inconceivable*

## Modification

*Tech allows for significant task redesign*

## Augmentation

*Tech acts as a direct tool substitute, with functional improvement*

## Substitution

*Tech acts as a direct tool substitute, with no functional change*

**Transformation**

**Enhancement**

SAMR model shows a progression that adopters of educational technology often follow as they progress through teaching and learning with technology.

SAMR Model Explained for Teachers. ***Educational Technology and Mobile Learning.***  
(Ref: <http://www.educatorstechnology.com/2013/06/samr-model-explained-for-teachers.html>)



# SAMR Model

Level	Definition	Examples	Functional Change
Substitution	Computer technology is used to perform the same task as was done before the use of computers.	Students print out worksheet, finish it, pass it in.	No functional change in teaching and learning.
Augmentation	Computer Technology offers an effective tool to perform common tasks.	Students take a quiz using an online Google Form in stead of using pencil and paper.	There is some functional benefit here in that paper is being saved, students and teacher can receive almost immediate feedback on student level of understanding of material.
Modification	Common classroom tasks are being accomplished through the use of computer technology.	Students are asked to write an essay around the theme "And This I Believe...". An audio recording of the essay is made along with an original musical soundtrack. The recording will be played in front of an authentic audience such as parents, or college admission counselors.	Computer technology is necessary for this classroom to function allowing peer and teacher feedback, easy rewriting, and audio recording. Questions about writing skills increasingly come from the students themselves.
Redefintion	Computer technology allows for new tasks that were previously.	A classroom is asked to create a documentary video answering an essential question related to important concepts. Teams of students take on different subtopics and collaborate to create one final product. Teams are expected to contact outside sources for information.	At this level, common classroom tasks and computer technology exist not as ends but as supports for student centered learning. Collaboration becomes necessary and technology allows such communications to occur. Questions and discussion are increasingly student generated.

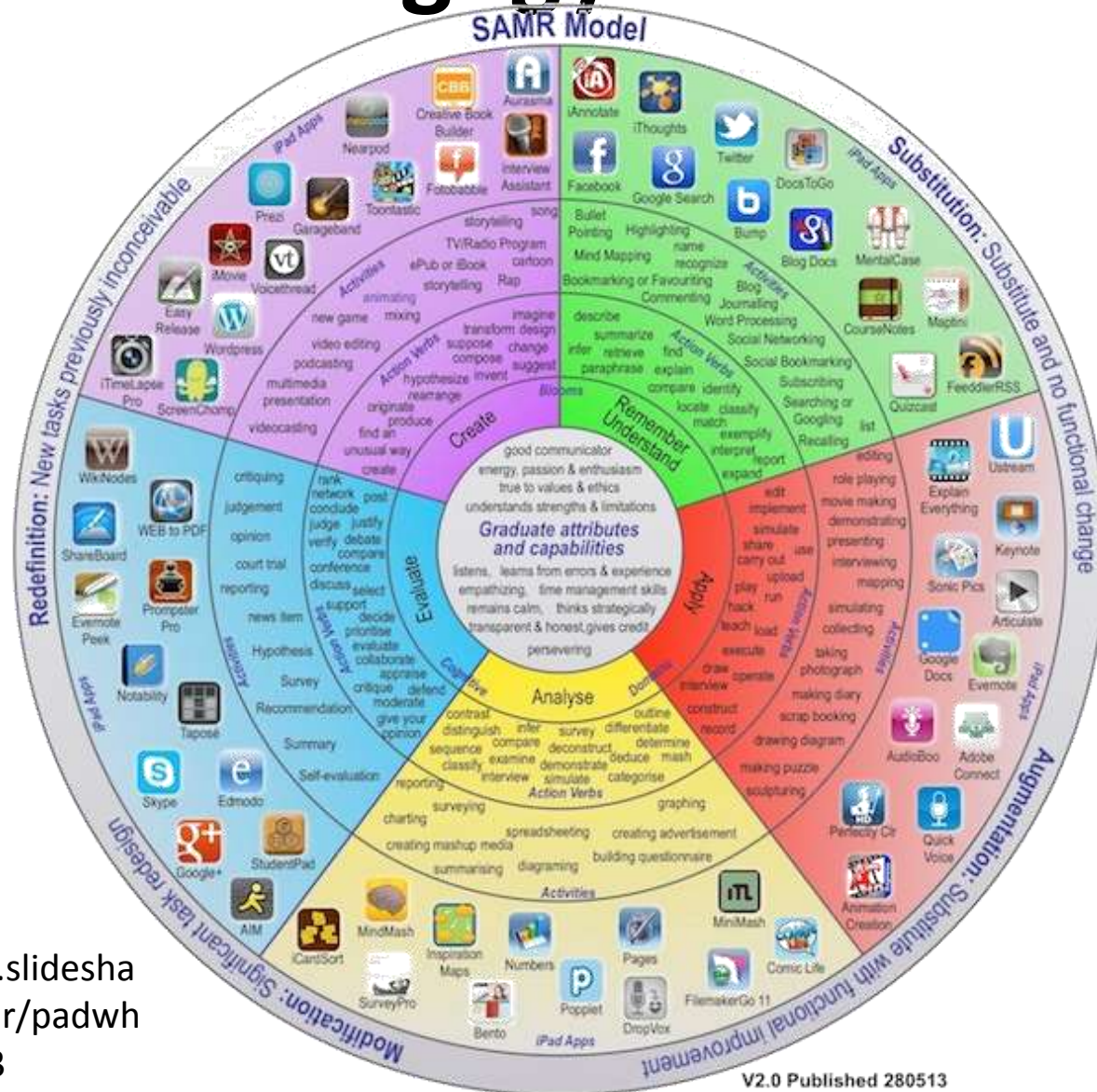
# SAMR Model (iPad Version)



Class Task	Substitution	Augmentation	Modification	Redefinition
Note taking	Notes taken using ios Notes	Students choose their own notes app	All students use Notability for all notes	Teachers have access to all student's notes.
Research	Using safari to copy and paste information	Bookmark and share notes using the share button	Download and annotate with Notability	Collaborative Mindmaps
Presentation	Make a keynote presentation on the iPad	Demonstrate understanding with Explain Everything	Combine audio, video and text in Movie Presentation	Nearpod Presentation
File sharing	Sent by email every lesson	Shared Dropbox folder	Showbie	iTunes U
Reading	Open PDF from email	Use dictionary & search document	Annotating documents in Notability & iBooks	Interactive iBook
Assessment	Google form test	Google form test with automatic marking script	Creative projects with Strip Designer Showme & iMovie	Creative Assignments with audio feedback in showbie

A Wonderful Visual on How to use SAMR Model on Different Classroom Tasks. **Educational Technology and Mobile Learning**. (Ref: <http://www.educatorstechnology.com/2014/02/a-wonderful-visual-on-how-to-use-samr.html> )

