



香港教育大學賽馬會小學

The Education University of Hong Kong  
Jockey Club Primary School

教育「元宇宙」

關於可持續發展生態的小學專題研習

**Discover<sup>2</sup>se Metaverse in Education**





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# The Education University of Hong Kong Jockey Club Primary School



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# Microsoft Showcase School

# 2014- Now



Education outsourced



Schools as learning hubs



2012-2013 Microsoft Innovative Pathfinder School  
(1/ 99 School in the World)

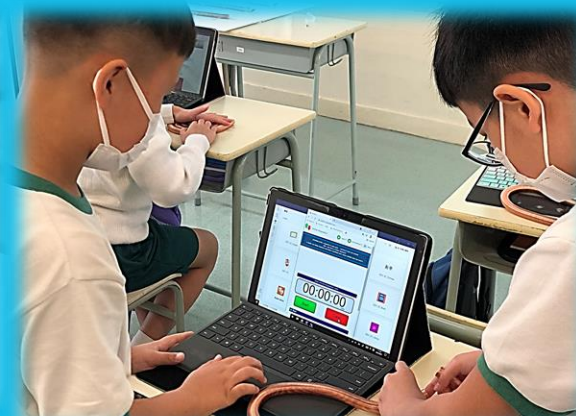
2013-2014 Microsoft Innovative Mentor School  
(1/88 School in the World)



Microsoft Innovative Schools



We are partners in learning.





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# e-bag Classes since 2011



Schooling  
extended





教育元宇宙

同我們有關嗎？

## 1 SCHOOLING EXTENDED

Participation in formal education continues to expand. International collaboration and technological advances support more individualised learning. The structures and processes of schooling remain.

## 2 EDUCATION OUTSOURCED

Traditional schooling systems break down as society becomes more directly involved in educating its citizens. Learning takes place through more diverse, privatised and flexible arrangements, with digital technology a key driver.

## 3 SCHOOLS AS LEARNING HUBS

Schools remain, but diversity and experimentation have become the norm. Opening the “school walls” connects schools to their communities, favouring ever-changing forms of learning, civic engagement and social innovation.

## 4 LEARN-AS-YOU-GO

Education takes place everywhere, anytime. Distinctions between formal and informal learning are no longer valid as society turns itself entirely to the power of the machine.



# SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS

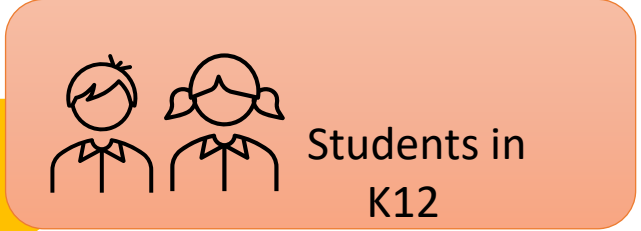
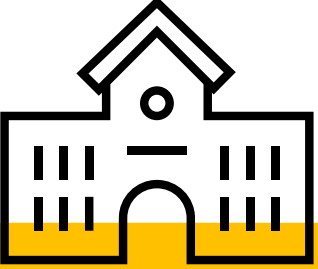


SUSTAINABLE DEVELOPMENT GOALS





Global



Web  
3.0

Extend





Schooling extended



Education outsourced



Schools as learning hubs



Learn as you go

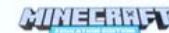
# Metaverse

WHISKERS EXPRESS

學術機構:



平台支援:



