

資訊科技教育教學法系列：  
在小學策略性運用資訊科技工具設計教學活動  
以提升學生以電腦為本的協作解難(CPS)能力  
(第二節)



香港中文大學學習科學與科技中心

## 小學 AA 班

### 第一節

日期：2018/05/04(星期五)

時間：18:30 - 21:30

地點：香港中文大學崇基校園信和樓614室

### 第二節

日期：2018/05/11 (星期五)

時間：18:30 - 21:30

地點：香港中文大學崇基校園信和樓614室



# 導師簡介

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- 專題研習科 科主任
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# 課程目標

本課程旨在介紹教師如何運用資訊科技工具和創新教學法，以提升學生以電腦為本的協作解難(CPS)能力。透過本課程讓學員：

- a) 了解CPS和以電腦為本的CPS的定義，及相關社交和認知技能；
- b) 了解以電腦為本的CPS活動的學習機會、特點、優勢和限制；
- c) 透過有關社會及科學的CPS活動案例，了解如何運用資訊科技工具和創新教學法，以提升學生以電腦為本的CPS能力；

# 課程目標

- d) 運用各種**資訊科技工具**（思維導圖工具等創造性工具、網上論壇等知識建構工具、交流工具和協作工具）創建與科目有關的簡單CPS活動；
- e) 設計和整合以電腦為本的CPS課堂活動；
- f) 運用常用**網上協作平台**（進展性和總結性電子評估）監察和評估學習成果；及
- g) 了解由**CPS延伸的技巧及才能**（例如領導技巧、團隊管理、時間管理和項目管理），並介紹如何使用**資訊科技**培育學生相關才能（例如使用翻轉教室和協作講故事）



# 課程詳情

## 第一節：

1. 以電腦為本的協作解難（CPS）能力的理論基礎
2. 課室設置、環境及學生分組
3. 於現時學校網絡環境中應用CPS流動應用程式/平台
4. 整合CPS應用程式/平台的介紹及實際操作（如real-time whiteboard、Google for Education、Learning Village等）
5. 課業討論



# 課程詳情

## 第二節：

1. 課業討論及回饋
2. 網上CPS應用程式/平台的介紹及實際操作（如 AnswerGarden、Coggle、Cacoo、Microsoft Office 365等）
3. 社交學習平台（如Edmodo）和翻轉課堂
4. 案例：於不同學習領域實踐CPS
5. 常見的CPS誤解
6. 介紹遊戲化的概念以促進協作學習
7. 討論、問與答及課程總結



# 1. 課業討論及回饋

## Feedback and discussion on Participants' Assignments





# LESSON 2

## 2. Examples of Using CPS Apps/Platforms to Facilitate Collaborative Learning



## 2. Examples of Using CPS Apps/Platforms to Facilitate Collaborative Learning

**Microsoft for Education:**

<https://www.microsoft.com/en-us/education/products/office/default.aspx>

### Microsoft 365

- ◆ Microsoft One Drive/Share Point: Teaching material sharing; Document
- ◆ management; Cloud-based access.
- Microsoft One Note: Sharing ideas; Sharing messages;
- Microsoft Task/Calendar: Communication among team members; Project and time
- ◆ management.



## 2. Examples of Using CPS Apps/Platforms to Facilitate Collaborative Learning

Microsoft for Education:  
<https://www.microsoft.com/en-us/education/products/office/default.aspx>

Office 365

























我的 App

搜尋 App

預設順序

名稱 (遞增)

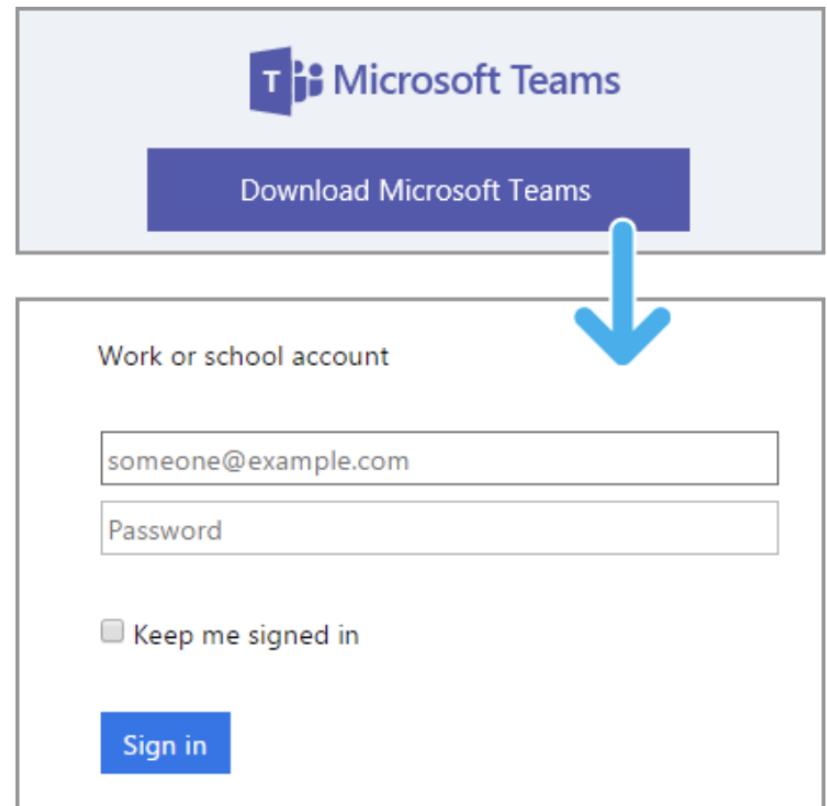
名稱 (遞減)

	OneNote		Class Notebook		Staff Notebook		郵件
	行事曆		Sway		Word		PowerPoint
	Excel		OneDrive		Forms		Planner
	人員		工作		Video		SharePoint
	Delve		新聞摘要		Yammer		PowerApps
	Flow		Stream		Teams		Dynamics 365

# Microsoft Teams

## 登入 Microsoft Teams

1. 前往 <https://teams.microsoft.com>
2. 使用公司或學校帳戶登入。



Microsoft Teams

Download Microsoft Teams

Work or school account

someone@example.com

Password

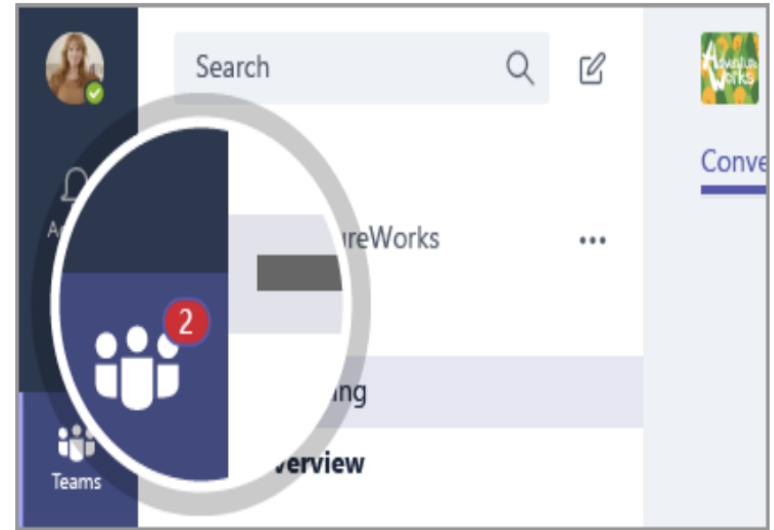
☐ Keep me signed in

Sign in

# Microsoft Teams

## 選取團隊和頻道

團隊可以匯集相關人員、交談、檔案和工具 — 全部集中在一處。頻道則是團隊的討論主題。熟悉團隊和頻道的最佳方式，就是選取團隊和頻道，然後開始探索。



## 選取 [團隊] 圖示

在團隊底下，選取頻道並查看頻道中的 [交談]、[檔案] 和 [記事] 索引標籤。

# Microsoft Teams : 交談

## 開始新的交談

當您有新的主題或想法要發表到團隊時，可以開始新的交談。

## 選取團隊和頻道

在 [開始新的交談] 方塊，新增您的訊息並按 Enter 鍵



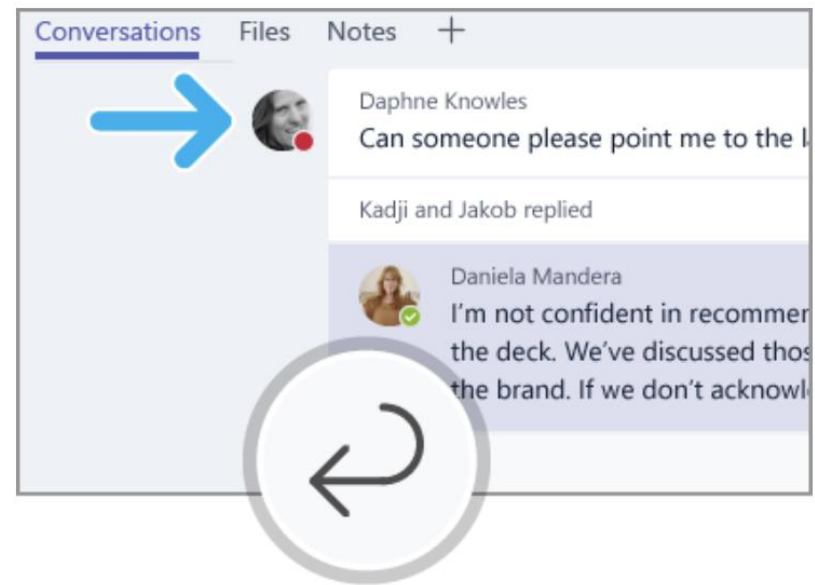
# Microsoft Teams : 交談

## 回覆交談

頻道中的交談會依日期、再依討論串分門別類。在往來交談中的回覆會歸類到初始交談底下，讓您可以更輕鬆地追蹤交談內容。

尋找您要回覆的交談討論串。

選取 [回覆]，新增您的訊息，然後按 Enter 鍵。

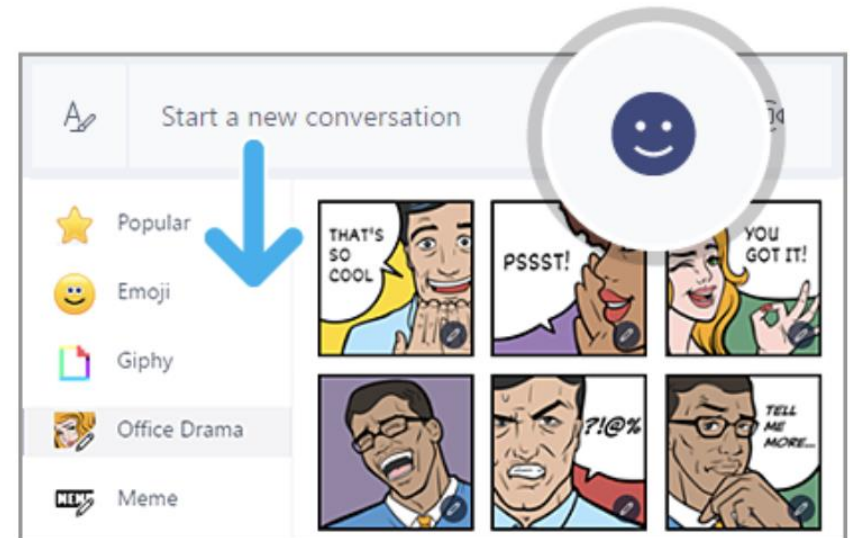


# Microsoft Teams : 交談

利用 Emoji、Meme 和貼圖增添樂趣 利用 Meme 和自訂的貼圖，來表達自我風格，並讓同事印象深刻。

選取 [團隊]，然後選取頻道。在撰寫訊息方塊/文字編輯器中選取選取以開啟 Fun Picker

我們建議使用辦公室小劇場貼圖，所以請選取 [辦公室小劇場]。選取貼圖，輸入有趣的標題，然後選取 [完成]。在傳送訊息之前使用 @ 提及同事，然後按 Enter 鍵