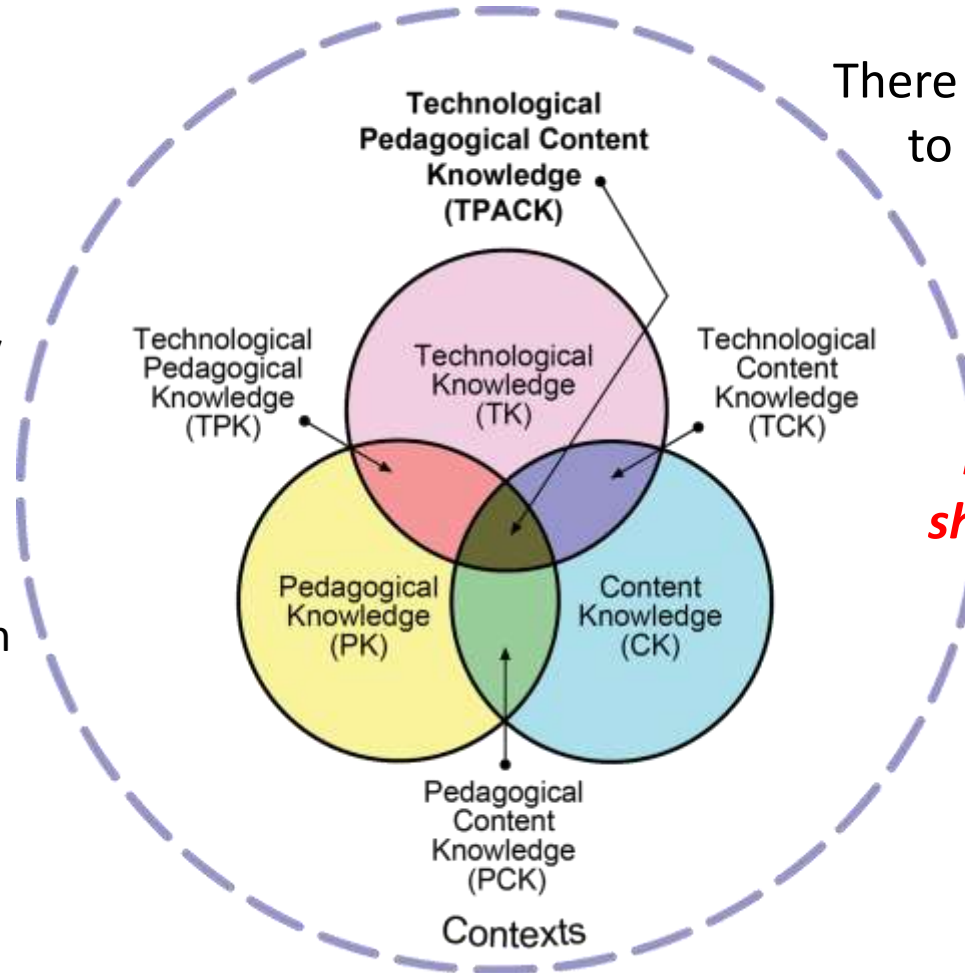
# The iPadagogy Wheel V3.0



Source:  
<http://www.slideshare.net/eraser/padwheelposter-v3>

# Technological Pedagogical Content Knowledge (TPACK) Framework

Effective technology integration for pedagogy around specific subject matter requires developing sensitivity to the dynamic, transactional relationship between these components of knowledge situated in unique contexts.



There is no “**one best way**” to integrate technology into curriculum.

***Integration efforts should be creatively designed or structured for particular subject matter ideas in specific classroom contexts.***

Mishra & Koehler (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, **108(6)**, 1017-1054.

# 第四個資訊科技教育策略



重點：  
更新學校課程，改變  
教學及評估方法

# 第四個資訊科技教育策略

平板電腦作為教學工具的好處：

- 將整個提升「資訊素養」過程發生在熟識的課室環境內；
- 可以配合「小組討論」、「翻轉教室」等不同的教學法。



# 第四個資訊科技教育策略

平板電腦作為教學工具的好處：

- 運用大量最新的多媒體資訊作為教學材料，包括相片、流行歌曲網頁、視像新聞材料等；



- 學生可因應學習進度和需要，閱讀相關材料

⇒ 處理學生  
**學習差異**



# 第四個資訊科技教育策略

平板電腦作為教學工具的好處：

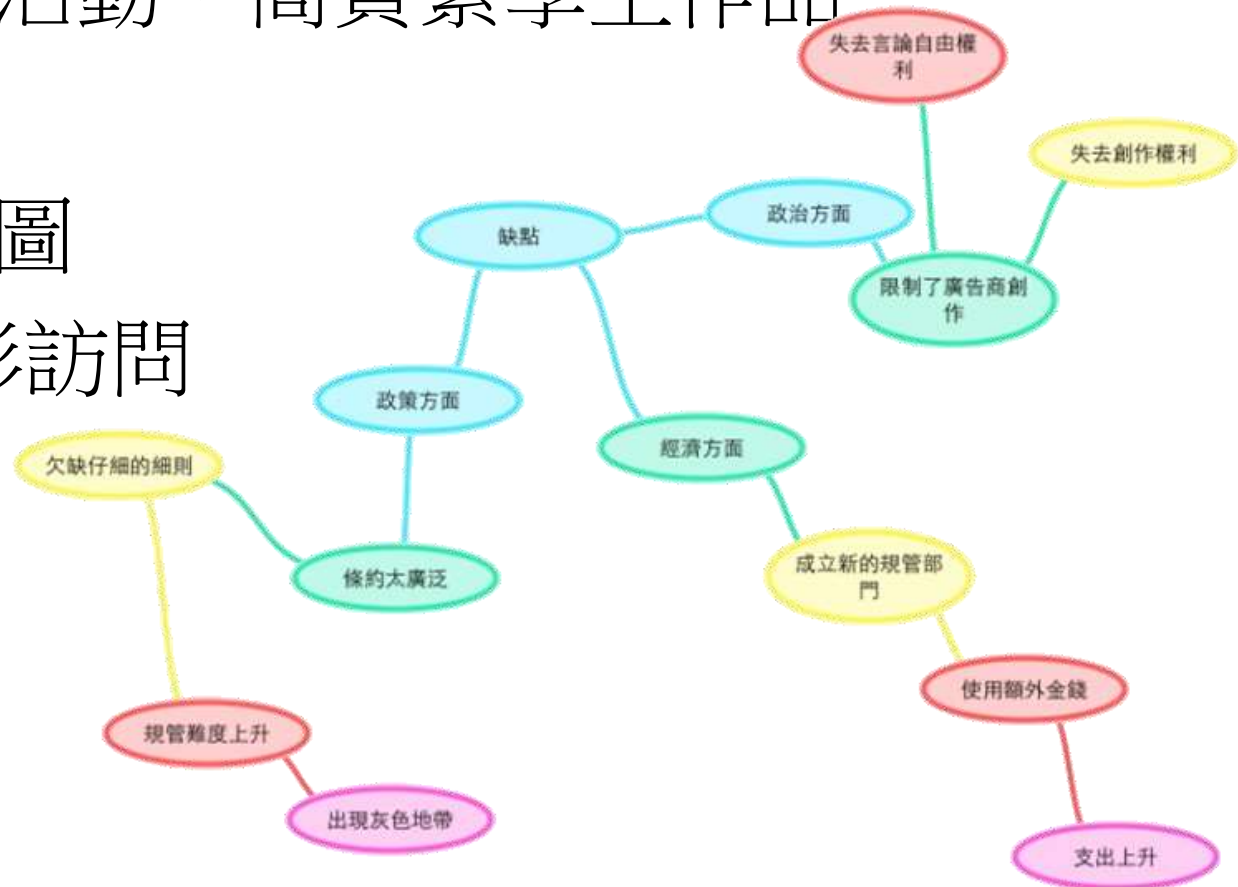
- 多元化教學活動，高質素學生作品

- 虛擬旅程

- 繪畫心智圖

- 錄音/錄影訪問

- 投票Like





# 第四個資訊科技教育策略

平板電腦作為教學工具的好處：

- 明白自己學習進度及強弱( 自知)
- 有效整理、展示討論成果( 自理)
- 個人及他人評價，掌控學習過程，評價學習結果( 自評)
- 在回饋和反思的基礎上，調節學習方法和加強自我認知，發揮潛能，追求卓越。  
( 自強)

鼓勵學生**自主學習** (self-directed learning)

# 如何鼓勵學生進行預習？

## 一般方法

- 網上平台可以顯示同學逗留在網頁上的時間；
- 完成 **5 – 10** 題選擇題/短答題，並由電腦系統自動批改；
- 大部份學習管理平台 (**Learning Management System**) 可以提供以上的功能。

