

CULTIVATING INNOVATORS THROUGH A TAILORED EDUCATION

During the 2016 commencement ceremony at Harvard University, one man was the focus of much attention. He Jiang, then a doctoral student in biochemistry, became the first Chinese citizen ever to give a commencement speech at the historic Ivy League institution.

Six years ago, He graduated from the University of Science and Technology of China (USTC). A boy from a village in central China, He's path to discovery — using single-virus tracking, super-resolution imaging (STORM) to understand more about how influenza infects cells — started at USTC.

Since its founding in 1958, USTC has been dedicated to building a bespoke education, and its efforts are paying off. During its 60-year history, the university has produced 49 members of the Chinese Academy of Sciences (CAS) and 23 members of the Chinese Academy of Engineering (CAE), and is first in the country for its percentage of CAS/CAE member alumni.

Notable alumni also include Pan Jianwei, known as Father of Quantum in China; Xie Yi, who works in inorganic functional nanomaterials and nanostructures and became the youngest female to be selected as a CAS member; and Deng Zhonghan, the youngest person to be selected as a CAE member, a world renowned leader in electrical engineering and physics.

USTC alumni have built international reputations, with nearly a third of its undergraduates receiving scholarships to study at world-class universities after graduation. Many come back to undertake research in China. By the end of 2017, 10% of returnees on the 'One Thousand Young Talents' programme were USTC graduates.

USTC's programmes aim to provide an integrative and international education. Students get hands-on research experience at institutes in China and abroad.

To better direct a student's potential, USTC has also launched reforms in curriculum planning, and major and career guidance. Students have the flexibility to choose and change their majors.

Ties with the Chinese Academy of Sciences (CAS) have also enabled USTC to leverage CAS resources and to integrate CAS institutes and USTC departments. Since 2009, USTC has launched 14 talent programmes in collaboration with various CAS institutes, such as the Academy of Mathematics and Systems Science and the Institute of Physics.

By sharing CAS and USTC resources and finding ways to work in tandem, these joint programmes provide optimal learning and research practice opportunities to students. The talent programmes have also become sites for piloting new curricula, educational models and talent selection mechanisms. ■

Nurturing brilliance The School of the Gifted Young

In 1974, Tsung-Dao Lee, a Nobel laureate in physics, came up with a novel idea.

He presented the country's leadership with a proposal to provide higher education for the most academically gifted of China's youth. Four years later, a designated class for gifted young people was launched at USTC.

This programme evolved to become the School of the Gifted Young (SGY), which provides an undergraduate education to those too young to be admitted to universities.

Its education includes cross-disciplinary training, a flexible schooling system and personalized course planning. SGY alumni active in the science and technology arena include Zhuang Xiaowei, the youngest foreign member of CAS, and Zhang Yaquin, president of Baidu, China's online search engine giant.

He Jiang, was the first Chinese citizen ever to address the commencement ceremony at Harvard University, when he graduated in 2016.

