

# 「專業分享·杏壇閃亮」教育薈萃 2023

## “Professional Sharing, Academia Shining” Knowledge Fair 2023

### 歡迎辭:

Welcome Speech



李伊瑩校長  
香港津貼中學議會主席  
九龍真光中學校長

**Ms Lee Yi Ying**  
Chairman,  
Hong Kong Subsidized  
Secondary Schools Council

Principal,  
Kowloon True Light School

### 主題演講:

Keynote Speech



李子建教授, JP  
學術及首席副校長  
課程與教學講座教授

演講題目:  
知識轉移和專業分享:  
以STEAM教育及價值觀教育為例

**LEE, Chi Kin John, JP**  
Vice President(Academic) and  
Provost; Chair Professor of  
Curriculum and Instruction

Topic:  
Knowledge Transfer and  
Professional Sharing on  
STEAM Education and  
Values Education

### 活動流程 Rundown :

- 09:00 – 09:15 Reception 接待
- 09:15 – 09:30 Welcome Speech 歡迎辭
- 09:30 – 10:15 Keynote Speech 主題演講
- 10:15 – 10:30 Prize Presentation 頒獎
- 10:30 – 10:45 Break 小休
- 10:45 – 11:30 Parallel Sharing Session 1 小組討論 (第1節)
- 11:45 – 12:30 Parallel Sharing Session 2 小組討論 (第2節)

### 日期 Date :

1<sup>st</sup> April, 2023 (Saturday) 二零二三年 四月一日(星期六)

### 時間 Time :

9a.m. to 12:30p.m. 上午 9時 至 下午 12時半

### 地點 Venue :

TWGHs Wong Fut Nam College 東華三院黃笏南中學  
1C, Oxford Road, Kowloon Tong, Kowloon, Hong Kong  
九龍塘牛津道1C號

### 單位名稱 :

- 佛教沉香林紀念中學 Buddhist Sum Heung Lam Memorial College  
(STEAM Education STEAM 教育)  
從疫境培養STEM教育中的價值、知識、技能和態度(V.A.S.K.)  
The Cultivation of Value, Attitude, Skills and Knowledge (V.A.S.K.) in the Covid Adversity
- 明愛馬鞍山中學 Caritas Ma On Shan Secondary School  
(Values Education 品德情意教育)  
全校價值觀教育課程規劃及推動守法、同理心及勤勞的學與教策略  
Whole-school Curriculum Planning for Values Education and Learning and Teaching Strategies on Promotion of Law-abidingness, Empathy and Diligence
- 中華基督教會方潤華中學 CCC Fong Yun Wah Secondary School  
(Values Education 品德情意教育)  
愛與關懷 培育豐盛人生  
Love and Care to Cultivate a Rich Life for Students
- 潮州會館中學 Chiu Chow Association Secondary School  
(Values Education 品德情意教育)  
制服團隊：非正規教育與價值觀教育的融合  
Uniform Groups - Integration of Non-Formal Education and Values Education
- 宣道會陳朱素華紀念中學 Christian Alliance S W Chan Memorial College  
(STEAM Education STEAM 教育)  
創意STEAM防疫專題課程—3D打印口罩  
Innovative STEAM —3D Printing Mask
- 香港教育工作者聯會黃楚標中學 HKFEW Wong Cho Bau Secondary School  
(National Education 國民、國安教育)  
從升旗儀式到國旗下講話  
National Education - Flag Raising Ceremony and Speech
- 香港道教聯合會圓玄學院第一中學 HKTA The Yuen Yuen Institute No.1 Secondary School  
(STEAM Education STEAM 教育)  
STEAM@YY1
- 高雷中學 Ko Lui Secondary School  
(STEAM Education STEAM 教育)  
從STEAM教育到服務學習  
From STEAM Education to Service Learning
- 九龍真光中學 Kowloon True Light School  
(National Education 國民、國安教育)  
通過多元策略，加強推動國民教育  
To Strengthen the Promotion of National Education through Multiple Strategies
- 港島民生書院 Munsang College (Hong Kong Island)  
(National Education 國民、國安教育)  
國情教育的知情意行  
National Education : Its Intellectual, Emotional, Volitional and Practical Dimensions
- 民生書院 Munsang College  
(Values Education 品德情意教育)  
善用早會平台作校長訓勉  
Principal's Sharing in School Morning Assembly
- 保良局羅傑承(一九八三)中學 Po Leung Kuk Lo Kit Sing (1983) College  
(Values Education 品德情意教育)  
正向氛圍，關愛校園  
Cultivating Positive Caring Culture
- 香港培正中學 Pui Ching Middle School  
(STEAM Education STEAM 教育)  
培正的校本STEAM教育  
PCMS School-based STEAM Education
- 禮賢會彭學高紀念中學 Rhenish Church Pang Hok Ko Memorial College  
(Values Education 品德情意教育)  
正向教育活動推展及價值教育課程重整  
Promotion of Positive Educational Activities and Refinement of Values Education Curriculum
- 聖公會李福慶中學 SKH Li Fook Hing Secondary School  
(Values Education 品德情意教育)  
以英語音樂劇推動全人發展  
Holistic Development through Musicals
- 東華三院張明添中學 TWGHs Chang Ming Thien College  
(STEAM Education STEAM 教育)  
專項化學習模式  
Project Approach in Learning
- 東華三院李潤田紀念中學 TWGHs Lee Ching Dea Memorial Colleg  
(National Education 國民、國安教育)  
凝心聚力，全方位推動國民及國家安全教育  
Together We Strive: Concerted Effort in Promoting National Identity & National Security Education
- 東華三院黃鳳翎中學 TWGHs Wong Fung Ling College  
(STEAM Education STEAM 教育)  
如何透過設計思維課程培養學生開拓與創新精神  
How to Cultivate Students' Entrepreneurship through Design Thinking Curriculum
- 東華三院黃笏南中學 TWGHs Wong Fut Nam College  
(National Education 國民、國安教育)  
中國歷史科教學分享  
Sharing on the Curriculum Planning and the Learning and Teaching Strategies in Chinese History Classes
- 仁濟醫院林百欣中學 Yan Chai Hospital Lim Por Yen Secondary School  
(National Education 國民、國安教育)  
推行國安教育校本經驗分享  
Sharing of School-based Experience in Implementing National Security Education(NSE)
- 香港津貼中學議會 Hong Kong Subsidized Secondary Schools Council  
(STEAM Education STEAM 教育)  
國民教育與STEAM 教育的有機結合  
Organic Integration of National and STEAM Education

