



EVERGREEN EDUCATION FOUNDATION



青樹教育基金會

Science &
Technology
Center

ATTENDING EDTECH TEACHER SUMMER INSTITUTE – PBL & MAKERSPACE WORKSHOPS

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Teacher Training - PBL & Makerspace - June 2018

by Winnie Wong, Ph.D.

During the week of June 17 – 23, Evergreen Education Foundation sponsored 2 teachers from Huai'an, China for a 6-day Project/Problem Based Learning (PBL) trip to San Francisco Bay Area, USA.

The Purpose: This trip aims to provide opportunities for teachers to experience PBL & Makerspace in a wider perspective and broader settings; to cultivate professional connections; and to inspire future collaborations. This trip allows the participants to acquire in-depth hands-on PBL and Maker knowledge as well as how PBL and Maker education can synthesize into Design Thinking mindset. The objective of this sponsored trip is to train the trainer so they can facilitate workshops to train novice PBL & Makerspace teachers. The end goal is to enhance the development of the already existing EEF teacher training platform in bringing more viable opportunities to a far-reaching range of EEF teachers so they can learn more about the PBL, Maker education, and Design Thinking in rural areas in China.

The Attendees: *Ms. Lu Ping - Huaiyin Secondary School senior professor-grade secondary-school teacher.* She is an adjunct professor at Huaiyin Teachers College and a tutor for the China National Olympiad in Informatics. She

also spearheaded the Lu Ping Special-grade Teacher's Studio in Huai'an city. She has years of PBL teaching experience and is the core PBL curriculum developer in Huai'an city. *Mr. Ma Erming - Secretary of the Party Committee, Huai'an No. 1 Secondary School, senior Politics teacher.* He is in charge of teaching pedagogy and professional development in middle schools. He is actively promoting PBL and Maker Education.

The Trip: The 6-day trip included attending 2 workshops with the EdTech Teacher Summer Institute 2018 at the San Francisco Day School from 6/18/2018 – 6/20/2018. For the rest of the time, EEF arranged PBL, Makerspaces, Innovation Lab, and PBL/STEM based Museum tours.



Touring San Francisco Public Library Makerspace – The Mix



Touring UC Berkeley CITRIS Invention Lab

The Workshops: Day 1 & 2 – In this intensive workshop, the teachers learned the essential design elements of PBL, meaningful ways to integrate technology as an integral component in student engagement and motivation, and instructional strategies to support student learning. The teachers learned how to identify and align student learning goals, construct driving questions to support sustained inquiry, and maximize authenticity. In addition, teachers also learned how to offer student choice and voice through the use of technology. The teachers explored examples of PBL, identified and created assessment frameworks for PBL, and reimagined current curriculum in order to



Two EEF teachers with instructor Mr. Greg Kulowiec and class

implement Project Based Learning in their classroom. Day 3 - Teachers explored the purpose and philosophy of school based makerspaces. By adopting a Design Thinking mindset, makerspaces and making can become more than a process of following a recipe for a prescribed product. Instead, it can become a creative environment that values both lo-tech and hi-tech creations. With the underlying purpose of fostering originality and innovation, this Makerspace workshop helped the teachers frame the purpose of a makerspace in school settings to foster problem solving, creation, and innovation.

The Tours: EEF arranged for the teachers to tour a wide variety of PBL & Makerspaces. The teachers' touring schedule was fully packed on top of their 3-day workshops. EEF would like to thank our hosts Ms. Doris Tseng (San Francisco Public Library), Ms. Renee Chao (Stanford d.School), Ms. Michelle



Touring Stanford University d.School

Zhao (Google), Mr. Chris Myers (CITRIS Lab), and Dr. Carol Tang (Children's Creativity Museum & Board of EEF) for their informative tours, their time, and hospitality. Of course we are always grateful for our EEF volunteers. We

would like to acknowledge Ms. Liping Xiong (CS Instructor of Foothill College) and Ms. Jingyi Yu (VP of EEF) for being our teachers' translators during the 3-day workshops. Dr. Lili Luo (Board of EEF) for taking the time showing the teachers around the Tech Museum.

Date	Event/Activity
6/17/2018	The Tech Museum of Innovation
6/20/2018	San Francisco Public Library – The Mix Makerspace
6/21/2018	Stanford University d.School
6/21/2018	Google Inc.
6/22/2018	University of California at Berkeley CITRIS Lab
6/22/2018	EDNova Academy
6/23/2018	Children's Creativity Museum

The Expense: EEF covered the cost of the workshop fees \$2200 for 3 participants (2 teachers and 1 translator) plus \$3000 international travel allowance and \$1800 local US room & board expenditures for 2 teachers. The total budget was set at US\$7000.

The Feedback: “We had a fruitful trip and will return to Huai’an with the seeds of innovation. We expect PBL concepts & design thinking framework can grow in Huai’an. We will be happy sharing with you the results of our maker education.” – Lu Ping. “We have gained a lot of insights from the trip to America. We will implement new ideas to our curricula and pedagogies. Professional development in PBL will also be encouraged. Thank you, Evergreen!” – Party Secretary Ma

The Action Plan: During summer of 2018, Teacher Lu plans to pilot her new PBL & Makerspace training program to train teachers selected from 3 elementary and 4 middle schools in rural Huai’an which are within her school network in Hui’an (See map on right). In November 2018, EEF plans to team up with

Beijing University and teacher Lu to offer a 4-day hands-on PBL & Makerspace workshop that incorporates Design Thinking to train 30 to 40 of our EEF rural schools STEM teachers.