# Microsoft Teams: 共同作業

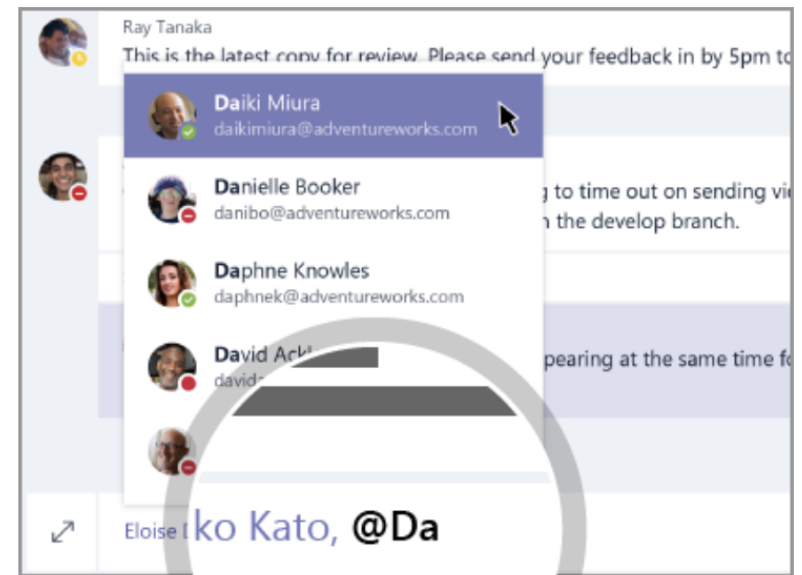
## 使用 @ 提及某人

如果您想要某人接收有關您傳送訊息的通知，您可以使用 @ 提及某人。您可以使用 @ 提及頻道、團隊、某個人或多個人。

在 [回覆] 或 [新交談] 方塊，輸入 @ 符號，然後輸入該人名字的前面幾個字母。

在 [建議] 方塊，選取人員。針對您想要使用 @ 提及的更多人員，重複上述動作。

對於您使用 @ 提及的人員，@ 符號會顯示在他們的 [頻道] 的訊息中和 [團隊] 圖示上。立即查看您的 [團隊] 圖示，查看某人是否使用 @ 提及您。



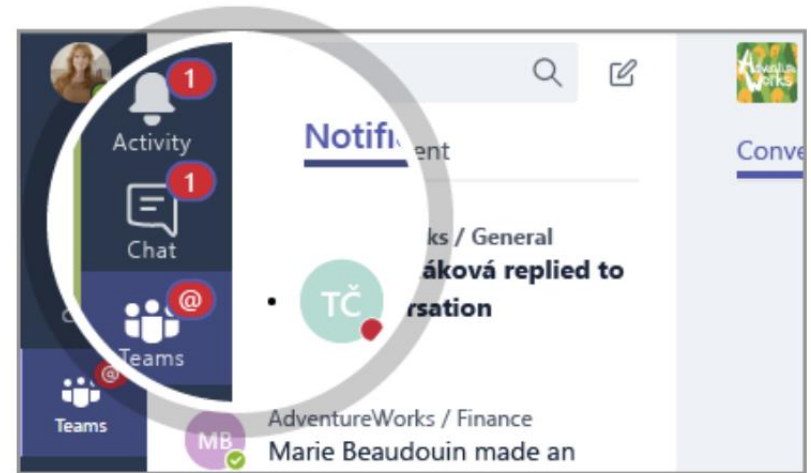
# Microsoft Teams: 共同作業

## 利用活動和通知隨時掌控全局

當有人使用 @ 提及您、有人對您的貼文按讚，或是有人回覆您開始的討論串，您都可以輕鬆地一覽無遺。在 [活動] 和 [聊天] 圖示上會顯示一個數字或遞增數字，而 @ 會出現在 [團隊] 圖示上。

選取 [活動] 圖示。

若要檢視適用於您的交談，請選取 [通知]。選取 [最近] 可檢視最新的團隊交談。

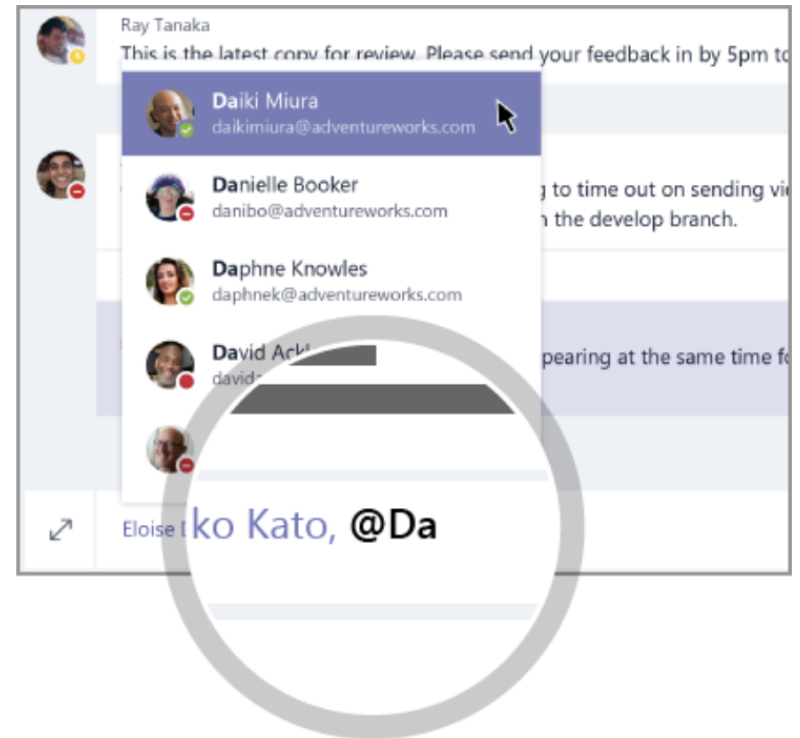


# Microsoft Teams: 共同作業

## 搜尋訊息、人員或檔案

您可以跨團隊、頻道和檔案進行搜尋。  
在 [搜尋] 方塊輸入詞句，然後選取 選取以開始搜尋。

- 選取 [訊息]、[人員] 或 [檔案]。
- 選取搜尋結果中的項目。您可以按一下 [篩選] 圖示來排序或篩選搜尋結果。



## 2. Examples of Using CPS Apps/Platforms to Facilitate Collaborative Learning

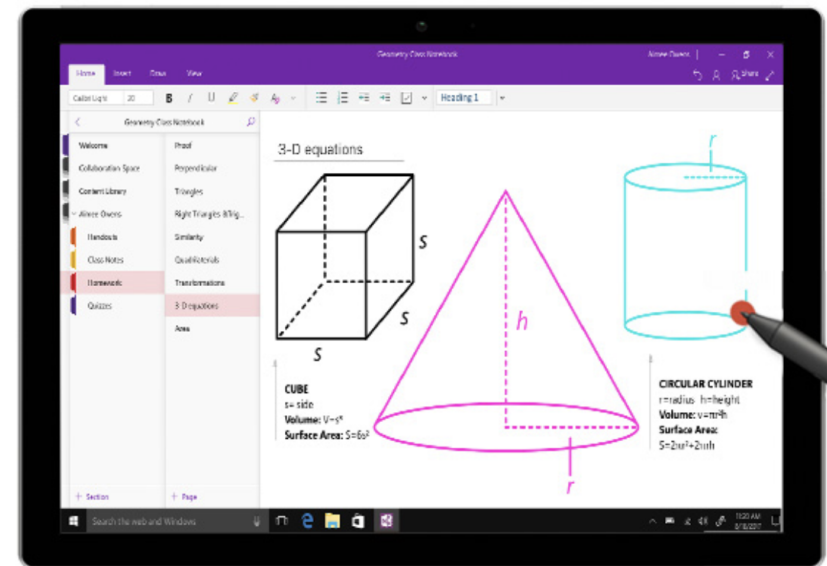
Microsoft for Education:

<https://www.microsoft.com/en-us/education/products/office/default.aspx>

### OneNote—用於組織和協同合作的終極數位筆記本

利用手寫文字、網站內容，甚至是來自您裝置的音訊和視訊來組織課堂教材和準備作業。然後即可輕鬆與學生和同事協同合作。

探索 **ONENOTE** > 在這裡免費取得 **ONENOTE** 訓練 >



## 2. Examples of Using CPS Apps/Platforms to Facilitate Collaborative Learning

Microsoft for Education:

<https://www.microsoft.com/en-us/education/products/office/default.aspx>



### Microsoft Teams

Teams 是集合對話、內容和 app 的數位中心。教育者可以創造協同合作課堂教學、與專業學習社群連結，並與學校人員對話——全部透過 Office 365 教育版完成。

[瞭解詳情 >](#)

## 2. Examples of Using CPS Apps/Platforms to Facilitate Collaborative Learning

Microsoft for Education:

<https://www.microsoft.com/en-us/education/products/office/default.aspx>



### PowerPoint Online

- 使用專業的範本，只要幾分鐘就能將您的想法轉換成令人信服的簡報。全部免費。
- 使用動畫、轉場效果、相片和線上影片，讓您的投影片更加生動活潑。
- 無論您人在哪，都能同時與您的小組共同撰寫同一份簡報。

開始使用 PowerPoint

Centre for Learning Sciences and Technologies (CLST)  
The Chinese University of Hong Kong



## 2. Examples of Using CPS Apps/Platforms to Facilitate Collaborative Learning

### Microsoft for Education:

<https://www.microsoft.com/en-us/education/products/office/default.aspx>

#### Excel Online

- 在熟悉的 Excel 試算表和活頁簿中整理和分析資料。所有變更都會在您輸入時自動儲存。
- 使用新式圖表和圖形以視覺化的方式呈現資訊，將多個數字欄轉換成有用的深入見解。
- 即時線上共同作業功能可確保每個人編輯最新版文件。

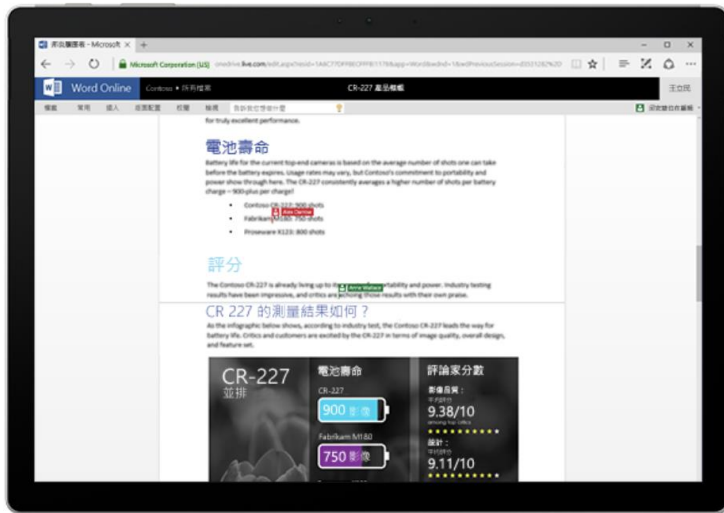
開始使用 Excel





## 2. Examples of Using CPS Apps/Platforms to Facilitate Collaborative Learning

Microsoft for Education:  
<https://www.microsoft.com/en-us/education/products/office/default.aspx>



### Word Online

- 建立並編輯外觀精美的履歷表、電子報和文件，並邀請其他人檢閱並即時共同撰寫。
- 使用免費範本節省時間，還包含針對 MLA、APA 和 Chicago 樣式需求所設計的格式設定工具。
- 運用免費的 Office 增益集額外增添功能，像是方便您撰寫文件時快速查詢資料的 Wikipedia 增益集。

開始使用 Word



### 3. Introduction and hands-on practices on free CPS Apps/Platforms



### 3. Introduction and hands-on practices on free CPS Apps/Platforms

Introduction to the following free CPS Apps/Platforms and illustration will be given to how to adopt them in carrying out classroom activities and collaborative learning.