(按學校英文名稱排序)

# 「專業分享・杏壇閃亮」教育薈萃2023 演講嘉賓



## 李子建教授

學術及首席副校長、  
課程與教學講座教授

### 演講題目

#### 知識轉移和專業分享：以STEAM教育及價值觀教育為例

一項針對香港青少年對科技創新素養的認知和看法的研究發現，大部分受訪學生認為自己欠缺21世紀議程所提及的科技創新素養，並希望學校增加更多科技創新相關的教育活動（香港科技創新教育聯盟和嶺南大學STEAM教育及研究中心, 2020）。《行政長官2022施政報告》指出，香港特別行政區政府將大力推動STEAM及價值觀教育。同時，資訊及通訊科技及編程能力（ICT&P）在不同層次的教育中都非常重要。為了回應可持續發展的問題，年輕人需要培養價值觀和技能，不僅關心自己而且關心他人，以更廣闊的視野瞭解自己在未來世界的角色（Kennedy et al., 2023）。

知識、技能、態度和價值觀相互依存（OECD, 2019），可持續性轉型需要知識基礎，知識轉移則支持加速可持續性轉型。是次分享從價值觀教育與STEAM教育的例子和角度出發，透過實例，探討知識轉移促進可持續發展的可能性。



## 佛教沈香林紀念中學

講題:

從疫境培養STEM教育中的價值、知識、技能和態度(V.A.S.K)

講者:

何嘉琪 科技學習領域統籌主任

孫芷珊 英國語文教育學習領域統籌主任

### 分享內容簡介

隨著物聯網(IoT)及人工智能(AI)科技發展成熟，未來勞動市場將出現鉅變，很多現有職位將會因科技發展而消失，首當其衝將會是我們的學生。基於此，本課程加入人工智能(AI)學習活動，讓學生體驗疫情下利用機器學習(Machine Learning)製作能檢測人們是否有配戴口罩的裝置，目的是透過主題式的STEM活動，讓學生體驗有目的地應用知識，解決現實生活的問題。

最後透過「同創共學」校本課程，讓學生體驗設計思維五個階段，運用編程、虛擬實境、擴增實境及3D模型設計等技能，發揮創意，融入校本初中英文科課程元素，如拼音教學(Phonics Education)及語言藝術教育(Language Arts Education)，學習以英文製作保育VR/AR動畫海報，以及一個以傳承香港文化為主題的導賞應用程式。

學生更以STEM社會服務形式，為患有認知障礙症的長者能足不出戶地透過懷舊AR模型進行「緬懷治療」，改善精神健康。

在跨學科相互配合下深化學生各科知識，由傳統課程中教師主導模式，轉化為學生為本模式的專題式學習(Project-Based Learning)，讓學生體驗到跨學科知識與現實生活議題互相依賴的性質。從中培育他們的創造力、價值、知識、技能及態度(V.A.S.K)的成長。



## 明愛馬鞍山中學

講題:

全校價值觀教育課程規劃及推動守法、  
同理心及勤勞的學與教策略

講者:

袁之彤 助理校長

廖銘輝 助理校長

### 分享內容簡介

我校如何落實推動「守法」、「同理心」及「勤勞」這三個價值觀。

課程涵蓋價值觀教育「認知」、「情感」和「實踐」層面，以「多重進路·互相配合」，做好「學校價值觀教育的整全規劃」；刻意「營造校園的良好氣氛」；持守教師的專業，在日常「身教言教」作學生的榜樣；利用課程的優勢，以「有機結合·自然連繫」滲入價值觀教育元素；透過多元化活動，讓學生體驗及實踐所學，身體力行，鞏固正確的價值觀。



## 中華基督教會方潤華中學

講題:

愛與關懷 培育豐盛人生

講者:

吳俊雄 校長

朱佩貞 主任

### 分享內容簡介

本校除重視學生的學業成績，亦關注學生在身、心、靈各方面得到均衡發展，學校希望讓學生發展個人潛能，透過學習和參與各類活動，成為具責任感及關懷祖國和社會的世界公民。同時，透過以生命影響生命，讓師生共同體會，致力培育學生具備「堅毅鑽研」（Persevering）、「自律自主」（Autonomous）、「探索求真」（Inquisitive）及「逆境自強」（Resilient）四個方中人特質。這四個英文字頭一個字母剛好拼合成「PAIR」一字，這象徵老師、同學和家長是一起同行，家校合作，從而達至教學相長。

本校積極推動班級經營，為了讓老師更了解學生，全校老師、副校長均擔任班主任，其中一位班主任更會陪伴學生整個學習階段，他們熟習學生的性格特質，家庭和成長背景，讓學生得到照顧和陪伴，師生感情要好。此外，一些學習態度和學習習慣，均可透過班級經營得到培養和改善，有助學生投入校園的生活，以及建立更良好的學校支援網絡和能關心學生成長的不同需要。

