



NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY

TAIPEI TECH POST



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Custard Cream, a Co-working Space for Aspiring Young Entrepreneurs

In view of a worldwide increase in startups, Taiwan also sees a rising number of entrepreneurs with aspirations to set up businesses. Many young startups, however, are facing similar problems, such as a lack of funding, connections and resources.

Vicki Yu-Yun Chiu, an assistant professor at Taipei Tech's Department of Cultural Vocation Development, recognized these problems experienced by Taiwan's young startups, and came up with the "Custard Cream" solution. She founded Custard Cream in 2012, with the vision of providing a space where young aspiring entrepreneurs can work and exchange ideas.

Different from the traditional office cubicle, Custard Cream to passersby looks just like a café. However, it is a rent-based "co-working space" located in one of the trendiest areas of central Taipei. With as little as NT\$3,000 per month, entrepreneurs can rent their own table or space, and sometimes that is all it takes for dreams to take off.

Chiu expressed that "co-working space" has been a prevalent idea in Western countries for some time now. A "co-working space" creates a more organic working environment for startups by creating more opportunities to connect with other entrepreneurs. For this reason, Chiu decided to introduce the "co-working" idea to Custard Cream and created this platform for entrepreneurs to network with people, gather ideas, and exchange experiences.

Isabel Wang



Wuchang Street shop sign

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Wuchang Street store front



Users utilizing the Anhe Street store space for a meeting



Anhe Street conference room

Chiu recently invited winners of the Red Dot Award and other international design awards to use Custard Cream free of charge. She also established cooperative relationships with Taipei Tech by asking students to help with remodeling an abandoned warehouse near Ximending.

Chiu is determined to create a relaxed home atmosphere at Custard Cream. She believes that a welcoming atmosphere is an incubator for cultivating creativity. Equipped with a kitchen and a common room, Custard Cream also serves as a leisure space that allows entrepreneurs to enjoy coffee or tea, relax, and generate more ideas.

Chiu's efforts, without a doubt, are recognized globally. John Howkins,

a renowned British economist, also known as the "Father of Creative Industry", praises Custard Cream as an accelerator for Taiwan's creative industry, while Charles Landry, an international expert in imagination and creative change, regards Custard Cream as a refreshing concept for Taiwan's co-working space.

Custard Cream redefines "entrepreneurship" as showing one's attitude towards life when starting a business. Chiu further explained that the success of Custard Cream lies in its unrelenting efforts to promote "social innovation," making available a wide variety of resources and providing quality working space and supporting services to its members.



From left to right: Nat'l Pingtung University of Science & Technology Pres. Yuan-Kuang Gu; Lead Shepherd APEC HRD Working Group Dr. Young Hwan Kim; Ministry of Edu. Dept. of Technological & Vocational Edu. Director - General Yen-Yi Lee; Nat'l Kaohsiung University of Hospitality and Tourism Pres. Yung Chi-Yeh

As huge advancements in technology and increase in global trade activities led to rapid changes in today's workforce, human resource development becomes ever more important in the APEC region and around the world. Breakthroughs in technology diminish the need for humans to perform routine tasks while enabling and empowering humans to adopt and perform more complex work skills. In addition, the inevitable need to globalize intensifies the demand for and competition between skilled workers, and promotes economic growth. Amidst such challenging times, the tasks of human resource development within APEC are entrusted to the Human Resources Development Working Group (HRDWG).

APEC Education Forum in Taipei: Spotlight on Technical Vocational Education and Training (TVET)

Sheng-Tung Huang (Dean of OIA)

The mission of HRDWG is to share knowledge, experience, and skills in order to strengthen human resource development and promote sustainable economic growth. Most of this educational work is carried out by the Education Network (EDNET), created at the first APEC Education Ministers Meeting (AEMM) in Washington, DC, in August 1992. The goals of these educational activities are to foster strong and vibrant learning systems across APEC members, to realize the notion of education for all, and to strengthen the role of education in promoting sustainable development at the individual, social and economic levels. After the financial crisis of 2008, the emphasis in education within many APEC economies began to shift to Technological and Vocational Education (TVE). As result, many TVE policies and practices came under the spotlight and were the subject of discussions at numerous APEC HRDWG meetings.