# EDpuzzle

- 免費平台，有Google帳戶可以免費使用；
- 可以用網上影片或自行上傳影片




同學不可以選擇快速播放

影片一定要播放到某個時間，才會出現問題讓同學作答，更會即時修改。

可以看到同學們  
在預習表現

<https://edpuzzle.com/>



Video Progress

Questions Understanding Overview

57% Grade 1

Student	View	Score	Time	Answer
evadiah	✓	100%	2 months ago	
evadiah	✓	100%	2 months ago	
evadiah	✓	100%	2 months ago	

# 校本教學設計

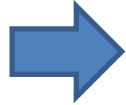
- 利用緊扣**課程設計**讓同學做討論，使同學必須要讀過內容才能針對議題發表意見，這樣不只讓教師知道學生的學習情況，也能慢慢養成學生自主學習的習慣。
- 在這過程中，同學們也會發現，如果不先看影片，課堂表現將會欠佳，自己在組內的價值會降低，自然就願意花時間做這件事。

# 校本教學設計

課題：以深圳為例，探討中國城市化的成就及挑戰

預習的內容

「有關深圳的發展」



活動一：  
分享自己的預習成果。

活動二：  
小組討論 - - - - - 深圳成為經濟特區最大的成就是什麼？

老師隨機抽問及解答同學預習時遇到的問題

老師不應該將預習內容再演說

透過學生彼此分享，鼓勵學生完成預習並提升學生預習功課的質素

學生討論時需要從預習家課提取有關的資料作論據

## 自知

在上課前，學生先完成與課堂內容緊扣的預習，讓學生預先認識學習任務（我要學什麼？我要完成哪些學習任務？若未能會完成有什麼後果？），這可令學生在心理上有安全感並減少焦慮。

在課堂前已準備好相關的學習內容，能提升個人在小組內的價值，增強學生的「自我效能感」。

# 校本教學設計

活動二：

小組討論 - - - - - 深圳成為經濟特區最大的成就是什麼？

同學運用平板電腦，將討論結果輸入網上討論平台。

透過網上討論平台，同學可以對其他組別之論點提出疑問或建議。

老師：就同學論點及互評作回饋，可指出學生答案的共通點或問題並進一步引導學生思考城市化如何令生活更美好。

## 自理

透過資訊科技，有效整理、展示討論成果，促進學生學習。

## 自評

透過資訊科技，有效閱讀多組別的學習成果。

是藉個人及他人**評價**，**掌控**學習過程，**評價**學習結果。

## 自強

在回饋和反思的基礎上，**調節**學習方法和加強自我認知，**發揮**潛能，**追求**卓越。

# Schoology

- 免費學習管理平台，有Google帳戶即可以免費使用。



The screenshot shows a discussion thread on Schoology. It features three posts by user 'swc lsqp2' and their replies by user 'swc lsqp1'. Each post includes a timestamp, a main text block, and interaction options like 'Like' and 'Reply'.

**Post 1:**  
User: swc lsqp2  
Time: Thu May 28, 2015 at 9:27 am  
Text: 經濟發展蓬勃，城市綜合競爭力上升，作為首個經濟特區榜樣，令其他城市可以效法，使中國國際地位上升及增加國際競爭力。  
Interactions: Like 😊 4 · Reply

**Reply 1:**  
User: swc lsqp1  
Time: Thu May 28, 2015 at 9:36 am  
Text: 簡而精，有重點。但欠缺競爭力提升的證明，欠缺扣題句。  
Interactions: Like 😊 1 · Reply

**Post 2:**  
User: swc lsqp2  
Time: Thu May 28, 2015 at 9:30 am  
Text: 深圳發展迅速成為首個經濟特區榜樣，增加競爭力，提升國際地位  
Interactions: Like 😊 2 · Reply

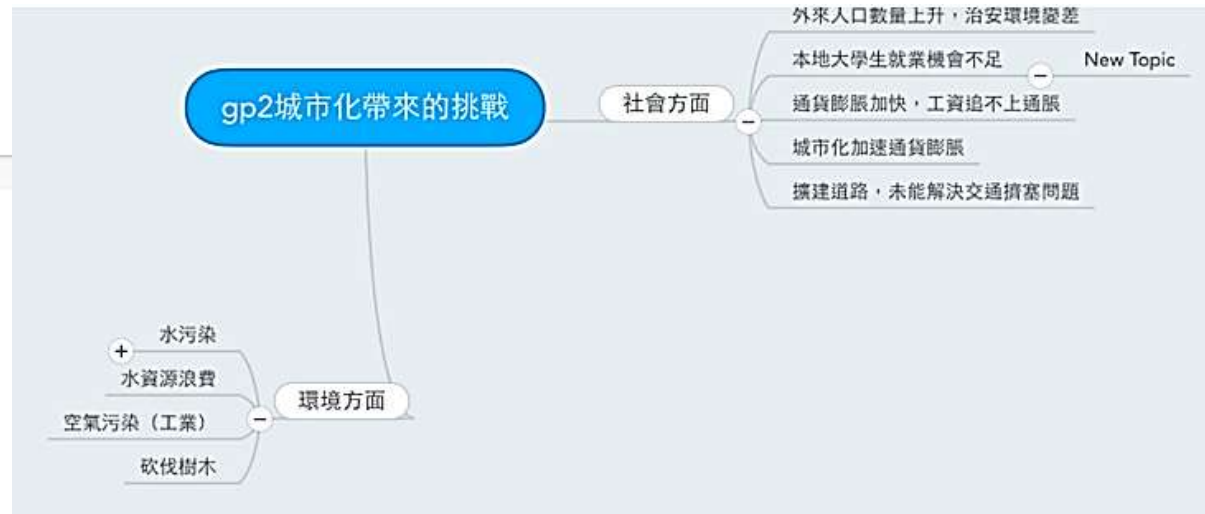
**Reply 2:**  
User: swc lsqp1  
Time: Thu May 28, 2015 at 9:37 am  
Text: 論點清晰，但論據不足欠缺說服力。何以見得深圳的經濟發展提升，令國際地位上升？  
Interactions: Like 😊 1 · Reply

# Schoology

- 可以進行討論，收取概念圖；
- 必須上載功課，才可以看到他人的功課。

swc lsgp2 Thu May 28, 2015 at 10:09 am  
gp2a  
Like 😊 2 · Reply

swc lsgp3 Thu May 28, 2015 at 10:09 am  
Group3 hi  
Like 😊 2 · Reply





# 陳朱素華的校本示例

## 通識

- Schoology
- Edpuzzle

## 英文

- Office 365
- Google form

## 體育

- Schoology
- Edpuzzle

## ICT

- Schoology

## 中文

- Schoology
- Edpuzzle

## 生活與社會

- Assorted

## 中國歷史

- Kahoot!
- Nearpod

## 科學

- Eduventure
- ?

## 其他

- ?
- ?

