

資訊科技教育教學法系列：  
在中學個人、社會及人文教育相關科目  
運用學習管理系統及資訊科技工具發展學生的自主學習能力



香港中文大學學習科學與科技中心 CLST

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



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# 手機/平板：安裝 Apps

1. Google Classroom
2. Kahoot!
3. Nearpod
4. Quizlet
5. Edpuzzle
6. Quizizz
7. VLE (Canvas Teacher)
8. Explain Everything



## 課程目標

本課程旨在：

本課程旨在介紹如何在**中學個人、社會及人文教育相關科目**  
運用**學習管理系統及資訊科技工具**發展學生的**自主學習**能力。

## 課程內容

1. 簡介現行可用作**促進學生自主學習**的學習管理系統及資訊科技工具的基本操作、限制及最新功能；
2. 於學習管理系統製作簡單**電子學習材料**、**電子評估活動**、**發放材料**及**收集學生課業與回饋**的基本技巧；
3. 透過**學校個案**，探討如何運用可整合至學習管理系統的資訊科技工具進行學習活動，以促進學生自主學習；
4. 就**不同的學習管理系統**及資訊科技工具在中學人文學科的應用作**比較**；及
5. 有效運用學習管理系統及資訊科技工具進行**面授課堂**及**實時網上授課**。

# 課堂安排 (第一節)

目標:

1. 有關**自主學習 (SDL)** 的相關學理
2. 不同**學習管理系統 (LMS)** 及**資訊科技工具 (IT TOOLS)**的基本操作、限制及功能
3. 於學習管理系統製作簡單**電子學習材料**、**電子評估活動**、**發放材料**及**收集學生課業與回饋**的基本技巧



## 課堂安排 (第一節)

1. 有關**自主學習 (SDL)** 的相關學理
2. 不同**學習管理系統 (LMS)** 的基本學教功能、共通元素、使用限制及最新發展功能
3. 不同**資訊科技工具 (IT TOOLS)** 的基本學教功能、共通元素、使用限制及最新發展功能
4. 學習管理系統製作簡單**電子學習材料、電子評估活動、發放材料及收集學生課業與回饋**的基本技巧
  - a. 實際應用及操作：Microsoft o365
  - b. 實際應用及操作：Google Classroom
5. 習作講解



# 導師簡介

文可為

MAN HO WAI · WALLACE

BSSc. (HON.) / PGDE (DIST.) / MEd, CUHK

樂善堂余近卿中學副校長

教育局資訊科技教育組

香港中文大學 學習科學與科技中心 顧問

HKU e-Learning Technology Development Laboratory

香港教育大學 卓越教學發展中心 顧問

行政長官卓越教學獎(資訊科技教育)

Centre for Learning Sciences and Technologies (CLST)  
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# 疫情下的學與教 支援學生在家學習的重要性

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# 停課不停學 疫情下的學與教

1. 學校主要通過甚麼**措施**支援學生在家學習?



2. 學校怎樣運用這段時間安排合適的學習活動，以保持學生的**學習動力**?



3. 學生的**學習進展**如何?



4. 學生怎樣獲得**五育均衡**的發展機會?



5. 學校如何藉今次疫情，**反思將來的發展**?



6. 學校**支援學生**在家持續學習的工作處於甚麼階段?



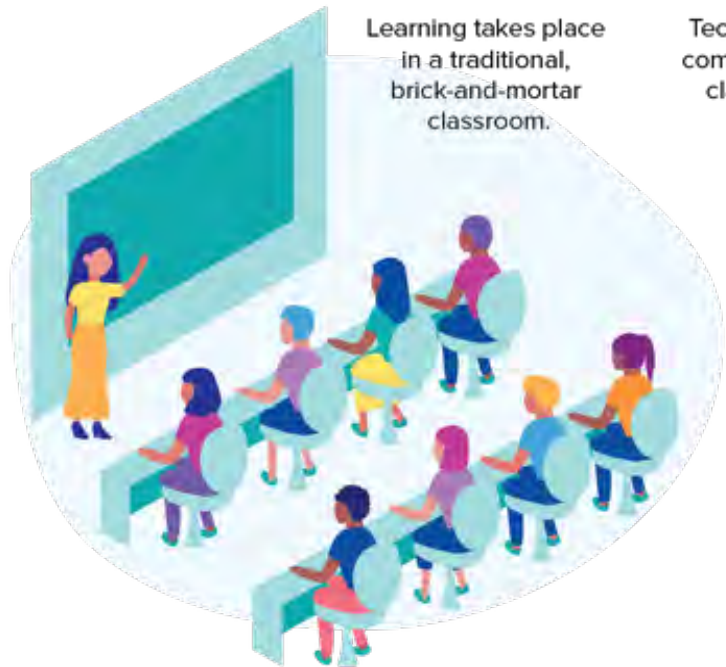


Learning takes place in a traditional, brick-and-mortar classroom.

Technology is used to complement traditional classroom learning.

Learning takes place online and offline with online learning replacing some face-to-face instruction.

All learning takes place online.





← **blended** →

**face-to-  
face**

**classroom  
aids**

**flipped**

**hybrid**

**fully online  
(distance)**

**no technology**

**(delivery)**

**all technology**

**1****Face-to-Face**

Class sessions take place 100% in a traditional “bricks-and-mortar” learning space. Technology may or may not be used to enhance learning.

**2****Web-Enhanced/  
Blended**

Class sessions take place in a traditional learning space, but technology is used to facilitate activities, deliver content, and/or assess students.

**3****Hybrid**

Online and face-to-face instruction are integrated, with a substantial amount of “seat time” in the traditional learning space substituted with internet-based activities.

**4****Online**

Nearly all instruction, interaction, and activities take place online; may or may not include a (synchronous) face-to-face orientation or proctored exam(s).

**← Less Online****More Online →**

*Chart 1. Online Learning Spectrum*

### Face to face is good for:

- Establishing social presence and support
- Nonverbal communication
- Defining assignments
- Negotiating expectations and responsibilities
- Diagnosing students' conceptual problems and providing immediate feedback
- Brainstorming
- Role play
- Student demonstration of psycho-motor skills

### Online is good for:

- Sustaining group cohesion, collaboration, and support
- Reflective, on-task discourse
- Broader participation in discussions
- Critical analysis
- Self-paced learning and practice
- Self-assessment quizzes with feedback
- Automatic grading of multiple choice, T/F, fill-in-the-blank tests
- Create a content outline, chunking content into modules.

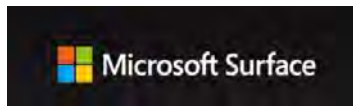
# Hybrid Learning 混合學習模式

1. 實課教甚麼？ 網課教甚麼？
2. 縱向：實課和網課的有機整合
3. 橫向：實課和網課的有機整合
4. 如何上好一堂實課？
5. 如何上好一堂網課？

# 停課不停學 疫情下的學與教



流動電腦裝置 + 無線網絡環境 = 提升學習效能?



Google  
Pixelbook

Apple iPad Pro

Android

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# 學生資助處 (學資處) - 中小學生資助計劃 - 上網費津貼 支援有經濟需要學生上網學習補充津貼

## WIFI 蛋



## DATA SIM 上網卡



# 停課不停學 疫情下的學與教 學習管理系統



MICROSOFT TEAMS



GOOGLE CLASSROOM

# 課前導讀 分組討論

## 自主學習 (SDL)

1. 你認為學生是否能夠做到自主學習？
2. 疫情下，學生能夠做到自主學習？
3. 如有，他們具備那些學習特徵？
4. 如無，他們欠缺的是甚麼？
5. 你所期望學生能在人文學科中的自主學習是怎樣的？



# 1. 有關自主學習 (SDL) 的相關學理



# 自主學習 三大取向

## 元認知取向（西方）：

- 從西方認知發展理論而衍生的自我調適及監控學習的概念

## 導學案取向（國內）：

- 國內在「還課堂給孩子」的觀念下，透過課前預習及加強學生在課內的互動，使學生投入學習活動、展示所學

## 資訊科技增潤學習（香港）：

- 香港資訊及電子科技的優勢下，透過電子及網上學習增潤學生學習。



# 元認知取向 ( 西方 )

Zimmerman 分析的 SRL 是過程模式(process model) , 分為三個階段

- 前備 (forethought)
- 表現 (performance)
- 自我反思 (self-reflection)



# 元認知取向（西方）

## 前備(Forethought)

- 在學習的早期前備階段便要鞏固及提升學習動機，建立學習習慣及態度
- 理解學生的性格強弱項、學習類型，透過活動提升自信及自我效能感，建立短期可達至的學習目標，長遠的期望，養成良好生活作息、時間管理、情緒及壓力控制等
- 手冊形式的學生學習概述(profile)，定期師生關懷式對話，班級經營的針對性活動都是這階段的策略點子

# 元認知取向（西方）

## 表現(Performance)

- 在表現階段，就要培育認知學習策略(cognitive strategies)及行為，學習各種學習技巧，例如做筆記、搜集及整理資料、連繫不同的學習概念
- 不同形式(文字、圖表、數據) 記錄所學，就成為這一階段的行動計劃
- 思維能力的培育亦應在各學習領域中體現，包括邏輯、水平、系統、擴散、創意、解難及批判等能力



# 元認知取向（西方）

## 自我反思 (Self-reflection)

- 到自我反思階段，反省、監控、調整目標、自我探究、評鑑學習及工作效果等
- 這可能已經不是靠學習策略等小點子而成就，而是隨知識的大量增長，對追求知識的學習慾望及強烈好奇而積累
- 即是說學習者已擁有相當豐厚的知識，有廣泛的閱讀，才容易從中作反思及深入探究



# 導學案取向（國內）

## 自主學習



自 主 信

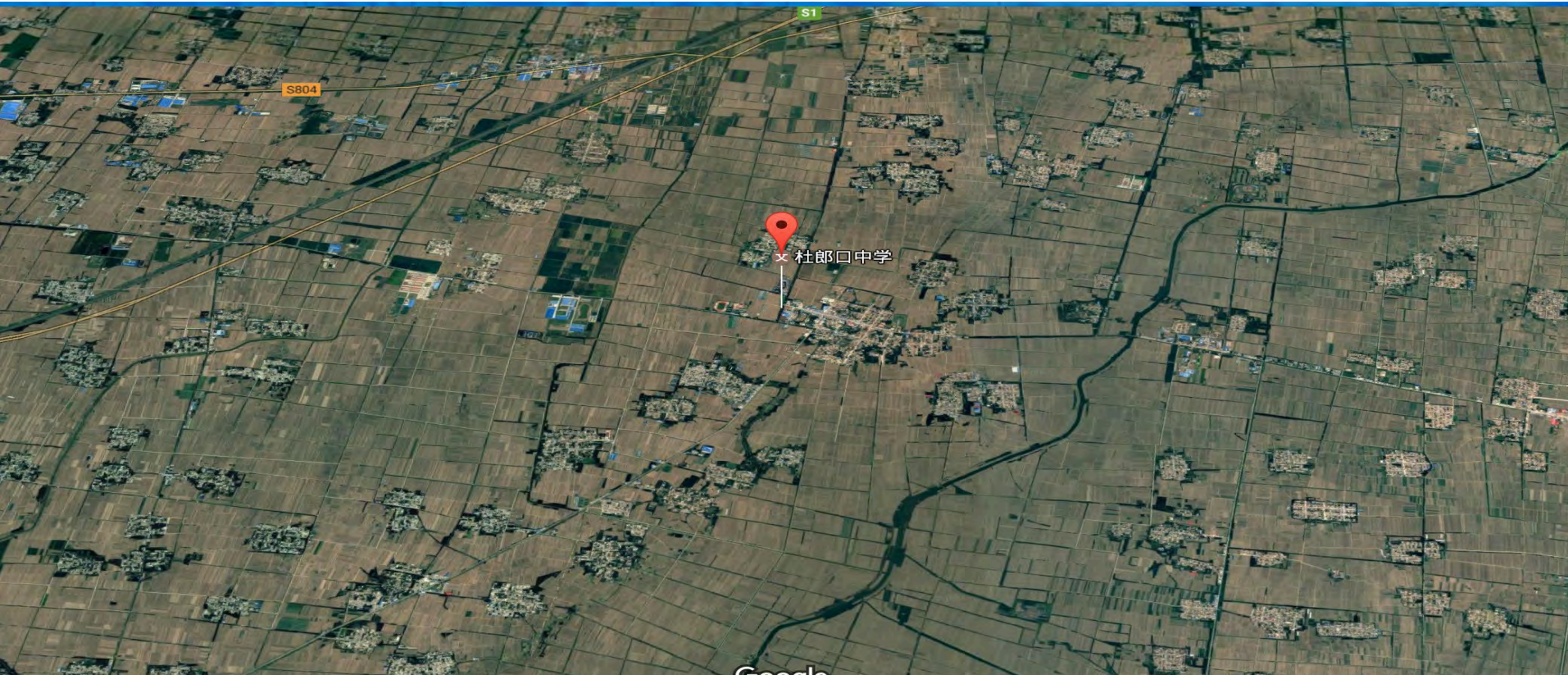
杜郎口中学



# 杜郎口中学

接待中心 办公室: 06354542046

联系人 李主任: 15863537734 崔主任: 18963512699



## 導學案取向（國內）

杜郎口中學「自主學習」有個「三特點」、「三模塊」、「六環節」的「三、三、六」學習模式及策略

- 三特點：「立體式」、「大容量」、「快節奏」
- 三模塊：「預習」、「展示」及「反饋」
- 六環節：「預習交流」、「明確目標」、「分組合作」、「展現提升」、「穿插鞏固」、「達標測評」。