Historically, Taiwan has placed great emphasis on Technological and Vocational Education (TVE). This is due to the commonly held view of the importance in strengthening the ties between TVE and economic development. Backed by observable results, TVE has contributed greatly to Taiwan's economic prosperity throughout the years. When the government worked to push for the Six Emerging Industries, Four Major Smart Industries, and Ten Major Service Industries to generate R&D innovation, increase the value of industries, and strengthen the competitiveness of service sectors, TVE demonstrated its importance in organizing vital resources necessary to cultivate practical professionals according to their aptitudes and capabilities, supplying Taiwan with precious human resources that continue to contribute to Taiwan's next

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miracle.

As part of the ongoing development effort, Taiwan's technological and vocational education sector actively responds to a recurrent aspiration made in previous APEC meetings and reports on the crucial aspects of TVET, namely, to foster a vibrant, innovative, and skilled workforce suitable for the APEC region's economies by endeavoring to accomplish an unprecedented task. This task, in the form of a project, aims to foster strong and vibrant learning systems across APEC member economies and strengthen the role of TVET in promoting sustainable development at the individual, social and economic levels by constructing a cooperative system for TVET.



Lead Shepherd APEC HRD Working Group Dr. Young Hwan Kim (left) and Minister of Education Chiang Wei-ling

As a leading technological university in Taiwan, Taipei Tech (National Taipei University of Technology) has been delegated to carry out this project by co-hosting with the Ministry of Education (MOE) an international forum with the theme "Sustainable TVET for market-oriented talent cultivation: Building an international collaboration network". The forum focuses on three relevant issues: "Career Mapping for Youths: The Taiwan Experience"; "Preparing a World-class Workforce through Youth Skills Development"; "Revamping Technical Vocational Education Programs to Meet Future Challenges". Under the able leadership of President Dr. Leehter Yao of Taipei Tech and Dr. Yen Yi Lee, Director General of the Department of TVET, MOE, the forum commenced at Sheraton Taipei on April 24, and gathered prominent educators and experts from 7 different economies:

Vietnam, Malaysia, Thailand, United States, Korea, Japan, and the Philippines.

More than 180 educators, most of whom are senior staff from universities' administrative offices from Taiwan attended the forum. Minister of Education of Taiwan Dr. Wei-Ling Chiang and Lead Shepherd of APEC HRDW Dr. Young Hwan Kim opened the forum. Director General, Dr. Yen Yi Lee began by providing an overall view of Taiwan TVET education outlook and future prospect. The President of National Kaohsiung University of Hospitality and Tourism, Dr. Chi-Yen Yung and the President of National Pingtung University of Science and Technology, Dr. Yuan-Kuang

Guu, presented on the topic of career mapping for youth in various fields of Taiwan. Delegates from Vietnam, Malaysia, Thailand and the United States also spoke on their TVET systems and current policies and developments within their economies. Throughout the forum, different policies and practices between different economies were exchanged and discussed. No less important is the fact that this forum has created many opportunities for educators in Taiwan to gain a better view of current TVET education systems around the APEC region. The forum session was complemented by site visits that gave delegates from other APEC economies the opportunity to visit various vocational training centers and technological and vocational universities.

Taipei Tech Leads the World in Laser Wireless Transmission Technology

Scully Chiu

Professor Hai-Han Lu of Electro-Optical Engineering and his research team at Taipei Tech (National Taipei University of Technology) spent 2 years developing an ultra-high speed visible light wireless network that is 1,000 times faster than 4G. With this new technology, downloading a full length film will take less than a second.

The ultra-high speed visible wireless network features two breakthroughs: 10Gbps transmission rate and up to 17.5 meters in transmission distance. Taiwan will be the first country to propose ultra-high speed red light communication. The technology is expected to inspire vast entrepreneurial opportunities.