為了培養學生國家的認識、國民身分的認同，以及建立正面的價值觀，在正規課程方面，中文、英文、宗教、公民及藝術科等科目藉不同的課堂活動，滲入相關教育元素。同時，透過其他學習經歷以跨學科合作，增加學生不同的學習體驗，讓學生關懷祖國，以及感受友愛同學、尊重長輩、培養孝心等美德，將正面價值觀滲到不同課堂。

學校分享



## 潮州會館中學

講題:

制服團隊：非正規教育與價值觀教育的融合

講者:

梁鳳兒 校長

張俊彥 主任

### 分享內容簡介

教育除了日常的正規教育 (Formal Education) 的課堂學習活動外，非正規教育 (Non-Formal Education) 也是重要的一環。制服團隊有著有系統的訓練課程和獎勵制度，提升學生之社會服務參與度、聯合戶外團隊培訓等，深化發展非正規教育與價值觀教育，並向其他學生及外界展示堅毅與勤勞的精神，實踐良好品德教育。



## 宣道會陳朱素華紀念中學

講題:

創意STEAM防疫專題課程—3D打印口罩

講者:

曾祥俊 STEAM教育統籌主任

司徒華生 STEM科老師 余利勤 STEM科老師

### 分享內容簡介

本課程為中三級的普及課程，題目為：創新3D打印口罩STEAM專題。

在這廿一世紀主張以STEAM知識解決問題及創造新解決方法的時代，希望透STEAM專題研習，讓同學更加認識及了解他們日常接觸及配帶的防疫工具—口罩，如何有效地保護他們。運用科學探究作為主導的STEAM學習策略，讓同學們認識不同類型口罩所發揮的保護作用。透過設計不同的公平測試實驗使同學對不同口罩的舒適度，透氣功能及防飛沫效能等，有更科學的掌握。

整個學習過程中，我們鼓勵同學自主學習。在課堂前能預習課堂知識，在課堂內能以小組方式進行討論及研習，在課後能整理所學知識進行匯報。這一連串的學習設計，對加強學生的共通能力及自主學習能力有更進一步的推展。



## 香港教育工作者聯會黃楚標中學

講題：  
從升旗儀式到國旗下講話

講者：  
許振隆 校長

### 分享內容簡介

2022年元旦起，每所學校都必須按指引恆常舉行升旗儀式及每天升掛國旗。因此在儀式進行之後，國旗下講話便更能豐富這時段的學習內容。是次分享，將向同工闡釋相關活動的意義、方式和示例。



## 香港道教聯合會圓玄學院第一中學

講題：  
STEAM@YY1

講者：  
簡偉鴻 校長  
陳寶怡 綜合科學科科主任 李彬 資訊及通訊科技科科主任  
李靜文 視覺藝術科科主任 郭俊廷 企業、會計與財務科科主任

### 分享內容簡介

圓玄一中的教學團隊一直不斷嘗試和尋找有效的教學方法以提升學生的學習動機。經校長與教師細心的檢視和考慮，本校於2013-14學年以綜合科技科為核心，發展主題式跨科協作課程，期望緊密連繫各學科知識，適切運用科技以提升學生學習動機與效能。

本校的主題式跨科協作課程深獲外界的認同。除多次獲得教育局及香港大學的課堂設計獎項外，亦於2017-18年度以主題「以科技教育為本，推動跨科協作」獲得了「行政長官卓越教學獎」（科技教育學習領域）。

學校分享



## 高雷中學

講題:  
從STEAM教育到服務學習

講者:  
余展翔 STEM統籌主任

### 分享內容簡介

本校致力推動STEAM教育，在課程及課外活動均為學生提供學習機會。

課程方面，在2021年，發展校本STEM課程，讓學生接觸環控水耕種植系統及透過機甲大師Robomaster讓學生學習工程、編程的基本知識。本學年，在校本STEM課程加入區塊鏈理論及實踐課程，讓學生接觸最新科技的資訊，對虛擬貨幣、NFT等有初步認識。

在課外活動方面，舉辦「滋味水耕」活動，學生自行籌辦活動給全校學生，利用自家種植水耕菜設計有營菜式，推廣健康校園生活。本校設有STEM校隊，參與不同的科技比賽，如：Robomaster機甲大師青少年挑戰賽、全港學界無人機挑戰賽。本校亦會舉辦機甲大師（觀塘區小學）挑戰賽，讓本校學生舉辦大型比賽及教導小學生，從而提供教室以外的學習機會。另外，本校以STEM主題舉辦長者學苑，如水耕樂、立體打印工作坊、無人機操控體驗，讓學生與長者一同學習，或作為「老友記」的小導師。透過舉辦小學大型學界比賽及長者學苑，讓學生利用STEM教育得到的知識及技能，回饋他人、服務他人，從而建立關愛、尊重等價值觀。



## 九龍真光中學

講題:  
通過多元策略，加強推動國民教育

講者:  
梁靜雲 副校長  
吳景輝 助理校長

### 分享內容簡介

中華文化博大精深，歷史足跡源遠流長，成為中華民族凝聚力的主要來源；當代中國發展一日千里，更值得青年人引以為傲。是次分享將介紹我校如何通過學校傳統、校園環境及課堂內外的學習，由知識到價值，從課堂走進生活，讓學生深入認識優秀中華文化、民族奮進歷程及當代國情發展，進而培養愛國情懷，推動國民教育。



## 港島民生書院

講題：  
國情教育的知情意行

講者：  
徐溯 中史科科主任

### 分享內容簡介

分享就本校為例，以恆常工作、課程規劃、聯校活動、境外交流等不同面向，簡述推展國情教育的不同階段。



## 民生書院

講題：  
善用早會平台作校長訓勉

講者：  
葉志兆 校長  
蔡家榮 協理副校長

### 分享內容簡介

校長的領導角色是什麼呢？早會的作用又是什麼呢？如果學校沒有早會這平台的影響又是會怎樣呢？

早會未必是學生在校園生活中最享受的一環，但我們又總會接受有這環節，如何能善用早會是一個容易被遺忘的課題。既然價值教育是整個社會所重視的元素，我們更加應該珍惜早會這平台。希望透過是次分享能帶出以下目的：

