The School of the Gifted Young

University of Science & Technology of China

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The History and Achievements of the School of the Gifted Young

An Education Fit for China’s Finest
The School of the Gifted Young (SGY) at the University of Science and Technology of China has been educating China’s brightest youths for over 30 years. The school offers a unique opportunity for those who are ready for higher education, but are too young to enter a normal university. This forward-thinking institution keeps class sizes small and has a rigorous admittance process to maintain its impeccable standards of education.

In 1974, during the tumult of the Cultural Revolution, Professor Tsung-Dao Lee was granted a rare dialogue with Chairman Mao Zedong, then-leader of the Communist Party. As a Nobel laureate in physics at the young age of 31, Lee’s dream was to reform the education system to allow brilliant young minds access to higher education as soon as they were ready, irrespective of age. After writing letters to the relevant powers in the central government advocating education for the especially gifted, Lee oversaw the first class of 28 youths at the University of Science and Technology of China (USTC) in 1978. Among them was a young man with razor-sharp intellect named Ya-Qin Zhang. Now chairman of Microsoft’s Asia-Pacific operations, Zhang was 12 years old when he first enrolled in SGY.

Since the late 1970s, thousands of bright young people like Zhang have prospered in the college. Situated in the east campus of USTC in Hefei, Anhui Province, overlooking an expanse of tree-shaded grass, the school’s many notable alumni greet visitors from portraits as they enter the lobby. Among them is a picture of Zhang himself, whose achievements, while remarkable, are equaled by many of his SGY peers. Over 2,000 prodigies have graduated from SGY thus far; among them are some of the most influential names in China and beyond.

“Our school’s education system is superior for undergraduate students,” says Professor Yang Chen, the school’s executive dean. “We hope it gives the gifted young the chance to reach their potential and find success.”

Recruiting the Best and the Brightest
Getting a place at the school is, as expected, highly competitive. Compared with students at China’s elite universities, such as Fudan or Tsinghua University, Chen estimates that 50% of the SGY scholars would be considered to have “excellent” academic performance. (When compared with China’s standard universities, Chen says 90% would be classed as such.)

Currently, there are three types of admission processes at SGY, which depend on a student’s age. The “Special Class for the Gifted Young,” for which the school was founded, recruits students under the age of 16. Each year around 3,000 remarkably bright students apply to this class. The admissions process includes a review of the students’ university entrance exam scores as well as campus tests and one-on-one interviews. Starting in 1985, a second class type was created, the “00 Class,” to select the most promising students from USTC’s newly enrolled freshman, who are typically 18 or older. The third type, the “Innovation Class,” began in 2010 and uses an entirely different admissions process. It is open to Grade 11 students, aged 16 to 17, who are recommended by their high school headmasters and pre-evaluated before they take the gaokao, or college entrance exam. SGY’s unique admission processes increase the diversity of the student population and provide exceptional students several different ways to join the school.

A Distinctive Curriculum
A big draw for students and parents alike is SGY’s unique teaching model. Since it was founded, SGY has crafted a high-requirement curriculum and flexible educational system that sets it apart from other academic institutions. One of the biggest differences—and one that is particularly suited to younger minds—is the delay in choosing a major. In their first year at SGY, students take a broad set of courses encompassing math, physics, chemistry, engineering, and English language. Only at the end of their freshman year are they asked if they are ready to choose a major.

“We encourage students to study what they’re interested in,” says Chen. “Not to think ‘which major will make money,’ but to find their motivation and passion. If the student still doesn’t know what they want to major in, they can create an ‘individualized study plan.’ ” This seemingly simple accommodation allows sufficient time for the students to discover their true interest—something that can be intimidating or perplexing in the crowded high school education system, when most students in China decide. “SGY values students’ individuality and expects students to achieve their full potential,” Chen adds.

This transition year enables students to enter into regular university life with confidence and ease. Chen explains that when SGY students merge into the greater student body at USTC, they are often in the top 10% of their classes, despite the age difference. When the prominent alumni, Xiaowei Zhuang, who is now a professor at Harvard University, applied to the graduate school at Berkeley there was a misunderstanding with her academic transcript. “Berkeley called us to confirm, because her score was 100—full marks—and they thought it was fake,” Chen laughs, adding: “She was one of the best students and younger than the other applicants by three years.”

The SGY students’ relative youth does not pose a barrier for their academic performance, however. SGY’s staff provides counseling to help students smoothly adapt to college life, while a busy 60-hour week keeps the students engaged. Though teaching standards are high, it is the students themselves who push their achievements beyond expectations, Chen says.

“All the students feel honored to be here,” he says, adding that because the students have skipped years in high school, their confidence is reinforced.

“They believe that because our school is special, they should work hard. They are self-disciplined and try their best,” he says.
Accomplished Alumni
Though the School of the Gifted Young is still relatively youthful itself—having been founded just 34 years ago—turning bright minds into leaders is something in which the school has long excelled. A brief glance at the achievements of former students, many of whom are prominent figures in diverse fields, attests as much. Of the 2,000 alumni (90% of whom went on to achieve either Master’s or Ph.D. degrees), over 200 are now professors at the world’s most accomplished institutions, including Harvard University, Yale University, the Massachusetts Institute of Technology, Princeton University, the University of Birmingham and, also, China’s finest schools such as Beijing’s Tsinghua University and Shanghai’s Fudan University.

Former SGY pupils are frequently the recipients of the most prestigious awards in science and technology fields. In 2012, alumni Xiaowei Zhuang (of Harvard University) and Liqun Luo (of Stanford University) were elected as academicians of the U.S. National Academy of Sciences. Other SGY alumni have become fellows at IEEE, the Optical Society of America, and the American Physical Society and have received early career awards such as the Alfred P. Sloan Fellowship, the National Science Foundation Career Award, and the Presidential Early Career Award for Scientists and Engineers (PECASE).

Moreover, many alumni have become leaders in industry, commerce, and finance. For example, Yuanlin Guo, who enrolled in 1978, is today vice president of Tsinghua Unisplendour Corporation Limited. Twenty percent of SGY’s alumni are today employed on global financial trading floors, including over a hundred on Wall Street alone.

Creating the Leaders of the Future
To attain positions of such prestige, young people need more than just robust intellect. This is something Yang Chen and the teachers at SGY understand well. “Since I started here, my goal has been to prepare students to become the future leaders in different fields and professions,” says Chen. “The key to becoming a leader is learning how to work in teams. The most valuable part of SGY is the students themselves. We expect the students to teach and learn from each other and to work in close cooperation.”

To assist with the students’ social development and to ensure they receive a well-rounded education, SGY offers a number of opportunities outside the academic realm. Students are highly encouraged to participate in many types of outreach and volunteering programs, including helping children with disabilities, teaching in high schools, and protecting the environment, so they can learn about social responsibility. “During winter and summer breaks, the students volunteer in rural parts of China where educational resources are deficient,” says Chen. “To become the leaders of the future, students need to gain a better understanding of social issues, accept heavier responsibilities, and return more to society.”

In the future, Chen and colleagues are determined to maintain a high standard of education and have their teaching methods naturally evolve to fit the times. “Going forward, we would like to learn how to better accommodate the students’ needs and reform the education system,” Chen says. “Students today learn a lot from the Internet, which is very different from when I was a student. So many staff members, including myself, are exploring new ways to teach this next generation. It used to take 20 years for a new generation to form, now I think it is closer to five years,” he adds. “Things are different today.” Though that may be true, there is no doubt that SGY will—just like the students themselves—be well ahead of the curve.