- ◆ CoeFFEE Learning Platform  
(Gamified Learning Environment)
- ◆ AnswerGarden  
(Formative assessment and polling)
- ◆ Coggle  
(Collaborative concept map and graph)
- ◆ Cacao  
(Collaborative flow chart)
- ◆ Alternative ways to adopt the above Apps/Platforms and their pros/cons:
  - ◆ On mobile devices;
  - ◆ As Google Chrome extensions.

### 3. Introduction and hands-on practices on free CPS Apps/Platforms


#### CoeFFEE Learning Platform (Gamified Learning Environment)

- Learning language in a **gamified environment**
- **Word Explainer**: explain and guess words with peers;
- **Learn phrases** created by other teachers from all over the world.

The screenshot displays the CoeFFEE Learning Platform interface. At the top, the CoeFFEE logo is on the left, and user options (Profile, Logout, 0 new messages) are on the right. A navigation bar includes links for Language Exchange, Make a Phrase, Word Explainer (which is highlighted), Blog, and Learning Stats. The main section is titled "Word Explainer" with the subtitle "Language practice that's pure fun". Below this, there is a "Game language" section with a dropdown menu set to "English" and a "Play!" button. A message states "Playing in your native language is fun too :)". Below the "Play!" button, there is a section with a pencil icon and text explaining that Word Explainer is an advanced game for advanced students and native speakers, and that its purpose is to explain words and guess words explained by other players. A link "Read more about Word Explainer" is provided. To the right of this text is a warning icon and a message stating that before starting the game, the user's vocabulary needs to be measured to adjust the game to their language level.

<https://coeffee.com/>

## AnswerGarden ( Formative assessment and polling)

- 

# AnswerGarden

A minimal tool for maximum feedback

Now also for iPad!

Download on the App Store

## What is AnswerGarden

AnswerGarden is a new minimalist feedback tool. Use it for real time audience participation, online brainstorming and classroom feedback.

[Learn more >](#)

## Who uses AnswerGarden

AnswerGarden has many different users: classroom, conference and corporate audiences, creative teams, online crowds, mindmappers, and more!

[Learn more >](#)

## Benefits of AnswerGarden

AnswerGarden fits educational, professional and creative purposes, is standalone and embeddable, and shows thousands of answers in a glance!



[Learn more >](#)

## AnswerGarden Demo

<https://answergarden.cn/>

## Create AnswerGarden

[Create your own AnswerGarden](#)


- 

# AnswerGarden

Demonstration

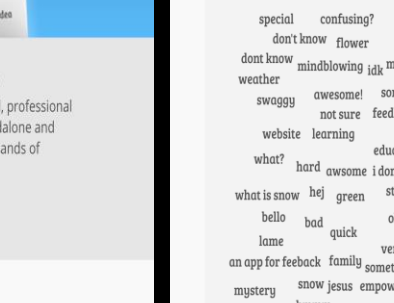
Try out this sample AnswerGarden. Respond to the question by typing in the answer field or click an existing answer, then press the submit-button to add your entry. Only the most frequent answers are shown, as there currently are more than answers in this garden! [Click here](#) to learn more on how to create and apply your own AnswerGarden. Or [create an AnswerGarden](#) right away!

## AnswerGarden is

Type your answer here...

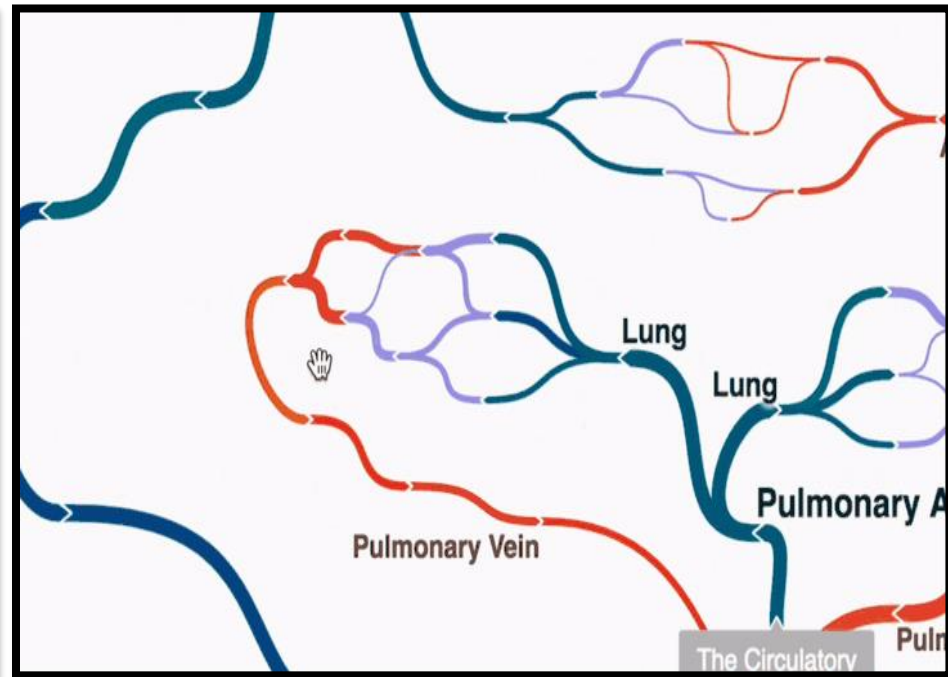
20 characters remaining

Submit



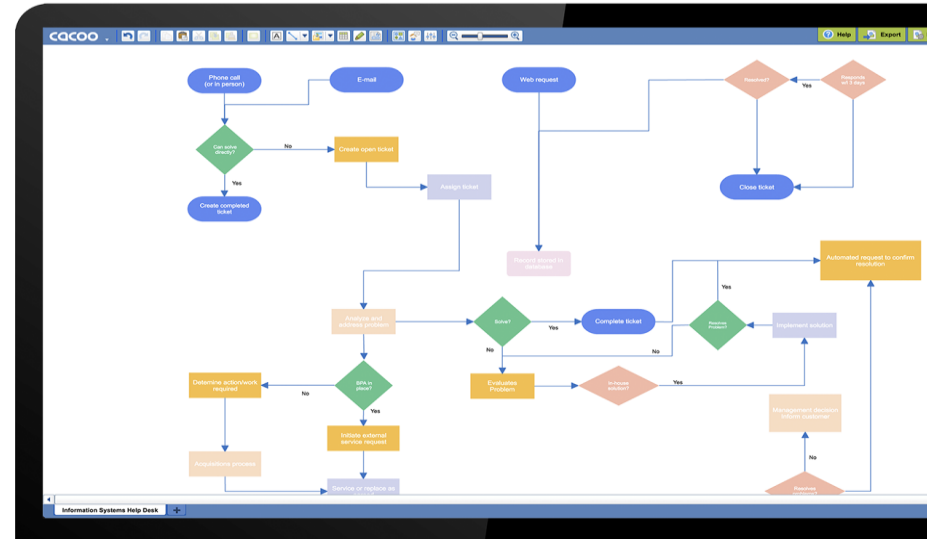
### 3. Introduction and hands-on practices on free CPS Apps/Platforms

#### Coggle (Collaborative concept map and graph)



<https://coggle.it/>

## Cacoo.com (Collaborative flow chart)



### 3. Introduction and hands-on practices on free CPS Apps/Platforms

MENTI

<https://www.menti.com/>



Please enter the code

 12 34 56

Submit

The code is found on the screen in front of you

### 3. Introduction and hands-on practices on free CPS Apps/Platforms

MENTI

<https://www.menti.com/>

Go to [www.menti.com](https://www.menti.com/) and use the code **92 56 20**

i

今天感覺寒冷嗎？

 Mentimeter

0%

寒冷

0%

不寒冷

0%

無感覺





# Trello

[登入](#)[登錄](#)

<https://trello.com/>



**Trello 不僅免費、使用上相當靈活，還可以視覺化的方式與他人共同管理所有事項。**

揚棄冗長的電子郵件對話串、過時表單、不太黏的便利貼和笨拙軟體，以免管理專案時節外生枝。Trello 可讓你一眼掌握專案的整體概況。

[立即註冊，免費使用。](#)

[登入...](#)

# Trello

How Trello Uses Trello to Collaborate, Plan, and Communicate as a Team

<https://zapier.com/blog/how-trello-uses-trello/>

How Teams At Trello Use Trello

<https://blog.trello.com/how-teams-at-trello-use-trello-pro-tips>



# Trello

一、每個專案都有一個 [ 收件匣 ] 列表

二、看板根據「工作流程」自由設計

以Trello在發佈新功能時使用的看板，採用了如下的工作進度列表設計：專案基本資料待辦事項處理中準備發布已經發布

三、利用卡片待辦清單，決定卡片是否移動到下個進度

四、利用空白卡片，建立可複製工作步驟模板

五、另外建立資源看板，和專案流程看板區隔

六、建立最佳流程後，隨時可以複製使用：

七、減少會議時間的技巧

八、減少通知噪音的技巧

## 4. Educational Social Network and Flipped Classroom



## 4. Educational Social Network and Flipped Classroom

### Introduction of Edmodo

- Teacher and Student connection
- Assessment tool and personalization
- Sending notes/ poll/ grouping/ resources posting
- Facilitation with Flipped Classroom Video



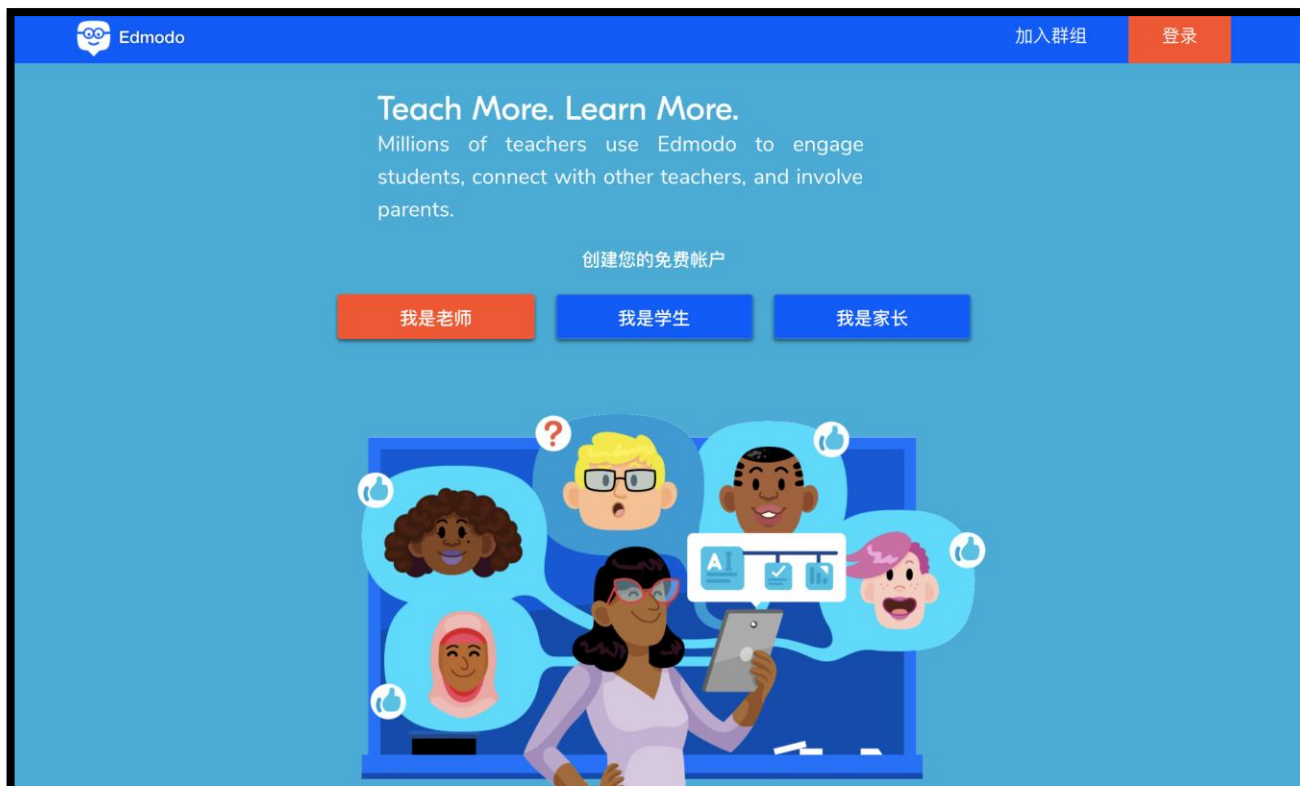
## 4. Educational Social Network and Flipped Classroom