1. 早會與校長角色及價值教育的關係
2. 透過早會帶出價值教育的幾點建議
3. 校長預備早會分享的一些資源及書籍
4. 行政架構安排及運作上反思

學校分享



## 保良局羅傑承（一九八三）中學

講題:

正向氛圍，關愛校園

講者:

樊達賢 學生事務主任、助理學務主任

張家豪 助理輔導主任

### 分享內容簡介

價值觀教育——關愛 校情分享

本年度我校其中一個關注事項是「敦品才顯，均衡發展」，致力從校內硬件配套，及多元活動改善學生身心健康，培育學生關愛之心。我校創建「Love And Hope Centre」，主用作學生進行靜觀活動。又翻新課室設備、粉飾全校牆壁，顧及學生生理及精神需要。就活動上，我校期望學生能由關愛自己出發，繼而學會照顧家人、朋友、師長，繼而到整個社區。我校從老師、家長、學生，多個持份者入手，推行靜觀培訓，期望能推廣一套新穎的減壓方法。每天早會亦設「三分鐘呼吸」，師生在上課前先平靜自己，才開始一整天的課堂。透過硬件的設計、活動的推展，從多方面培育學生「關愛」的價值觀。



## 香港培正中學

講題:

培正的校本STEAM教育

講者:

黃子榮 副校長、化學科主任

楊偉樂 助理校長、科學科主任

### 分享內容簡介

STEAM教育包括Science、Technology、Engineering、Art和Mathematics，學生除了需要掌握各範疇的基礎知識外，還要將所學知識融合實踐在不同的情景中，當中不但要求學生具備解難、分析和創意能力，更挑戰學生的視野和自主學習能力。為了裝備學生面對新時代的機遇和挑戰，我們根據學生的不同興趣和能力，從跨科合作、課程整合及各類課外活動，推行培正中學校本STEAM教育。



## 禮賢會彭學高紀念中學

講題:

正向教育活動推展及價值教育課程重整

講者:

李夢詩 副校長

蔡鳳兒 學生事務委員會負責人

### 分享內容簡介

本校通過籌劃全校性班級經營活動，如「感恩滿寫」、「好歌任你點」、「每月之星選舉」、「學生輔導日」等，提供平台及機會讓同學學會欣賞、感恩、恰當地抒述意見及感受，同時增進生生、師生之間的關係。

近年，本校又增設價值教育組，致力重整全校價值教育課程，以令學生能更有系統地培養11項重要的價值觀、態度、知識及技能，又善用周會或活動後的反思節，引導學生討論如何在生活中實踐所學到的價值，並給予學生適切回饋。



## 聖公會李福慶中學

講題:

以英語音樂劇推動全人發展

講者:

許少翔 主任 陳錦嫦 老師

Tanya Pinsent-Priso 外籍英語老師

### 分享內容簡介

自2007年起，我們一年一度的英語音樂劇已成為學校的傳統。除了通過音樂劇提高學生的英語水平和釋放學生的各種潛能外，我們相信這種學習經歷為我們提供了一個很好的機會來培養學生的全人發展培養積極的價值觀和態度，這對學生應對未來面臨的挑戰至關重要。



## 東華三院張明添中學

講題：  
專項化學習模式

講者：  
梁偉業 設計與科技科主任

### 分享內容簡介

根據2015年教育局文件《推動 STEM 教育—發揮創意潛能》概覽，STEM主要是透過『讓學生就著日常生活問題，設計和擬定具體及有創意的解決方案，從而增強他們在綜合和應用跨學科知識與技能的能力。』由此可見，最有效及最易於理解的STEM學習模式便是透過目標明確的專項（Project）來進行。

然而，規劃 STEM 專項是一項具有挑戰性的任務，因為每個專項都涉及教授跨學科知識和技能。為了避免將 STEM 專項降級為傳統的個別學科課堂教學，我們在講座中將介紹5個核特徵來促進 STEM 專項的規劃：「難題為本」、「情境引導」、「知識連繫」、「探究精進」、「實質產出」。這5個特徵指出了不同學科背景教師在規劃跨學科 STEM 專項時要考慮的領域。



## 東華三院李潤田紀念中學

講題：  
凝心聚力，全方位推動國民及國家安全教育

講者：  
陳惠玲 副校長  
譚采瑩 助理校長、德育及公民教育組主任

### 分享內容簡介

分享本校如何透過全校參與、互相協作配合的模式，結合學與教、全方位學習及活動經歷，推動及深化國民及國安教育，讓學生進一步認識法治和國情，明白保障國家安全的重要性，並提升國民身份認同感。

學校分享



## 東華三院黃鳳翎中學

講題:

如何透過設計思維課程培養學生開拓與創新精神

講者:

黃佩佩 科學教育學習領域統籌主任

### 分享內容簡介

我校創立了一個以設計思維為框架的MAKER+創新課程。在這個創新的課程中，學生的學習會經歷簡化了的設計思維四個步驟：感受、思考、實踐和測試，以解決他們在真實情況中發現的問題。課程中主要有3種教學法：真實學習、體驗式學習和個性化學習，這些教學法也能幫助提升學生參與課堂並主導學習。課程經過研究團隊證實了能培育學生好奇心、創意、協作、同理心、自學力及抗逆力等開拓與創新精神。



## 東華三院黃笏南中學

講題:

中國歷史科教學分享

講者:

