



廖寶珊紀念書院

林學楷老師

中一級 IT 課堂分享

(AI 輔助教學學習設計獎 - 人工智能素養)

利用生成式人工智能製作工具 (QR Code 生成器)以協助專題式學習

課堂資訊

對象: 中一級學生

課時: 40 分鐘

工具: Gemini (生成式AI), Google Sites (發佈平台)

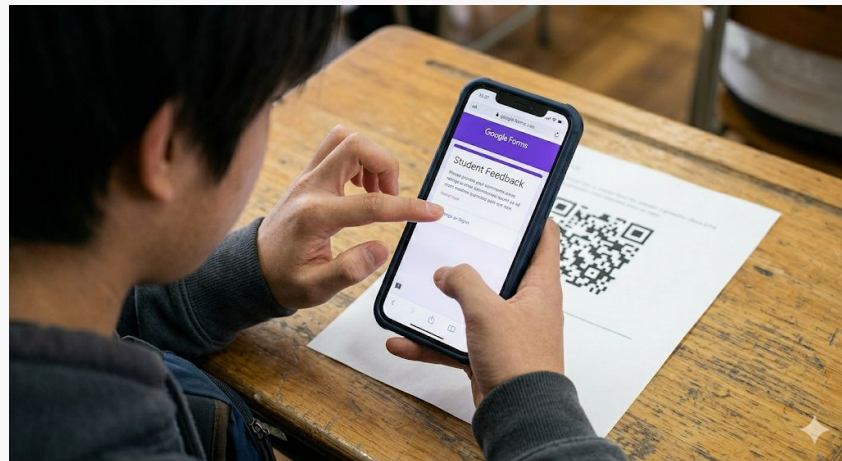
預期學習成果:

- ❖ **知識 (Knowledge):** 學生能識別免費線上工具的安全風險 (如數據隱私、惡意重定向與隱藏追蹤)
- ❖ **技能 (Skill):** 學生能使用 Gemini 進行提示詞工程 (Prompt Engineering), 生成具備功能的 QR Code 生成器, 並利用 Google Sites 部署 (Deploy) 自訂工具
- ❖ **價值觀 (Value):** 培養批判性數位素養 (Critical Digital Literacy), 學會在「使用第三方工具的便利性」與「資訊安全風險」之間做出權衡與取捨