步驟一：

到 <http://www.edmodo.com/>，按下 “I'm a Teacher” 進行註冊

\*老師帳戶 – 必須提供電郵作註冊，功能較多

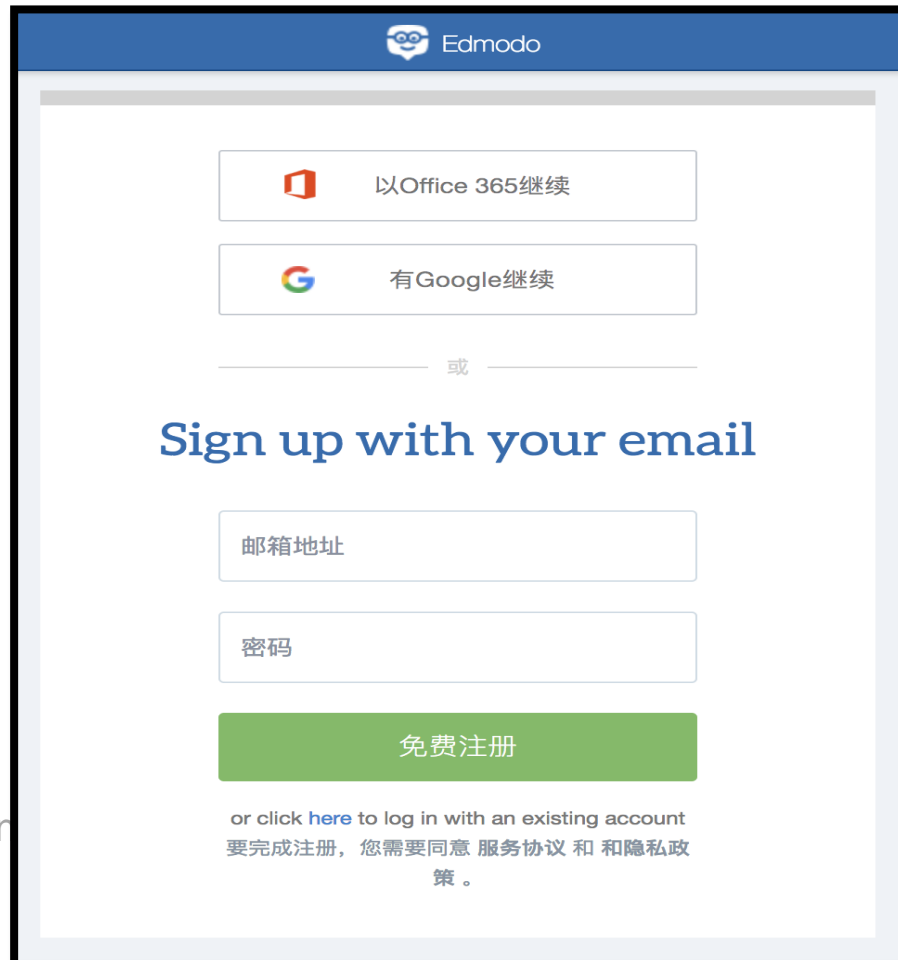
\*學生帳戶 – 不須提供電郵



## 4. Educational Social Network and Flipped Classroom

### 步驟二：

先填寫基本資料，再剔選同意使用條款，最後按 “Sign up”  
(免費註冊) (也可用 Google 或 Office 365 戶口登入)



The image shows the Edmodo sign-up page. At the top is the Edmodo logo. Below it are two buttons for logging in with Office 365 and Google. A separator line with the word '或' (or) is in the middle. Below that is the heading 'Sign up with your email'. There are two input fields for '邮箱地址' (Email address) and '密码' (Password). A green button labeled '免费注册' (Free registration) is below the fields. At the bottom, there is a link to log in with an existing account and a note about agreeing to terms and privacy policy.

Edmodo

以Office 365继续

有Google继续

或

Sign up with your email

邮箱地址

密码

免费注册

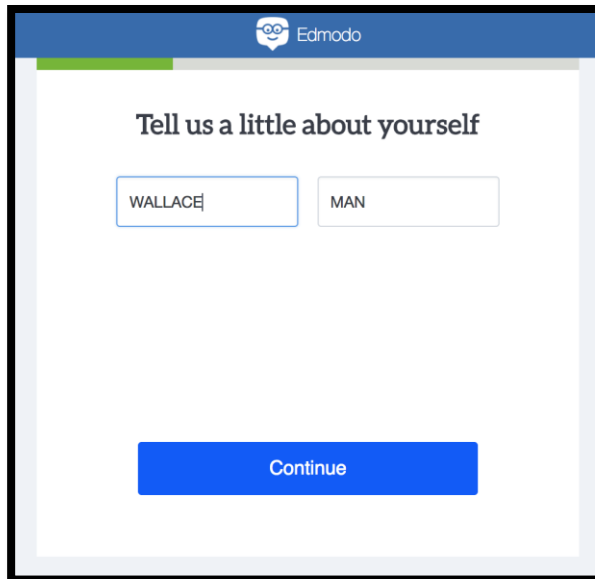
or click [here](#) to log in with an existing account  
要完成注册，您需要同意 服务协议 和 隐私政策。



## 4. Educational Social Network and Flipped Classroom

步驟三：

填入相關戶口資訊

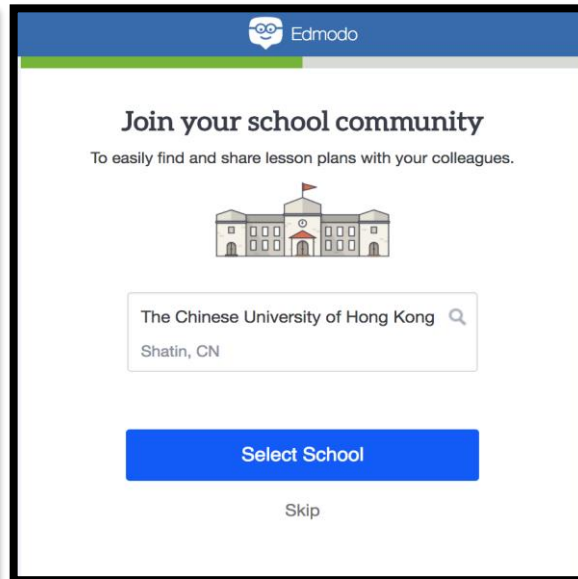


Edmodo

Tell us a little about yourself

WALLACE MAN


Continue



Edmodo

Join your school community

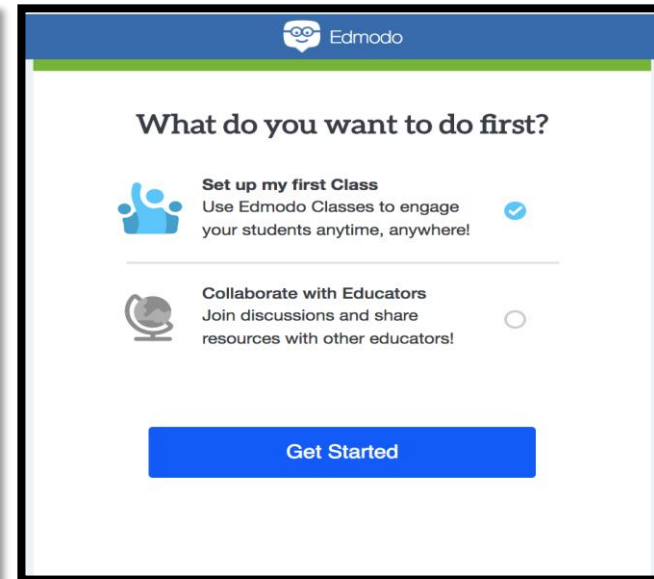
To easily find and share lesson plans with your colleagues.



The Chinese University of Hong Kong  
Shatin, CN


Select School


Skip



Edmodo

What do you want to do first?