英文科

利用 Office 365 優化專題研習問卷及報告

# 「探訪尖沙咀」專題研習背景



# 「探訪尖沙咀」專題研習背景

## [Learning Objectives]

- To visit a famous touring site in Hong Kong (Not in N.T.)
- To practice interviewing skills using questionnaire
- To consolidate their data during the interview
- To present the details of the whole project
- To write a written report for the project

# 「探訪尖沙咀」專題研習背景

## English

- Content
- Language Skills
- Presentation Skills
- Report Writing Style

## Computer

- Data Analysis (Excel)
- Data Presentation (Excel)
- Report Writing (Word)
- Presentation Slides (Powerpoint)

# 專題研習 的煩惱…



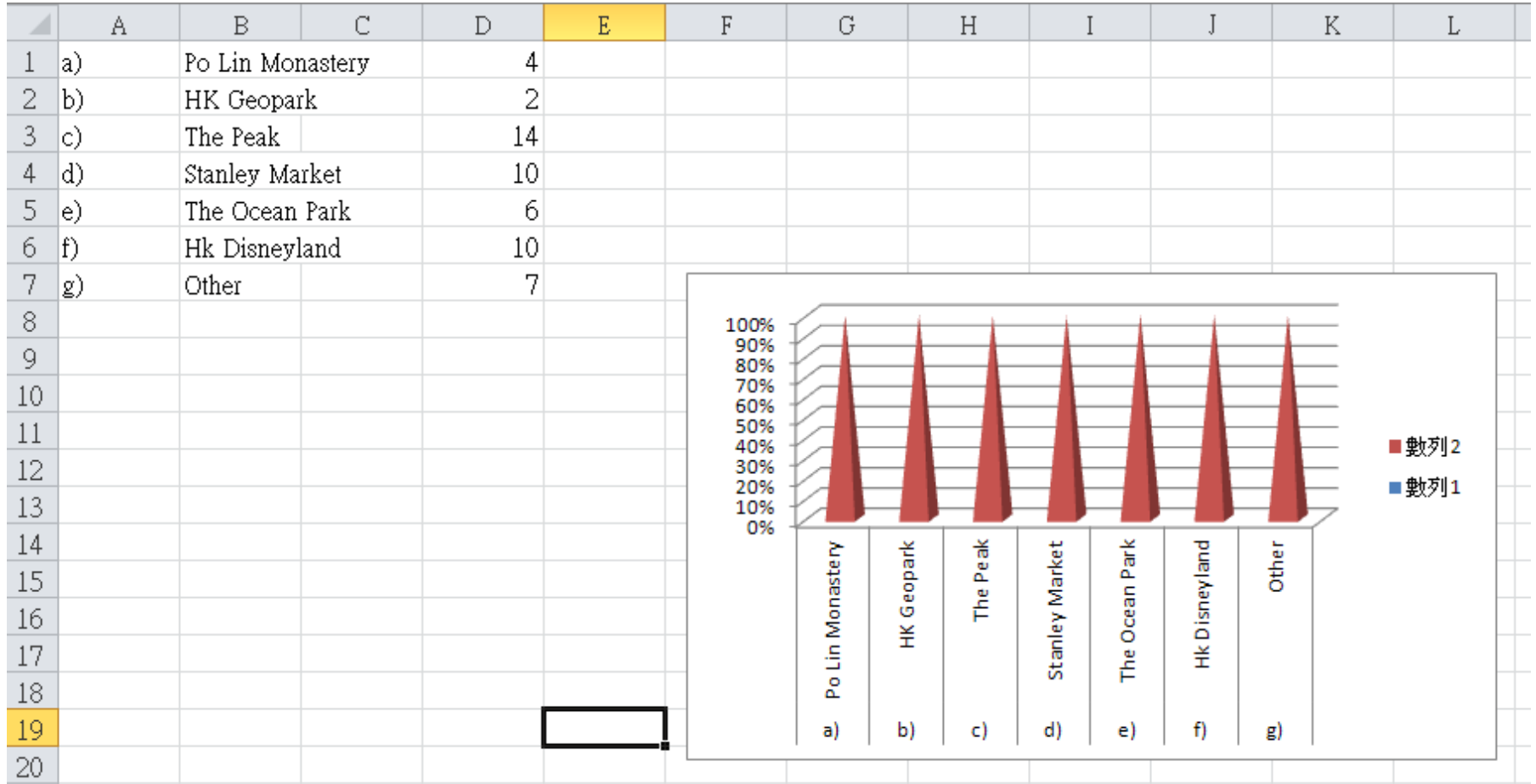
# 專題研習 的煩惱...

## [Teachers' Comments]

- Too much paper has been used
- Too hard to gather their worksheets
- Too much time spend in individual typing and data entry
- Using different styles to make up the reports and slides



# 專題研習 的煩惱...





# 專題研習 的煩惱...

6 4 2 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42

## Feelings

↵

### 1A(30)James's feeling ↵

This survey was not my first time to conduct a survey ,I did a Tsim Sha Tsui Survey when I was Studying in primary six. I think it was difficult to conduct the survey because I was scared when I was talking to the tourist .And I felt nervous when I started the first questionnaire because I was afraid that I will reject by the tourists in the first questionnaire. I had some problems when I talked with the tourist. But my partner is good at English, so that I can clam down quickly, and start to interview more other tourists. At last, we can interview 21 tourists and we are happy about it. ↵

↵

↵

↵

### 1A(24) Samuel Chan's feeling↵

I think it is difficult to conduct the survey. I felt very excited when I started the first questionnaire. There were some problems when I was taking with the tourists. Like I forgot the word how to spoke . My partner will help me at the first time. He helped to talk to the tourists. I do not know how many tourists I had interview. I learn more about English. This is a good experience.↵

↵

### 1A(26)Marcus Chau's feeling ↵

I was second time to conduct a survey. I thought this survey had some difficult but I can solve with group members. I felt excited when I started the first questionnaire. I have some

# 專題研習的煩惱...

**Tsim Sha Tsui Project**

group members (gp 3):

1) Miss Leung (GR)  
2) Miss Li (GR)  
3) Miss Li (GR)

☆☆ 1

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3) Finding Page 8-15  
4) Recommendations Page 8-15  
5) Miss Li Page 16-18  
6) Job Allocation Page 24

☆☆ 2

**Introduction**

Ha ha... Do you know what do we laughing at? We did an interview in Tsim Sha Tsui which is a survey called "Tsim Sha Tsui Survey" on 17th March, 2014 after we have a lunch. We have a good mood to do the survey. We followed the teachers (Miss Li and Miss Leung) to the Peninsula Hotel and YMCA in Hong Kong which located at Tsim Sha Tsui. When we could do the survey. We interview a lot of tourists from other countries immediately. We finished it at 3:15 pm on that day.

In the report, there are six parts. They are the introduction, photos, findings, recommendations, reflections and job allocation.

Page 1

☆☆ 3

This woman come from South American. So beautiful, right!

Page 2

☆☆ 4

They are couple and they are Japanese. They think HK is beautiful.

Page 3

☆☆ 5

They are Korean (look at the book!) and they are so kind!

Page 4

☆☆ 6

Wow! So many people, right? They come from Germany. They said they love HK a lot because HK people are friendly.

Page 5

☆☆ 7

They are Korean. But they do not good at English, we are difficult to talk to them! :(

Page 6

☆☆ 8

They are Japanese and they come to HK to sightseeing and shopping.

Page 7

☆☆ 9

Q1) Where do you come from?

Country	Number of Tourists
Germany	10
Japan	2
Canada	1
South Africa	1
England	1
France	1

Most tourists came from Germany. Only a few of them came from Japan, Korea, Canada, South Africa, England and France.

Page 8

☆☆ 10

Q2) Have you ever been to Hong Kong before this visit?

Response	Number of Tourists
Yes	10
No	2

A majority of the tourists have been to HK before this visit. Only a few of them haven't been to HK before this visit.

Page 9

☆☆ 11

Q3) Why did you come to Hong Kong?

Reason	Number of Tourists
Sightseeing	10
Visit friends/relatives	2
Business	1

Most tourists came to HK for sightseeing or to visit their friends/relatives. Only a few of them came to HK for business.

Page 10

☆☆ 12

Q4) How long will you stay in Hong Kong?

Duration	Number of Tourists
Less than 3 days	10
3-7 days	2
More than 7 days	1

Most tourists would stay in HK less than three days or about a week. Only a few of them would stay in HK more than a week.

