

CSD020230299

STEAM knowledge updates series:

Webinar on the Development Trend of Creative Wearable Technology (New)

STEAM教育知識增益系列：

創意穿戴式科技發展趨勢網上研討會 (新辦)

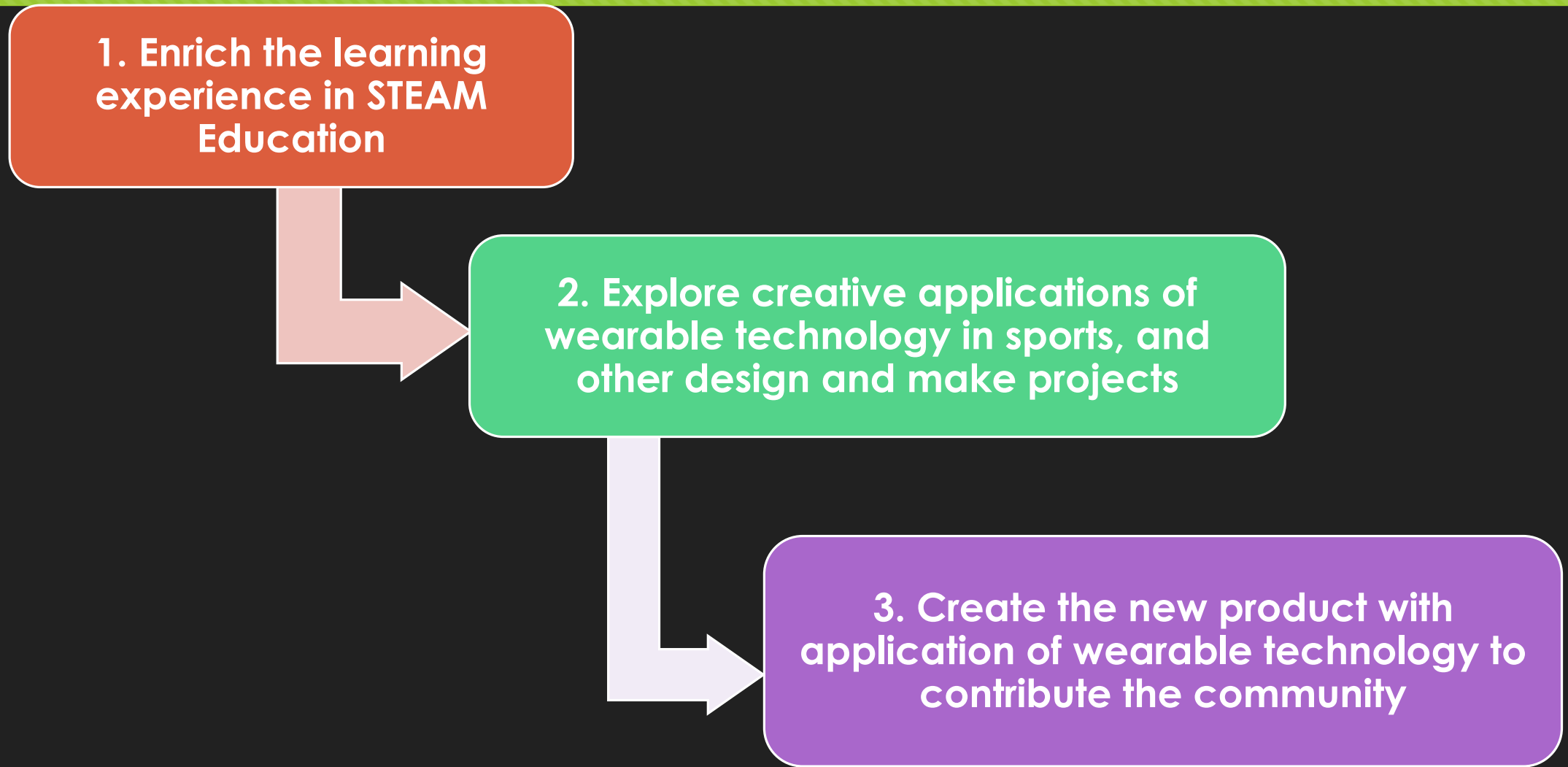
Date日期：27/4/2023 (Thursday/星期四)

Time時間：2:00 p.m. – 5: 00 p.m.