## 導學案取向（國內）



学校里有一条不成文的规定，  
每节课**老师讲**不超过10分钟，  
**学生讲**不低于30分钟。

# 山东省杜郎口中学



杜郎口中学的课堂改革是通过**三个流程**来完成的，包括：

- **预习**（形成基本能力）
- **展示**（通过老师主导作用，让学生拔高和提升）
- **反馈**（检查学习效果）

## 山东省杜郎口中学



这种教改模式**对老师的挑战更大**。

- 因为四五十个学生通过**预习后**获得的**知识量**，一定比单个老师大。
- 这种课堂教学模式对老师是很大的挑战。



# 探访杜郎口中学

## 「教育超市」



杜郎口中学的“教育超市”式教学远近闻名。慕名而来的学习者络绎不绝。为减少来访者，学校想出一个办法：凡来参观者需交纳50元的门票费。可就是这样一所“收门票费”的学校，仍挡不住来访的人流。为什么？因为杜郎口中学创造了一个教改神话。

杜郎口中学的所有教室中都没有讲台，除了一面墙上安装着玻璃窗以外，其余三面墙上全是黑板，专供学生写板书之用；老师在课堂上只准讲十分钟，多讲就要挨罚，其余的35分钟要让学生来讲课；那里的课堂气氛热烈非凡，学生或坐或站，或大声探讨或激情演讲……就是这样一所似乎处处都不符合常规的学校，却在短短几年内从过去一个濒临撤并的学校变为了全县名列前茅的优秀中学，并成为山东省农村中学教学改革的典型。

杜郎口中学地处经济并不发达的山东聊城市茌平县，教学设备简陋，师资力量薄弱，学校的老师中，专科毕业居多，甚至中师毕业生也占有相当大的比例。这所教师学历并不高的学校获得了好的教改奇迹，引起了众人的好奇。秘密何在？专家分析说，杜郎口中学的成功之处在于它抓住了素质教育的根本——以学生为主体，只有让学生学习的积极主动性得到开发，教改才不会成为一句空话。

## 杜郎口已死，下一个是衡水？

刁博 12-11 20:28

T大

“学生反了！课堂散了！老师也不管了！四周全是黑板了！”这是几年前迅速席卷全国的“杜郎口旋风”。杜郎口中学，这个普通县城普通乡镇里的一所师资没师资、要生源没生源、要成绩没成绩、欠发工资几近关门的初级中学，经《中国教师报》一期接一期连篇累牍的疯狂推销炒作后，几乎是一夜之间就变成了一个全国各级学校校长争相朝拜仿效的圣地。

进门参观，每人交费260元；十日培训，每人2000元；加入杜郎口中学发起的“中国名校共同体”，每年会费28万；加盟杜郎口中学推出的“区域课改样本”，每年加盟费200万元……早在2010年5月，就有记者估算过，当时3年50万的参观人群为山东省贡献了45亿。杜郎口中学赚的钱要和《中国教师报》分成早已不是秘密，但参观的校长们关注更多的是杜郎口的疯狂以及能够尽早像杜郎口那样赚钱。

参观完杜郎口中学的各学校领导们，几乎也是在一夜之间强行推出自己学校的“高效课堂模式”，他们幻想着自己也能成为杜郎口中学校长那样的名利双收的“教育家”。于是，神州大地上各种“高效课堂模式”遍地开花。虽然各自的教学模式上都冠着自己学校的名字，但内容上都是大同小异。每一个响亮的“高效课堂模式”后面都有一个霸道独裁的校长，一手遮天的强迫教师按他的套路工作，凡不按其套路的，停职、扣钱马上找到你头上。听杜郎口的洗脑和各学校领导的跟风，仿佛原来的教育一无是处，教育已到了病入膏肓不改不死的地步。而药方就是按他们的套路去做，让老师退到学生的后面，限制老师的授课时间，让学生主导课堂，让学生在课堂上喳喳呼呼。这就是“学生反了！课堂散了！老师也不管了！四周全是黑板了！”。

进入杜郎口中学以及其他跟屁学校的课堂，就会发现那是一个十足的假大空课堂。也许你曾嘲笑过抗战神剧的虚假，但当你进入“高效课堂模式”里，你就会发现抗战神剧的那点神奇若是放在高效课堂里，简直要羞愧的无立足之处。高效课堂里，老师靠边站，学生主导课堂。历史上一代代聪明绝顶的大科学家花了大量心血才发现出的科学规律，在高效课堂那里，学生们眨眨眼的功夫就能齐刷刷的自己“探究”出来。这哪是教育，分明就是要学生配合着作假！要就是这种表演，学生们只不过是学校和领导赚取名利的道具而已。

# 自主學習

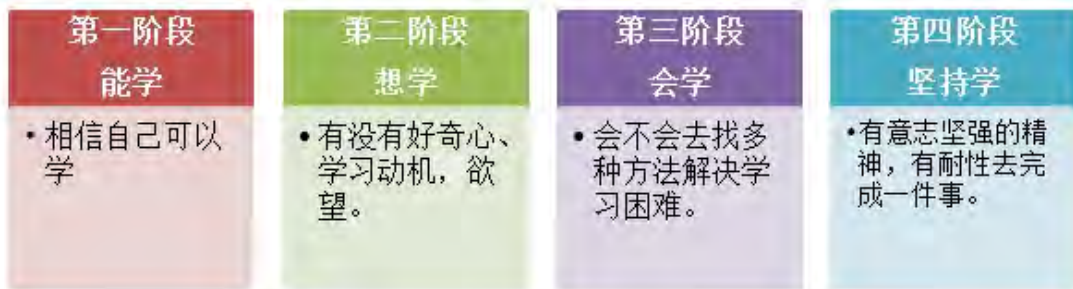
- 「自主學習 (Auto didacticism或autonomous learning)」迄今並無較為統一的學術定義
- 教育研究者從不同角度來研究並界定自主學習，不僅衍生不同定義且發展出許多同義名稱
- 例如自願學習(voluntarily learning)、學習者自主(learner autonomy)、自我調節學習(self-regulated learning)、自我組織學習(self-organized learning)、自學(self-study)、自我計畫學習(self-planned learning)、獨立學習(independent learning)

# 自主學習

主動學習(active learning)  
自我教育(self-education)  
自我定向學習(self-directed learning)  
自我管理學習(self-managed learning)  
自我監控學習(self-monitored learning)  
開放學習(open learning)  
參與學習(participatory learning)  
自我獲取學習(self-access learning) 等。

## \* 自主學習的意義

- 「自主學習乃學生主動學習的意願、態度、方法與能力，亦即包括主動學習**意願**(或動機)、主動學習**態度**、有效學習**方法**及基本學習**能力**(李坤崇，2004)」。
- 「自主學習是建立在自我意識發展基礎上的**‘能學’**；建立在學生具有內在動機基礎上的**‘想學’**；建立在學生掌握了一定學習策略上的**‘會學’**；建立在意志努力上的**‘堅持學’**。」(龐維國，2003)





✓ 能学

✓ 想学

✓ 会学

✓ 坚持学

# 自主學習的意義

- 自主學習乃是學習者透過後設認知，有動機性地在行為上主動參與他們的學習過程，自己生產出自己的想法、感覺與行動，以達到他們的學習目標
- 自我調整學習強調學習者可以主動地透過後設認知與動機等策略的使用，改善個人的心智能力，能夠選擇、建構與創造有利的學習環境；同時，學習者也在教育形式的選擇上扮演很重要的角色 (Zimmerman, 1986)

# 自主學習的意義

- 自主學習是一種主動的、建構性的學習過程，在這個過程中，學生首先為自己確定學習目標，然後監視、調節、控制由目標和情境特徵引導和約束的認知、動機和行為。自主學習活動在學生的個體、環境及總體的成就中發生中間作用 (Pintrich, 2000)
- 自主學習可簡略定義為「學生自己主宰自己的學習，學習者在學習上能於認知(監控自己的學習)、情意(學習態度)、行為(學習方法上)展現出其自主及主動」



# 自主學習的特徵 (Pintrich , 2000)

- 1 對他人提供給自己的資訊做出更加積極的反應，在學習過程中主動創設學習策略、目標及意義；
- 2 能正視由個體差異、情境、生理給自己帶來的限制，監控及調節自己學習行為；
- 3 能依據目標及標準來評估自己學習效果，必要時會對學習目標及標準進行調整；
- 4 能利用自我調節過程來調節外部情境及自身特徵所產生的影響，以便於提高學業成績，改善學習表現(Pintrich , 2000)

# 自主學習的特徵(Paris & Ayres , 2001)

- 1 目標選擇的自主：學生選擇自己的學習目標，朝著自己的學習目標努力；此意味其有多種學習目標可以選擇，也有選擇目標的權利
- 2 設置挑戰性目標：自主學習者會給自己設置有挑戰性的目標，然後最大限度地發揮自己的學習潛能，努力追求成功，但是也能容忍失敗
- 3 調整控制學習：自主學習者知道如何使用課堂中的學習資源，其也可以自由地調整控制自己的學習。其知道如何計劃、分配時間等技巧，如何尋求他人的幫助，怎樣評價自己的學習表現；其瞭解自己的學習策略，知道如何使用這些策略

## 自主學習的特徵(Paris & Ayres , 2001)

4. 合作學習：自主學習者能與他人進行合作學習。其經常討論學習內容，交流學習收穫。
5. 理解學習：自主學習者重視有意義的建構。其喜歡發表自己的看法，深入理解學習內容的意義，並注重學習中的創造性。
6. 自信與責任：自主學習者具有較高的學習自信心及自我責任感。其很少將自己遇到的學習困難歸咎於他人，知道透過努力及合適學習方法，自己才能取得學習上的成功。
7. 管理與評價：自主學習者依據預定學習標準及時間，自己管理學習進程，評價學習表現。

# 自主學習與他主學習間之區別

特徵	自主學習	他主學習
自主性	學生積極、主動、自覺地從事及自我管理控制自己的學習活動	在外界的各種壓力及要求下被動地從事學習活動，或需要外界來管理自己的學習活動
主動性	主動學習、建構性學習	被動學習
獨立性	學習建立在人的獨立性；學生在學習各方面及整個過程中盡可能擺脫對教師或他人的依賴，由自己作出選擇及控制，獨立展開學習活動	學習建立在人的依賴性

# 自主學習與他主學習間之區別

特徵	自主學習	他主學習
效益性	自主學習係採取各種調整控制措施使自己的學習達到最優的過程。因此，學習的自主性越高，學習過程就越優化，學習效果也就越好。	大都是被動、單方面灌輸及壓力下學習，學習效益較差，
調整性	以學習者為主體，強調學習者的學習認知、動機及行為的自我調整，包括自己監控並調整學習活動及策略	以教師為主體，雖有回饋機制，然是否調整仍取決於教師調整意願
遷移性	強調團隊合作學習、發表並交流學習所得，團隊成員學習經驗彼此遷移	以教師單向教學為主，知識的遷移主要為單向

## 自主學習的內容及步驟

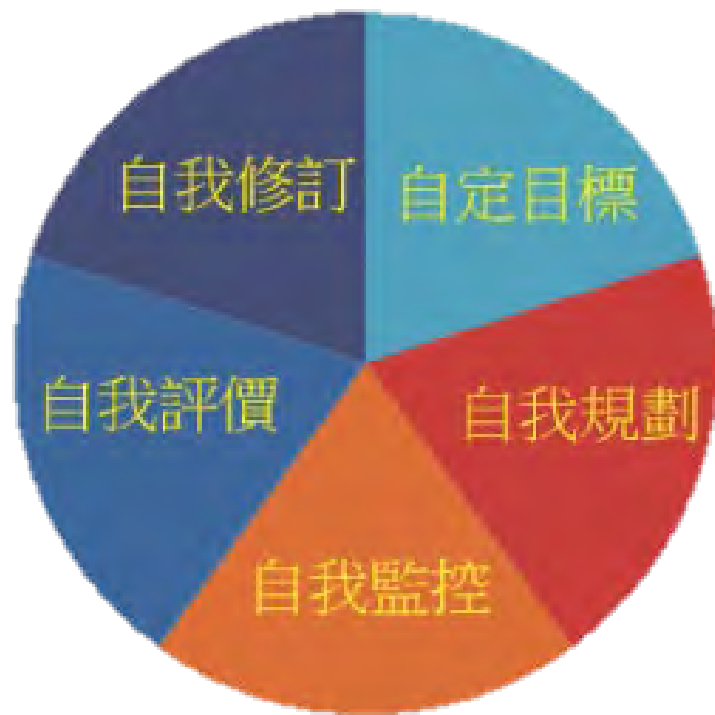
- (1) 確立學習目標；
- (2) 確定學習內容和進度；
- (3) 選擇方法和技巧；
- (4) 監控學習過程；
- (5) 評估學習結果。