林善甯 中史科主任

利子寧 中史科老師

### 分享內容簡介

很多人認為歷史是已被封塵的過去，中國歷史科往往給人的印象是要求死記硬背，沒有實用價值。根據錢穆的《國史大綱》所言，學習歷史，必須要附帶著一種溫情和敬意。作為中史科的老師，我們致力讓學生在立體的視角下分析歷史，為過去的歷史賦予生命。我們通過多元化活動，配合修訂課程及學校國家安全教育，積極舉辦考察及展覽活動、傳統手工藝工作坊、歷史體驗活動、問答比賽及誇學科專題報告等；自然連繫並有機結合國安教育元素，從而讓學生明白繼承和弘揚中華民族優秀傳統文化，是維繫國家、民族團結和加強文化認同的重要基礎。以及，我們持續發展電子教學，推行自主學習，如「AR中國歷史教育平台」、「VR秦朝兵馬俑歷史體驗軟件」，「中國歷史與文化雲端電子書圖書館」及「360°虛擬導覽」等，提升同學對中國歷史科的興趣，從而加深學生對國情的認知。



## 仁濟醫院林百欣中學

講題：  
推行國安教育校本經驗分享

講者：  
盧祥錦 中史科主任、副教務主任

### 分享內容簡介

分享推行國安教育的經驗：

1. 籌備建立國安教育的課程內容
  - 人民學科以跨科研究主題方式施教
  - 中史科國安教育題目的教學經驗
2. 心得交流及遇到的挑戰



## 香港津貼中學議會

講題：  
國民教育與STEAM教育的有機結合

講者：  
香港津貼中學議會財政 簡偉鴻校長  
香港津貼中學議會執委 呂恒森校長  
「古今中華虛擬遊」設計比賽部分得獎學校師生

### 分享內容簡介

行政長官於《施政報告》提出加強推動STEAM教育，藉此配合香港未來發展創科的大方向。而中華傳統文化博大精深，底蘊厚重；當代中國發展一日千里，成績令人矚目，值得青年人加深認識與了解。有見及此，香港津貼中學議會主辦「古今中華虛擬遊」設計比賽，鼓勵學生發揮創意，運用VR/AR技術呈現中華優秀文化及當代發展，既強化參賽者綜合和應用STEAM知識的技能，亦能提升國民身份的認同。

是次分享將介紹如何組織有關活動，並邀請得獎師生分享學習經驗及成果。

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Keynote Speaker



## Professor Lee, Chi Kin John, JP

Vice President (Academic) and Provost;  
Chair Professor of Curriculum and Instruction

## Topic

### Knowledge Transfer and Professional Sharing on STEAM Education and Values Education

A study on Hong Kong teenagers' cognition and views on technological innovation literacy found that most of the interviewed students believed that they lack scientific innovative literacy, as required by agenda of 21st century, and hoped that schools would increase more educational activities related to technological innovation to the curriculum (香港科技創新教育聯盟和嶺南大學STEAM教育及研究中心, 2020). The Chief Executive's 2022 Policy Address states that the Hong Kong SAR government will step up efforts to promote STEAM and values education. Moreover, Information and communication technology and Programming skill (ICT&P) are very important at different levels of education. To echo the issue of sustainability, young people need to be exposed to values and attitudes that will help them acquire a broader vision for their roles in the world and a concern not just for themselves but for others (Kennedy et al., 2023).

Knowledge, skills, attitudes and values are interdependent (OECD, 2019), a knowledge base is needed for sustainable transformation, and knowledge transfer supports the acceleration of sustainable transformation (Winkler- Portmann, 2021). This sharing draws upon examples and perspectives of values education and STEAM education, and explores the possibility of knowledge transfer to promote sustainable development through an example.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### Buddhist Sum Heung Lam Memorial College

#### Topic

The Cultivation of Value, Attitude, Skills and Knowledge (V.A.S.K.) in the Covid Adversity

#### Speakers

Mr. Ho Ka Ki Spike (KLA Head, Technology Education)

Ms. Suen Suzanne Tse Shan (KLA Head, English Language Education)

## SUMMARY

With the gradual maturity of the development of Internet of Things (IoT) and artificial intelligence (AI) technologies, the future labor market will undergo tremendous changes. Many existing jobs will disappear due to technological development, and our students will be the first to bear the brunt. Based on this, this course adds artificial intelligence (AI) learning activities, allowing students to experience the use of machine learning to make devices that can detect whether people are wearing masks during the epidemic. The purpose is to let students experience a purposeful application of theoretical knowledge in solving real-life problems.

Through "Learning For Good", our school-based curriculum, students could experience the five stages of design thinking, and adopt skills such as programming, virtual reality, augmented reality and 3D model design, to unleash their creativity. Elements of the school-based junior secondary (JS) English curriculum, such as Phonics Education and Language Arts Education, are incorporated, so that students are able to use English to make VR/AR animation posters promoting conservation, and a guided tour app under the theme of inheriting Hong Kong culture.

To adopt learnt STEAM knowledge in social services, our students have also designed a nostalgic AR model for the elderly with dementia. The elderly are able to undergo "Reminiscence Therapy" without leaving home, which is immensely beneficial to their mental health.

Students' knowledge of various subjects are deepened by interdisciplinary cooperation. It has successfully transformed the teacher-based mode of learning in traditional curricula into project-based learning which is student-centered, allowing students to comprehend the interdependence of interdisciplinary knowledge and social issues. This is to nurture the growth of V.A.S.K in our students.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing

### Caritas Ma On Shan Secondary School

#### Topic

Whole-school Curriculum Planning for Values Education and Learning and Teaching Strategies on Promotion of Law-abidingness, Empathy and Diligence

#### Speakers

Mr. Yuen Chi Tung (Assistant Principal)

Mr. Liu Ming Fai (Assistant Principal)



## SUMMARY

How to implement and promote the Values of "Law-abidingness", "Empathy" and "Diligence".