DISCOVERISE  
METVERSE IN EDUCATION

DISCOVERISE  
METVERSE IN EDUCATION



Discoverise in Education Website :  
<https://discover2se.gns.hk/>

# Discover<sup>2</sup>se 計劃



Education outsourced

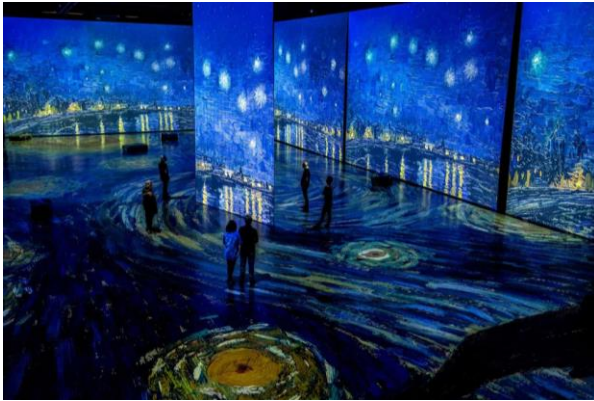


教育元宇宙的想法



1. Discover<sup>2</sup>se 計劃的構思及目標

# METAVVERSE IN EDUCATION



沉浸式學習環境～  
掌握知識、增加社  
交流互動

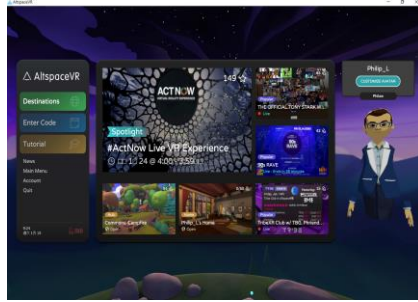


體驗METAVVERSE  
的初型



定義教育元宇宙

Virtual Platforms



AltSpaceVR



Roblox



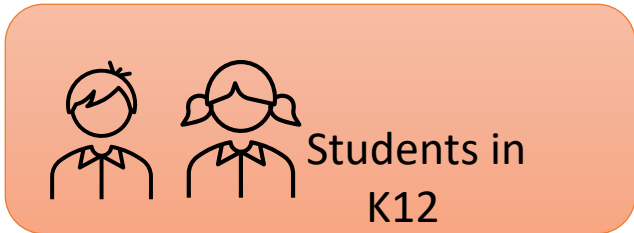
SANDBOX



CoSpace



Minecraft



Generation Alpha:

**Global** : shared customs, values, and experiences.

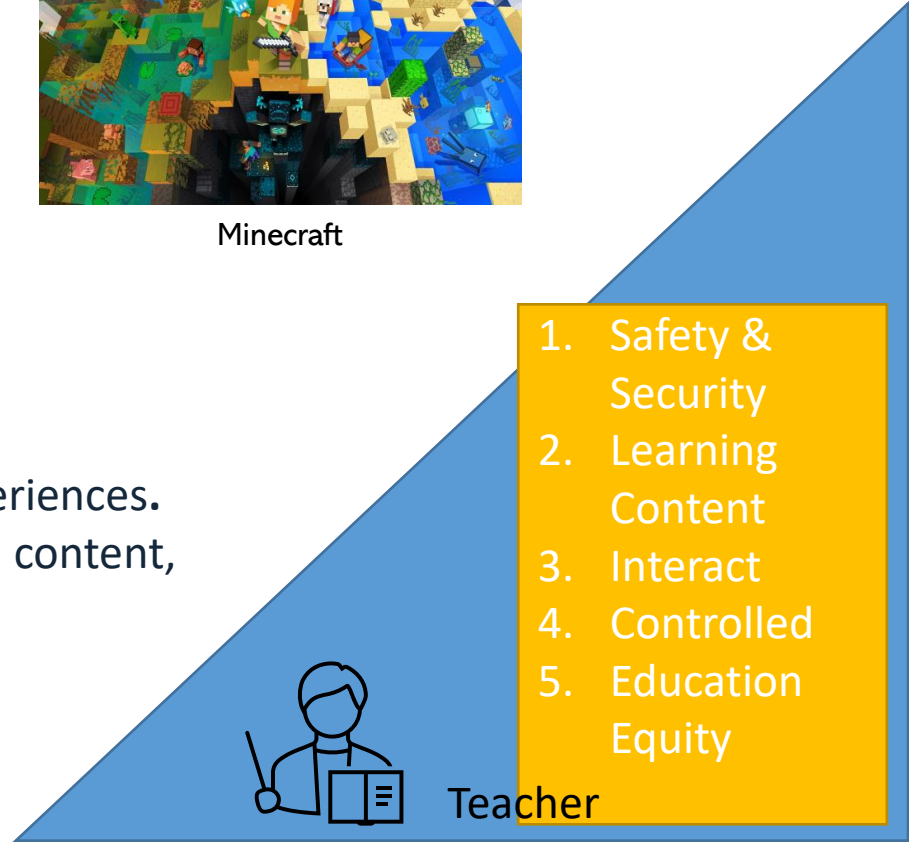
**Digital** : high expectations for on-demand content, products, and services.