即自主學習的內容包括整個學習過程中之自我規劃、自我管理、自我調節、自我檢測、自我回饋和自我評價的自我建構。

# 自主學習的內容及步驟



# 自主學習的內容及步驟





以資訊科技增潤自主學習  
(香港)

票齡轉匯

「翻轉教室」

學生自主學習  
有辦法

TapTab  
點指教育

## Traditional Classroom Learning Approach

### Before the Class



*The learners come to the classroom based on the topic and schedule given to them.*

### In the Classroom



*The instructor delivers the lecture to the classroom and provides with the study material.*

### After the Class



*The learners are given practice exercises or activities to enhance their learning.*

## Flipped Classroom Learning Approach

### Before the Class



*The learners are given study material to read and assimilate the learning content.*

### In the Classroom



*The learners discuss the content with their peers and the instructor.*

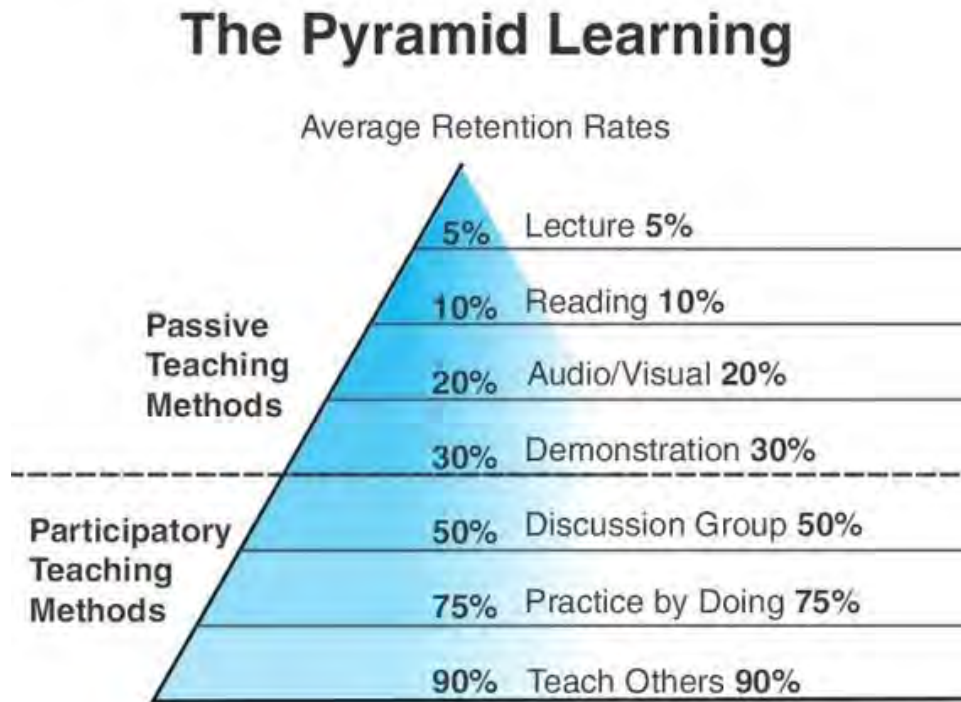
### After the Class



*The learners check and confirm their understanding by doing further learning activities.*

# 自主學習的內容及步驟

學生主導學習程度越高層次



學生學習的保留率百分比越大

Adapted from National Training Laboratories, Bethel, Maine

ST)  
ing



# Reboot

SALMAN KHAN'S YOUTUBE LESSONS HAVE ALREADY MADE HIM A GEEK CELEBRITY. NOW HE WANTS TO REINVENT HOMEWORK, BANISH CLASSROOM LECTURES—AND MAYBE SAVE EDUCATION

BY KAYLA WERLEY

the

# School

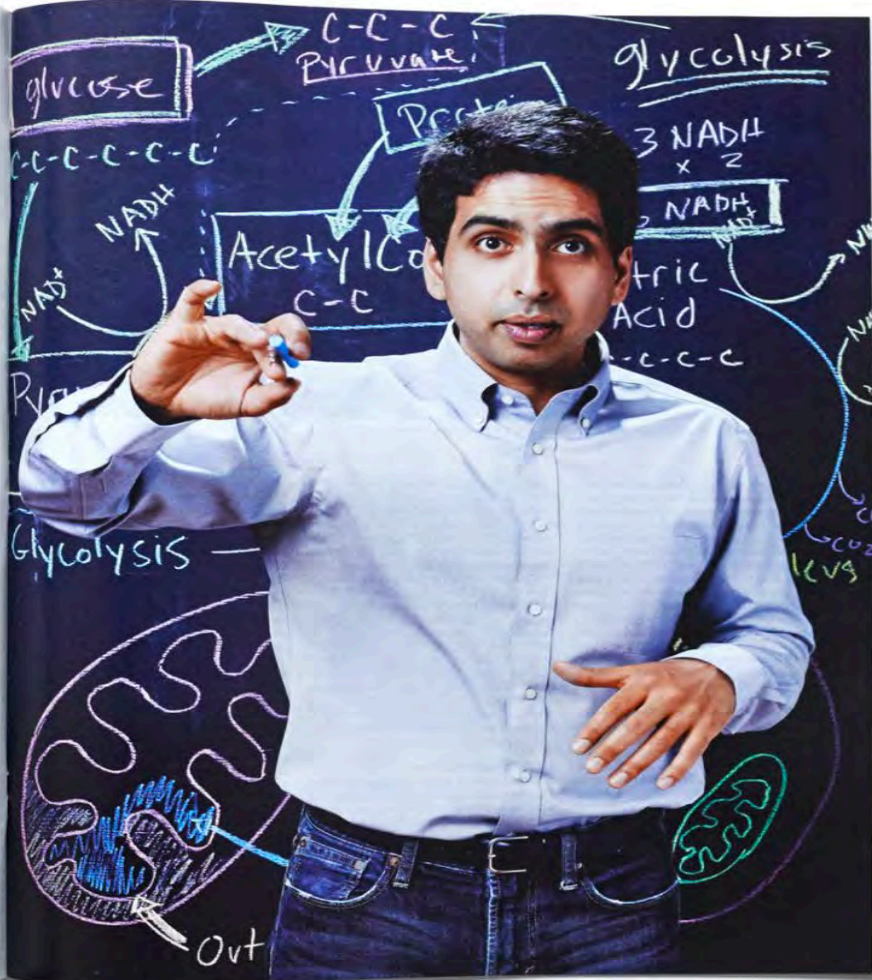
**F**IFTH-GRADERS AT EASTSIDE College Preparatory School in East Palo Alto, Calif., sit at their desks with netbooks. They're in the middle of a math lesson, listening as a teacher explains how to convert percentages to decimals. "If we get rid of the percent sign, we just have to move the decimal sign two places to the left," the instructor says. Pens scribble across notebooks.

Seven thousand miles away in Accra, Ghana, students at the African School for Excellence are studying logarithms. Their teacher is the same one firing off math tips in California—both groups

of kids are learning by watching online videos. While the screen shows a march of equations and diagrams, the students never actually see the face of the lecturer. There's just a voice, deep, patient and unrehearsed—think NPR host crossed with Mister Rogers. His inflection rises at times to underscore a point or when he gets really excited. "Math is not just random things to memorize and regurgitate on a test next week," he says. "It's the purest way of describing the universe!"

The voice belongs to Salman Khan, a 35-year-old hedge-fund manager turned YouTube professor to millions around the world. Thanks to his Khan Academy

Photograph by Jamie Chung for TIME



“Nice to meet you.”

### Before Class

- Watching videos and reading
  - Getting familiar with terms and phrases
  - Introduction to concepts
- 
- Formative assessment
  - Check for understanding



“Let’s Do Something Together.”

### During Class

- Projects, problems, small groups, discussions, labs, creating things, analyzing things
- 
- Formative assessment
  - Check for understanding



“Will you be my...?”

### After Class

- Projects, papers, creating things, reviewing key concepts
- 
- Formative assessment
  - Check for understanding





Salman Khan:

# Let's use video to reinvent education

TED2011 · 20:27 · Filmed Mar 2011  
Subtitles available in 42 languages

View interactive transcript



Watch later



Favorite



Download



Rate

Share  
this idea



3,377,859 Total  
views



Share this talk and  
track your influence!

Salman Khan talks about how and why he created the remarkable Khan Academy, a carefully structured series of educational videos offering complete curricula in math and, now, other subjects. He shows the power of interactive exercises, and calls for teachers to consider flipping the traditional classroom script — give students video lectures to watch at home, and do "homework" in the classroom with the teacher available

## Related playlists & talks



Playlist

Re-imagining



Playlist

MOOCs 101



Playlist

South America



Student watch  
video to  
pre-learn

Teacher follow-  
up responses

Active learning / e-Learning / Higher order  
activity


20 mins

10 mins

30 mins

**Flipping Classroom Framework**

# Learning Management System (LMS)

 schoolology®

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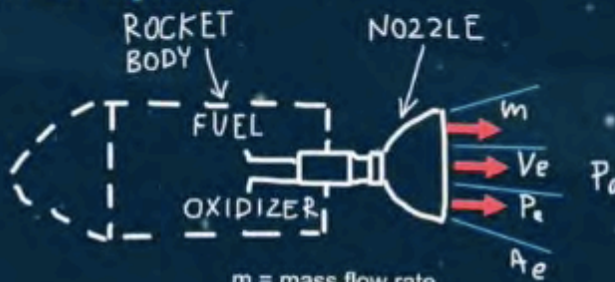


**The perfect course**  
made possible by Schoolology



# Pre-Learn with Scaffolding

Additional information:  
Rocket thrust equation



ROCKET BODY  
FUEL  
OXIDIZER  
NOZZLE  
 $m$   
 $V_e$   
 $P_e$   
 $P_0$   
 $A_e$

$m$  = mass flow rate  
 $p$  = pressure  
 $V$  = Velocity  
 $A$  = Area

$$\text{Thrust} = F = mV_e + (p_e - p_0) A_e$$

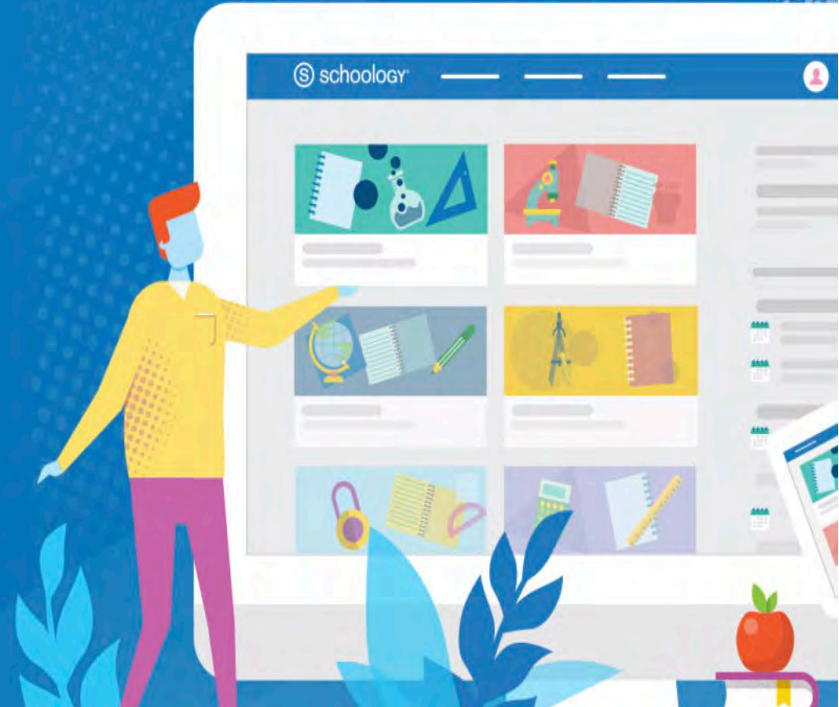
Slide 5 of 5

[www.schoology.com](http://www.schoology.com)

# PowerSchool Is Here to Help

PowerSchool is doing everything we can to make it easy for districts to get up and running with distance learning.