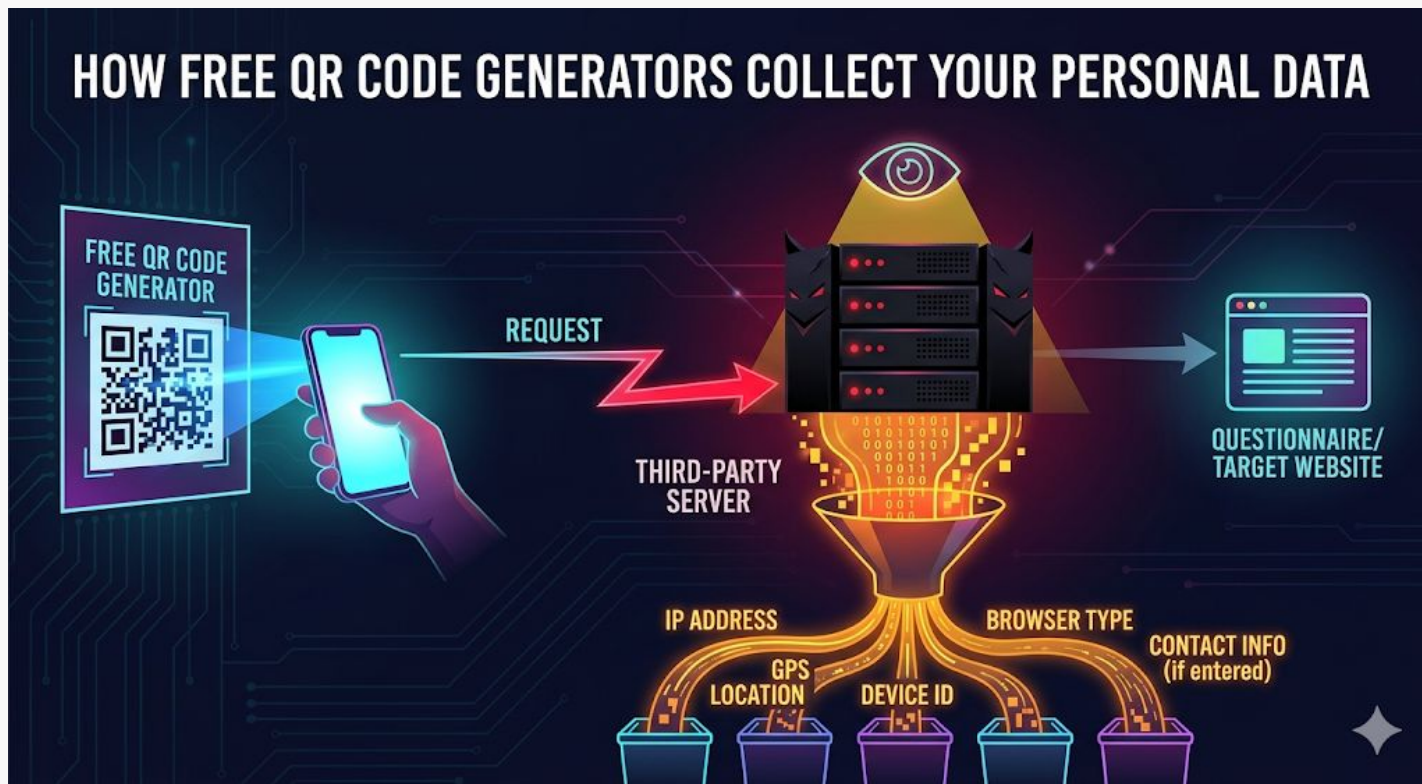
從真實情境出發：為何我們需要自製 QR Code 生成器？

- **課堂情境**

學生在進行「綠色設備(Green Devices)」專題式學習時，需要使用QR Code 來發放問卷。



免費的線上 QR Code 生成器？



傳統教學難點 及 AI 的切入點

- 傳統教學難點-技術門檻高

- 中一學生寫網頁程式?
- HTML/JS ?

- 傳統教學難點-趣味性

- 「編程」
- 「網絡安全」


```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>QR Generator with Live Preview</title>
7 </head>
8 <body>
9   .body {
10     font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
11     background-color: #f0f2f5;
12     display: flex;
13     flex-direction: column;
14     align-items: center;
15     justify-content: center;
16     min-height: 100vh;
17     margin: 0;
18     padding: 20px;
19   }
20
21   .container {
22     background: white;
23     padding: 30px;
24     border-radius: 12px;
25     box-shadow: 0 4px 20px rgba(0,0,0,0.1);
26     text-align: center;
27     width: 100%;
28     max-width: 450px;
29   }
30
31   h2 { color: #333; margin-top: 0; }
32
33   .input-group { margin-bottom: 15px; text-align: left; }
34   label { font-size: 14px; font-weight: bold; color: #555; display: block; margin-bottom: 5px; }
35
36   input[type="text"], select {
37     width: 100%;
38     padding: 10px;
39     border: 2px solid #ddd;
40     border-radius: 6px;
41     box-sizing: border-box;
42     font-size: 16px;
43     background-color: #fff;
44   }
45
46   button {
47     width: 100%;
48     padding: 12px;
49     border: none;
50     border-radius: 6px;
51     font-size: 16px;
52     cursor: pointer;
53     transition: background 0.2s;
54     margin-top: 10px;
55     font-weight: bold;
56   }
57
58   .btn-generate { background-color: #007bff; color: white; }
59   .btn-generate:hover { background-color: #0056b3; }
```



傳統教學難點 及 AI 的切入點

- **AI 與學生的角色定位**
 - AI 負責處理複雜的編程任務
 - 學生負責利用RTF 框架 (Role, Task, Format)指示AI完成任務
- **對接 OECD AI 素養框架**
 - ***Engaging AI:***
學生識別 AI 在解決私隱問題中的角色
 - ***Managing AI:***
學生學習如何管理、優化、反思AI 的輸出。

Mission: Create our own QR code generator

Features	
<p data-bbox="1091 480 1265 529">RTF Framework for using AI</p>  <p data-bbox="1101 677 1265 698">(RTF Framework)</p>	<p data-bbox="1294 404 1342 425">Role:</p> <p data-bbox="1294 524 1342 546">Task:</p> <p data-bbox="1294 671 1362 693">Format:</p>
<p data-bbox="1149 900 1284 922">Critical Check</p>	<p data-bbox="1294 786 1806 808">Does the AI-generated 'QR code generator' fit your expectations?</p> <p data-bbox="1294 928 1690 950">How did you prompt it to reach your expectation?</p>