Time	Content	Speaker(s)
2:00 p.m. – 2:10 p.m.	Part 1 : Introduction to the STEAM learning activities related to Wearable Technology	Curriculum Development Officer of Technology Education Section, CSD, EDB
2:10 p.m. – 2:45 p.m.	Part 2: Introduction to Wearable Technology	Mr. Bob Chan Senior Consultant, Smart Wearable Technology, Smart Manufacturing Division, HKPC
2:45 p.m. – 3:25 p.m.	Part 3: Case study on the Intelligent Wearable Technology	Dr. Lisa Zhang, Research Institute for Intelligent Wearable System, PolyU
3:25 p.m. – 3:30 p.m.	Break	
3:30 p.m. – 4:05 p.m	Part 4: Application of latest technologies in Wearable product design Introduction to EVs Specifications and Charging Technology	Mr. Grayson Sun Senior consultant, Metals and Industrial IoT Technology, Smart Manufacturing Division, HKPC
4:05 p.m. – 4:50 p.m	Part 5: Sharing on Wearable product design industry and related reference materials	Mr. Wilson Chong Chairman, IOT HK Association Mr. Edmond Wong Architect/ Product Designer Ms. Sherona Chan Executive Chairperson, Association For Creative Education
4:50 p.m. – 5:00 p.m.	Q&A session	All speakers

Trends in STEAM Education:

Adaption of wearable technology in various STEAM -related activities



1. Enrich the learning experience in STEAM Education

Example: Make use of wearable technology in different STEAM activities

虛擬實境裝置 (Virtual Reality Gear)

- ▶ 使用 360 Panorama 全景相機拍下的影像可使用虛擬實境裝置展示，讓學生感受有如親歷其境的體驗。
- ▶ 體驗學習 (Experiential Learning)
 - ▶ “Live a lesson instead of just reading about it.”
 - ▶ What is the difference from the normal education?
- ▶ 體驗擴增實境 (Augmented Reality Scenarios)
- ▶ 拉近課本的理論與實境的應用
- ▶ Ref:
 - ▶ IVRPA International Virtual Reality Photography Association (<http://ivrpa.org/panoramas/>)



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如何應用可攜式裝置技術豐富學習體驗



- ▶ 智能眼鏡
 - ▶ 優點
 - ▶ 方便
 - ▶ 體驗擴增實境 (Augmented Reality)
 - ▶ 缺點
 - ▶ 影響視力
 - ▶ 或對用家的道路安全造成危險

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如何應用可攜式裝置技術豐富學習體驗

▶ 智能手帶

- ▶ 監控學生的身體狀況
- ▶ 以免心跳太快或體溫過高中暑
- ▶ 追蹤學生位置，增加活動安全性



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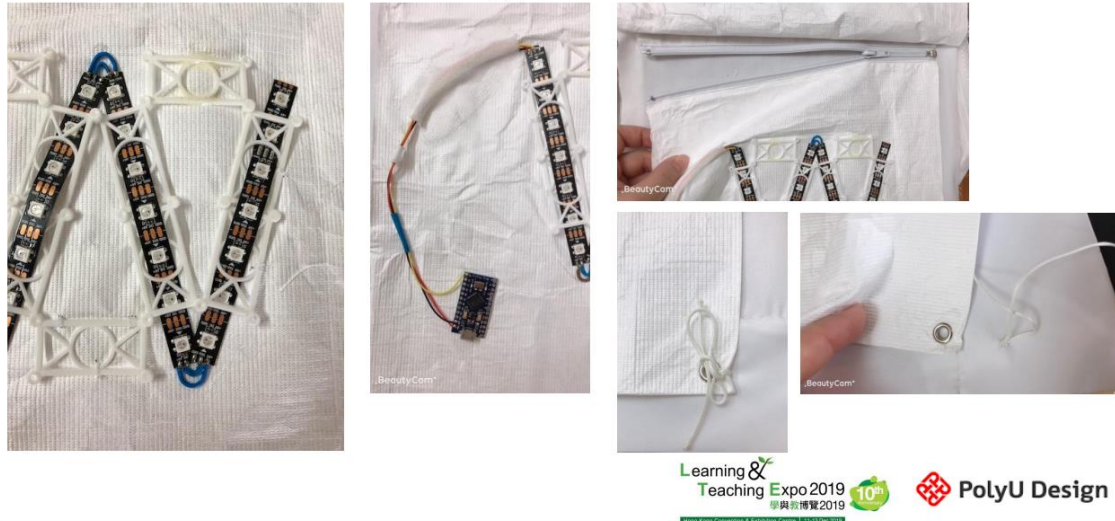
Reference:

https://www.hkedcity.net/goelearning/sites/default/files/upload/5e1d1818aee1be5d61d766d2/1578965355_17_Maker_Clifford.pdf