[LEARN MORE](#)



# WHAT IS MEANINGFUL LEARNING?

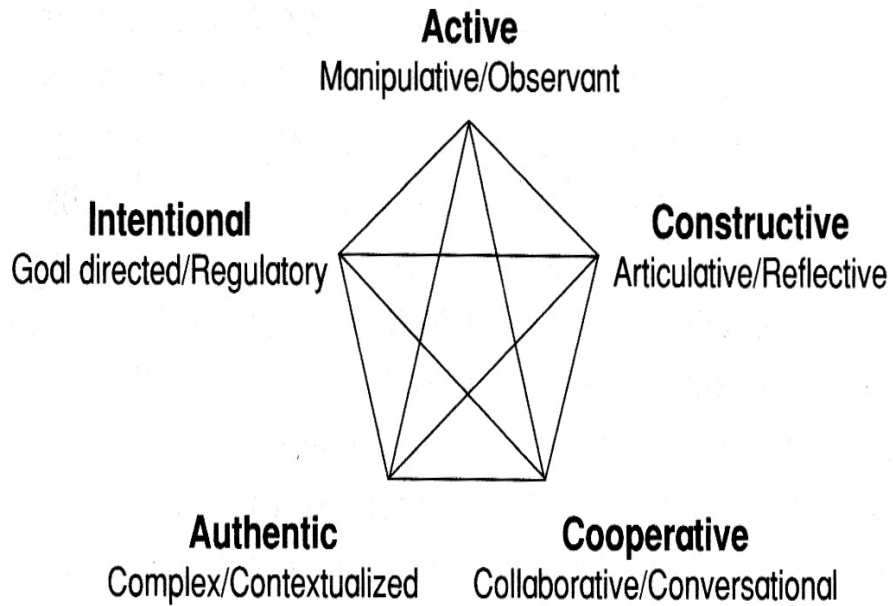
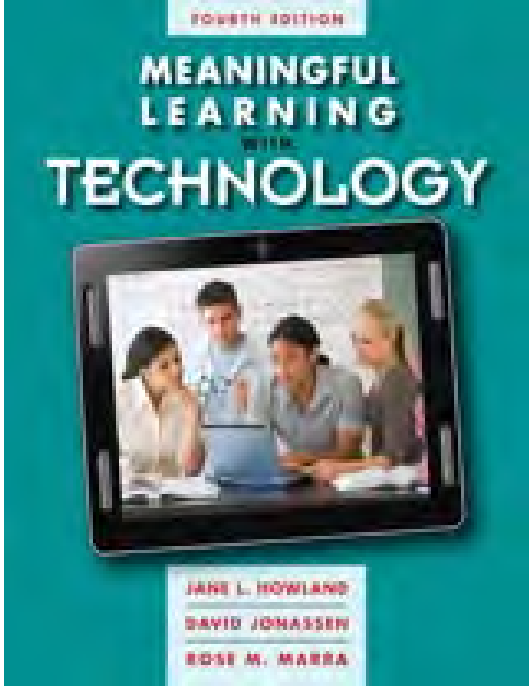
(Jonassen, D, et al, 2008)

## 『有意義的學習』

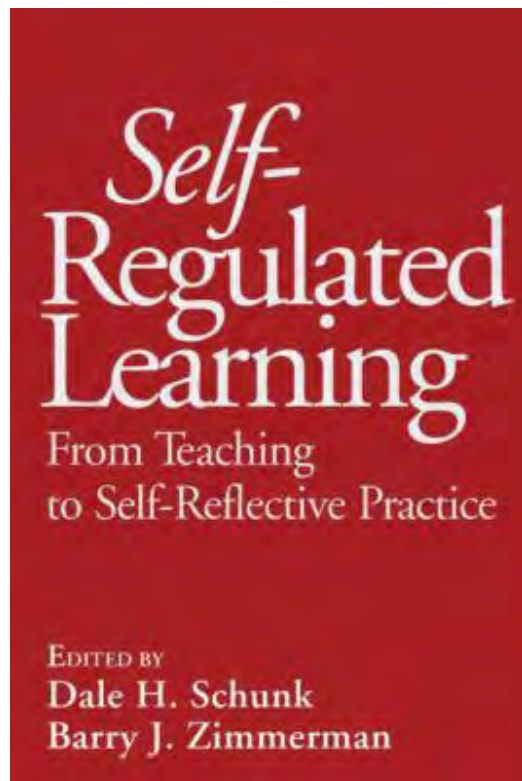
- 以學生為中心的『主動』、『建構』、『合作』、『真實』、『意圖』精神
- 探討在『探究』、『實驗』、『設計』、『溝通』、『建立社群與協作』、『寫作』、『建模』、『視覺化』等學習型態與活動上，**科技的導入與應用、評量學習等實例**，同時也提醒教師思考相關問題。

# Meaningful Learning with Technology

By Jane L. Howland, David H. Jonassen, Rose M. Marra



# 齊莫曼：自主學習專家



# The Staged Self-Directed Learning Model

TEACHING LEARNERS TO BE SELF-DIRECTED (SSDL)

About SSDL: The Staged Self-Directed Learning Model) by Gerald Grow

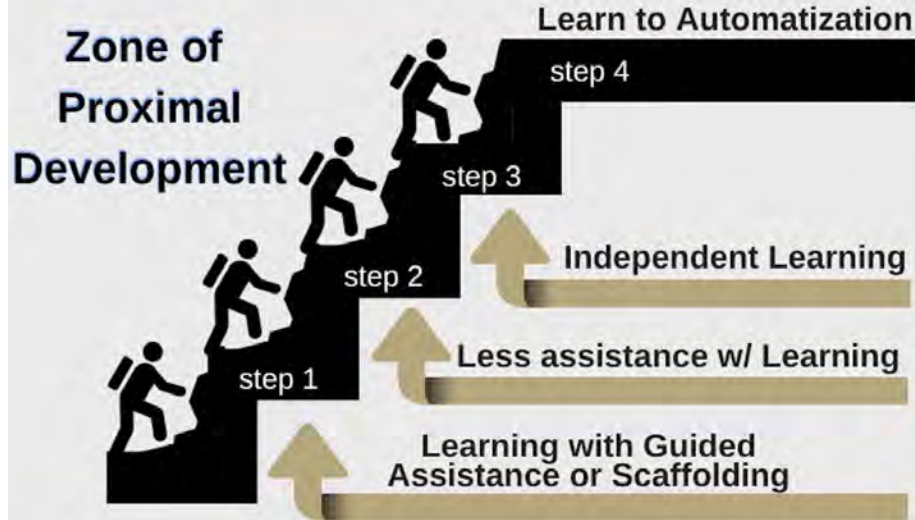
	<b>Student</b>	<b>Teacher</b>	<b>Examples</b>
<b>Stage 1</b>	Dependent	Authority, Coach	Coaching with immediate feedback. Drill. Informational lecture. Overcoming deficiencies and resistance.
<b>Stage 2</b>	Interested	Motivator, guide	Inspiring lecture plus guided discussion. Goal-setting and learning strategies.
<b>Stage 3</b>	Involved	Facilitator	Discussion facilitated by teacher who participates as equal. Seminar. Group projects.
<b>Stage 4</b>	Self-directed	Consultant, delegator	Internship, dissertation, individual work or self-directed study-group.

# The zone of proximal development (ZPD)

(Vygotsky, 1978, p. 86).



## Learning is Too Hard: Anxiety

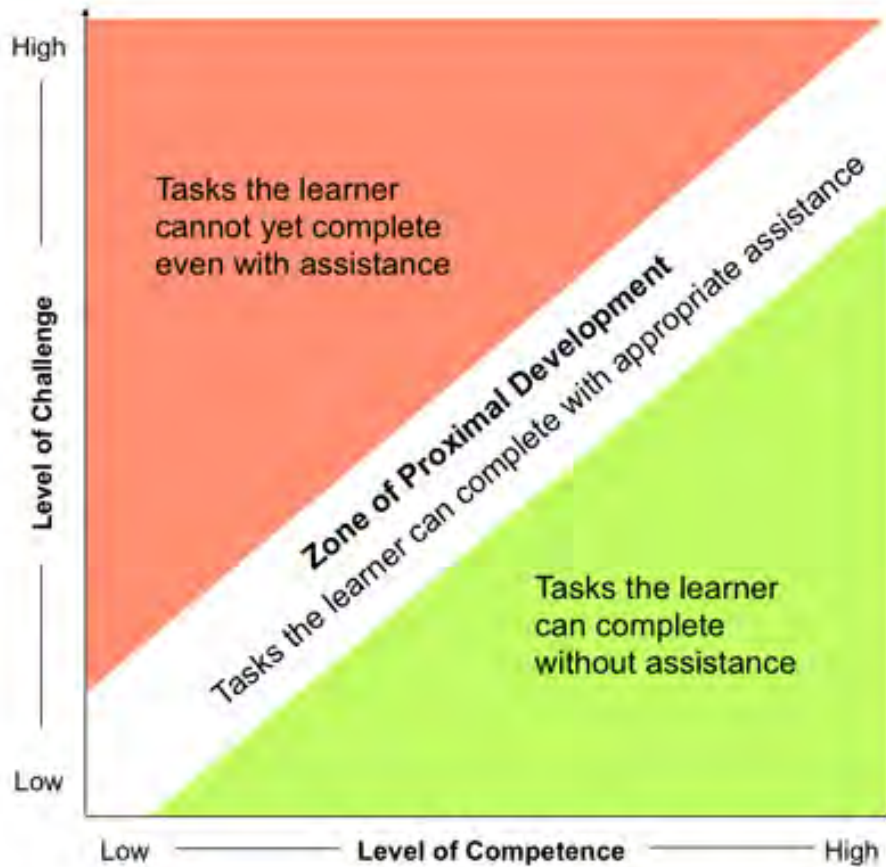


## Learning is Too Easy: Boredom

© Dr. Erica Warren

<https://learningspecialistmaterials.blogspot.com/2016/01/maximize-learning-keeping-students-in.html>





<https://www.literacyworldwide.org/blog/literacy-now/2013/09/20/tile-sig-feature-the-digally-enhanced-zone-of-proximal-development>

# 課前導讀 分組討論

## 學習管理系統 (LMS)

1. 你任教的學校使用那套學習管理系統？
2. 有那些主要的學教功能？
3. 疫情期間，能否有效發揮停課不停學效能？
4. 有甚麼改善空間？
5. 你所期望學生能在學習管理系統如何做到自主學習？



## 2. 不同學習管理系統 (LMS) 的基本學教功能、共通元素、使用限制及最新發展功能



# 學習管理系統 (LMS)



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



# 學習管理系統 (LMS) 的基本學教功能

1. 資訊發佈 Announcement by subject/class
2. 中央化學習資源 Central repository of learning resources
3. 個人化學習進度 Personalized learning progress
4. 協作支援 Teacher collaboration tools
5. 自動批改 Self-assisted assessments
6. 收集回饋 Collection of feedback for further elaboration
7. 收發功課 Online assignment submission and collection
8. 協作社群 Community building (as a Facebook-like social platform)
9. 雲端存儲 Cloud storage syncing
10. 學生自助加入 Student self-enrollment
11. 家長監察 Parent's monitoring
12. 應用軟件 Mobile apps

# 學習管理系統 (LMS) 的主要套件

1. 資源庫 Resource Library
2. 交流討論 Discussion Forum
3. 分享行事曆 Calendar
4. 內容管理系統 Content Management System
5. 考測評估 Test and Assessment
6. 自動批改 Grading
7. 協作互動 Collaboration



# 學習管理系統 (LMS) 的主要限制

1. 用家介面 User interface
2. 兼容格式 Upload formats
3. 賬戶管理 Difficult account management
4. 電子學習檔 Complicated ePortfolio for students
5. 評估工具 Lacks rigorous assessment-management tools
6. 有限互通 Limited interoperability



# 學習管理系統 (LMS) 的最新發展

1. 個人化學習經歷      Personalized learning experience for each learner
2. 數據為本學習分析      Detailed statistics on students' learning progress and customized reports that analyze students' answers
3. 遊戲化學習      Gamification
4. 行政自動化      Automated admin tasks





# 學習管理系統 (LMS) 的分類

1. Software as a service (SaaS) vs. self-hosted
2. Web-based interface vs App-based interface



### 3. 不同資訊科技工具 (IT TOOLS) 的基本學教功能、共通元素、使用限制及最新發展功能



# 資訊科技工具 (IT TOOLS) 的基本學教功能

1. 基本操作 Basic operations
2. 開設賬戶 Create an account (teacher, student)
3. 加入任務 Create e-learning tasks/games/e-assessments
4. 匯入資源 Use existing e-resources
5. 分享内容 Share with students
6. 追蹤進度 Track students' responses
7. 匯出報表 Download reports
8. 其他設定 Other settings