**Social** : socially connected

**Mobile** : on the go with mobile

**Visual** : more responsive to visual images

1. Safety & Security
2. Learning Content
3. Interact
4. Controlled
5. Education Equity



# MINECRAFT

## EDUCATION EDITION

## Minecraft Education

1. Safety & Security
2. Learning Content
3. Interact
4. Controlled
5. Education Equity

- increased motivation and engagement, an enhanced learning experience, and improved student achievement and retention. Connolly (2011)
- As children and young people excitedly discuss, share, debate, argue, ignore, teach and learn while playing the game. Michael Dezuanni(2015)



Virtual Platforms



Minecraft

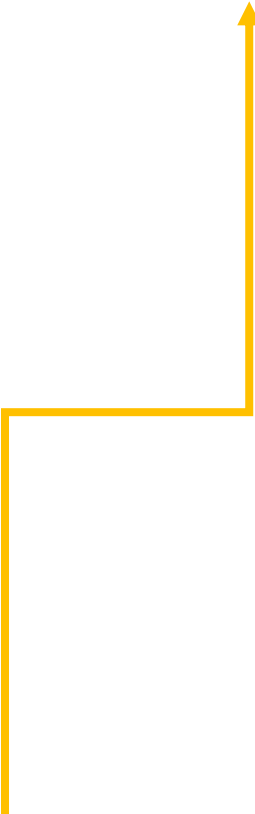
Learning Content



Generation Alpha:

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Students in K12





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# 可持續發展生態計劃

## Sustainable Ecology Project



Discover2se 計劃的構思及目標

# 計劃源起：

主 題：聯合國17項永續發展目標—第14項保育海洋與海洋資源

教學策略：Problem based learning

混合式學習

結合講座、專家訪問、參觀活動等方法

引領學生探究海洋保育的議題，

元宇宙教育：利用Minecraft Education Edition

創建一個安全環境下進行的「教育元宇宙」的體驗，

學生透過在虛擬世界的身份，在元宇宙共同分享

保育的創意構想、體驗及交流，宣揚海洋保育意識。



Minecraft



Metaverse



Learning Content



Virtual Platforms



Sustainable Development Goals

Partners



Schools



Students in K12



Teacher

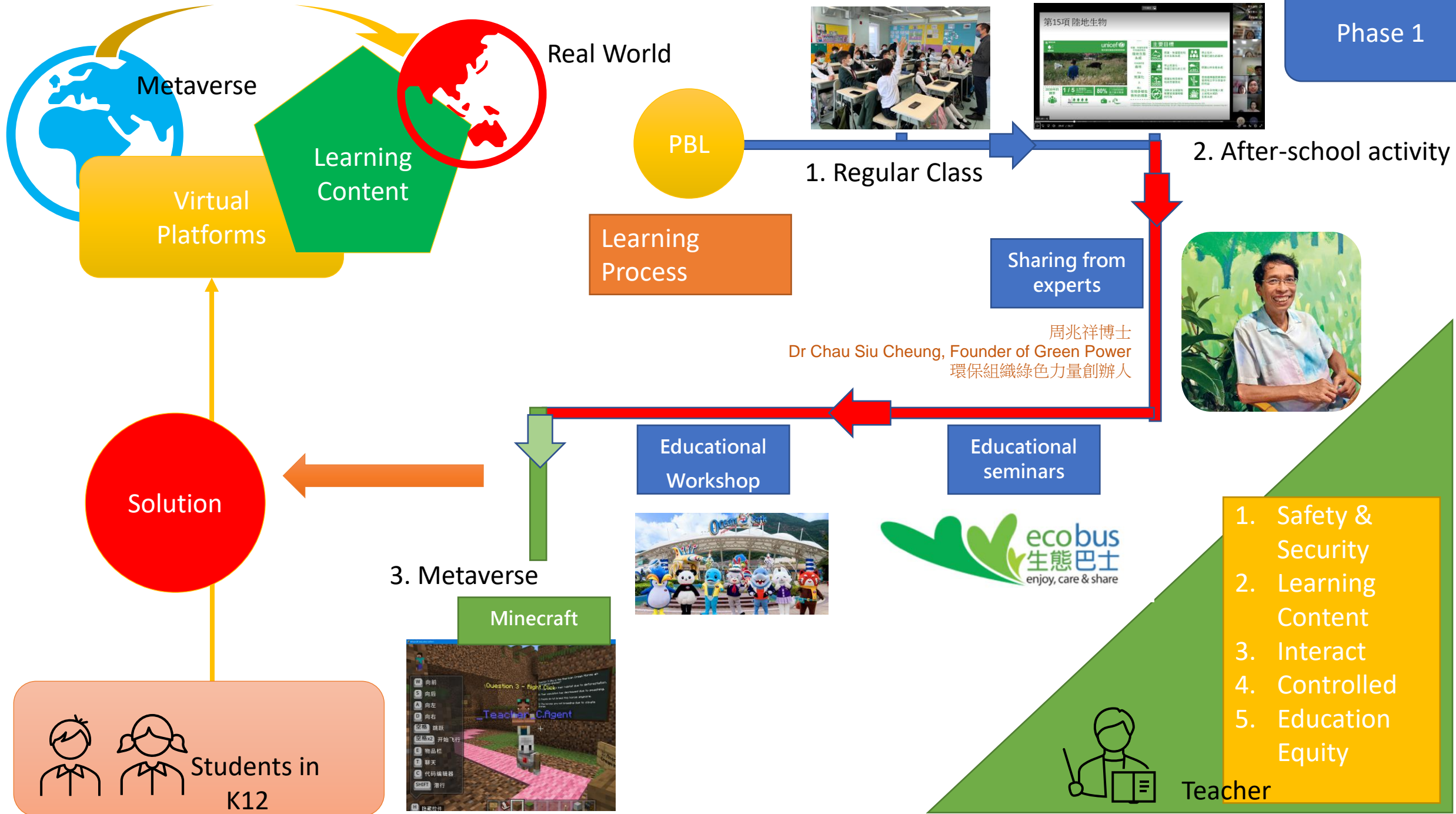


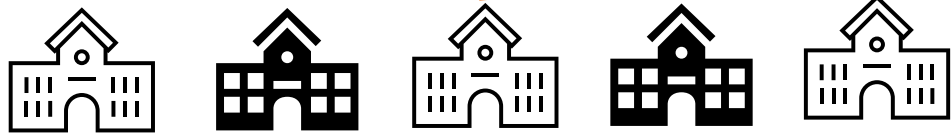
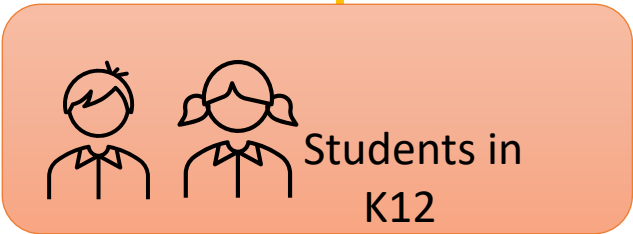
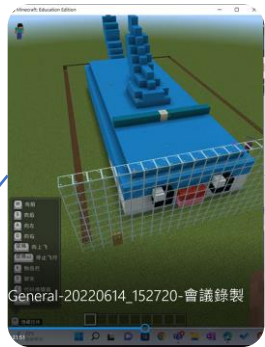
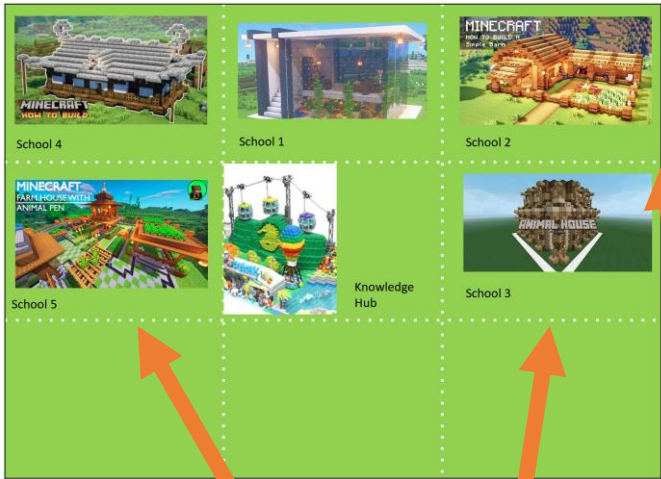
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# Problem-based learning