Page 11

☆☆ 13

Q5) What kind of food do you like best in Hong Kong?

Food Type	Number of Tourists
Chinese food	10
Japanese food	1
American food	1

The majority of the tourists like Chinese food in HK. Only a few like Japanese food and American food in HK.

Page 12

☆☆ 14

Q6) How much do you expect to spend in Hong Kong?

Spending Range	Number of Tourists
\$5000 or below	10
\$5000-\$10000	2
\$10001-\$15000	1
\$15000 or above	1

Most of the tourists spent \$5000 or below. 66% of tourists spent \$5000-\$10000 and \$10001-\$15000. A few of tourists spent \$15000 or above.

Page 13

☆☆ 15

Q7) Do you find the goods in Hong Kong cheap?

Response	Number of Tourists
Yes	10
No	2

50% of tourists found the goods in HK cheap and another 50% of tourists thought the goods in HK are too expensive.

Page 14

☆☆ 16

# 專題研習的變化… 不再那麼煩惱



# 專題研習的變化... 不再那麼煩惱

2014  
English Project  
Place: Tsim Sha Tsui

1

Table of contents

- ▶ 1. Introduction
- ▶ 2. Photo
- ▶ 3. Finding
- ▶ 4. Recommendations
- ▶ 5. Reflections
- ▶ 6. Job Allocation

2

Introduction

- Have you ever conducted a survey before? On 17th March, 2014, we did a survey about a trip in Hong Kong. We went to Tsim Sha Tsui in the afternoon to conduct the survey by coach. This day, the weather is fine and the temperature was about 22 - 24 degrees. There are many tourist and my group interviewed fifteen tourists at all.
- Our report consists of six parts, the introduction, photos, findings, recommendations, reflections and job allocation.

3

Photos

They came from Britain. They had not been to Hong Kong before. He came to Hong Kong for sightseeing. He thought our Hong Kong's things is expensive so he didn't want to buy things in Hong Kong.



This is their first time that they visited Hong Kong.

4

Photos

This lady came from UK, she has been to Hong Kong every time because she comes to Hong Kong have a business trip, she stay in Hong Kong more than a week, she like Chinese food very well. She has expect to spend in Hong Kong about \$5001-\$10000. She think she can find the Hong Kong cheap, she has visit many scenic spots in Hong Kong. Finally she felt Hong Kong is a beautiful city.



This comes to Hong Kong have a business trip.

5

Photos

4 This man comes from Johana but he lives in Hong Kong. He comes to Hong Kong to do business trip. He likes Chinese food but he doesn't want to spend money on Chinese food. He thought the goods in Hong Kong are cheap.



This man lives in Hong Kong.

6

Photos

This man is come from Switzerland. He has been to Hong Kong. He come to Hong Kong is from business trip. He stays in Hong Kong less than 3 days. He like Thai food very well. He spend \$5000 or below in Hong Kong. He buy so clothes in Hong Kong. He feel Hong Kong in a energetic city.



7

Photos

10 This couples come from Russian. This is their first time for visit Hong Kong. They will stay in Hong Kong about a week. They thought goods in Hong Kong are a bit expensive. They will spend below \$5000 in Hong Kong.



8

Finding

		What do you feel about Hong Kong?			
第一類		energetic city	beautiful city	polluted city	Others
回答		2	3	1	1
人數		2	3	1	1

		What are you going to buy in Hong Kong?			
第二類		clothes	food	others	
回答		5	16	15	4
人數		5	16	15	4

9

Finding

		How long will you stay in Hong Kong?	
第一類		Less than 3 days	About a week
回答		7	3
人數		7	3

		How much do you expect to spend in Hong Kong?			
第二類		\$5000 or below	\$5001-\$10000	\$10001-\$15000	\$15000 or above
回答		14	15	0	1
人數		14	15	0	1

		Do you find the goods in Hong Kong cheap?	
第三類		Yes	No
回答		5	10
人數		5	10

		Which of the following Hong Kong scenic spots have you heard of?					
第四類		Yu Lei Museum	HK Cosco Park	The Peak	Stanley Market	The Ocean Park	Disney
回答		6	4	13	7	17	11
人數		6	4	13	7	17	11

Finding

		Where do you come from?				
第一類		USA	Canada	Australia	Britain	UK
回答		2	1	1	4	2
人數		2	1	1	4	2

		Have you ever been to Hong Kong before this visit?	
第二類		Yes	No
回答		0	15
人數		0	15

		Why did you come to Hong Kong?			
第三類		Sightseeing	Visiting friend or relative	Business trip	Others
回答		8	1	4	2
人數		8	1	4	2

		What kind of food do you like best in Hong Kong?				
第四類		Chinese food	American food	Japanese food	Thai food	Others
回答		12	1	0	1	2
人數		12	1	0	1	2

Figure 1: How long will you stay in Hong Kong?

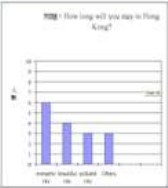
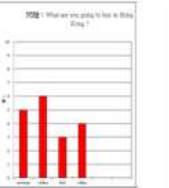
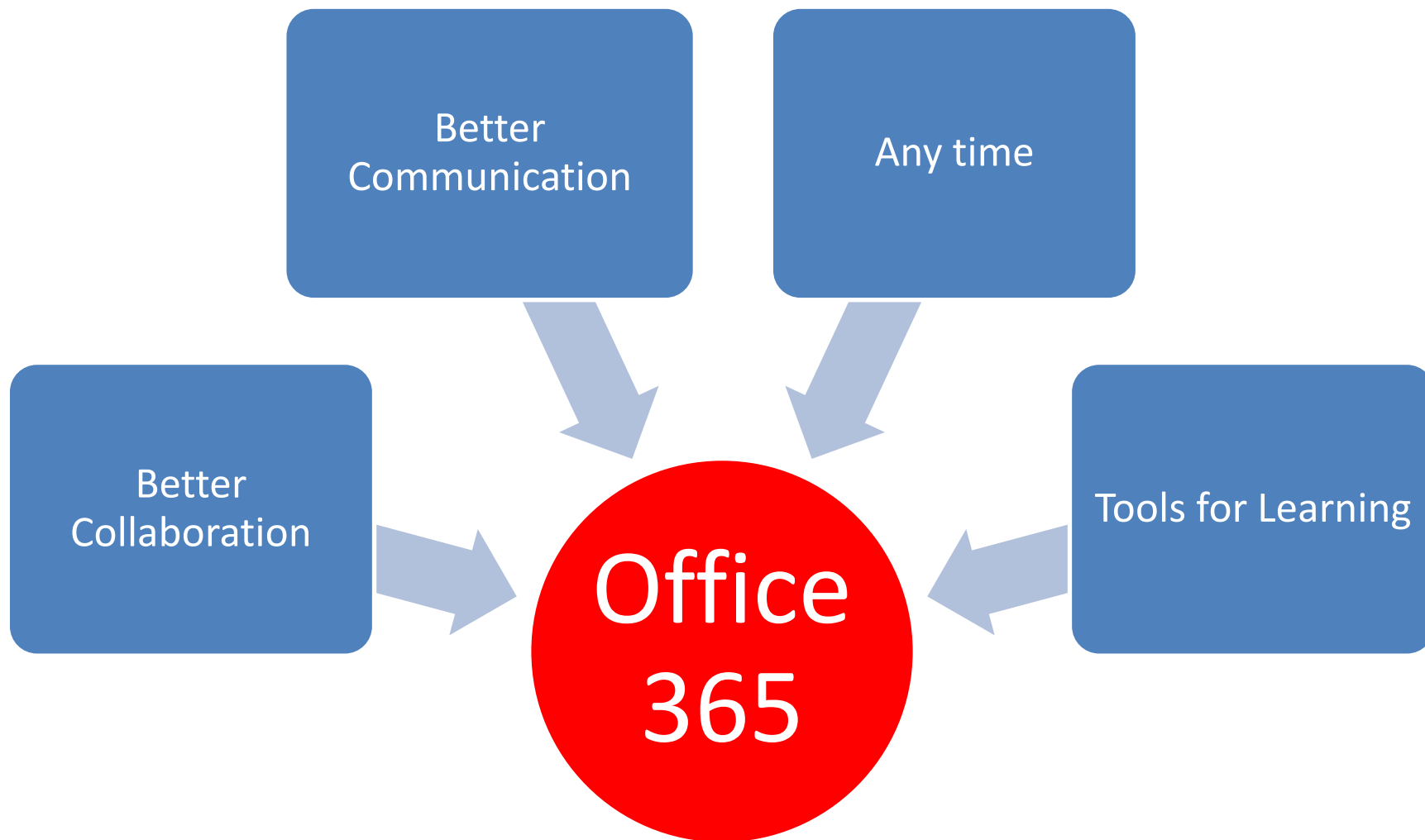


Figure 2: What are you going to buy in Hong Kong?



