

04

QUALITY EDUCATION



2018-2022 Publications

157



Course Units

2,998



Student Engagements with Units on SDG 4

90,551



2018-2022 Percentage of all Taiwan Publications

3.7%

Research

VR Applications in Clinical Skill Training

The application of virtual reality (VR) technology in hospital training has great significance. The research team led by Professor Ying-Ying Yang of NYCU's College of Medicine studied 60 doctors, nurses, and respiratory therapists, comparing the effects of standard text materials and VR training materials. The results showed that, despite no significant difference in relevant knowledge and self-efficacy of care techniques, those who received VR training were more confident, and the satisfaction score of VR training materials was higher. These research results confirm that VR teaching materials can accurately convey information and reduce the anxiety of medical professional, providing an important reference for hospitals regarding the future training of medical staff. The research findings have been published in the international journal *Medicine*.

Strengthening Students' Online Learning Experience through the MOOCs Platform

During the COVID-19 pandemic, schools at all levels across Taiwan adopted online learning. In his book *A Decade of MOOCs and Beyond*, Professor Wei-Yi Li of NYCU's Department of Electrophysics stated that, before the COVID-19 outbreak in Taiwan, more than 75% of junior high school students had no online learning experience, but during the pandemic, more than 75% of courses were conducted via livestreaming, while few courses were pre-recorded and taught through asynchronous teaching. Although schools at all levels in Taiwan were not forced to close due to the pandemic, government agencies and educational institutions were well aware that online learning will become the future trend in education and therefore had a large budget to invest in strengthening and improving the digital learning environment.

Social Impact

Open Resources to Promote Taiwan's High-Quality Education

In 2017, NYCU began collaborating with FutureLearn, the biggest online learning platform in Europe, to develop online courses in English to provide high-quality courses for people of all nationalities, races, genders, and ages. Course topics cover creative thinking, everyday Mandarin, and technology law. For example, in 2017, NYCU launched the course "Using Creative Problem Solving," which has since been attended by 23,410 people across 148 different countries. In 2022, the "Brain, Behavior, and Dentistry" course offered by Professor Chia-Shu Lin of NYCU's Department of Dentistry won the Distinguished Award of the 2022 OpenCourseWare Excellent Course Awards. 2023 saw the launch of two major Mandarin courses, "Conversational Chinese" and "Mandarin Chinese in Motion." NYCU will continue to offer courses on diverse topics in hopes of introducing Taiwan to the world and learning with people from all over the world.

Schweitzer Program

To encourage care for the disadvantaged and professionalism, NYCU's Center for Teacher Education organized the 10th "Schweitzer Program" summer camp in 2022. The center established a long-term collaboration with Baoshan Junior High School, Hsinchu County and, since 2013, sends 20-30 teacher trainees to the school to organize a 3-week camp, providing academic, moral, life, and career planning counseling to rural disadvantaged students. Through this program, teacher trainees can put their educational knowledge into practice, apply the class management theories they were taught, and improve their ability to carry out activities, and interact with disadvantaged students, extending education to the community.



Education & Cultivation

Establishing a Comprehensive Special Education Resource Environment

NYCU actively promotes special education programs to create a minimally restrictive educational environment and provide disabled students with appropriate learning support and guidance. NYCU's Special Education Promotion Committee has approved a series of plans for implementation, including the certification of special-needs students, individualized support plans, and the construction of an accessible campus environment. In accordance with the Special Education Act and relevant regulations, NYCU provides comprehensive support services such as academic, life, and mental health counseling and assistive device application for students with disability identifications to help them in their personal development. In addition, NYCU actively promotes campaigns that advocate for a friendly campus, emphasizing care and acceptance of all special-needs students and establishing an accessible education environment to facilitate the independent learning and growth of special-needs students.

Training Senior Citizen Lecturers

In 2015, NYCU launched "Senior Citizen Lectures" in its commitment to establishing a sustainable community empowerment education module, emphasizing that the spontaneity of community elders is a core condition of achieving a sustainable and empowered community. The program trains elders to become senior citizen lecturers, having trained over 15 such lecturers to this day. The course design not only includes cross-generational learning, but also self-arranged activities by the lecturers. The lecturers connect with their social resources through the self-arranged activities, demonstrating Senior Citizen Lectures' potential to connect with the community as they continue to expand.



Stewardship

University/High-school Collaboration on Online-learning

To enrich the learning opportunities of high school students, NYCU launched the University/High-school Collaboration on Online-learning (UHCOOL) program, combining university, high school, and industry resources to develop diverse and in-depth digital learning materials and establish a cross-campus, cross-sector, and cross-disciplinary collaborative teaching model. In 2022, for the first time, the program collaborated with the Taoyuan City Government and Vanguard International Semiconductor Corporation to offer the course "Introduction to Semiconductor Principles and Manufacturing," helping students gain an in-depth understanding of the semiconductor industry. Going forward, the program will expand to even more fields, such as artificial intelligence, FinTech, electric vehicles and new energy, design thinking, and digital humanities, hoping to provide more diverse digital learning resources for high school students, overcome geographical restrictions, and drive innovation in education models.

Establishing the "ewant" Open Education Platform

NYCU's "ewant Open Education Platform" is the largest open course platform in Taiwan. The platform not only shares higher education resources with the public, but also focuses on expanding the learning areas of high school students, promoting independent learning and flexible electives. NYCU has teamed up with the education departments of many city and county governments to establish online learning sections. So far, the platform has partnered with over 100 high schools to provide diverse learning opportunities. Recently, the platform teamed up with the New Taipei City Government and Keelung City Government to establish the "New Taipei City High School Learning Section" and "Keelung City High School Online Learning Section," enabling nearly 50 thousand students to take 100 university courses in Taiwan for free, cultivating students' independent learning and exploration skills. The platform also encourages the participation of high school teachers to develop special online courses to incorporate local characteristics and improve students' interest in learning. The platform not only expanded the scope of educational resources, but also highlights NYCU's social responsibility and promotes diversified educational development.