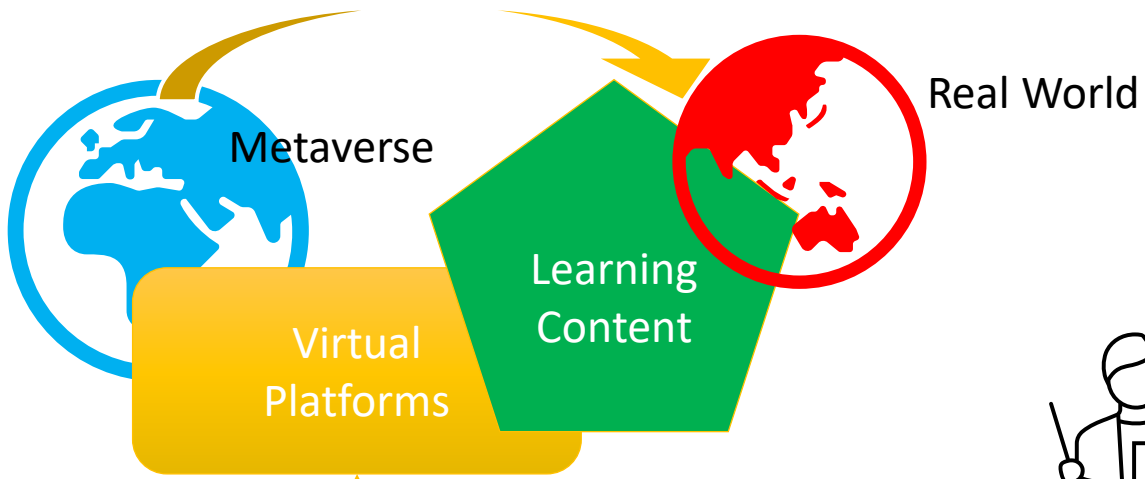
## Problem Based Learning Model





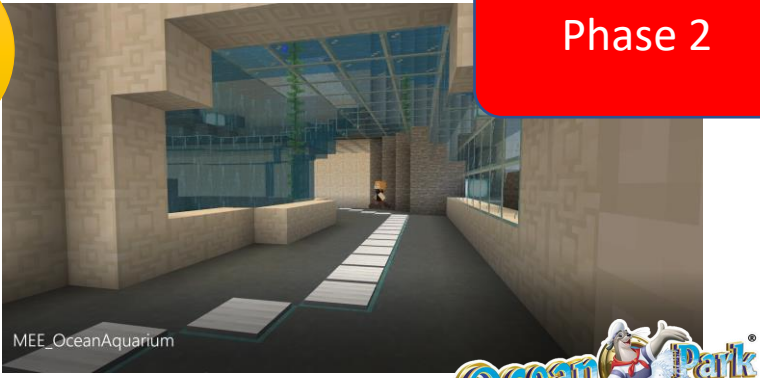
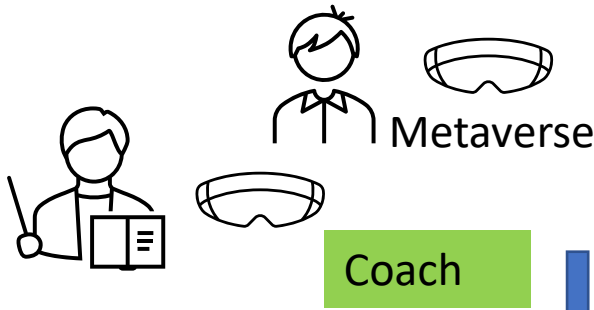


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- 2. Learning Content
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PBL

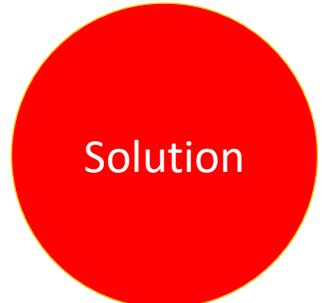
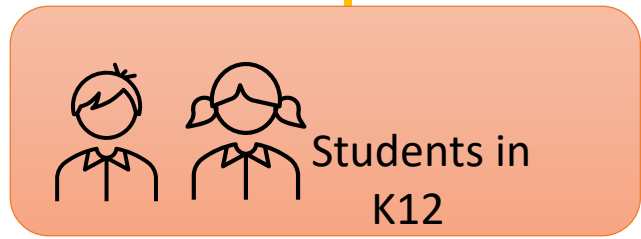
Phase 2