# 資訊科技工具 (IT TOOLS) 的基本學教功能



**Quizlet**

**Kahoot!**

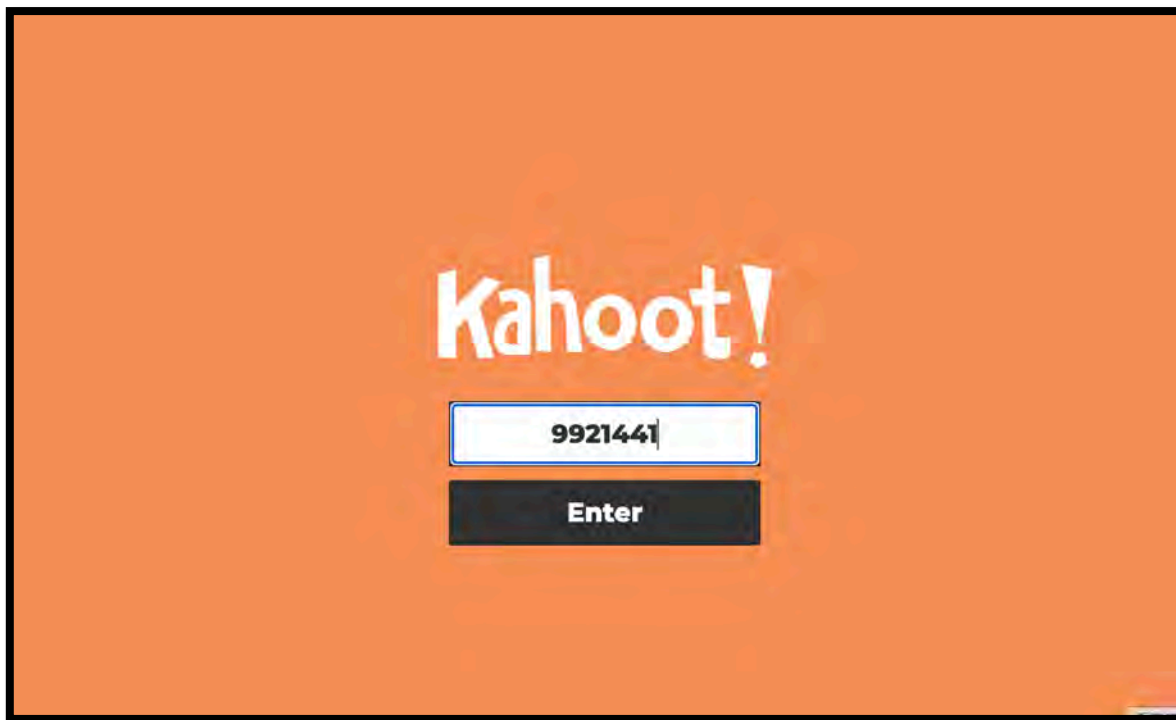


**edpuzzle**

**Quizizz**

# 資訊科技工具 (IT TOOLS) 的基本學教功能

參與：[www.kahoot.it](http://www.kahoot.it) 輸入 Game PIN: 9921441



# 資訊科技工具 (IT TOOLS) 的基本學教功能

KAHOOT! 示例:

<https://play.kahoot.it/#/k/f22b6d94-84bb-4fc1-ae30-95b0b9102e1d>



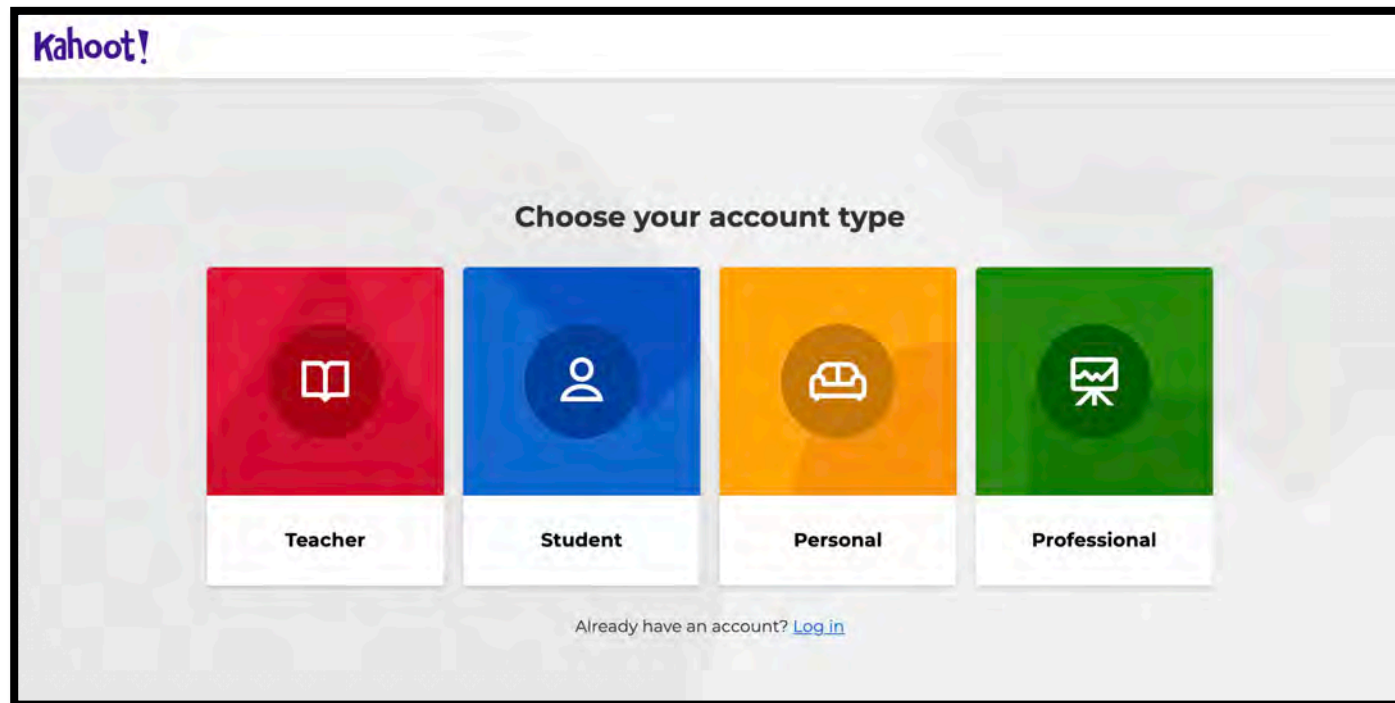
# 資訊科技工具 (IT TOOLS) 的基本學教功能

KAHOOT!: <https://kahoot.com/schools/distance-learning/>

The screenshot shows the Kahoot! website interface. At the top, a yellow banner reads: "Are you a teacher, business or parent affected by COVID-19? See how Kahoot! can support you. Learn more". Below this is the navigation bar with the Kahoot! logo, "News" (with a red notification badge), "School" (highlighted), "Work", "Home", "Academy" (with a "New" badge), "Contact sales", "Explore content", "Play", "Sign up", and "Log in". A secondary navigation bar lists: "How it works", "Schools & districts", "Ways to play", "Distance learning" (underlined), "Assessment", "Interactive lessons", "Higher education", "Learning apps", and "Available pla". The main content area has a green background with the heading "Kahoot! for schools" and "Distance learning" in large white text. Below the heading is the text: "We believe that there should be no limits to when and where you can learn. Engage students in learning when your school is out and stay on track with curriculum while instructing online." A "Sign up for free" button is located below this text. On the right side, there is a collage of four images showing students in various settings, some holding Malaysian flags, engaged in online learning activities.

# 資訊科技工具 (IT TOOLS) 的基本學教功能

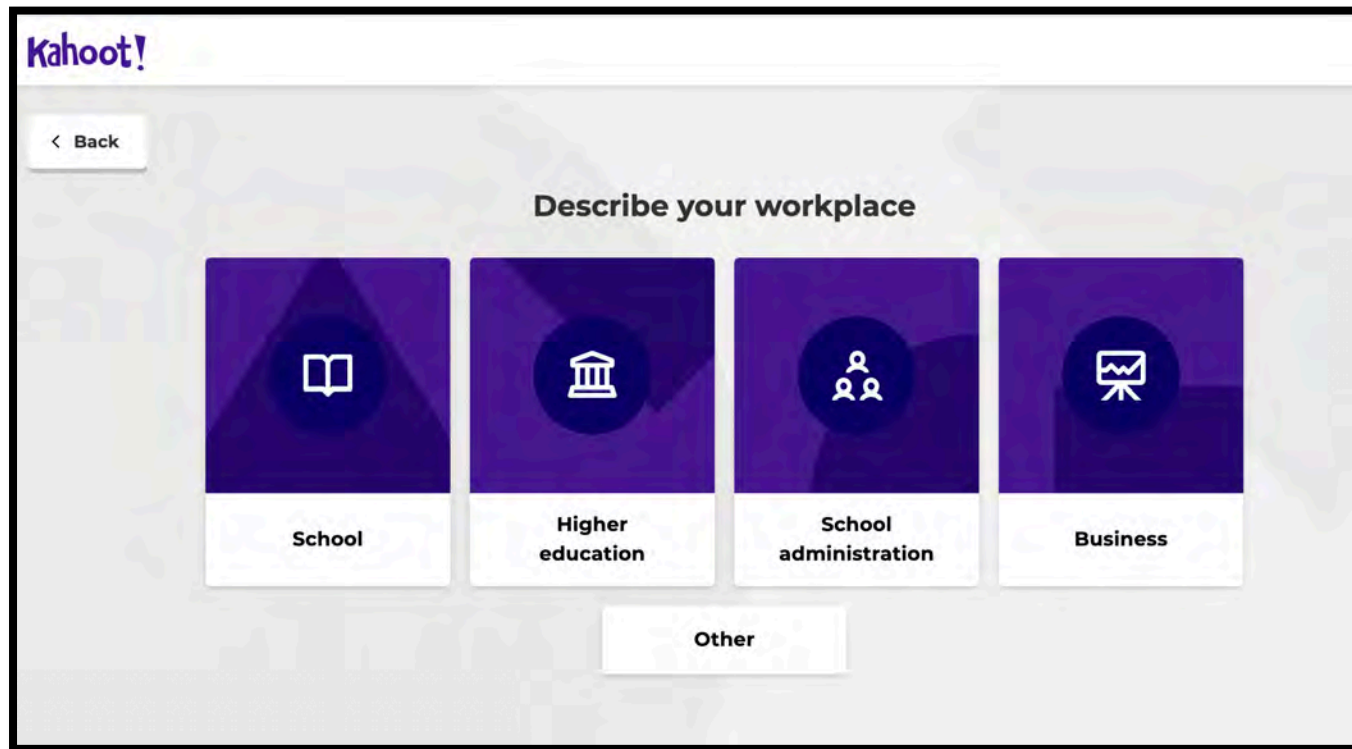
KAHOOT!: <https://kahoot.com/schools/distance-learning/>





# 資訊科技工具 (IT TOOLS) 的基本學教功能

KAHOOT!: <https://kahoot.com/schools/distance-learning/>



# 資訊科技工具 (IT TOOLS) 的基本學教功能

KAHOOT!: <https://kahoot.com/schools/distance-learning/>


Sign up with your email


Email


Password

I wish to receive information, offers, recommendations, and updates from Kahoot!

or




 Continue with Google

 Continue with Microsoft

 Continue with Apple

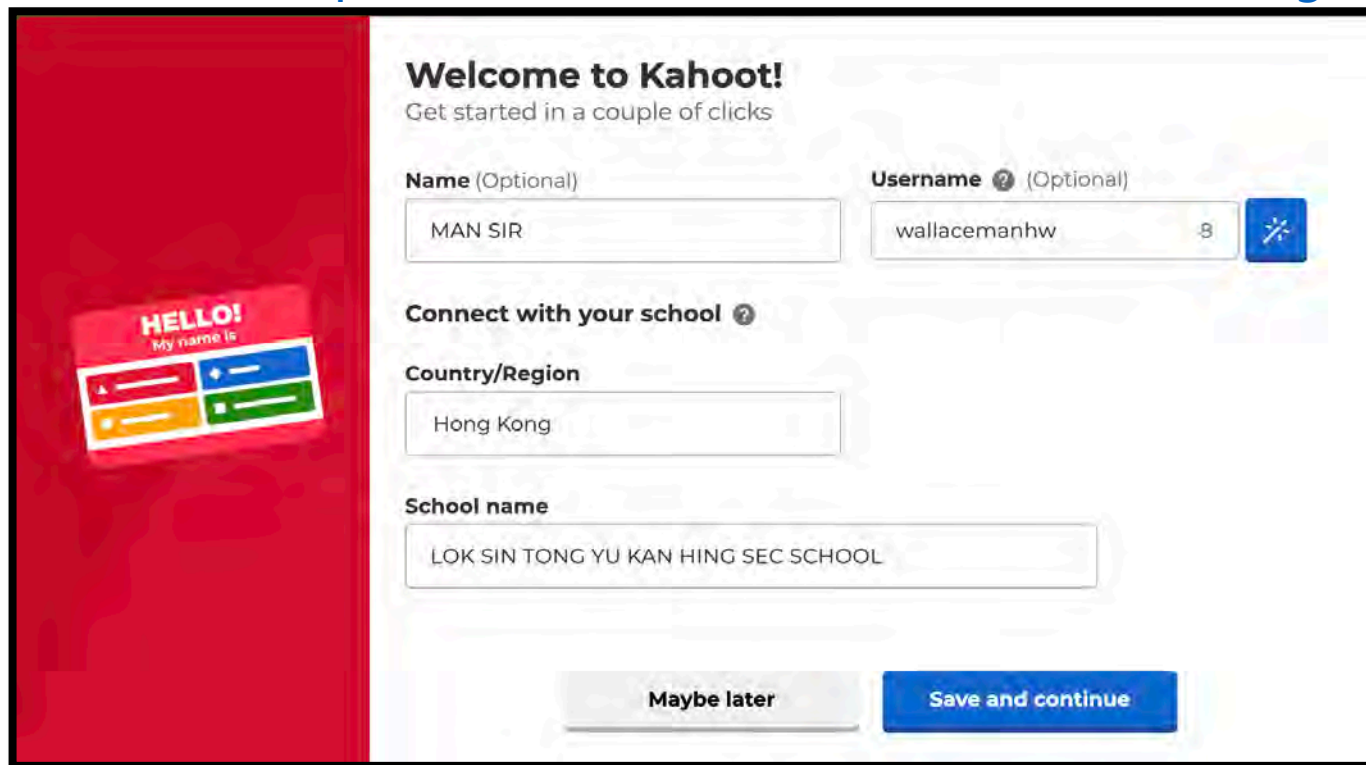
## Level up Kahoot!ing in any learning environment

Whether you're teaching in class or virtually, Kahoot! will help you engage students, increase participation, and assess learning.