# 專題研習的變化... 不再那麼煩惱



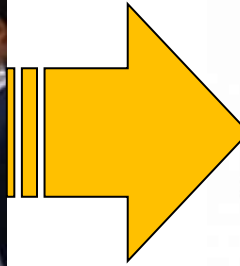
# Why "Technology Adoption" in classroom ?

## Benefits of Technology Adoption:

- offer students new instructional and learning experiences;
- promote deep processing of ideas;
- increase students interaction with subject matter;
- provide students with significantly expanded learning opportunities;
- equip students to independently organize their learning process;
- :
- links with increased level of academic achievement.

Kurt, Serhat. (2013). Creating Technology-Enriched Classrooms: Implementation Challenges in Turkish Education. *Learning, Media and Technology, 39(1)*, 90 – 106.

# Coming Soon



# Coming Soon





# What's happening?



# What's happening?



# What's happening?

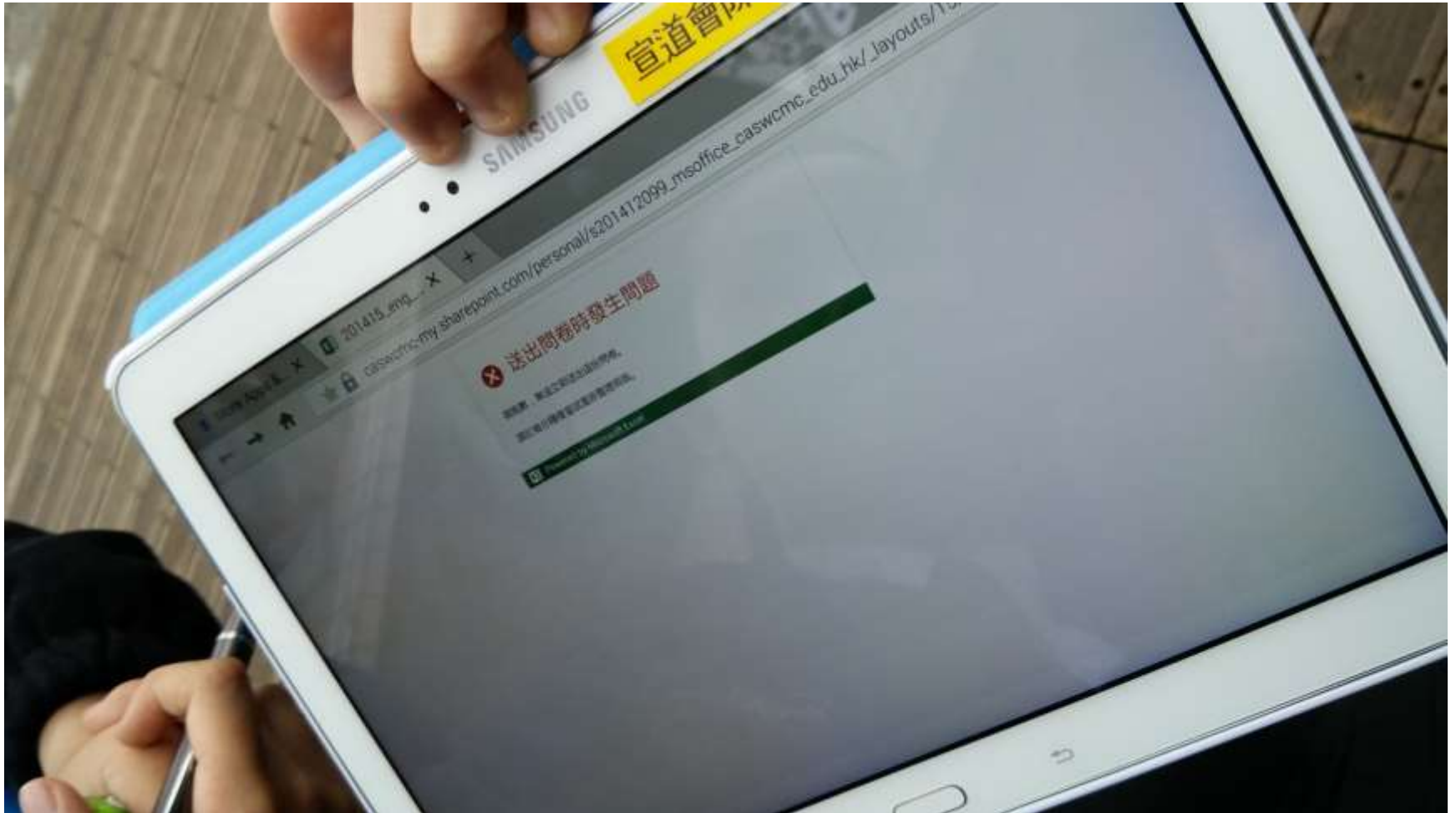


# What's happening?



- Both paper and tablets are used.
- Tablets: Samsung 10.1
- Software: Office 365, Excel Form
- Bring other cameras or using tablets

# Issues



Company Logo

# Issues

- **Cooperation** with English Colleagues in the preparation phrase.
- Students are not used to use online system, **forget password** and need frequent reset.
- Not used to **the interface** of Office 365
- **Happy with the sharing mode.**

# 陳朱素華的校本示例

## 通識

- Schoology
- Edpuzzle

## 英文

- Office 365
- Google form

## 體育

- Schoology
- Edpuzzle

## ICT

- Schoology

## 中文

- Schoology
- Edpuzzle

## 生活與社會

- Assorted

## 中國歷史

- Kahoot!
- Nearpod

## 科學

- Eduventure
- ?

## 其他

- ?
- ?