The curriculum covers the "Cognitive", "Emotional" and "Practical" aspects of Values Education, with "Multi-pronged and Co-ordinated" approach to develop overall school Values Education deliberately. It aims at creating a good atmosphere on campus, presenting teachers to be role models for students, infiltrating the elements of value education through "Organical Integration and Natural Connection" and to enforce proper value.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### CCC Fong Yun Wah Secondary School

#### Topic

Love and Care to Cultivate a Rich Life for Students

#### Speakers

Mr. Ng Chun Hung (Principal)

Ms. Chu Pui Ching (Panel Head)

## SUMMARY

In addition to students' academic development, our school emphasizes all-round development in different aspects, body, mind and spirit. Our school hopes to enable students to develop their potential fully and ultimately become responsible and caring global citizens through a wide range of activities. Through life on life interaction between teachers and students, our school deliberately cultivates four positive character traits, Persevering, Autonomous, Inquisitive and Resilient. Combining the first letter of these traits forms the word "PAIR". This also symbolizes the importance of cooperation among teachers, students and parents. By building stronger home-school relationships, we can create a better teaching and learning environment.

Our school actively promotes class management to allow teachers to understand students better. All our teachers, including our vice principals, serve as class teachers. Additionally, one of the class teachers accompanies the class throughout their six years of secondary school journey. They become more familiar with the needs of the students and their families, and hence, students can be better taken care of. In addition, learning attitudes and learning habits can be nurtured and improved through effective class management. This helps students to devote themselves to their campus life, and this also establishes a better school support network that can care for diverse students' needs.

To promote national awareness, national identity, and other positive values, our school incorporate various classroom activities into the formal curriculum in different subjects, for example, Chinese, English, Religious Studies, Civics Education and Arts. Besides, the school provides other learning experiences and facilitates cooperation among different subject panels to increase students' exposure about China, loving one another, and respecting seniors.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### Chiu Chow Association Secondary School

#### Topic

Uniform Groups -

Integration of Non-Formal Education and Values Education

#### Speakers

Ms. Leung Fung Yee Fannie (Principal)

Mr. Cheung Chun Yin William (Panel Head)

### SUMMARY

Education in schools is a kind of Formal Education, in addition, Non-Formal Education is also important for students to learn beyond the classrooms. Uniform Groups have systematic training programmes and the award systems. These would be able to enhance students in different areas, including the involvement of social services and outdoor team challenges. The integration of Non-Formal Education and Values Education demonstrates the spirit of perseverance and hard work and to uphold positive Values Education.



### Christian Alliance S W Chan Memorial College

#### Topic

Innovative STEAM — 3D Printing Mask

#### Speakers

Mr. Tsang Cheung Chun (STEAM Coordinator)

Mr. Seto Wah Sang (Teacher)     Mr. Yu Lee Kan (Teacher)

### SUMMARY

This course is a universal curriculum for Secondary 3 students. The topic is STEAM Project: Innovative 3D Printed Mask.

In this 21st century era where STEAM knowledge is advocated to solve problems and create new solutions, we hope that through STEAM project(s), students will have a better understanding of how to effectively protect them by the anti-epidemic tool they wear daily - masks. Using scientific investigation driven STEAM strategies, students will understand the protective role played by different types of masks. Through the design of different fair test experiments, students have a more scientific understanding of the comfort, breathability and anti-splash efficacy of different masks.

Throughout the learning process, we encourage students to learn independently. Students can preview the notes before the class; discuss and study in small groups in the class; and organise what they have learned for the project after the class. A series of learning designs has further promoted the strength of students' generic skills and independent learning abilities.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### HKFEW Wong Cho Bau Secondary School

#### Topic

National Education - Flag Raising Ceremony and Speech

#### Speakers

Mr. Hui Chun Lung (Principal)

### SUMMARY

All schools are required to conduct a national flag raising ceremony on important days and special occasions. After the ceremony, speech can be delivered to enrich and consolidate students' learning experience. In this sharing, our school will share the related activities and the rationale behind the events.



### HKTA The Yuen Yuen Institute No.1 Secondary School

#### Topic

STEAM@YY1

#### Speakers

Mr. Kan Wai Hung (Principal)

Ms. Lee Ching Man (VA Panelhead)

Mr. Kwok Chun Ting (BAFS Panelhead)

Ms. Chan Po Yi (IS Panelhead)

Mr. Lee Pan (ICT Panelhead)

### SUMMARY

Igniting students' learning desires has always been one of the major principles of our school in developing pedagogical approaches. After careful reviews and consideration by the principal and teachers, in the 2013-14 school year, the school selected Integrated Technology to be the instrumental subject and developed a theme-based course infused with collaborative learning across various disciplines. It was expected to closely connect the knowledge of various subjects and enhance students' learning motivation and effectiveness with the use of technology.

The school's theme-based interdisciplinary collaborative courses are well recognized territory-wide, receiving several classroom design awards from the Education Bureau and the University of Hong Kong. We also won the "Chief Executive's Award for Teaching Excellence" (Technology Education Key Learning Area) in 2017-18 with the theme "Promoting Interdisciplinary Collaboration with Technology Education".

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### Ko Lui Secondary School

#### Topic

From STEAM Education to Service Learning

#### Speakers

Mr. Yu Chin Cheung (STEM Coordinator)

## SUMMARY

Our school is committed to promoting STEAM education by providing learning opportunities for students through both curriculum and extracurricular activities.

In 2021, we have developed school-based STEM courses as a means to let students learn about the environment-controlled hydroponic planting system on campus. In addition, our students get to learn engineering and programming through Robomaster. In school year 2022-23, foundations of blockchain theory and applications have been incorporated into our school-based STEM courses. Students can get in touch with the latest technology information and have a preliminary understanding of virtual currency, NFT, etc.