 <b>Basic</b> Use basic features to create, play, and host games outside of the classroom and in-class.	 <b>Pro</b> Unlock more question types and game options, and collaborate with colleagues.	 <b>Premium</b> Access our full suite of question types, distance learning tools, and play school-size games.
<b>Free</b> per teacher / month (billed annually) <a href="#">Continue for free</a>	<b>\$3</b> per teacher / month (billed annually) <a href="#">Buy now</a> <a href="#">Start free trial</a> Trial duration: 7 days. Cancel at any time.	<b>\$6</b> per teacher / month (billed annually) <a href="#">Buy now</a> <a href="#">Start free trial</a> Trial duration: 7 days. Cancel at any time.

# 資訊科技工具 (IT TOOLS) 的基本學教功能

KAHOOT!: <https://kahoot.com/schools/distance-learning/>



**Welcome to Kahoot!**  
Get started in a couple of clicks

**Name (Optional)**  
MAN SIR

**Username (Optional)**  
wallacemanhw 8

**Connect with your school**

**Country/Region**  
Hong Kong

**School name**  
LOK SIN TONG YU KAN HING SEC SCHOOL

Maybe later Save and continue



# 資訊科技工具 (IT TOOLS) 的基本學教功能

The screenshot shows the Kahoot! user interface. At the top, there is a navigation bar with the Kahoot! logo, an 'Upgrade now' button, and 'Share' and 'Create' buttons. The main content area is divided into several sections:

- Profile Section:** Displays the user name 'MAN SIR' and email 'wallacemanhw'. It includes an 'Upgrade' button, a 'Member of:' field showing 'LOK SIN TONG YU KAN HING SEC SCHOOL', and a 'My interests' field with an 'Add interests' button.
- Welcome Banner:** A green banner with the text 'Welcome, MAN SIR! Let's get started:' and three numbered steps: 1. Play demo game, 2. Create a Kahoot, and 3. Host kahoot.
- My Kahoots Section:** Titled 'My Kahoots' and 'Team space', it contains the text 'Create your first kahoot using one of our templates.' and a 'Create kahoot' button.
- Challenges in progress Section:** Contains the text 'Students play independently during a set time frame with questions and answers displayed on their devices.' and a 'Learn more' button.
- Collections Section:** Titled 'Collections', it contains the text 'Welcome to Collections! Here you can create collections and add several kahoots to them. Get started by creating your first collection and assign to your learners.' and a 'Create collection' button.
- Promotional Banner:** A purple banner with the text 'Make virtual classrooms awesome by adding Bitmoji to Kahoot!' and a 'Learn more' button, featuring an illustration of a teacher and a globe.
- Latest reports Section:** Titled 'Latest reports', it contains the text 'Host your first kahoot to see'.

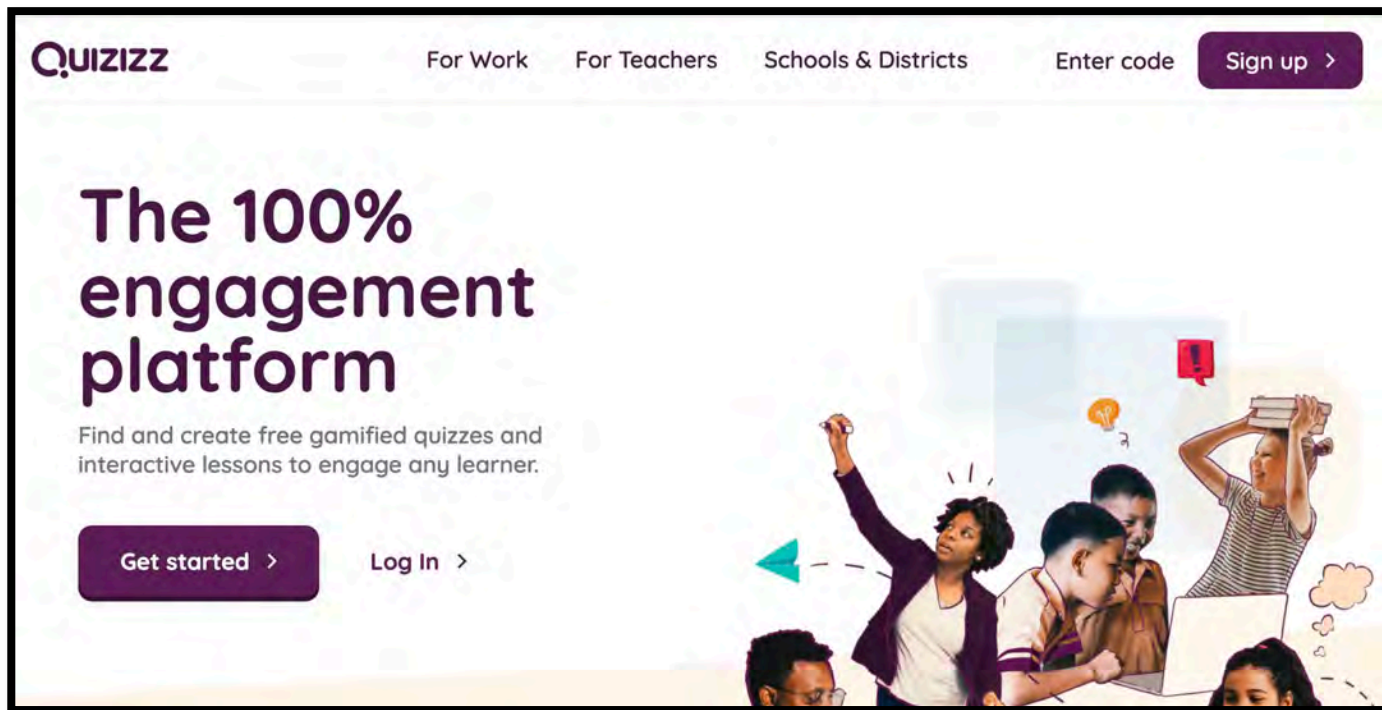
# 資訊科技工具 (IT TOOLS) 的基本學教功能

The screenshot displays a menu of educational tools organized into three categories:

- Test knowledge**
  - Quiz**: Give players several answer alternatives to choose from.
  - True or false**: Let players decide if the statement is true or false.
  - Type answer**: Ask players to type a short correct answer.
  - Puzzle**: Ask players to place answers in the correct order.
- Collect opinions**
  - Poll**: Get players to choose from up to 4 opinions.
- Present info**
  - Slide**: Give players more context or additional explanation.

# 資訊科技工具 (IT TOOLS) 的基本學教功能

Quizizz: <https://quizizz.com/>



**QUIZIZZ**

For Work For Teachers Schools & Districts Enter code [Sign up >](#)

## The 100% engagement platform

Find and create free gamified quizzes and interactive lessons to engage any learner.

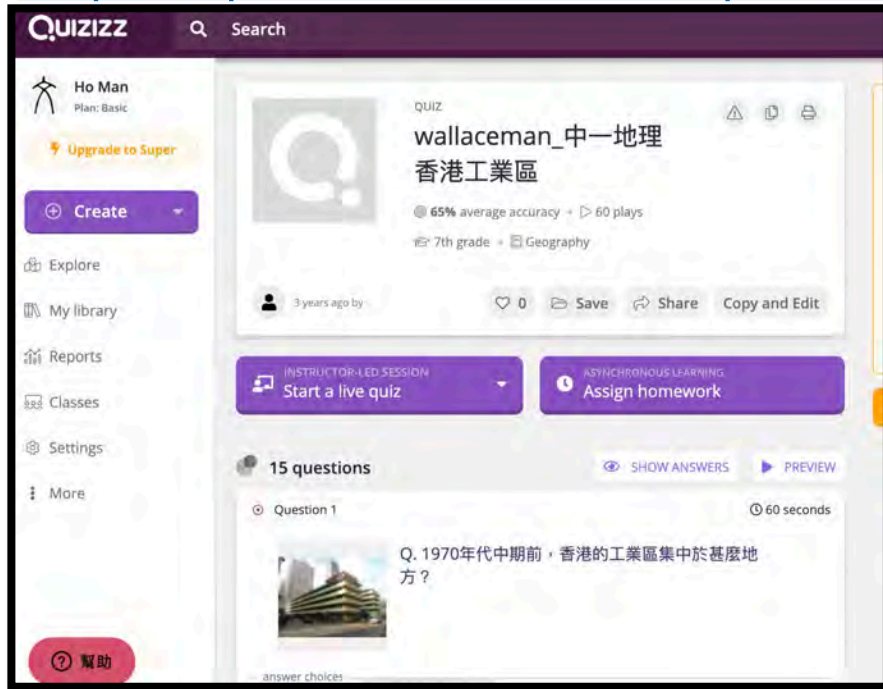
[Get started >](#) [Log In >](#)



# 資訊科技工具 (IT TOOLS) 的基本學教功能

Quizizz 示例:

<https://quizizz.com/admin/quiz/5a510e4fbe27c3100070c226>



The screenshot displays the Quizizz admin dashboard. On the left, a navigation menu includes options like 'Create', 'Explore', 'My library', 'Reports', 'Classes', 'Settings', and 'More'. The main content area shows a quiz titled 'wallaceman\_中一地理 香港工業區' (wallaceman\_ Middle 1 Geography Hong Kong Industrial Area). It indicates a 65% average accuracy and 60 plays. Below the quiz title, there are buttons for 'Start a live quiz' and 'Assign homework'. A preview of a question is visible: 'Q. 1970年代中期前，香港的工業區集中於甚麼地方?' (Before the mid-1970s, where were Hong Kong's industrial areas concentrated?).



# 資訊科技工具 (IT TOOLS) 的基本學教功能

Go to [joinmyquiz.com](https://joinmyquiz.com) and enter the code 450878



1970年代中期前，香港的工業區集中於甚麼地方？

1

大埔

2

元朗

3

舊市區

4

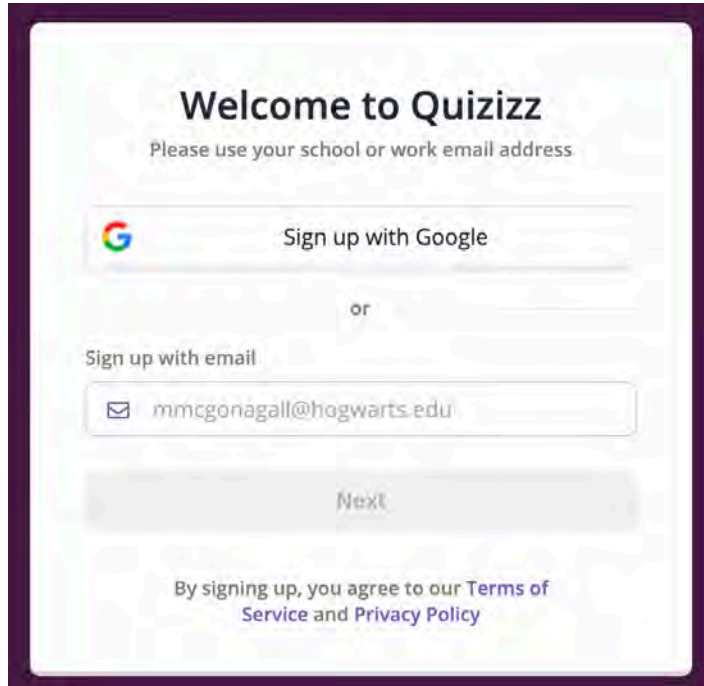
新界





# 資訊科技工具 (IT TOOLS) 的基本學教功能

Quizizz: <https://quizizz.com/>



The image shows a screenshot of the Quizizz sign-up page. The page has a white background with a purple border. At the top, it says "Welcome to Quizizz" in bold black text, followed by "Please use your school or work email address" in a smaller font. Below this, there are two sign-up options: "Sign up with Google" with a Google logo icon, and "Sign up with email" with a text input field containing the email address "mmcgonagall@hogwarts.edu". A "Next" button is positioned below the email input field. At the bottom, there is a link to "Terms of Service and Privacy Policy".