# 教學反思

## 實施方法

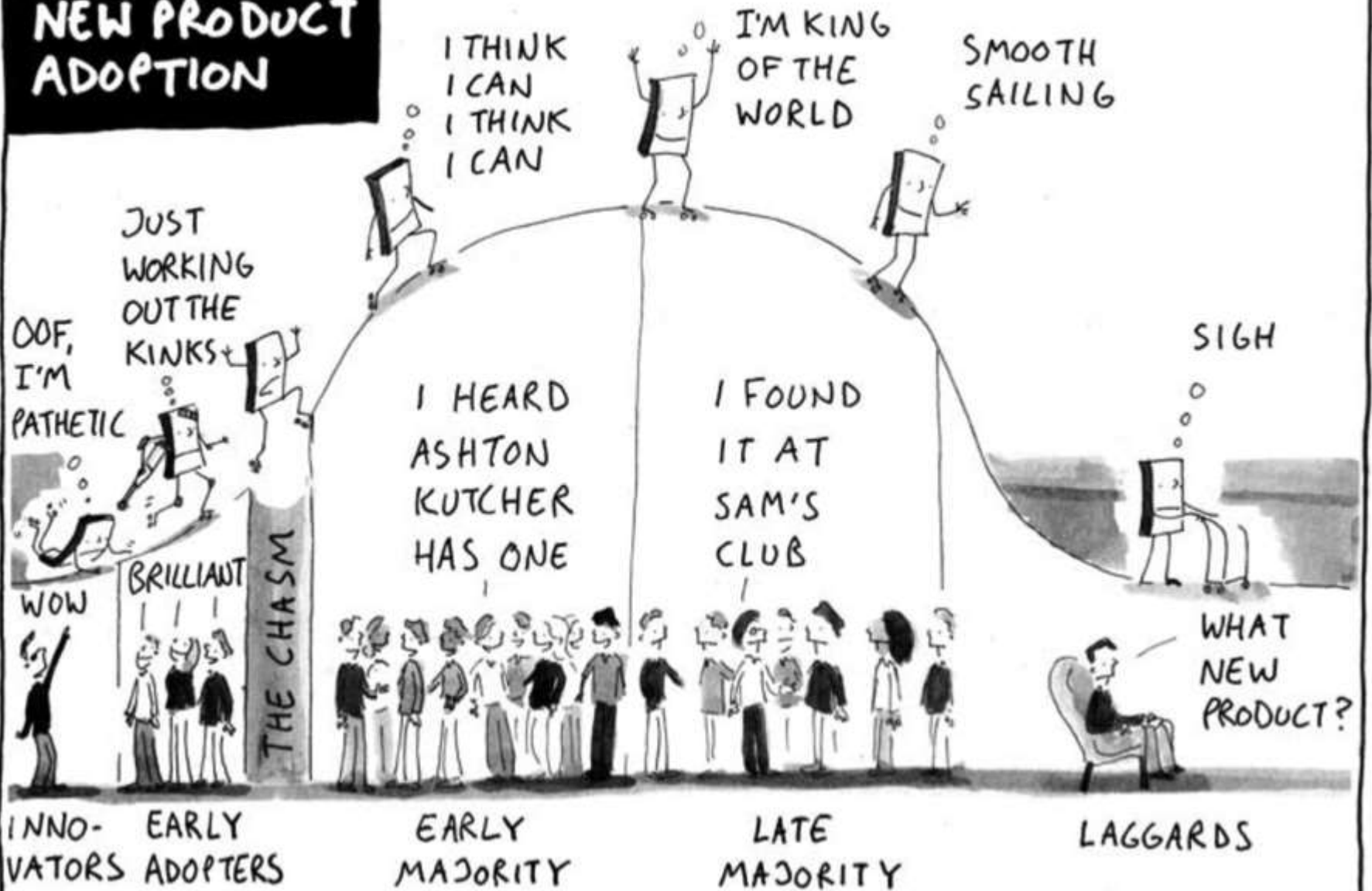
1. 重新設計課堂教學 – 如何緊扣預習及課堂教學。
2. 準備預習材料。
3. 學生在家裡觀看教師的影片，如果家裡沒有網路，則在學校觀看。
4. 教室的時間則用來互動，做實驗，或透過活動更深入瞭解學習內容。



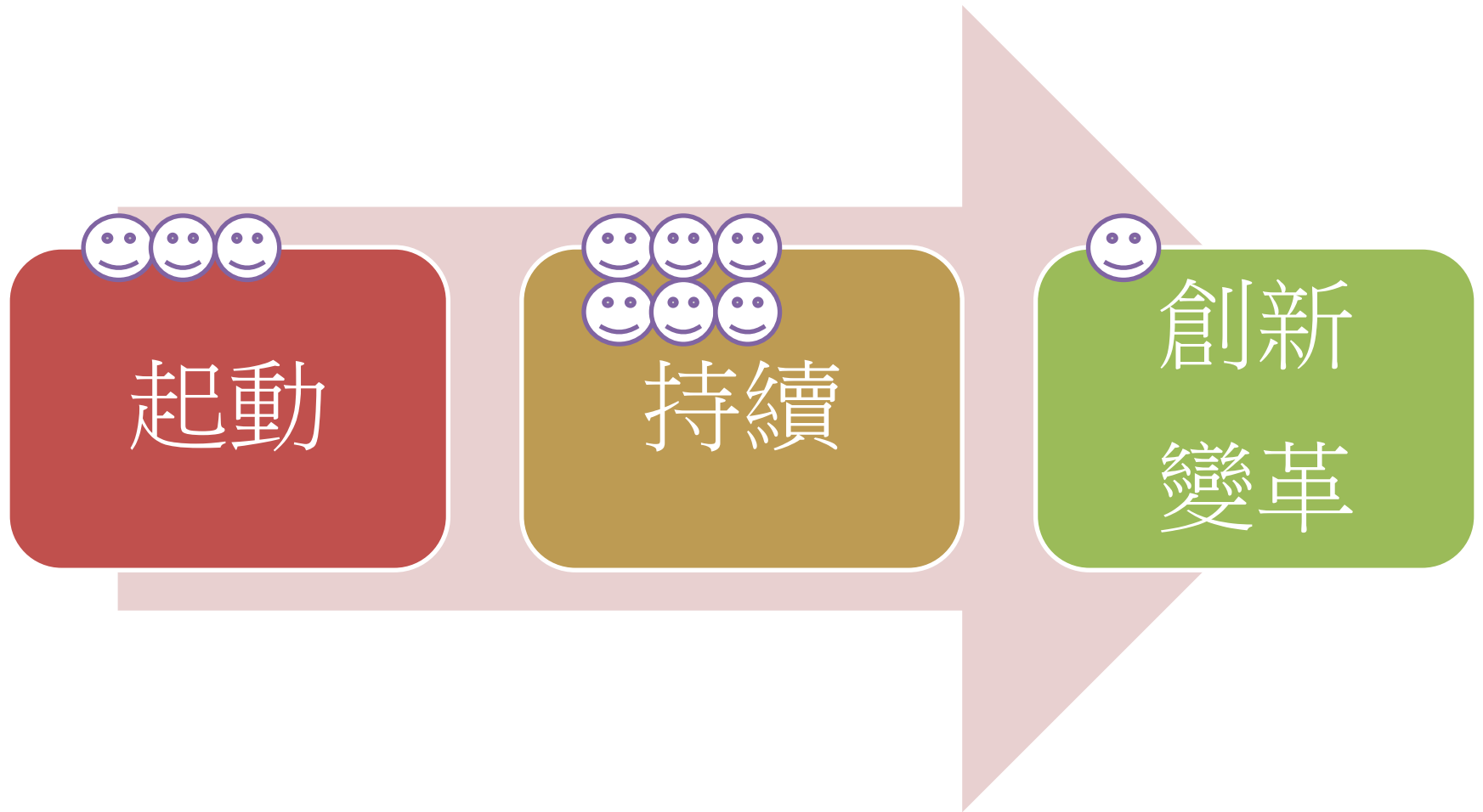
# 教學反思

1. 學生能夠「自主學習」的特性是**不容否定**。
2. **不同學科的學習方式是不一樣**。輕易地全盤肯定，或全盤否定，都不是專業的態度。
3. 知識的學習與知識的內化一樣，同樣需要**在體驗中建構**，也需要交互的環境，單靠講授式的視頻學習顯然不能滿足學習的要求。
4. 在現時中學眾多科目數量，把課堂學習全部轉移到課前是不現實的。