2. Explore creative applications of wearable technology in sports, and design and make project

Example: Collaboration with different STEAM subjects

Wearable Technology for Sports (4)



Wearable Technology for Sports (5)



Reference:

Wearable Technology for Sports

<https://www.edb.gov.hk/attachment/tc/edu-system/primary-secondary/applicable-to-primary-secondary/it-in-edu/rtc/201718/EI0020160357/rtc-mols-pri-session2-tc.pdf>

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Example: Collaboration with different STEAM subjects

Wearable Technology for Sports

「Wearable Technology Sportswear」 × 「Raspberry Pi」

▶ 極地探險 (Polar Adventure)



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Wearable technology for sports

Wearable Technology for Sports

「穿戴式科技運動服裝」 × 「樹莓派」

▶ 自由潛水 (Free Diving)



▶ 電單車賽車 (Bike Racing)

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Wearable technology for sports

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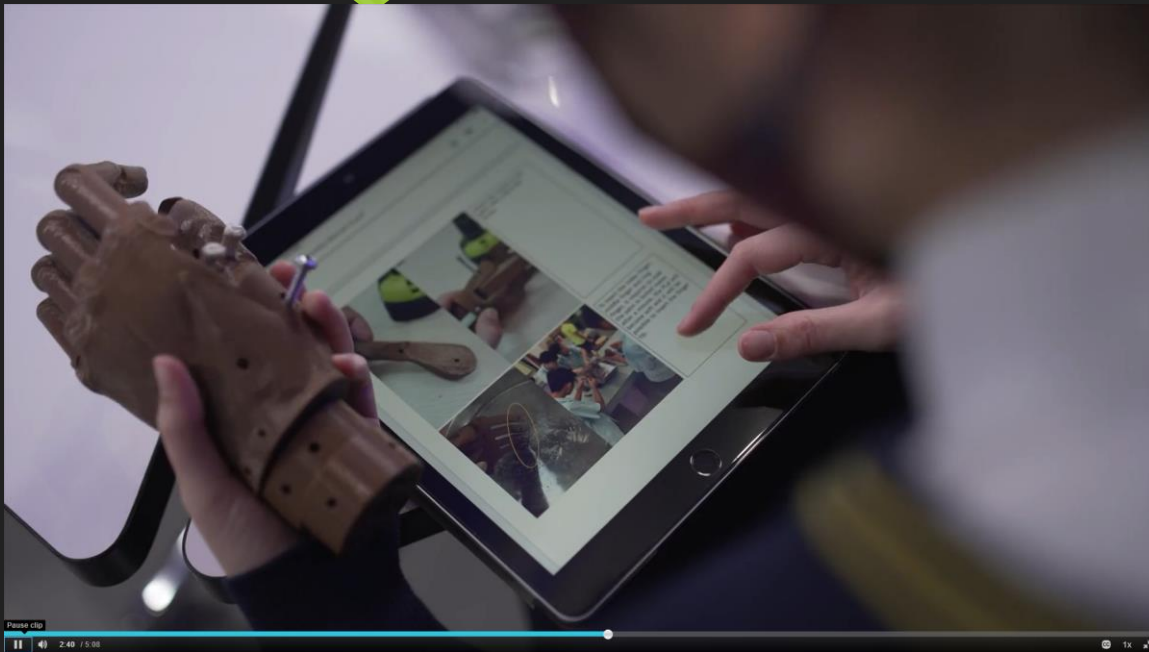
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3. Create the new product with application of wearable technology to contribute the community

Example: 從STEM教育到關愛社群——3D義肢組裝大行動



Reference:

<https://stem.edb.hkedcity.net/en/edb-etv-on-stem-education-chinese-version-only/>

https://emm.edcity.hk/media/t/1_xges1mm4