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



# 資訊科技工具 (IT TOOLS) 的基本學教功能


Quizizz: <https://quizizz.com/>

### How are you using Quizizz?



- at a school**  
K-12 or University
- at a business**  
Or nonprofit
- personal use**  
Friends and family

### I am a...



- Teacher**  
or school administrator
- Student**
- a parent**

# 資訊科技工具 (IT TOOLS) 的基本學教功能

The screenshot displays the Quizizz web application interface. At the top, there is a dark purple header with the Quizizz logo, a search bar, and options for 'Quizizz library' and 'Enter Code'. The left sidebar contains a user profile for 'Ho Man' (Plan: Basic), an 'Upgrade to Super' button, a 'Create' button, and a list of navigation items: 'Explore', 'My library', 'Reports', 'Classes', 'Settings', and 'More'. A red '幫助' (Help) button is located at the bottom left of the sidebar. The main content area features a 'BASIC' level indicator and four primary action cards: 'Create an account' (with a character saying 'Hi!'), 'Create a lesson' (with a character holding a 'LET'S CREATE!' sign), 'Present a live lesson' (with a character saying 'QUIZ ME!'), and 'Assign a quiz' (with a character's face). Below these cards, the text 'What will you teach today?' is displayed above a search bar that prompts the user to 'Search for quizzes on any topic'. A '幫助' (Help) button is also present at the bottom left of the main content area.

# 資訊科技工具 (IT TOOLS) 的基本學教功能

Nearpod : <https://nearpod.com/>

**nearpod**

Request a quote Sign up for FREE Log in

## You'll wonder how you taught without it

Engaging media and formative assessments to make every lesson interactive.

**STUDENTS**  
Join a lesson  
Enter CODE

**TEACHERS**  
Sign up for FREE  
or Log in

**ADMINISTRATORS**  
Discover more  
or Request a quote



# 資訊科技工具 (IT TOOLS) 的基本學教功能

Nearpod : <https://nearpod.com/>

The image shows a split-screen view of the Nearpod website. The left side is for Teachers, and the right side is for Students.

**Teachers**  
Sign up for FREE

Buttons for sign-up:  
- Sign Up with Google  
- Sign Up with Office 365

Or

Form fields for Teachers:  
- First Name  
- Last Name  
- School Email  
- Password (Minimum 6 characters, no common words)

**Students**  
Join a Lesson

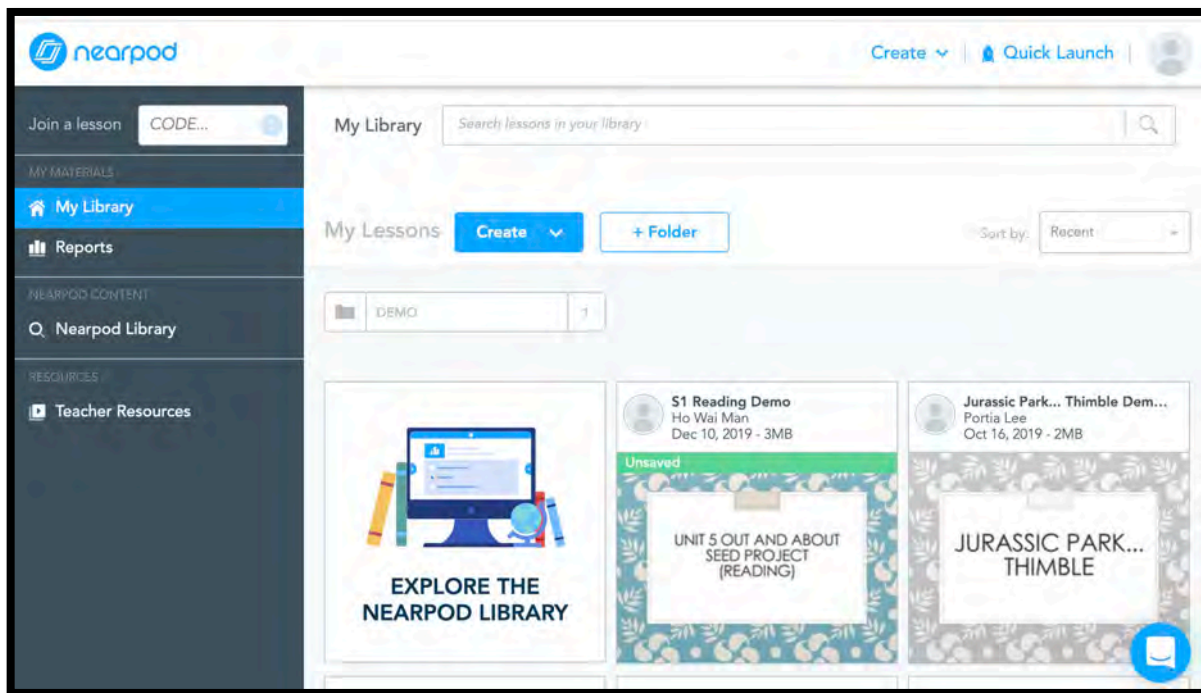
Form for Students:  
- Enter CODE (input field)  
- Join (button)

Text for Students:  
- Don't have a CODE?  
- Test out Nearpod using MAGIC



# 資訊科技工具 (IT TOOLS) 的基本學教功能

Nearpod : <https://nearpod.com/>

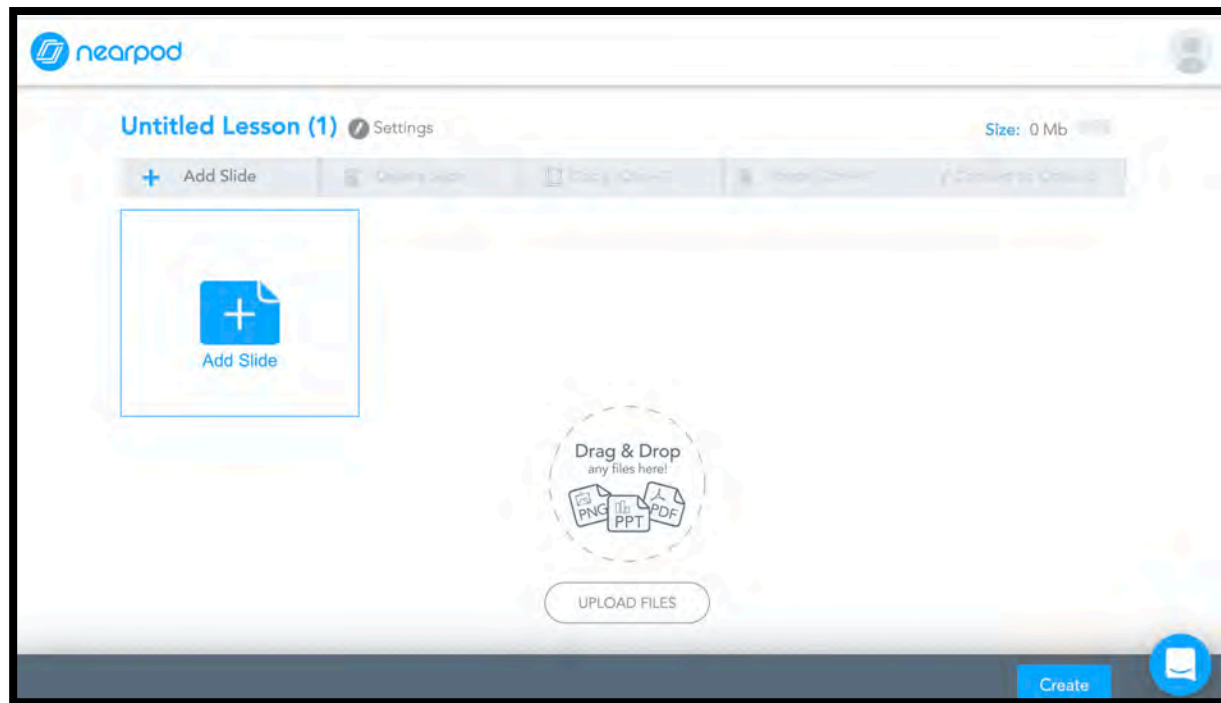


The screenshot displays the Nearpod web application interface. On the left is a dark sidebar with navigation options: 'Join a lesson' with a 'CODE...' input field, 'MY MATERIALS' (including 'My Library' and 'Reports'), 'NEARPOD CONTENT' (including 'Nearpod Library'), and 'RESOURCES' (including 'Teacher Resources'). The main content area is titled 'My Library' and features a search bar. Below this is the 'My Lessons' section, which includes a 'Create' button, a '+ Folder' button, and a 'Sort by: Recent' dropdown. A folder named 'DEMO' is visible with a count of '1'. The main area displays three lesson cards: 1) 'EXPLORE THE NEARPOD LIBRARY' with an illustration of a computer and books; 2) 'S1 Reading Demo' by Ho Wai Man, dated Dec 10, 2019, 3MB, with a green 'Unsaved' banner and a white card containing the text 'UNIT 5 OUT AND ABOUT SEED PROJECT (READING)'; 3) 'Jurassic Park... Thimble Dem...' by Portia Lee, dated Oct 16, 2019, 2MB, with a grey patterned background and a white card containing the text 'JURASSIC PARK... THIMBLE'. A blue chat icon is in the bottom right corner of the interface.



