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Library as a place for Learning Experience

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Library for learning experience

- Information is evolving. It is not only about text, but all kinds of digital media and modalities.

- Library space transformation realizes the ideas of information literacy, and **link space to learning**.

- **The Library built i-Space in September 2017**. It provides a learning space and digital equipment for students to freely access, create, express and share information.

Why i-Space in the Library?

- **Entry-level Digital Equipment and Facilities**

  Uniquely positioned to lower the barrier to entry for students from **all disciplines and family background**.

- **Easily Accessible Experiential Learning Space**

  With Digital Makerspace available at the i-Space, students can freely use and explore different emerging technologies such as Internet of Things (IoT), Virtual Reality (VR), 3D scanning & printing, laser cutting/engraving, vinyl cutting, poster printing, videos recording and editing.

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About PolyU Library i-Space

i-Space
4/F, North Wing

Digital Visualisation Room

Ideation Zone

Inspiration Zone

Implementation Zone

Idea Pod

Digital Makerspace

Inspiration

Inspiring & stimulating ideas generation

Ideation

Building ideas through sharing & collaborative discussion

Implementation

Actualising creativity & imagination to create prototypes & digital content

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MakerMindset@

I-SPACE

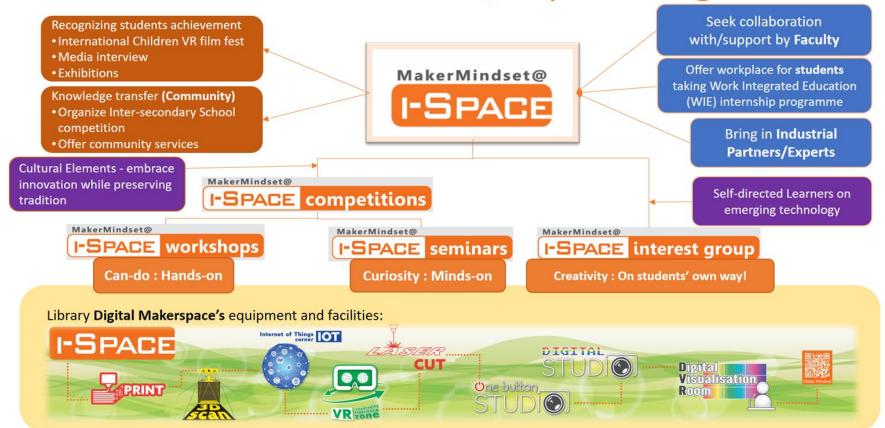# Link Library's space to support learning with Emerging Technology

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Link i-Space to Learning with Technology

The i-Space's **MakerMindset Programme is a pioneer approach of self-directed learning with emerging technologies** by students. The Programme aims to:

- Cultivate a creative, curious and can-do mindset;

- Develop the spirit of innovation in students by bridging emerging technologies with their study disciplines; and

- Build community by gathering students to knowledge sharing sessions, and bringing in industrial experts and other successful makers to share their stories.

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Overview of MakerMindset@i-Space Programme

MakerMindset@ I-SPACE

Recognizing students achievement
- International Children VR film fest
- Media interview
- Exhibitions

Knowledge transfer **(Community)**
- Organize Inter-secondary School competition
- Offer community services

Cultural Elements - embrace innovation while preserving tradition

Seek collaboration with/support by **Faculty**

Offer workplace for **students** taking Work Integrated Education (WIE) internship programme

Bring in **Industrial Partners/Experts**

Self-directed Learners on emerging technology

MakerMindset@ I-SPACE competitions

MakerMindset@ I-SPACE workshops
Can-do : Hands-on

MakerMindset@ I-SPACE seminars
Curiosity : Minds-on

MakerMindset@ I-SPACE interest group
Creativity : On students' own way!

Library **Digital Makerspace's** equipment and facilities:

I-SPACE
3D PRINT
3D Scan
Internet of Things corner **IOT**
VR virtual reality experience zone
LASER CUT
One button STUDIO
DIGITAL STUDIO
Digital Visualisation Room
Maker Mindset

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MakerMindset@

I-SPACE

Workshops and Seminars

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Workshops and Seminars

- Hands-on workshops for students to take up skills and to prepare for their self-directed learning with emerging technologies.

- Minds-on seminars for students to explore the feasibility of using emerging technologies in their projects or service learning.

- Students can join competitions or interest groups organised by i-Space.

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CAN-DO : Hands-on workshops

- **Learn theory from doing and take part in activities**

- **Aim to Cultivate Can-do Mindset**

- Uphold small class size for workshops

- Keep duration within 1.5 to 2 hours

- Workshops include:

  - How to use Laser Cutting

  - Programming Internet of Things (IoT) device

  - Build an elementary VR application

  - Assemble 3D Printer

Assembling 3D Printer and learn the theory of fused deposition modeling (FDM) printing

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CAN-DO : Hands-on workshops

Laser cutting & engraving workshop

Assembling a 3D-printed hand (Prosthetic)

Assembling 3D Printer and learn the theory of fused deposition modeling (FDM) printing

Build a VR application using Unity software

Learn how to program an Internet of Things (IoT) device

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Kung Fu Robot Learning Experience

- Robotic Programming for Kung Fu brings together robotic technology with Chinese martial arts (Kung Fu).

- Students can try out robotic programming while transmitting and safeguarding the intangible cultural heritage of Kung Fu.