With regards to extracurricular activities, student-led STEM events such as “Taste of Hydroponic” are held, with the purpose of promoting healthy campus life via designing nutritious dishes with their own hydroponic vegetables. Besides, we have founded a STEM school team. The team participates in different technology competitions, such as, Robomaster Youth Tournament (Hong Kong) and Hong Kong School Youth Drone Competition.

Our school also holds Robomaster (Primary Schools) Tournament (Kwun Tong), which enables our students to host large-scale competitions and teach primary school students, thereby exposing our students to diverse learning opportunities outside the classroom. Furthermore, our school has established an “Elder Academy” featuring STEM themes, such as hydroponics, three-dimensional printing workshops and drone control experience. Through the activities, students can get to learn with the elders together, or serve as a mentor for the “Elderly Friends”. By organizing large-scale Robomaster Tournament for primary schools and Elder Academy, students can utilize the knowledge and skills acquired in STEM education to serve the others and contribute to the community, thereby cultivating their moral values such as caring and respect.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### Kowloon True Light School

#### Topic

To Strengthen the Promotion of National Education through Multiple Strategies

#### Speakers

Ms. Leung Ching Wan (Vice Principal)

Mr. Ng King Fai (Assistant Principal)

### SUMMARY

The extensive and profound Chinese culture and its long history has helped establish the Chinese nation with a strong cohesion. Contemporary China has been developing rapidly, which is what young people can be proud of. In this sharing, we will introduce how our school enriches students' understanding of the impressive cultural tradition of our country, the history of our national endeavor and the latest development of our nation through our school traditions, campus environment, and learning inside and outside the classroom. From building on knowledge to value, and from applying what is learnt in classrooms to daily life, we aim to inculcate patriotism and further promote national education among students.



### Munsang College (Hong Kong Island)

#### Topic

National Education : Its Intellectual, Emotional, Volitional and Practical Dimensions

#### Speakers

Mr. Season Tsui (Panel Head of Chinese History)

### SUMMARY

The sharing provides an overview of the various stages in implementing national education from different aspects such as daily routine, curriculum planning, joint school activities and overseas exchanges.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### Munsang College

#### Topic

Principal's Sharing in School Morning Assembly

#### Speakers

Dr. Yip Chi Sio (Principal)

Mr. Tsoi Ka Wing (Assistant Principal)

### SUMMARY

What are the roles of Principals? Why shall we operate Morning Assembly? What if we could not optimize the impacts of Morning Assembly?

In most cases, Morning Assembly is not the most remarkable part in campus life and it may be insensibly taken as routine work. Nevertheless, as Values Education is the core concern of the society, we shall reconsider the importance of Morning Assembly. It is expected that the sharing may bring about

1. the related impacts of Principals, Morning Assembly and Values Education
2. some suggestions for Values Education to be incorporated into Morning Assembly
3. some books and resources for Principals to prepare Morning Assembly
4. some reflections on structure and logistics



### Po Leung Kuk Lo Kit Sing (1983) College

#### Topic

Cultivating Positive Caring Culture

#### Speakers

Mr. Fan Tat Yuen

(Head of Student Affairs Department, Assistant Prefect of Studies)

Mr. Cheung Ka Ho (Assistant Guidance Master)

### SUMMARY

Sharing on Our Values Education - 'Care for Others'

One of our school's major concerns is 'To Empower Students to Achieve Physical, Emotional and Intellectual Wellness'. From upgrading our school's facilities to organising different caring programmes, we aim at creating a positive caring environment that can cater for students' needs and improve their wellness at school. For example, we renovated the wall painting on campus and upgraded the classroom equipment. To help students release their stress, we provide mindfulness training to them and launch the '3-minute Breathing Space Practice' every morning before the start of the day. A 'Love and Hope Centre' was also built for students to join mindfulness-based activities. It is hoped that our students will learn to care for and love themselves, their family, teachers, friends and even the community.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### Pui Ching Middle School

#### Topic

PCMS School-based STEAM Education

#### Speakers

Dr. Wong Tsz Wing (Vice Principal, Panel Head of Chemistry)

Mr. Yeung Wai Lok Wesley (Assistant Principal, Panel Head of Science)

### SUMMARY

STEAM Education includes Science, Technology, Engineering, Art and Mathematics. Students have to master the basic knowledge in different fields and integrate the knowledge they have learned in different situations. Students are not only required to have problem-solving, analytical and creative abilities, but also their vision and self-directed learning ability. In order to equip students to face the opportunities and challenges in the new era, we promote Pui Ching Middle School-based STEAM education based on students' interests and abilities in three ways, interdisciplinary cooperation, curriculum integration and various extracurricular activities.



### Rhenish Church Pang Hok Ko Memorial College

#### Topic

Promotion of Positive Educational Activities and Refinement of Values Education Curriculum

#### Speakers

Ms. Li Mong Sze (Vice-Principal)

Ms. Choi Fung Yee (Head of Student Affairs Committee)

### SUMMARY

Adopting a whole school approach, our school organizes an array of classroom management activities namely Gratitude Journal Writing, Song Dedication, Stars of the Month Election, Student Counselling Day, etc. These activities not only provide platforms and opportunities for students to learn to appreciate, be grateful as well as expressing their ideas and feelings in an appropriate manner, but also enhance student-student and teacher-student relationships.