 **Set up my first Class**  
Use Edmodo Classes to engage your students anytime, anywhere! ☒

 **Collaborate with Educators**  
Join discussions and share resources with other educators! ☐

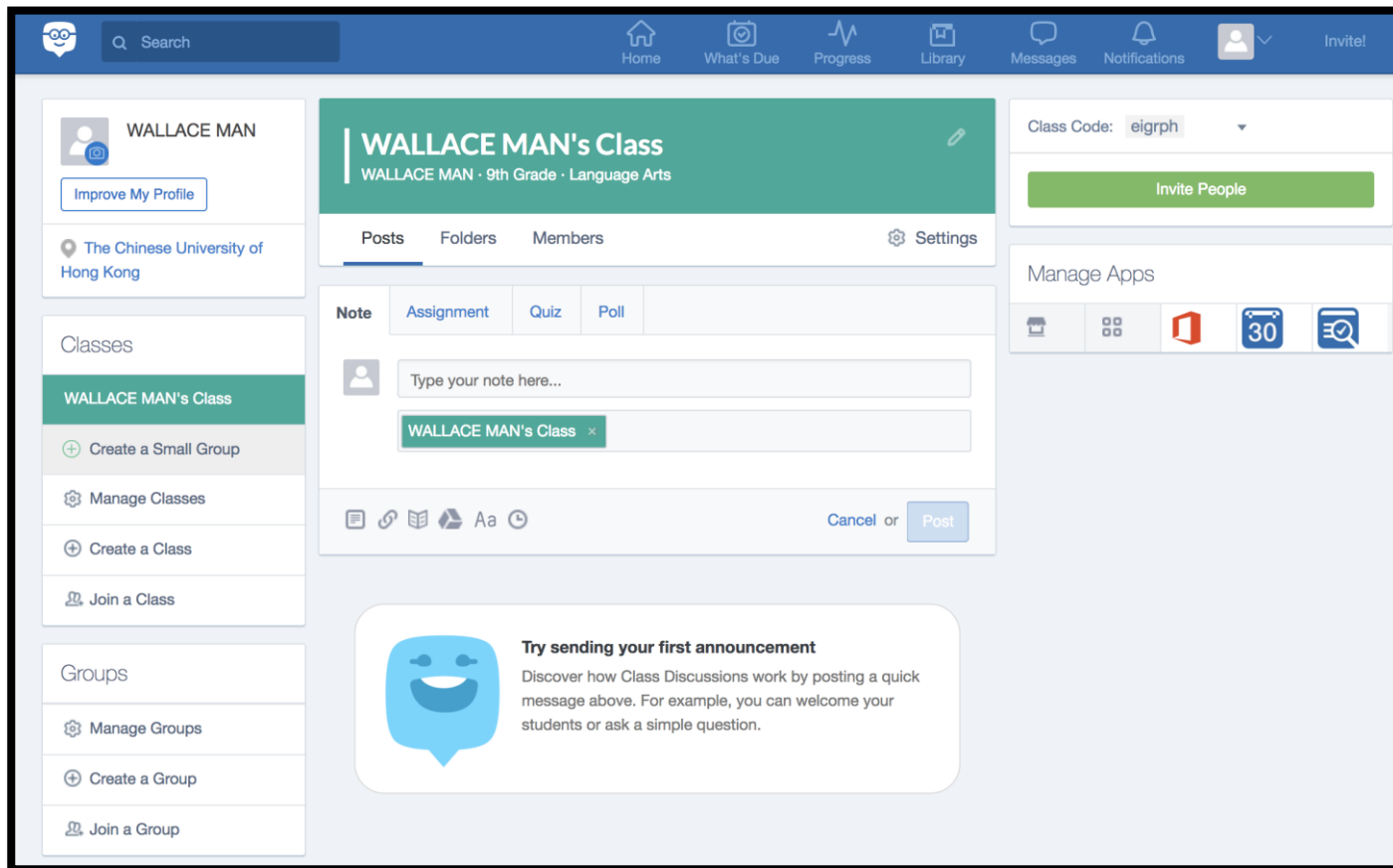
Get Started



## 4. Educational Social Network and Flipped Classroom

### 步驟四：

- 到達個人網頁, 介面和 Facebook 類似
- 老師可按下左面 “Create a Small Group” 建立一個新群組，並為群組設定名稱及類別。



## 4. Educational Social Network and Flipped Classroom

步驟五：

填入相關 SMALL GROUP 資訊

Create Small Group

CUHK DEMO

Create



WALLACE MAN

Improve My Profile

The Chinese University of Hong Kong

Classes

WALLACE MAN's Class

CUHK DEMO

Create a Small Group

Manage Classes

Create a Class

Join a Class

Groups

Manage Groups

Create a Group

CUHK DEMO

Small group for WALLACE MAN's Class

Posts

Folders

Members

Settings

Note

Assignment

Quiz

Poll



CUHK DEMO

CUHK DEMO

Cancel or Post



Try sending your first announcement

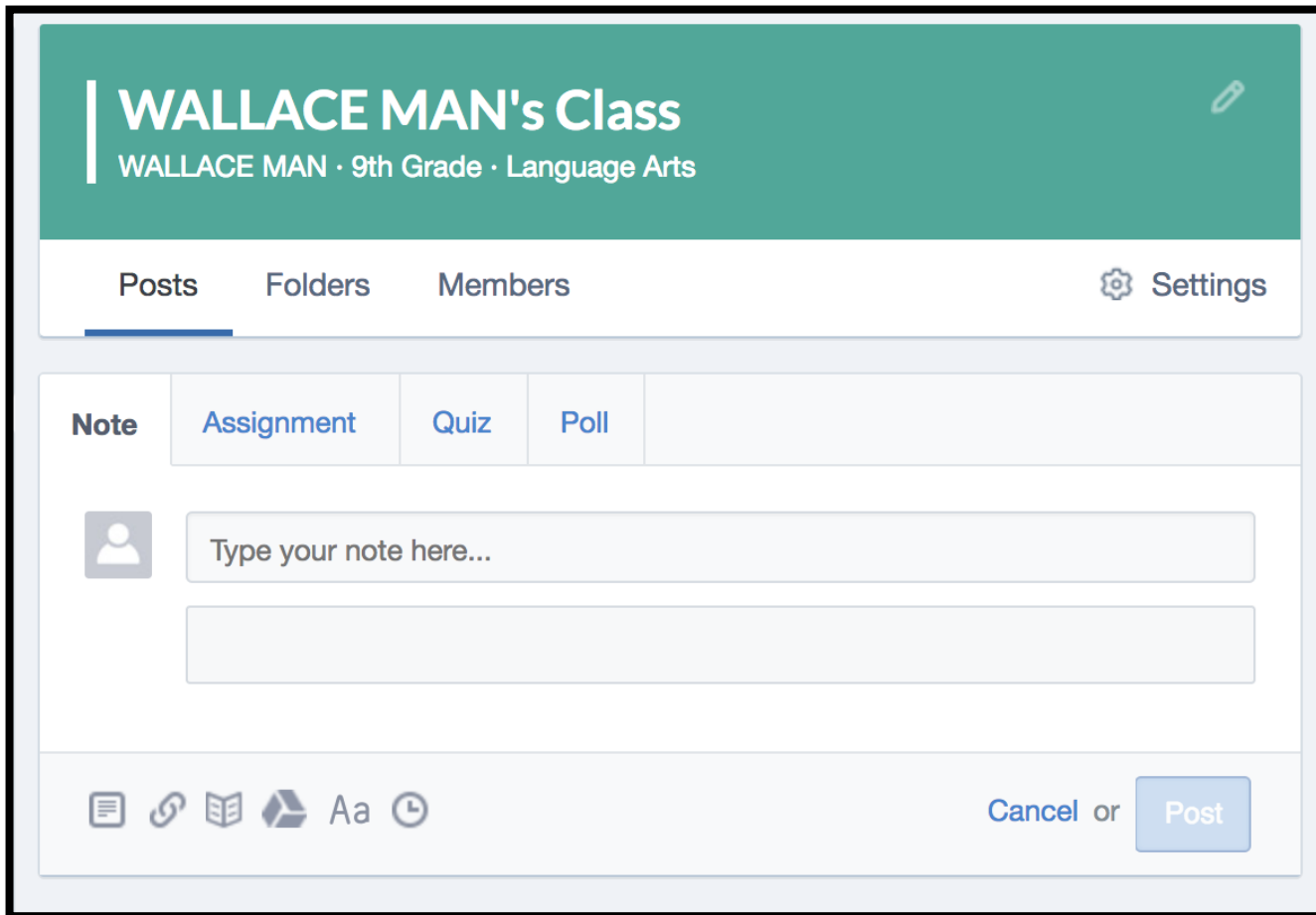
Discover how Class Discussions work by posting a quick message above. For example, you can welcome your students or ask a simple question.



## 4. Educational Social Network and Flipped Classroom

### 步驟六：

- Posts 內有四個選項：Notes, Assignment, Quiz, Poll
- Note 可加入筆記（可以加入附件/連結/Google Drive）



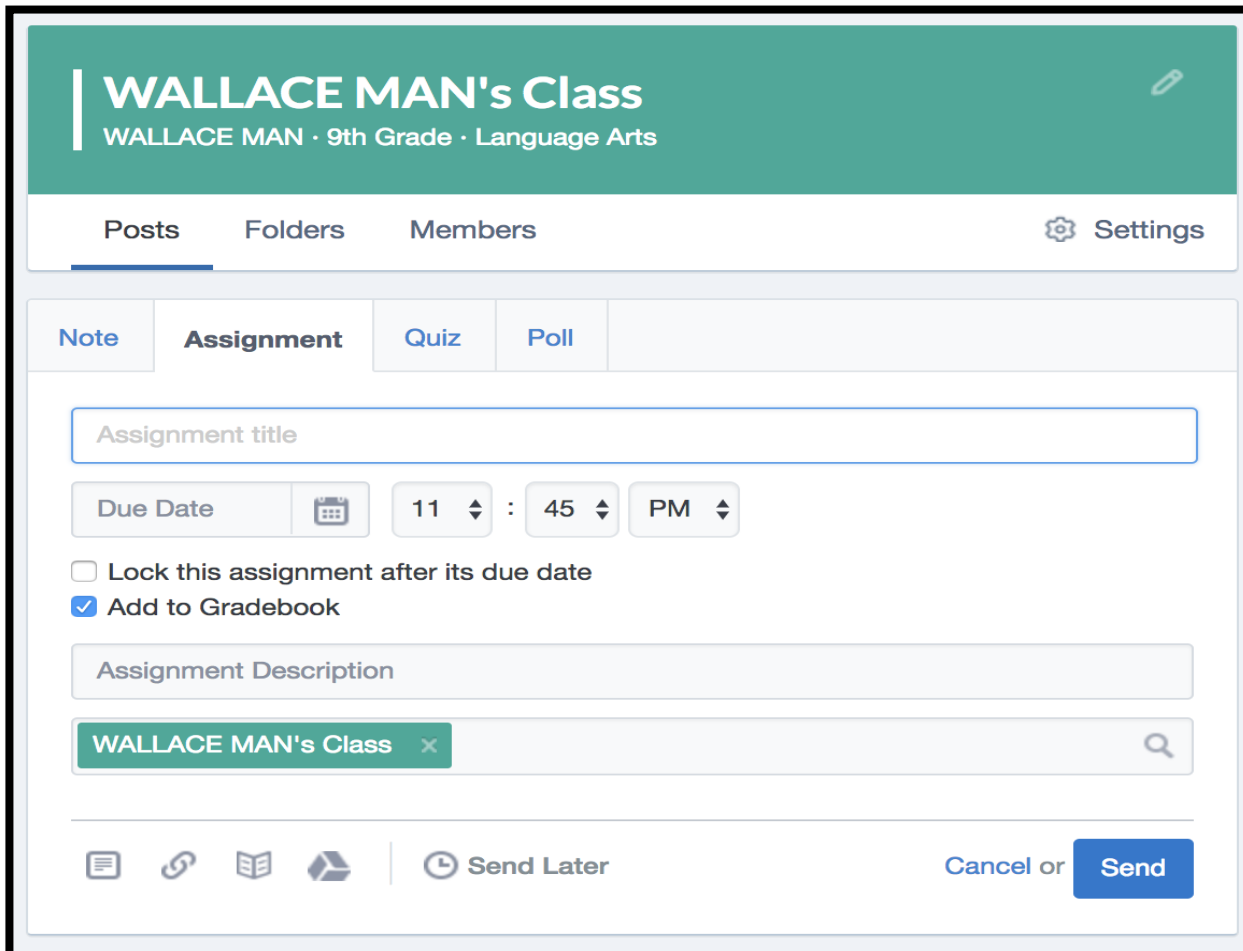
The screenshot displays the 'WALLACE MAN's Class' interface, specifically the 'Note' creation screen. The header bar is teal with the class name 'WALLACE MAN's Class' and the subtitle 'WALLACE MAN · 9th Grade · Language Arts'. Below the header, there are tabs for 'Posts', 'Folders', and 'Members', with 'Posts' being the active tab. To the right of these tabs is a 'Settings' button with a gear icon. The main content area has a light blue background and features four tabs: 'Note' (selected), 'Assignment', 'Quiz', and 'Poll'. Below these tabs, there is a text input field with the placeholder 'Type your note here...' and a smaller, empty text area below it. At the bottom of the interface, there is a toolbar with icons for text, link, image, and document, followed by a 'Cancel or Post' button.