Professor Lu pointed out that visible light is able to transmit freely in space, thus not only does the new technology solve the last mile problem of optical fiber internet, but it also reduces radiated electromagnetic interference without having to install cables, making the home environment tidier and more comfortable. In the future, visible light can be applied to signal transmission in different settings, such as hospitals, refineries, aircraft

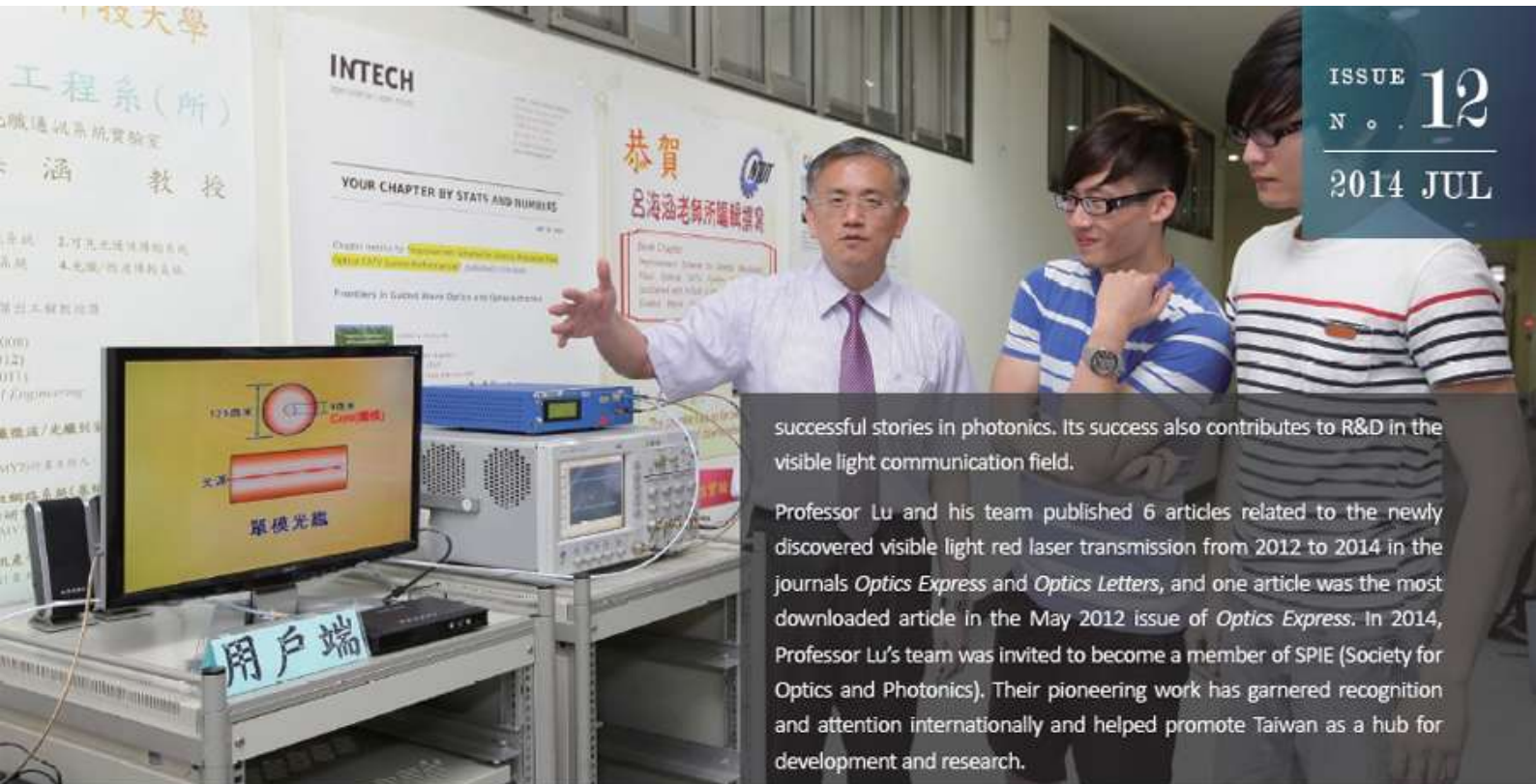
cabins, etc., as well as resolve accidental signal disconnection problems in the high speed rail system.