In recent years, our school has set up Values Education Division to refine and develop a systematic Values Education curriculum to foster the development of students' positive values, attitudes, knowledge and skills in 11 cross-curricular domains in Values Education in a more comprehensive and structured way. Reflection sessions in which teachers offer timely feedback are held after weekly assembly as well as experiential activities to guide students to discuss and reflect on how to put values into practice in daily life.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### SKH Li Fook Hing Secondary School

#### Topic

Holistic Development through Musicals

#### Speakers

Ms. Casey Hui Siu Cheung (English Panel Head)

Ms. Christina Chan Kam Sheung (English Teacher)

Ms. Tanya Pinsent Priso (NET Teacher)

### SUMMARY

Our annual English Musical has become a school tradition since 2007. Apart from enhancing students' English level and unlocking students' various potentials through the musical, we believe that this learning experience provides a great opportunity for us to nurture students' whole-person development as well as cultivating positive values and attitudes that are crucial for students in dealing with the challenges they face in the future.



### TWGHs Chang Ming Thien College

#### Topic

Project Approach in Learning

#### Speakers

Mr. Leung Wai Yip Antony

(Panel Head of Design and Technology)

### SUMMARY

According to the 2015 Education Bureau document "Promotion of STEM Education - Unleashing Potential in Innovation", STEM is mainly "to strengthen the ability of students to integrate and apply their knowledge and skills across different subject disciplines through solving daily life problems with practical solutions and innovative designs". Therefore, the project-based approach is the most effective and easy-to-understand STEM learning approach.

However, planning a STEM project is a challenging task as every single project involves teaching interdisciplinary knowledge and skills. To avoid degrading the STEM project back to the traditional classroom teaching of individual disciplines, we introduce 5 features to facilitate planning STEM projects. The 5 features include "Problem Based", "Scenario Leading", "Knowledge Connectedness", "Exploration and Elaboration", and "Tangible Production". These 5 features highlight the areas to be considered when teachers from different disciplines plan an interdisciplinary STEM project.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### TWGHs Lee Ching Dea Memorial College

#### Topic

Together We Strive: Concerted Effort in Promoting National Identity & National Security Education

#### Speakers

Ms. Chan Wai Ling (Vice Principal)

Ms. Tam Tsoi Ying (Assistant Principal, Head of Moral and Civic Education Unit)

### SUMMARY

We would like to share how our school promotes National Identity and National Security Education through whole-school participation and mutual cooperation. We strive to enhance our students' sense of National Identity and understanding of the importance of National Security Education through meaningful, educational learning & teaching and all-round learning experiences.



### TWGHs Wong Fung Ling College

#### Topic

How to Cultivate Students' Entrepreneurship through Design Thinking Curriculum

#### Speakers

Ms. Wong Pui Pui (Head of Science Education KLA)

### SUMMARY

We have implemented design thinking in school-based innovative curriculum called MAKER+. In this innovative curriculum, students undergo four steps: feel, think, do, test, to find and solve a problem by making an invention in a real situation. There are 3 main pedagogies we are using, i.e. authentic learning, experiential learning and personalized learning which help students to engage in the class and take the lead in learning. There is a research team to prove that the curriculum can cultivate students' entrepreneurship such as curiosity, creativity, collaboration, empathy, self-learning abilities and resilience.

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### TWGHs Wong Fut Nam College

#### Topic

Sharing on the Curriculum Planning and the Learning and Teaching Strategies in Chinese History Classes

#### Speakers

Ms. Lam Sin Ling (Panel Head of Chinese History)

Ms. Lee Tsz Ning (Chinese History Teacher)

### SUMMARY

History is considered forgotten past by many, and Chinese History is particularly considered a subject of requiring only rote learning without much practical value. According to Qian Mu’s “A General History of China”, compassion and respect are essential for learning history. As Chinese History teachers, we strive to help students analyze history from different perspectives to bring history in the past to life. Students actively participate in various activities, such as field trips and exhibitions, traditional handcraft workshops, history experience activities, quiz competitions and cross-curriculum projects to tie in with the revised curriculum and national security education, such that students can understand that inheriting and promoting the great traditional culture of Chinese nation is an important foundation of maintaining solidarity of our nation and enhancing cultural recognition. Moreover, we continue to develop e-learning and promote self-learning through the introduction of “AR Chinese History education platform”, “VR Qin Terracotta Warriors experiencing software”, “Chinese History and Culture Cloud e-book library” and “360° virtual tour” to raise students’ interest in Chinese History, thereby enriching their knowledge of our country.



### Yan Chai Hospital Lim Por Yen Secondary School

#### Topic

Sharing of School-based Experience in Implementing National Security Education(NSE)

#### Speakers

Mr. Lo Cheung Kam (Vice Head of Academic Affair)

### SUMMARY

Sharing of experience in implementing NSE:

1. Preparation for the establishment of curriculum content of national security education
  - Humanities are taught in an interdisciplinary research approach
  - Teaching experience of national security education topics in Chinese history
2. Exchange of experiences and challenges

# “Professional Sharing, Academia Shining” Knowledge Fair 2023

## Schools Sharing



### Hong Kong Subsidized Secondary Schools Council

#### Topic

Organic Integration of National and STEAM Education

#### Speakers

Mr. Kan Wai Hung (Hon. Treasurer of HKSSSC)

Mr. Lui Hang Sum (Executive Committee of HKSSSC)

Winning Schools of 「古今中華虛擬遊」 Design Competition

## SUMMARY

To facilitate Hong Kong’s innovation and technology development, the Chief Executive has stated in the Policy Address that the government will step up the promotion of STEAM education. As Chinese citizens, teenagers should gain a deeper understanding of China’s profound history and culture. In view of that, Hong Kong Subsidized Secondary Schools Council has organized ‘Ancient and Modern China – VR Tour Design Competition’ for students to showcase their talents and creativity. Using VR/AR technology to visualize Chinese culture and latest development, it is hoped that it will strengthen participants’ STEAM skills and boost their sense of belonging. This sharing will focus on how to organize such an event. The teachers and students of winning teams will also share their learning experience and showcase their remarkable work.