## 4. Educational Social Network and Flipped Classroom

### 步驟七：

- Assignment 可加入家課 及 設定功課提交日  
( 可以加入附件/連結/GoogleDrive)



**WALLACE MAN's Class**  
WALLACE MAN · 9th Grade · Language Arts

Posts Folders Members Settings

Note **Assignment** Quiz Poll

Assignment title

Due Date 11 : 45 PM

☐ Lock this assignment after its due date  
☒ Add to Gradebook

Assignment Description

WALLACE MAN's Class

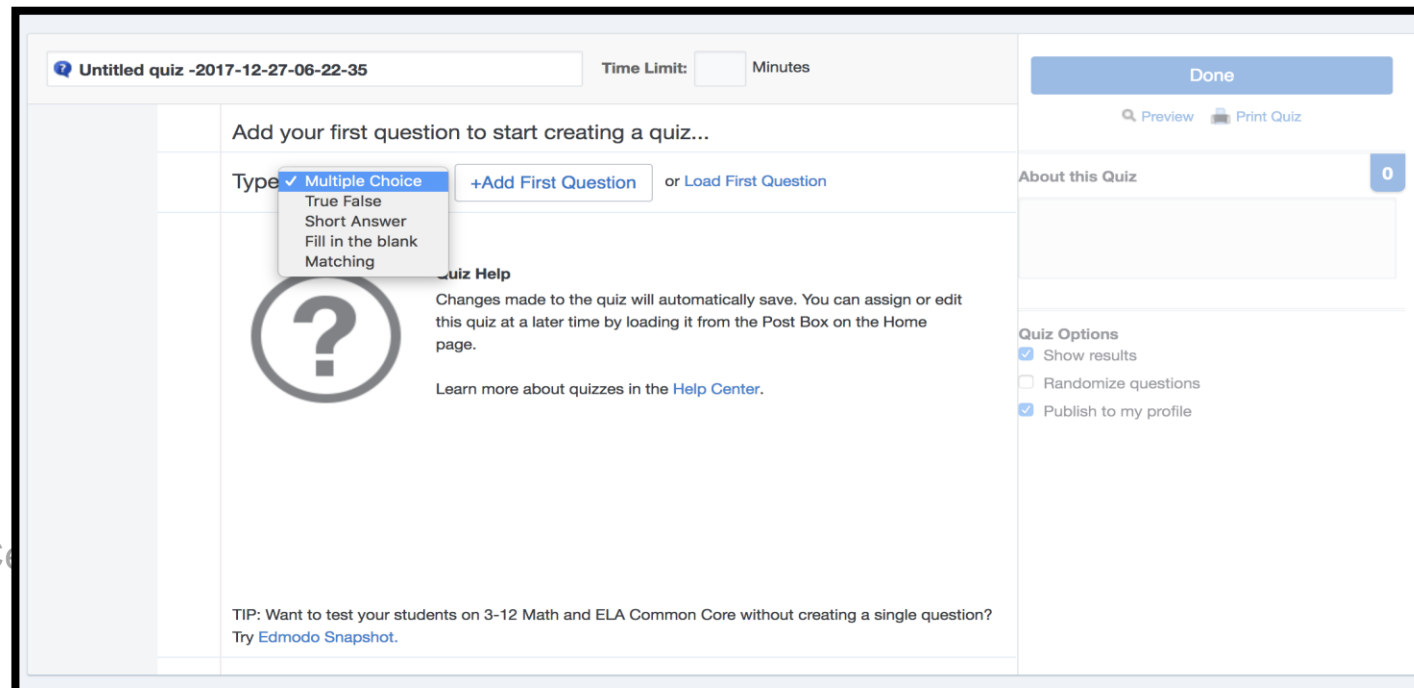
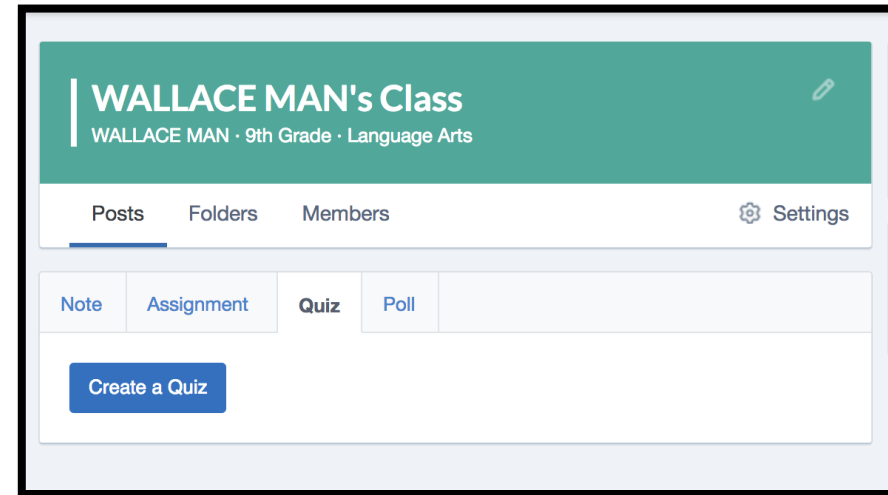
Send Later Cancel or Send



## 4. Educational Social Network and Flipped Classroom

### 步驟八：

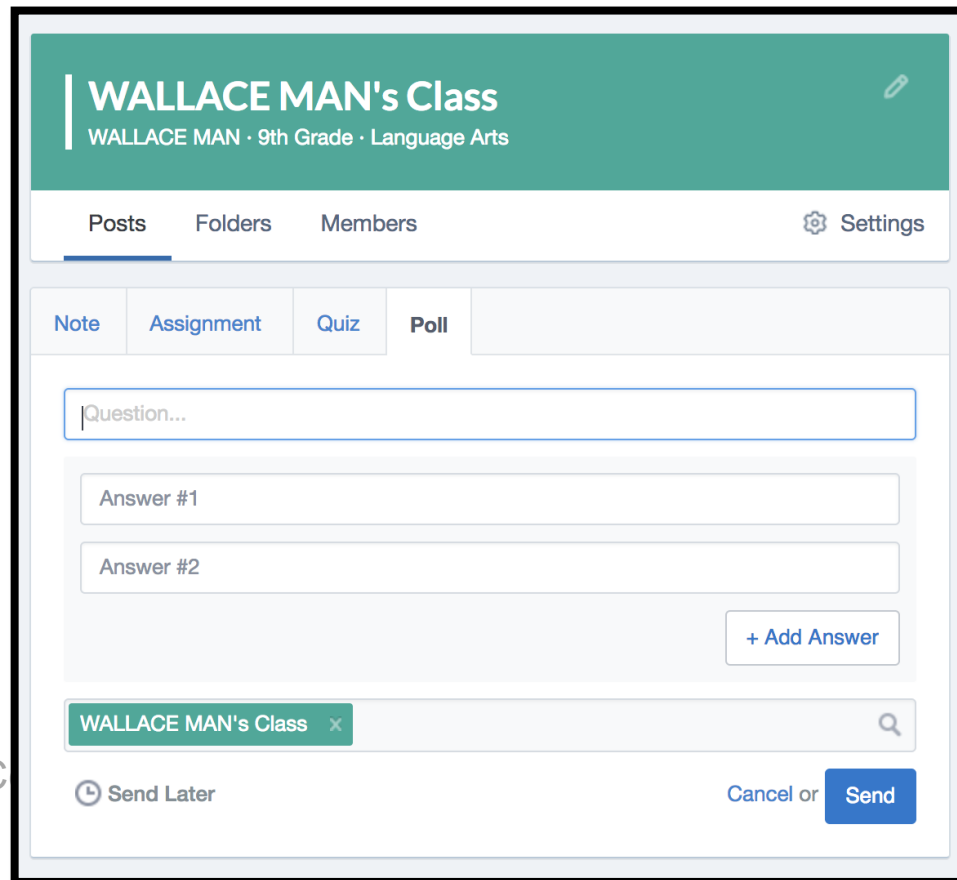
- Quiz 可加入測驗 及 設定功課提交日
- 題型：MC/ TF/ SQ/ Fill in Blank/ Matching



## 4. Educational Social Network and Flipped Classroom

### 步驟九：

- Poll 可加入投票
- 在空白位置輸入問題，然後輸入答案，老師亦可按 “+ Add Answer” 增加答案。完成後按 “Send”。



The screenshot displays the 'WALLACE MAN's Class' interface, which is a social network for Wallace Man, a 9th Grade Language Arts teacher. The interface includes tabs for Posts, Folders, and Members, along with a Settings icon. Below these, there are tabs for Note, Assignment, Quiz, and Poll. The Poll tab is selected, and the form for creating a poll is visible. It includes a text input field for the question, two text input fields for answers (labeled Answer #1 and Answer #2), and a button labeled '+ Add Answer'. At the bottom of the form, there is a search bar with 'WALLACE MAN's Class' entered, a 'Send Later' button, and a 'Send' button.



## 4. Educational Social Network and Flipped Classroom

**Video Editing Apps** for Teachers and Students to express collaborative ideas

- Apple Clips [iOS]



<https://itunes.apple.com/hk/app/clips/id1212699939?v0=www-hk-clips-app&l=zh>

- Magisto Video Editor & Maker



<https://play.google.com/store/apps/details?id=com.magisto>

<https://itunes.apple.com/us/app/magisto-video-editor-movie-maker/id486781045?mt=8>

- Video Editor AndroMedia [Android]







[https://play.google.com/store/apps/details?id=com.catflow.andromedia&hl=zh\\_TW](https://play.google.com/store/apps/details?id=com.catflow.andromedia&hl=zh_TW)

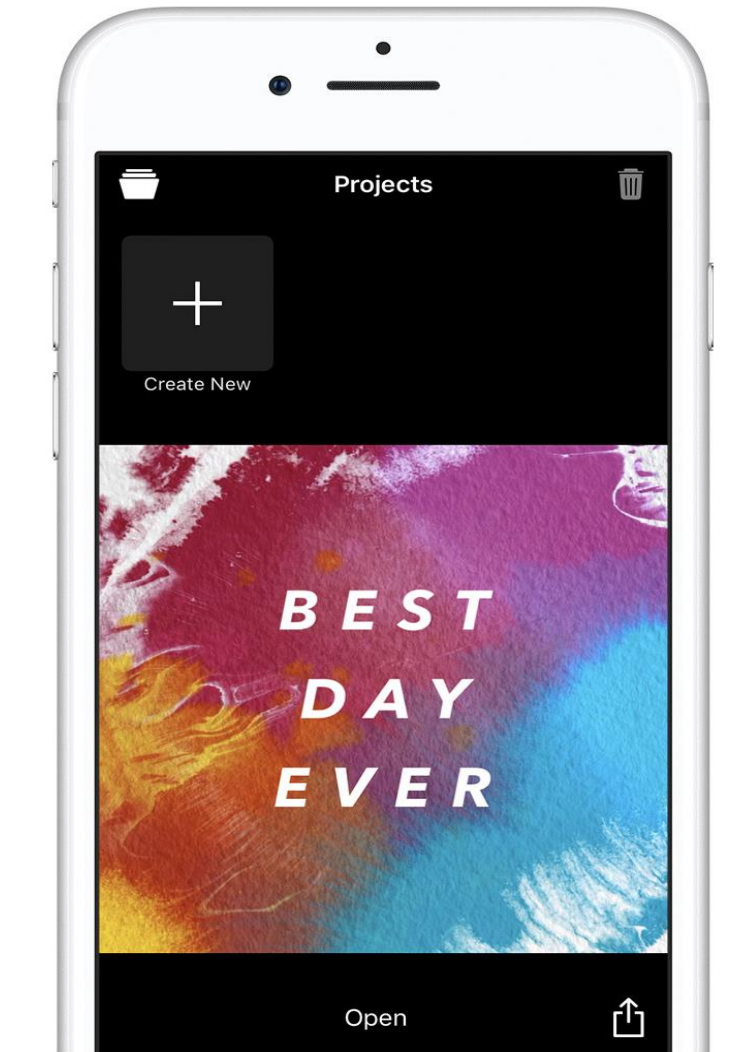
## 4. Educational Social Network and Flipped Classroom