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CURIOSITY : Minds-on Seminars

- Hands-on doesn't assure minds-on

- Organize cultural seminars with the theme on Tech Culture projects

- Invite industrial experts to deliver insightful technological talks to explore new ideas of using emerging technologies

- Follow up with hands-on workshops when applicable

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CURIOSITY : Minds-on Seminars

Creativity has no limits! Learn new skills of VR software and fabrication tools to actualize ideas.

A series of cultural seminars to facilitate student contestants to develop a storyboard for their VR Contest.

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CURIOSITY : Minds-on Seminars

VR animation and the latest development in Digital Entertainment market (2019.10.03)

Minds-on Seminar: Get to know how simple to collect environmental data using Internet of Things (IoT) and send data to Cloud services. (2019.04)

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Virtual Reality Contest

- Virtual Reality Contest is a key event of MakerMindset@i-Space programme to bring Technology and Culture together.

- **Promote Interdisciplinary Collaboration**: It seeks to engage students from various disciplines working together to adopt emerging VR technology into Chinese Culture.

- Keep seeking collaboration with faculty members to organize more contests and competitions.

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Virtual Reality Contest about Ancient Chinese stories

VR Contest seeks to engage students from various disciplines working together in to adopt emerging VR technology into Chinese Culture.

PolyU student contestants, faculty and industrial partners attending the Award Presentation Ceremony of VR Contest – Stories from ancient China. (2019.07.17)

私塾夫子
魏姓茶農就想既然茶樹苗是從有一座鐵觀音的廟裏移植過來，那就叫鐵觀音吧！

Champion entry of the VR Contest 2018/19 – VR game on Chinese Tea Culture.

Finalist student teams of the VR Contest presented and demonstrated their VR games!

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Emerging Technology as a Library Service

- **Library service:** The emerging technology facilities and services are readily available service for students of all disciplines.

- **Digital equipment loan service:** Students can checkout digital equipment at a Self-service Kiosk anytime during library opening hours. Just like you checkout a book!

- **Staff consultation:** The i-Space provides Technical Support Desk services to assist users.

- **Peer-to-Peer support:** The i-Space regularly organizes student sharing sessions for idea exchange; builds up student interest groups to work on their own ideas and projects.

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Self-service Kiosk

- Students can borrow Notebook computers, MacBooks, iPad Pro, 3D Scanner, 360 camera, etc.

- Over 17,000 loan of digital equipment per year.

- Self-service Kiosk's software is developed by i-Space staff ourselves.

Packed in transparent plastic bags for easy identification

iPad Pro

Notebook

360 Camera

3D Scanner

Media Creation and Editing Services

- Provide a variety of video production studios

- Provide multimedia workstations for sound and video editing

- Equip with various software for creation of different video formats

  - **360 Video** – 360 video camera

  - **3D Image & Video** – 3D scanner or photogrammetry software

  - **VR Game Production** – Unity software

Studios@Library i-Space
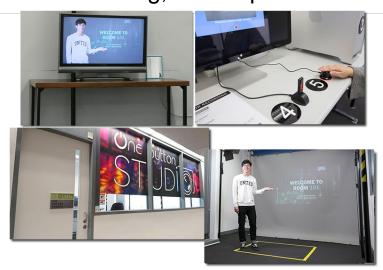
Digital Studio (Staff-managed)	One Button Studio (Self-service)
Contact staff for booking arrangement	Online booking; 2-hour per session

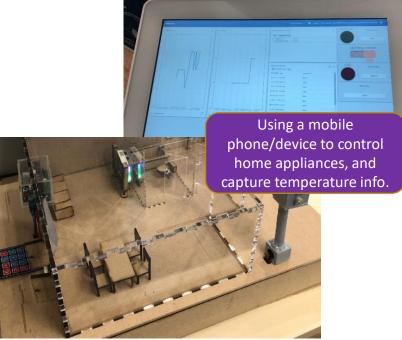MakerMindset@
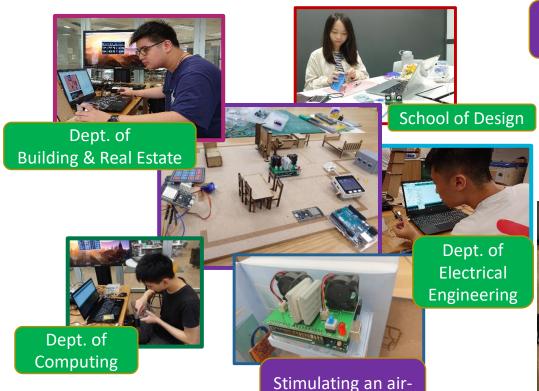
I-SPACE

Student Projects

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Project Created by Student & Industrial Partner

Simulated a VR cycling tour in the Hong Kong Velodrome (2019.04)

Installed a solar panel for students to embed energy feature into Smart Home prototype (2019.10)

3D printed blooming flower with moving petals and changing LED colours. (2019.05)

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Student Sharing@i-Space Programme

**Establishing a peer-to-peer learning platform.
UG student sharing "Wikipedia for Project-based Learning" with students & staff, and industrial partners. (2019.10)**

Pioneering Self-directed Learning with Technology

To summarize, students can:

- Borrow and use digital devices and facilities regardless of their disciplines and family backgrounds

- Identify, learn and pick up new skills of emerging techniques

- Develop self-directed learning competence with emerging technology

- Set their learning pathway, setup evaluation criteria, constructive use of comments and feedback for further improvements

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