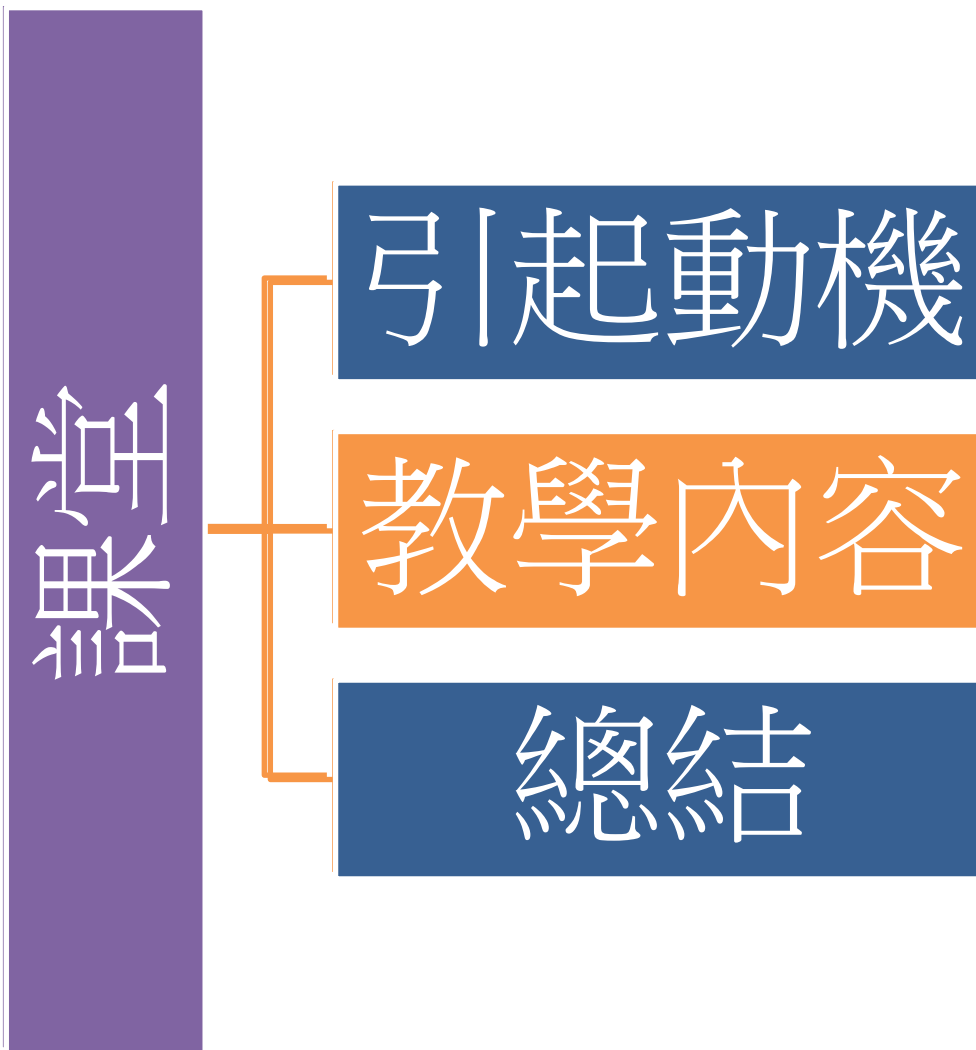
# NEW PRODUCT ADOPTION

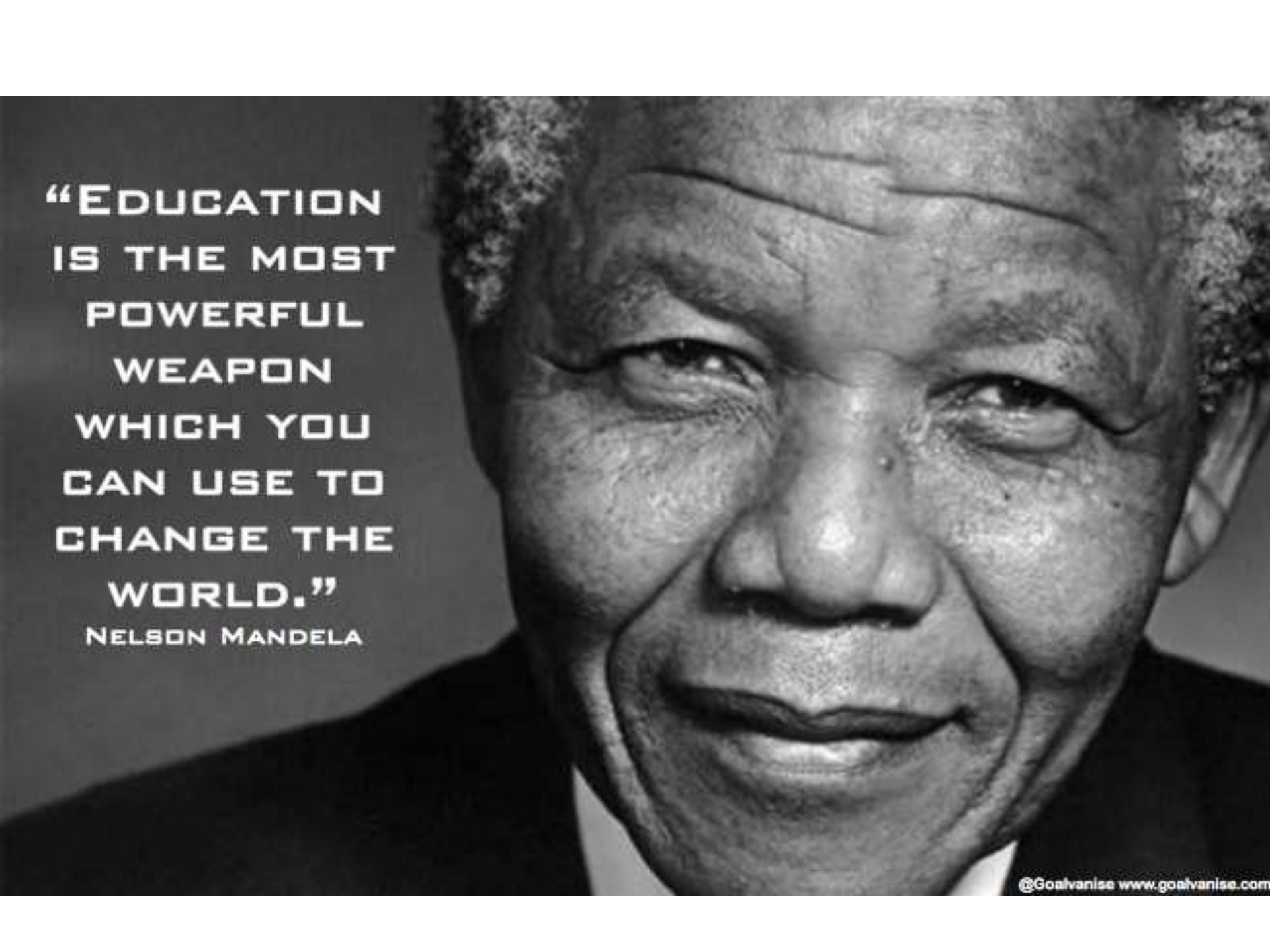


# 推行電子學習的階段



# 推行電子學習的階段



A black and white close-up portrait of Nelson Mandela, showing his face from the nose up. He has a slight smile and is looking directly at the camera. The background is dark and out of focus.

**“EDUCATION  
IS THE MOST  
POWERFUL  
WEAPON  
WHICH YOU  
CAN USE TO  
CHANGE THE  
WORLD.”**

**NELSON MANDELA**

A black and white photograph of Nelson Mandela in a prison cell. He is wearing a light-colored, long-sleeved button-down shirt with a pocket on the left side. He is leaning his right arm on a ledge and looking out of a window with vertical bars. The lighting is soft, coming from the window.

**“It always seems impossible  
until it is done.”**

**~ Nelson Mandela**

多謝!