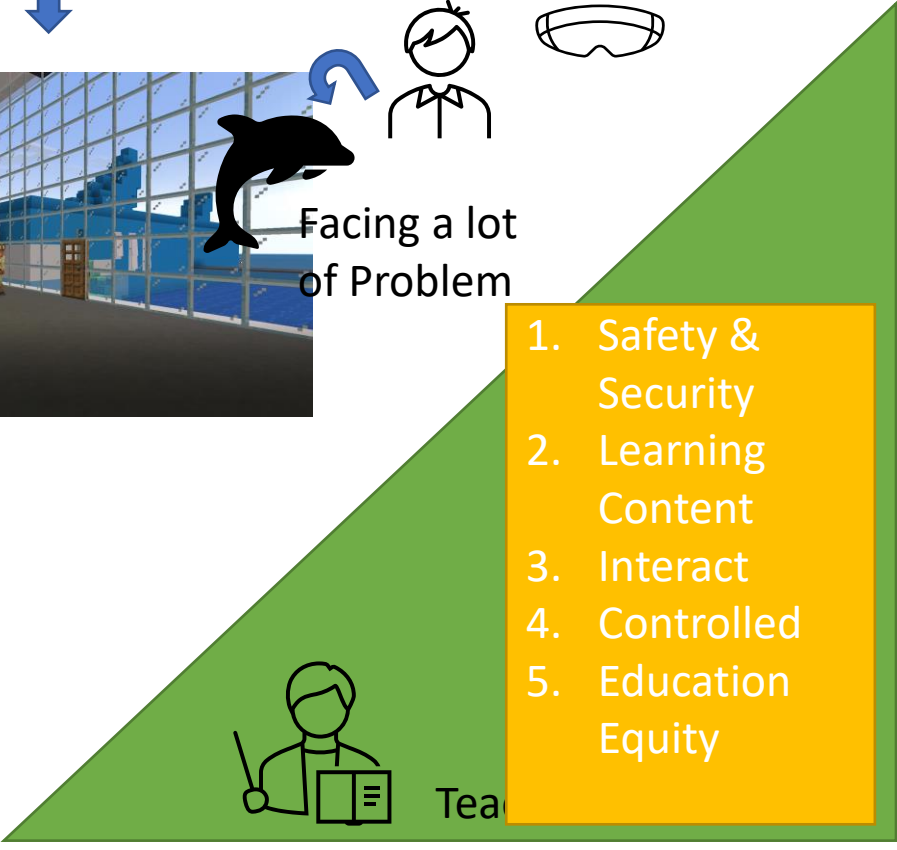
Learning Hub

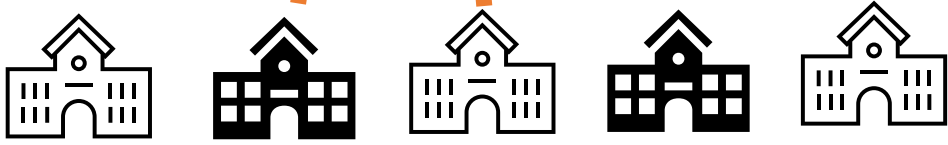
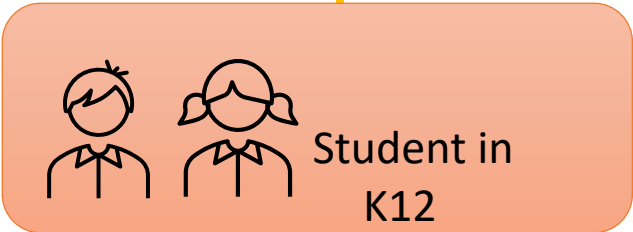