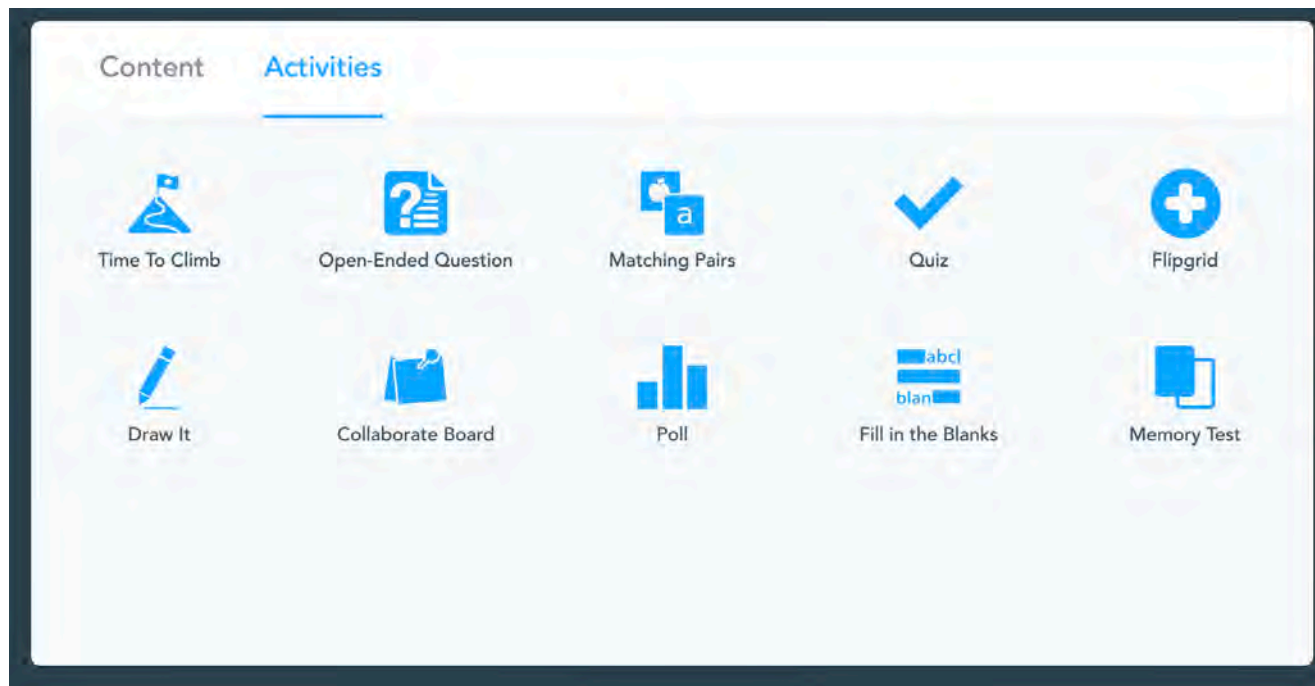
# 資訊科技工具 (IT TOOLS) 的基本學教功能

Nearpod : <https://nearpod.com/>



# 資訊科技工具 (IT TOOLS) 的基本學教功能

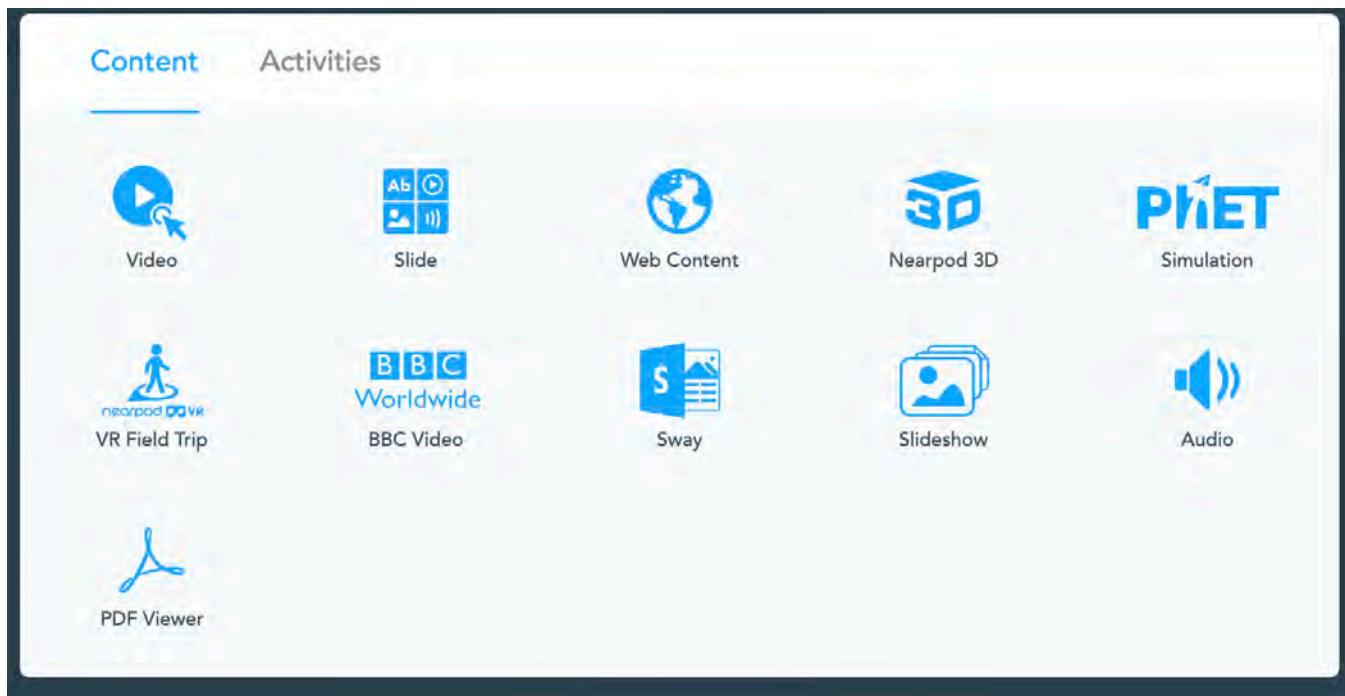
Nearpod : <https://nearpod.com/>





# 資訊科技工具 (IT TOOLS) 的基本學教功能

Nearpod : <https://nearpod.com/>



# 資訊科技工具 (IT TOOLS) 的基本學教功能

Playposit : <https://www.playposit.com/>

playposit

Platform K-12 Higher Ed Corporate Community Features Log In Sign Up

Interactive Video.  
Unleashed Learning.

View Pricing Plans

in t f e y



# 資訊科技工具 (IT TOOLS) 的基本學教功能

Playposit 示例：

<https://app.playpos.it/go/share/1170615/296434/0/0/Copy-of-Plate-Tectonics>



Technologies (CLST)  
City of Hong Kong



# 資訊科技工具 (IT TOOLS) 的基本學教功能

Playposit : <https://www.playposit.com/>

Single sign-on

Edmodo Log in with Clever Office 365 登入

Sign up

I am an INSTRUCTOR  I am a STUDENT

first name last name

name my students call me

email address or username retype email/username

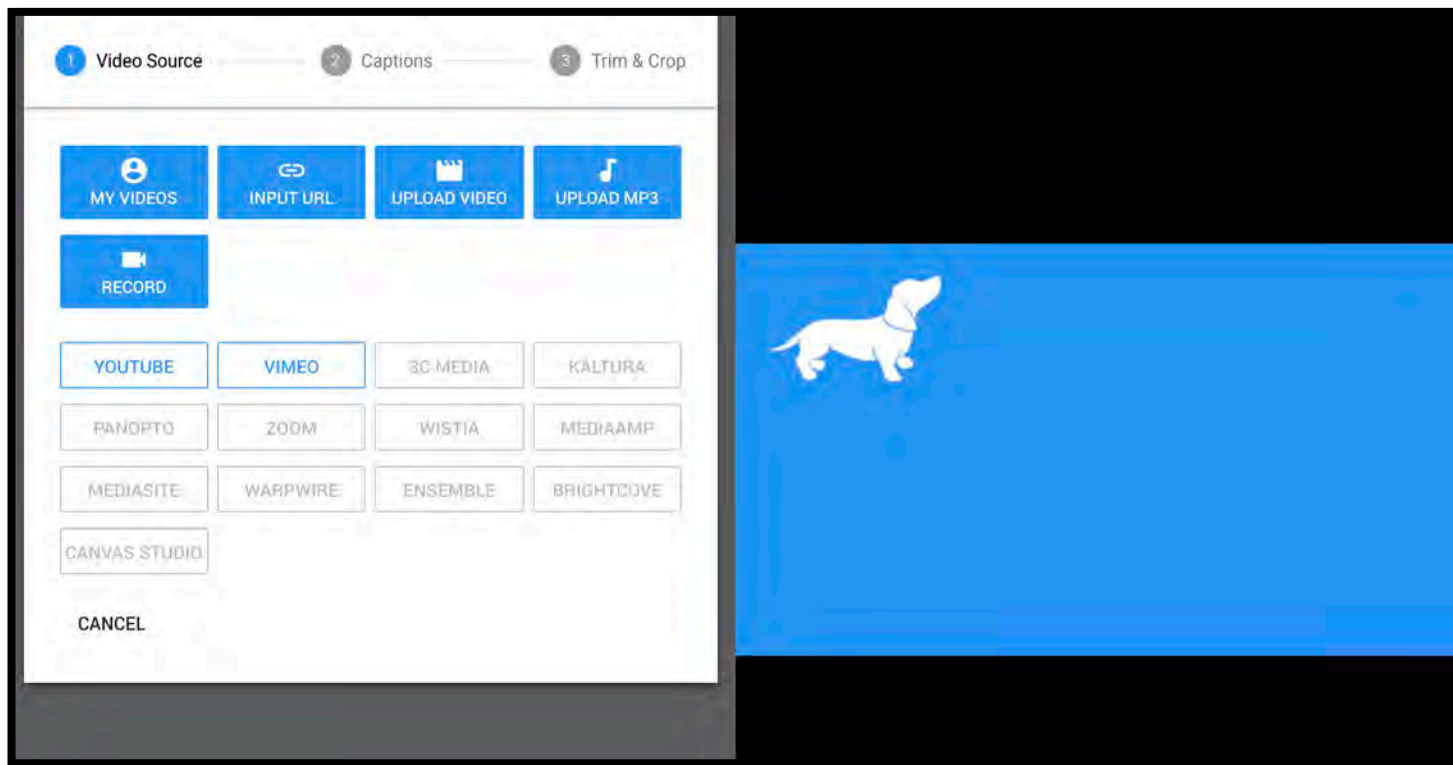
password

SUBMIT >

The screenshot displays the Playposit user interface. On the left is a blue navigation sidebar with the following items: 'Ho Wai Man' (with a profile icon), 'My Bulbs', 'Folders', 'Classes', 'Premade Bulbs', and 'Upgrade to Pro' (with a star icon). The main content area on the right features a search bar with 'FILTER' and 'Search' labels, and a 'Tags' section. Below the search bar, there are options for 'Last Modified', 'Views', and 'Actions'. A prominent blue button labeled 'Create your first bulb' is visible in the center of the main area. At the bottom of the main area, there is a pagination indicator showing '0/page' and navigation arrows.

# 資訊科技工具 (IT TOOLS) 的基本學教功能

Playposit : <https://www.playposit.com/>



The screenshot displays the Playposit video player interface. At the top, there are three steps: 1. Video Source (active), 2. Captions, and 3. Trim & Crop. The 'Video Source' menu is open, showing various options for where to get video content. The options are arranged in a grid:

- MY VIDEOS (with a camera icon)
- INPUT URL (with a link icon)
- UPLOAD VIDEO (with a video camera icon)
- UPLOAD MP3 (with a music note icon)
- RECORD (with a video camera icon)
- YOUTUBE
- VIMEO
- 3C-MEDIA
- KÁLTURA
- PANOPTO
- ZOOM
- WISTIA
- MEDIAAMP
- MEDIASITE
- WARPWIRE
- ENSEMBLE
- BRIGHTCOVE
- CANVAS STUDIO
- CANCEL

The main video player area on the right shows a blue background with a white silhouette of a dog.

# 資訊科技工具 (IT TOOLS) 的基本學教功能

	Kahoot	Nearpod
Updated functions	<ul style="list-style-type: none"><li>• Multi-select answers</li><li>• Microsoft Teams integration</li><li>• "Groups" facilitates the easy sharing of content with other users and make online collaboration more flexible</li></ul>	<ul style="list-style-type: none"><li>• Require students to submit a response to certain learning activities</li><li>• Microsoft Teams integration</li><li>• Teacher view in student-paced mode</li><li>• Student audio submissions for open-ended questions</li></ul>
limitations	<ul style="list-style-type: none"><li>• 10-player limit for free accounts</li><li>• Teacher can't ask challenging and complex questions due to the time constraints for Q&amp;A</li><li>• Limited question and chart types</li><li>• Few customization options</li></ul>	<ul style="list-style-type: none"><li>• Time consuming to create presentations</li><li>• Some features may not work on all devices</li><li>• Take much time to load with a slow wireless connection</li></ul>

# 課前導讀 分組討論

## 學習管理系統 (LMS)

你學校使用的學習管理系統，能否有效處理人文學科教學中：

1. 製作簡單電子學習教材
2. 進行電子評估活動
3. 發放教學材料給學生
4. 派發及收集學生課業及作出回饋

## 4. 學習管理系統的基本操作技巧

- i. 製作簡單電子學習教材
- ii. 進行電子評估活動
- iii. 發放教學材料給學生
- iv. 派發及收集學生課業及作出回饋

實習：

- a. 實際應用及操作：VLE (HKEdcity)
- b. 實際應用及操作：Google Classroom





# 實際應用及操作： VLE (HKEdcity)

用戶指南 [https://www.edcity.hk/vle/zh-hant/user\\_guide](https://www.edcity.hk/vle/zh-hant/user_guide)

用戶指南

教師指南 學生指南

1. 課程設定、界面設定、課程首頁

課程設定、界面設定、課程首頁

03:11

用戶指南

教師指南 學生指南

學生提交測驗、作業及查閱分數

學生提交測驗、作業及查閱分數

03:40

# 實際應用及操作： Google Classroom

<https://support.google.com/edu/classroom#topic=10298088>

熱門文章

探索 Classroom

開始使用 Google Classroom

學生：加入及管理課程

學生：繳交及追蹤作業

學生：與老師或同學溝通交流

老師：建立、加入及管理課程

老師：建立、追蹤及批改作業

老師：與學生和監護人溝通交流

G Suite 管理員：管理 Google Classroom

隱私權、政策和濫用情形

# 實際應用及操作：Google Classroom

The screenshot displays the Google Admin console interface. At the top, the header includes the Google Admin logo, a search bar with the text "搜尋使用者、群組或設定", and navigation icons. The main content area is titled "管理控制台" and features a grid of management options:

- 使用者**: 新增或管理使用者
- 群組**: 建立群組與郵寄清單
- 機構單位**: 新增、移除、重新命名、移動或搜尋機構單位
- 建築物與資源**: 管理及監控建築物、會議室與資源
- 裝置**: 確保裝置上的公司資料安全無虞
- 應用程式**: 管理應用程式和應用程式設定
- 安全性**: 調整安全性設定
- 報告**: 監控整個機構的使用情況
- 帳戶設定**: 請更新貴公司的相關資訊
- 支援**: 與支援小組通話

On the right side, a user profile sidebar is visible, showing the user's name "CUHKLMS2021\_admin CUHKLMS...", email "cuhklms2021\_admin@ykh.hk", and a "管理你的 Google 帳戶" button. Below this, it indicates "1 Student" (s1@ykh.hk) and a "未登入" status, along with a "新增其他帳戶" button and a "登出" button.

At the bottom left, the URL is visible: <https://admin.google.com/ac/appsettings/352555445522?authuser=0>

## 5. 習作講解

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



# 習作講解

試就你所任教的人文學科，**分享**三個在應用學習管理系統及/  
或資訊科技工具，發展學生的自主學習能力的**策略**

輸入：

<https://tinyurl.com/cuhklms-aa>



查看：

<https://tinyurl.com/cuhklms-aa-re>