### Apple Clips



#### Record a new video clip

1. Open the Clips app
2. Tap  in the upper-left corner, then tap 
3. To start recording, hold  If you don't want to hold the button, swipe up on the record button to lock it.
4. To stop recording, let go of the record button. If you locked the record button, tap it to stop recording. Find the new clip in the timeline at the bottom of the screen.
5. To watch your recorded clips, tap a clip in the timeline, then tap 





## 4. Educational Social Network and Flipped Classroom

### Apple Clips



### Add more clips to a video

- You can keep recording new clips and then combine multiple clips to make a video.
- When you add a clip to a video, the new clip appears after the previous clip in the timeline.
- When you play back the video, it plays all the clips in the order they appear in the timeline






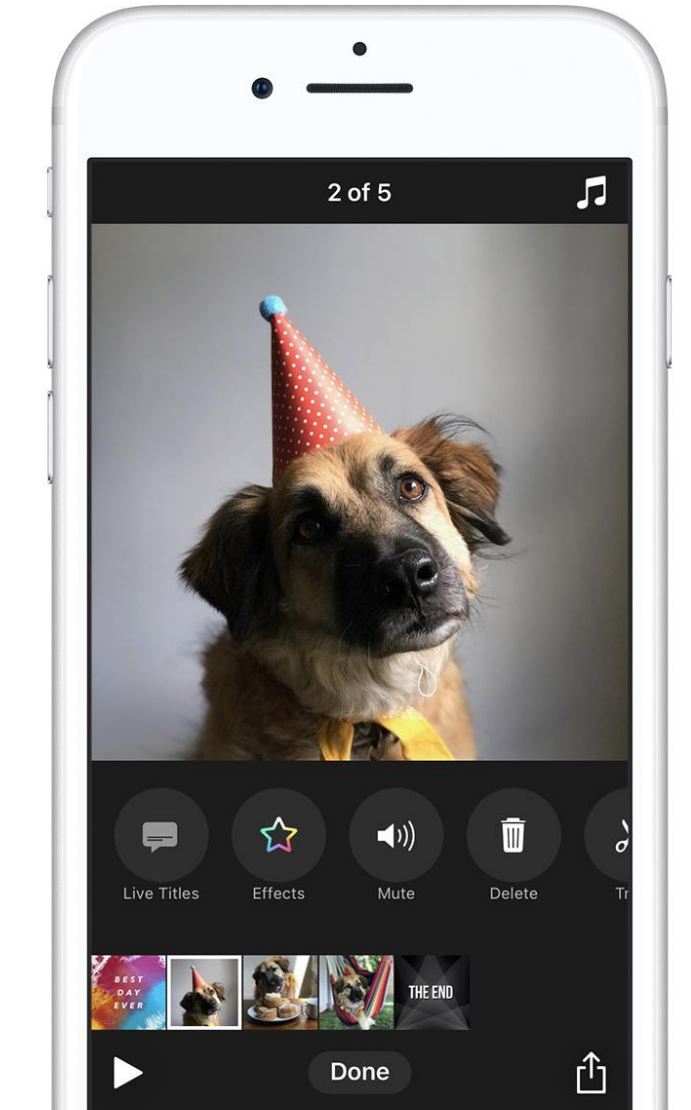
## 4. Educational Social Network and Flipped Classroom

### Apple Clips



You can also add existing still photos and videos from your library with these steps:


1. Tap Library
2. Tap an existing photo or video.
3. Hold  for the amount of time that you want the photo or video to appear.
4. For example, if you select a photo and hold  for three seconds, the photo will appear in your video for three seconds.
5. And if you select an existing video in your library and hold  for five seconds, the first five seconds of action will appear in your video.



## 4. Educational Social Network and Flipped Classroom

### Apple Clips





4. After you add a clip, you can reorder clips or remove them.
- To reorder clips, touch and hold a clip in the timeline, then drag it left or right.
  - To remove a clip from a video, select the clip in the timeline, then tap  Or drag the clip towards the top of the screen.

## 4. Educational Social Network and Flipped Classroom



### Apple Clips



#### Share videos

1. If the video you want to share isn't open, tap  in the upper-left corner.
2. Swipe left to see all your videos, then tap a video project to open it.
3. Tap , then choose Mail, Messages, or your favorite social media app

#### Delete a project

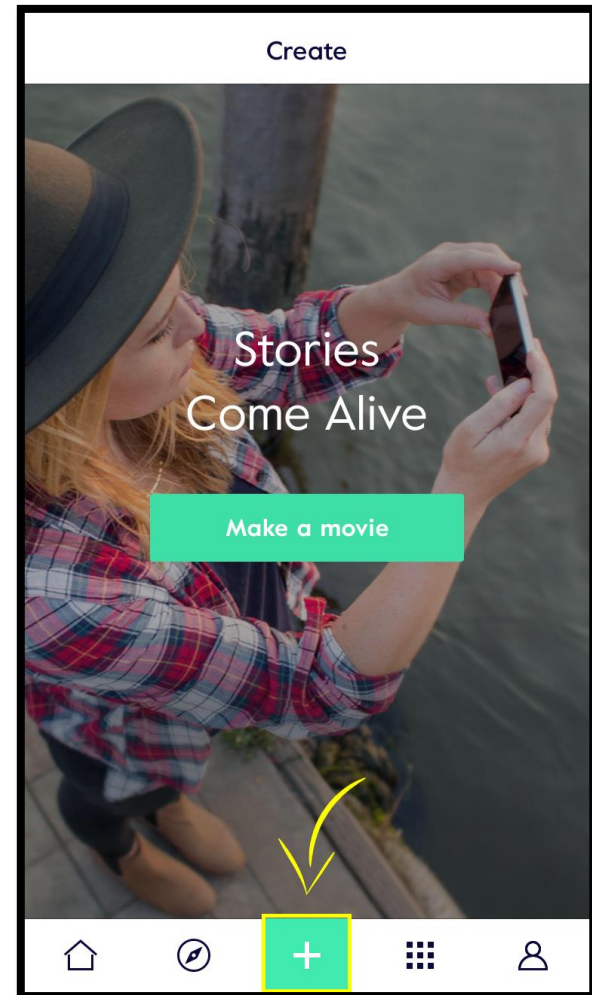
1. Tap  in the upper-left corner.
2. Select the project that you want to delete.
3. Tap 

## 4. Educational Social Network and Flipped Classroom

### Magisto Video Editor & Maker

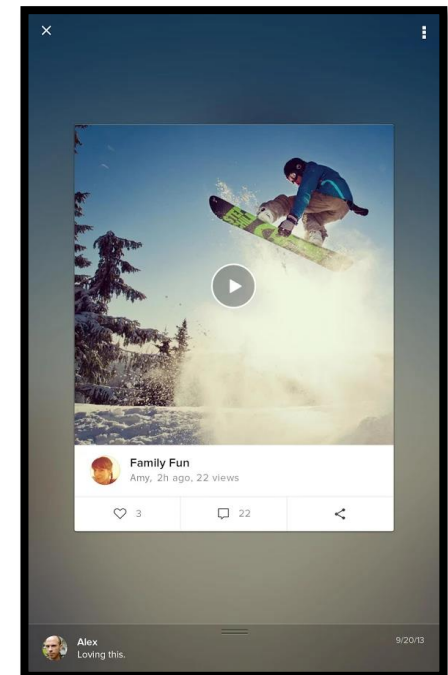
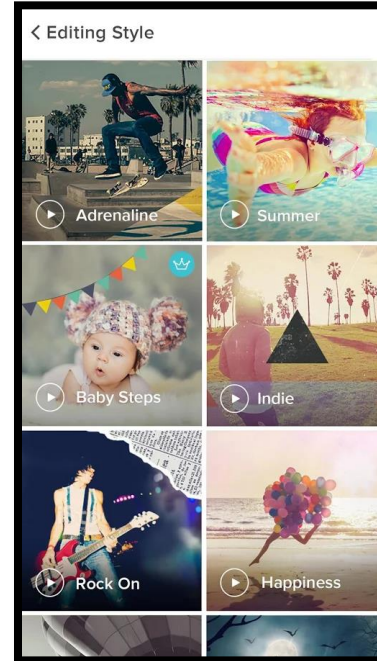
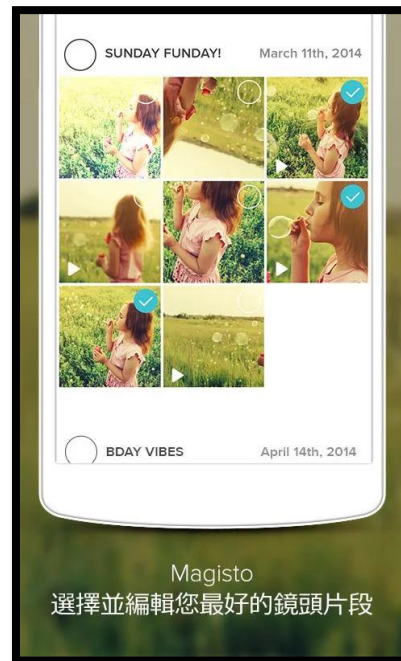
#### Creating a new movie

From the Home screen, just tap the green plus button to begin making your new movie.



## 4. Educational Social Network and Flipped Classroom

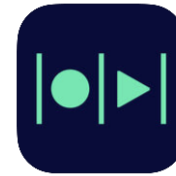
### Magisto Video Editor & Maker [Android]





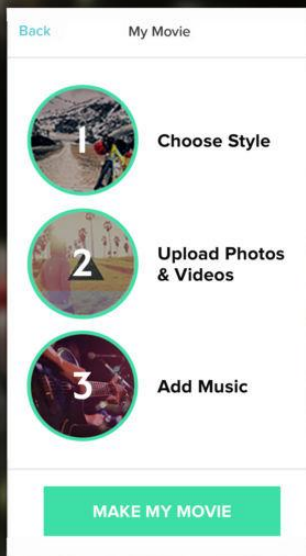
# 4. Educational Social Network and Flipped Classroom