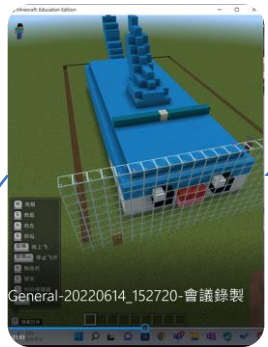
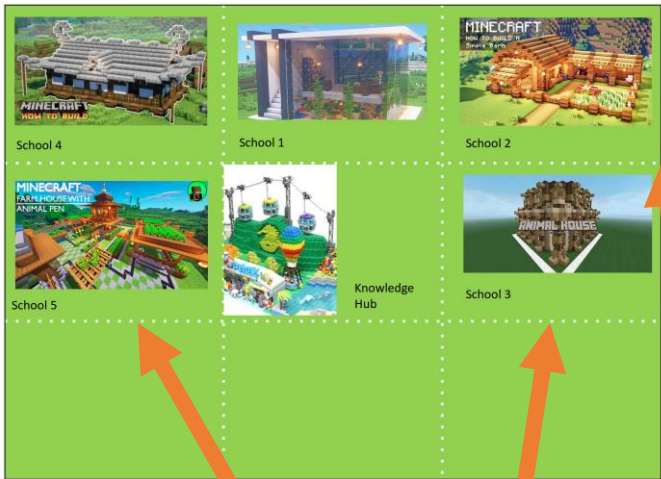
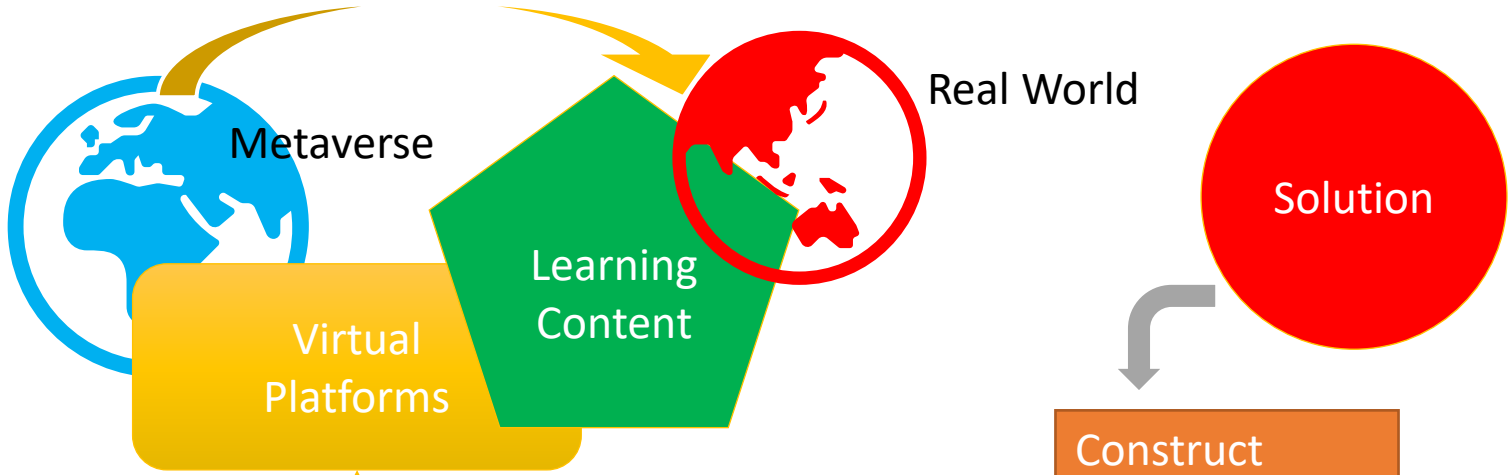


