

5-Year Fab Lab Program for Senior High School and the Establishment of Regional Showcase Center for Vocational Exploration for Junior High School

(Article and Photo by Cai Sin-yi, Division of Junior High, Elementary School and Preschool Education)



Wu Sih-hua, Minister of MOE, announced two major plans to enhance technological and vocational education. One of them is the promotion of a 5-Year FabLab Program that aims to increase the establishment of Self-Builder Lab in senior high school in five years starting from 2016 to 2020. This will mark the five-year period of time during which a maker lab is established in at least one senior high school in each municipality, provincial city or city (22 altogether). The other plan is the promotion of Regional Showcase Center for Vocational Exploration in junior high school. Starting from next year, at least one junior high school in each municipality, provincial city or city (22 altogether) shall establish a Regional Showcase Center for Vocational Exploration as well.

Minister Wu conducted an inspection visit today (23) to New Taipei Municipal, where he witnessed the development of vocational education. He visited the College for Creative Studies of New Taipei Municipal Yingge Vocational High School, where he had an understanding of how the school cultivated technical talents with basic and higher skills in the field of ceramics and design through industry-government-academia strategic alliance. Next,

he visited the Education Center for Vocational Exploration of New Taipei Municipal Yingge Junior High School, where he exchanged opinions regarding the development of vocational education with over 10 school principals of vocational high and junior high schools.

Then, Minister Wu visited the Innovation Center for Self-Builder in New Taipei Municipal Zhonghe Senior High School, where he interacted with robots, operated laser cutter and experienced other hand-on activities. Minister Wu highly recognized the establishment of Education Center for Vocational Exploration in the campus of junior high schools, for it provided junior high school students and senior elementary school students with vocational exploration opportunities in the neighborhood; and also the establishment of Fab Lab in vocational high and senior high schools, for it provided students with the opportunity to have hands-on problem solving experience.

MOE said that schools at or below senior high school level shall offer or adopt courses of merge-integrated vocational exploration and career counseling to provide students with the opportunity of vocational exploration and thus holding the work ethics envisioned in Technical and Vocational Education Act, which was enacted this year. Accordingly, MOE decided to offer consultation and grants as encouragements starting from 2016 so that at least one junior high school in each municipality, provincial city or city (22 altogether) could establish a Regional Showcase Center for Vocational Exploration.

Regional Showcase Center for Vocational Exploration is a program in which junior high and elementary schools will have the opportunity for vocational exploration through a variety of experience courses that were designed to cater their needs—a way through which students can have a taste of the occupation and the work life, thereby enhancing their technical and vocational talents. The center will provide hand-on experience courses that involve at least two or three occupational groups; in addition, it will hold occupation exploration activities or camps during the semester or in summer and winter vacation for junior high and elementary school students. The scale of the activity could be expanded year by year based on the needs of the municipality, provincial city or city.

As for the program of Fab Lab for senior high school, MOE not only sets up a Fab Lab school but also supports senior high schools to purchase 3D digital fabrication equipment, such as laser engraver, cutting machines, 3D scanner, CNC milling machine and other machines, with grants provided in various stages. Meanwhile, MOE will give grants to every school to purchase 3D printer.

According to the statistics from MOE, so far there are 9 senior high schools in the country with a Fab Lab: New Taipei Municipal Yingge Vocational High School, New Taipei Municipal Zhonghe Senior High School, New Taipei Municipal New Taipei Industrial Vocational High School, New Taipei Municipal Banqiao Senior High School, National Hualien Industrial Vocational High School, National Taichung Industrial High School, National Feng-Shan Senior Commercial and Industrial School, National Tainan Second Senior High School, and the Affiliated Senior High School for National Taiwan Normal University.

MOE also holds FabLab Truck campus tour. This year (2015), the scale of the activity has been expanded: 6 Showcase Cars were scheduled to tour 497 senior high schools during a time period of 2 years, and 2,000 to 2,400 conferences and experience activities were also planned for teachers and students to attend, around 160 thousand teachers and students are expected to be benefitted from participating in these activities.

MOE emphasizes that the enhancement of technical and vocational education constitutes a core of our educational policy. The Second Phase of Technical and Vocation Reshaping Plan is a program that focuses much on the cultivation of talents that addresses the industry needs through industry-academia cooperation. Based on that, MOE will strive to promote the upgrading of the teaching equipment that vocational education requires, increase the proportion of hands-on courses at school, arrange student internship for an increase of professional knowledge and vocational skills as well as offer teachers the service of participating in public or private enterprises during summer and winter vacation for the enhancement of practical experience and teaching quality, thereby increasing employment opportunities for students.

In the future, technical and vocational education will continue to develop through the tune-up and refinement of each and every program that underpins this educational system. And, through interdisciplinary integration, international movement, the upgrading of equipments, and practical empowerment, the goal of Innovation in Vocational High School Education and Seamless Linkage between Industry and Academia will be achieved. In addition, through experience learning and innovative hands-on activities, junior high and elementary school students will have much more opportunities for vocational exploration, thereby achieving adaptive learning and development which aims to cultivate technical and vocational talents, fulfilling the ideal of talent development and multiple exploration.