## Magisto Video Editor & Maker [IOS]



### VIDEOS IN MINUTES

Produce Inspiring Videos in 3 Easy Steps



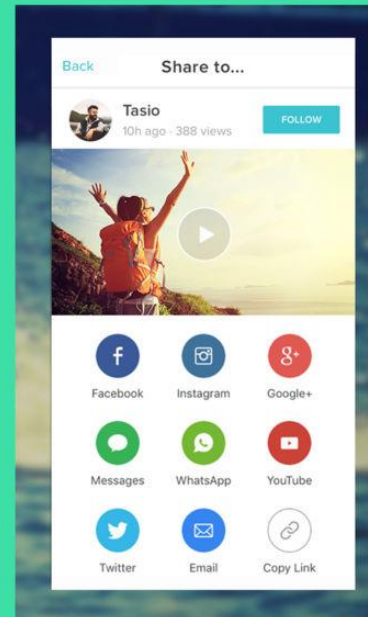
### MAKE VIDEOS LOOK PRO

Enhance your story with premium stock footage



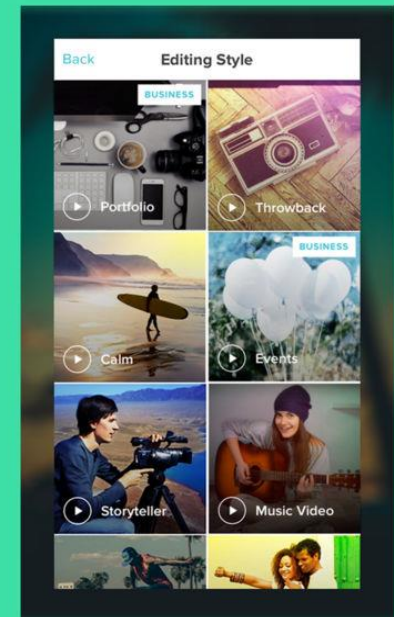
### ONE TAP SHARING

Easily share videos through social, websites and messaging



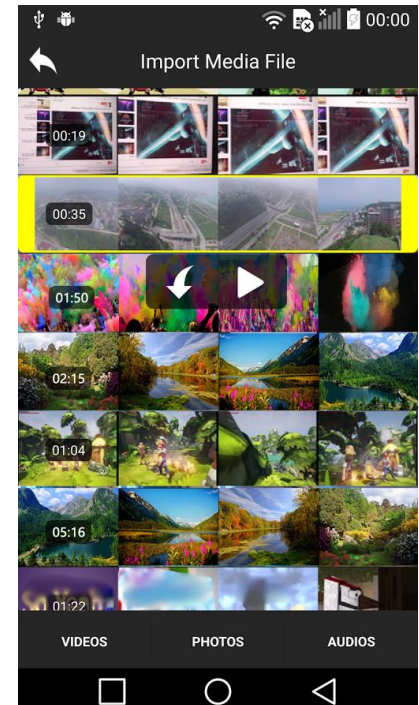
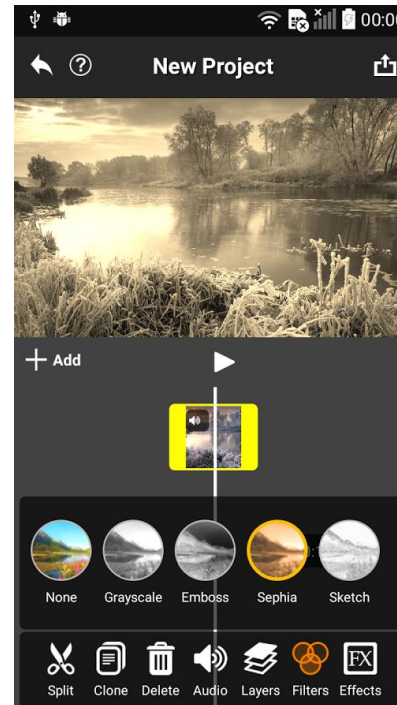
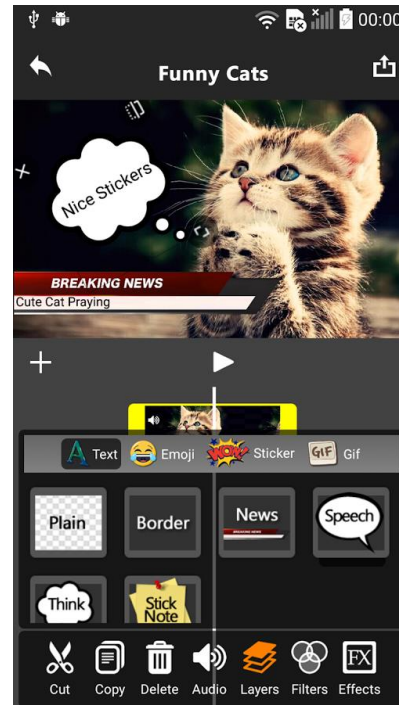
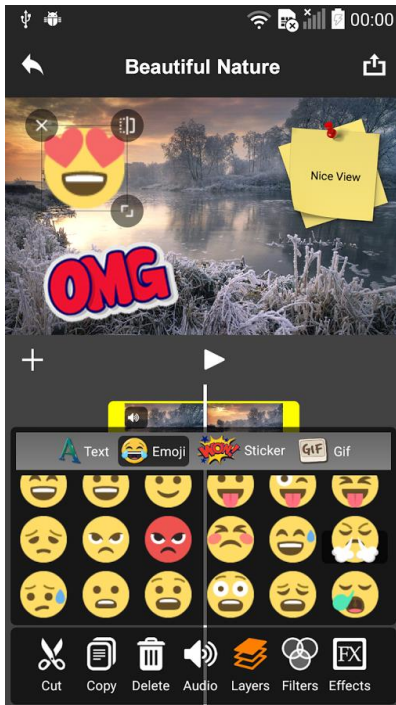
### POWERFUL EDITING STYLES

Lifestyles, businesses, moods and events



# 4. Educational Social Network and Flipped Classroom

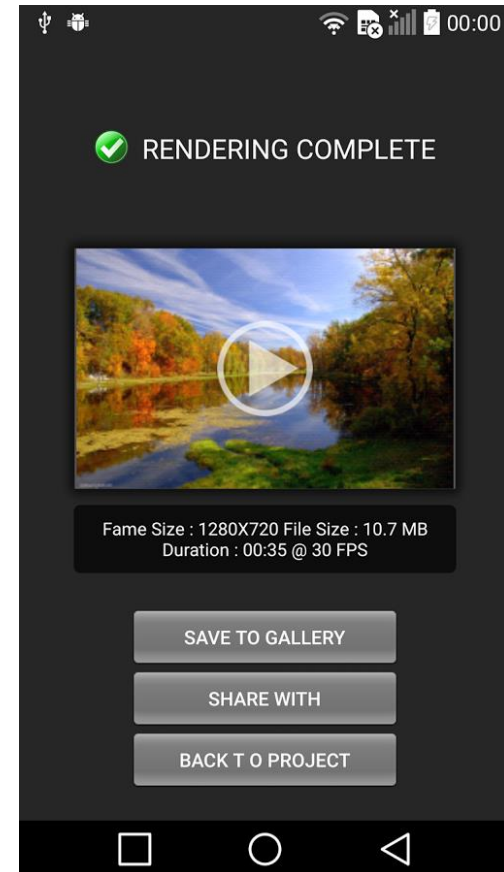
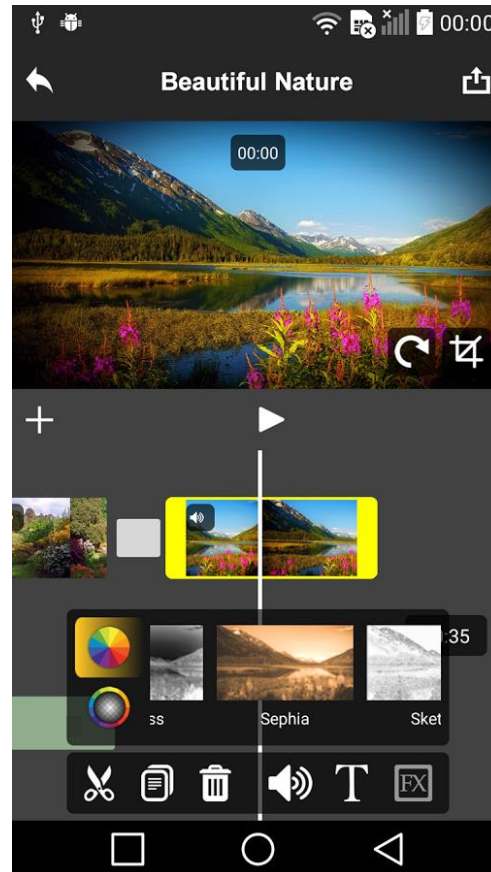
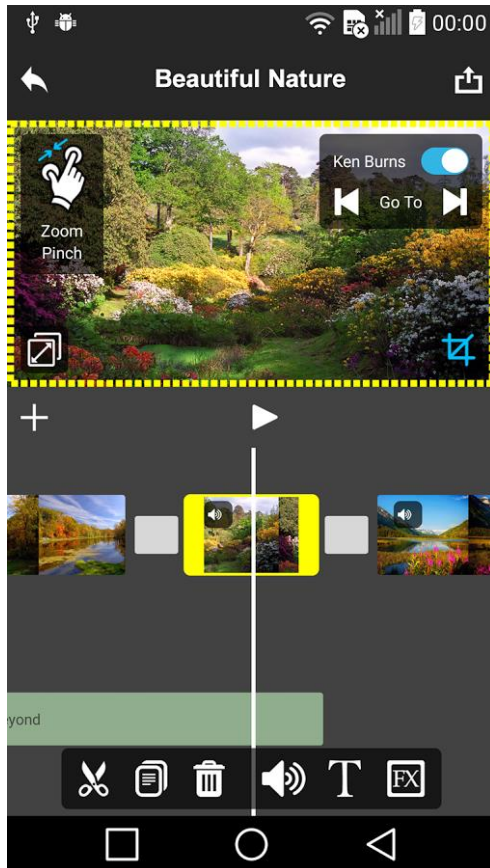
## Video Editor AndroMedia [Android]





## 4. Educational Social Network and Flipped Classroom

### Video Editor AndroMedia [Android]



## 5. Case Studies for Good Practice Cases for CPS in Different KLAs



## 5. Case Studies for Good Practice Cases for CPS in Different KLAs

### Discussion :

1. How to adopt free CPS platforms on different major KLAs of the Secondary / Primary school curriculum
2. Understand the learning opportunities, features, strengths and limitations of CPL on different KLAs
3. How to measure students learning outcomes



## 6. Common CPS Pitfalls-Their Causes, Phenomenon, the Ways to Fix Them



## 6. Common CPS Pitfalls-Their Causes, Phenomenon, the Ways to Fix Them

- CPS learning has been criticized as having similar problems to those identified in problem-based learning and cased-based instruction (where learners work in groups)
  - The problem of lurkers (free passengers)
  - The complexity of modeling real situations
  - Reaching closure and scaling up
  - Process becomes more important than outcome
- Many of these issues have been addressed by improvements to CPS and integration or alignment with related fields (CSCW, Instructional design, etc.)



## 6. Common CPS Pitfalls-Their Causes, Phenomenon, the Ways to Fix Them

### Seven Problems of Online Group Learning (and Their Solutions)

Tim S. Roberts and Joanne M. McInnerney [http://www.ifets.info/journals/10\\_4/22.pdf](http://www.ifets.info/journals/10_4/22.pdf)

Roberts, T. S., & McInnerney, J. M. (2007). Seven Problems of Online Group Learning (and Their Solutions). Educational Technology & Society, 10 (4), 257-268.

Problem #1: student antipathy towards group work

Problem #2: the selection of the groups

Problem #3: a lack of essential group-work skills

Problem #4: the free-rider

Problem #5: possible inequalities of student abilities

Problem #6: the withdrawal of group members, and

Problem #7: the assessment of individuals within the groups

## 6. Common CPS Pitfalls-Their Causes, Phenomenon, the Ways to Fix Them

### Factors Important to CPS

- The nature of the collaborative task:  
e.g. physics problem solving vs. editing a school newspaper
- The nature of collaborators (peer, teacher-student, student-computer, etc.)
- The unit of analysis (individual, activity, group, classroom)
- The number of collaborators
- The previous relationship between collaborators
- The motivation of collaborators
- The setting of collaboration: classroom, workplace, home
- The time period of collaboration: from minutes to years



# 7. Conclusion





# 課程詳情

## 第一節：

1. 以電腦為本的協作解難（CPS）能力的理論基礎
2. 課室設置、環境及學生分組
3. 於現時學校網絡環境中應用CPS流動應用程式/平台
4. 整合CPS應用程式/平台的介紹及實際操作（如 real-time whiteboard、Google for Education、Microsoft Office 365等）
5. 課業討論



# 課程詳情

## 第二節：

1. 課業討論及回饋
2. 網上CPS應用程式/平台的介紹及實際操作（如 AnswerGarden、Coggle、Cacoo等）
3. 社交學習平台（如Edmodo）和翻轉課堂
4. 案例：於不同學習領域實踐CPS
5. 常見的CPS誤解
6. 介紹遊戲化的概念以促進協作學習
7. 討論、問與答及課程總結



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