Field-Based



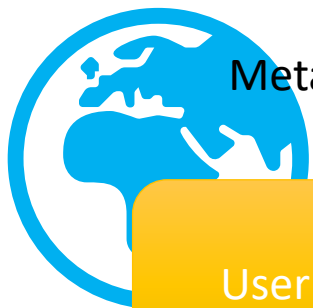
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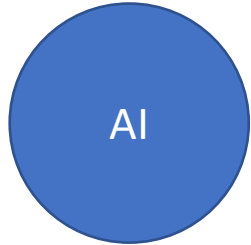
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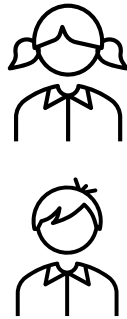
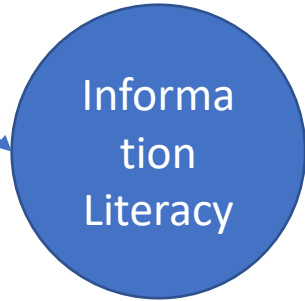


Metaverse

User Behavior



- Capture and understand student behavior in most kinds of activities
- NPC characters in the metaverse can “learn (be trained)” after interacting with users and “grow” along with the timeline.



- There are some missions in Metaverse for student experience



Students in K12

Teacher

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# 活動片段

## 跨科元素：

- 常識科：五年級課題--生命的循環
- 中文科：訪問及匯報技巧
- 綜合科技科：Minecraft Education Edition、Laser cut
- 全方位：海洋公園實地考察
- 混合式學習：面授課堂、實地考察結合課後延伸時段線上課程
- 專家線上訪談及授課



綠色力量創辦人  
周兆祥博士



海洋公園探索及教育經理  
馮少聰先生



海洋公園探索及教育主任  
陳家豪先生



遊戲湯麵創辦人  
余安濤先生





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如有興趣一起 形成  
Metaverse in Education

聯絡我們