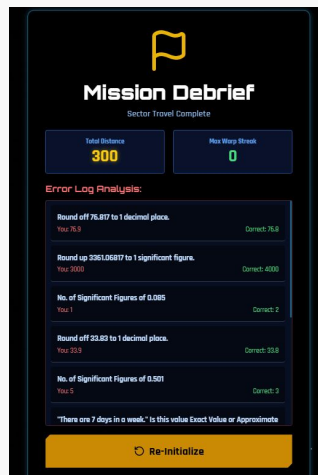
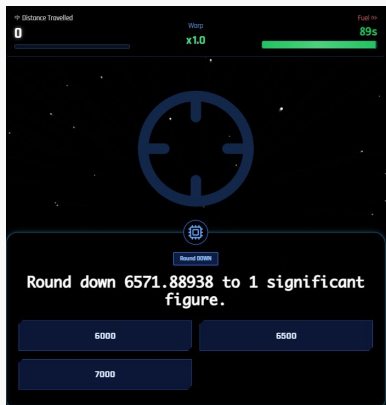
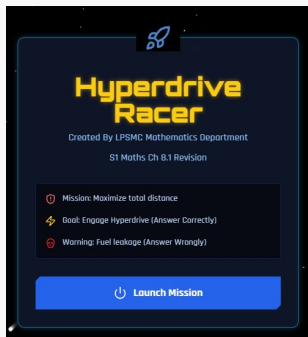
推廣、普及、啟發

● 易於推廣

- 完全免費、普及的平台(Gemini & Google Sites), 適合在香港中學的電腦科或創新科技科中推廣。

● 啟發性

- 課堂理念源自於自身試用AI的經驗



Individual Report
Testing (No. 1)
S5 Mathematics - 1st term Exam Analysis

PREDICTED GRADE
Lv. 3

PAPER 1 TOTAL	PAPER 2 TOTAL	OVERALL %	PASS/FAIL
48 / 80	18 / 36	56.5%	PASS

At: 20:33
At: 18:27
E: 5:20

Paper 1 Analysis			Paper 2 Analysis		
Topic	Score	%	Topic	Score	%
Indices	3/3	100%	Indices	1/1	100%
Change of Subject	2/3	67%	Factorization	1/1	100%
Factorization	1/3	33%	Change of Subject	1/1	100%
Errors and Estimations	2/3	67%	Errors and Estimations	1/1	100%
Percentage	3/4	75%	Quadratic Equations	0/1	0%
More about Inequalities	4/6	67%	Basic Knowledge of Functions	0/1	0%
Equations of Straight Lines (Basic)	1/4	25%	More about Inequalities	2/2	100%
Solving Equations	4/4	100%	Rates and Ratios	1/1	100%
Properties of Circles (Part 1)	5/5	100%	Quadratic Functions	1/1	100%
Measures of Dispersion	4/9	44%	Interest Rates	1/1	100%
Variations	3/3	100%	Equations of Straight Lines (MCQ-Hard)	0/1	0%
Quadratic Functions	4/4	100%	Variations	2/2	100%
More about Polynomials	3/7	43%	Trigonometry	0/1	0%
Similar Solids	4/7	57%	Properties of Circles (Part 1)	1/2	50%
Quadratic Equations	1/6	17%	Area Ratio of Plane Figures	0/1	0%
2-Dimensional Trigonometry	4/5	80%	Pythagoras' Theorem	0/1	0%
3-Dimensional Trigonometry	0/4	0%	Similar Solids	0/1	0%
			Equations of Straight Lines (Basic)	0/1	0%
			Statistics	1/2	50%
			Measures of Dispersion	2/3	67%
			More about Polynomials	1/1	100%
			More about Equations	0/2	0%

Revision Plan

FIX WEAKNESSES (Lv 3)

- Quadratic Equations in Paper 2 (0%)
- Basic Knowledge of Functions in Paper 2 (0%)
- Trigonometry in Paper 2 (0%)
- Pythagoras' Theorem in Paper 2 (0%)
- Equations of Straight Lines (Basic) in Paper 2 (0%)
- Binary Numbers in Paper 2 (0%)
- Quadratic Equations in Paper 1 (17%)
- Equations of Straight Lines (Basic) in Paper 1 (25%)
- Factorization in Paper 1 (33%)

TARGET NEXT LEVEL

Focus on Lv 4 Topics in this Exam:

- More about Equations
- Measures of Dispersion
- More about Polynomials
- Properties of Circles (Part 2)
- 2-Dimensional Trigonometry
- Properties of Circles (Part 1)

Teacher Comments

Should get all marks in A(1) and A(2).

For A(2), should be more familiar with 'Mensurations' and 'More about Polynomials'. Should practice more on Paper 2 and '3D Trigonometry'.

推廣、普及、啟發



活動2：VIBE CODING學習遊戲製作比賽

日期：20/4 - 24/4

獎項：最佳遊戲、最佳使用者介面設計
、最佳互動體驗

負責老師：林學楷老師



學習遊戲製作比賽
(學生作品)