For example, in the future, all people need to do is to turn on the power and target the laser light to enjoy cable-free super speed internet access. In addition, it will only take 0.45 second to download a 4GB file and the same technology can be applied to cloud computing. The technology is scheduled to launch next year and is estimated to worth over USD3,000,000 in value.

Professor Lu said that the most expensive part is the transmitter, which costs about USD322. The whole system, however, only costs less than USD 1,600. The connection fee will cost about USD33 per month after the transmitter is commercialized and users can install the system at home or in the office.

The research and development of this project spanned across electro optical engineering and communication technology, creating many

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successful stories in photonics. Its success also contributes to R&D in the visible light communication field.

Professor Lu and his team published 6 articles related to the newly discovered visible light red laser transmission from 2012 to 2014 in the journals *Optics Express* and *Optics Letters*, and one article was the most downloaded article in the May 2012 issue of *Optics Express*. In 2014, Professor Lu's team was invited to become a member of SPIE (Society for Optics and Photonics). Their pioneering work has garnered recognition and attention internationally and helped promote Taiwan as a hub for development and research.

A Doctor's Design Playground for Medical Innovation: Taipei Tech's MD-PhD Program

Kimberly Lee

Since its establishment in 1912, Taipei Tech (National Taipei University of Technology) has long placed equal emphasis on academic research and hands-on practice. In recent years, with close and solid industry-university collaborations, Taipei Tech has dedicated a considerable amount of effort to nurturing great minds with innovative ideas in the field of applied medical technology. The initiation of the Doctorate of Medicine and of Philosophy (MD-PhD) is a case in point.

In many instances, improvements to medical devices are released with slight changes, such as exterior modification or minor error fixes, while developmental breakthroughs are seldom reached. Professional experiences of doctors are imperative to meeting the needs of patients when it comes to the study of medical technology. There remains much room for improvement in the field of medical instrument research in terms of practicality. Taipei Tech's MD-PhD puts emphasis on industrial design and engineering, and doctors in the program are offered introductory courses in these areas. They provide feedback on the ineffectiveness of any device from clinical trials to skilled research fellows who has the right expertise. The program has the potential of merging medical studies and engineering in the future.

Professor Jung Tang Huang, one of the driving forces behind Taipei Tech's MD-PhD, urges doctors who are interested in developing medical devices to join this program so that they can utilize their experience and expertise into making better, more refined and even revolutionary medical equipment that can be turned into business opportunities that brings hope and easier access to numerous patients.

The MD-PhD program is run by Taipei Tech's College of Mechanical & Electrical Engineering in collaboration with Shuang Ho Hospital, Mackay



Memorial Hospital, Taipei Medical University Hospital as well as the National Defense Medical Center. Since the emphasis of this program is clinical practice and experience, doctors who wish to join the program are not required to have master degrees. Taipei Tech encourages and welcomes doctors who embrace this challenge in the field of industrial engineering.

The MD-PhD program courses are exciting with rewarding research results that have already attracted attention from many industry and investment companies. Doctor Pei Hao Chen, a student of the MD-PhD program, currently serving at Mackay Memorial Hospital, developed a cane with adjustable lengths that can be lengthened or shortened according to the user's needs. The user-friendly function is very helpful for patients with Parkinson's disease particularly since their deteriorating central nervous system results in poor muscle control and balance. The adjustable length prevents them from tripping. This example shows that given doctors' clinical experience and familiarity with medical devices, problems in existing medical devices can be more accurately identified, improvements efficiently carried out, and new models put into production.

In the future, Taipei Tech's MD-PhD program will incorporate more diverse and flexible source materials that enable innovation and development. Ultimately, more resources and match-making with industry is needed so as to achieve the goal of materializing innovative ideas into empowering medical instruments that can aid those in need.



Cane with adjustable lengths

Wish you have a great day ahead,

A handwritten signature in black ink, reading "Wenlung Li". The signature is written in a cursive, flowing style.

President

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