

• Home / University Special

# Bringing together classroom learning, real-world applications

By Yuan Shenggao | China Daily | Updated: 2017-11-09 07:43



Innovative model uses internships to apply knowledge in the workplace

For higher education experts, teaching students how to apply classroom knowledge in the real world has been an ongoing challenge. The four-year exploration of a new cooperative education model at Chongqing University could produce an answer, according to Zhang Zhiqing, vice-dean of the Chongqing University-University of Cincinnati Joint Co-op Institute.

The cooperative education model merges internships with academic study, to help students to transite their knowledge of theory to practice and solve workplace problems. The University of Cincinnati pioneered cooperative education in 1906. Former UC dean Teik Lim was the founder of the CQU-UC Joint Co-op Institute.

The model was introduced to CQU in 2013, and it is one of the top educational institutions in China. Princeton Review, college admission services company, ranked the joint program with UC in the top 5 percent of the 2,500 public research-oriented universities in the world.

**“The internship narrows the gap by pushing them to face real-world problems ...”**

Zhang Zhiqing, vice-dean of the CQU-UC Joint Co-op Institute



Zhang said students of the institute that major in either electrical engineering and automation, or machine design manufacturing and automation - two key majors at the university - will have a five-year learning period in undergraduate study.

From the second to fourth years of study, students will alternate between staying at school for four months and working in companies for four months.

The institute signed an agreement with more than 40 enterprises, including nine Fortune Global 500 companies, for students to have paid internships. Taking part in the internship is a requirement for graduation.

"There is a gap between college education and the skill sets needed by the market," Zhang said. "Students tend to listen to what the teachers say in class, take some notes and stay up for a few nights before the test, and eventually forget everything they have learnt."

"The internship narrows the gap by pushing them to face real-world problems and even have a chance to experience the cutting-edge trends of the industry," he said.

They will also have a better understanding of their major and what knowledge they need most, he added. Students also learn more about society, how to communicate with people and how to shoulder social responsibility.

Zhang explained that when students doing job hunting, they may have a superficial understanding of the company they will work for. Some will choose to leave when they find out the job is not what they imagined, wasting both the time and energy of the individuals and the companies.

However, after 20 months of working in the industry, the employees and employers will both know each other well.

"I have heard a female student already received a verbal offer from GE," he said.

## Today's Top News

Li seeking new ideas to give the economy boost

Financial stability committee launched

Xi offers hand of friendship to Trump

High-end sector to see more imports from US

Together towards prosperity and harmonious development

## Editor's picks



Society: 'Giant hairy crab' building nears completion



Culture: Chinese books popular at Istanbul book fair

## Most Viewed

6 cultural differences between China and the US

Virginity issue reflected in TV drama

Female celebrities featured in Chinese-style fashion photos

Top 10 most popular online shopping sites in China

Top 10 classic kiss scenes in films

## Special



US President Donald Trump visits China



19th CPC National Congress

"The first batch of students is currently studying in the United States for their last year of study. It won't take long to see the impact of the cooperative education program."

Companies have shown their appreciation of the cooperative education program, including Siemens China, ABB, GE and Changan Ford Automobile.

Prasanna Malaviya, senior director of research and development at One Ethicon & DePuy Synthes China, a subsidiary of Johnson & Johnson Medical (China) Ltd, said it's the best way for engineering students to catch up with the working world quickly after graduation.

"Some Chinese students suffer the first few months working at multinational companies because they don't know how to make full use of their talent."

When exposed to real-world problems, students are very quick to learn to solve issues outside the classroom, he added.

Another highlight of the program is the all-English teaching and application of Western educational philosophy.

About half of the specialized courses were taught by professors from UC, including some former engineers and managers of world-famous companies, such as GE, Zhang said.

The courses are organized in the form of small-sized classes, panel discussions and procedural learning, to encourage students to verbalize their ideas and participate more proactively in academic activities, said Zhang.

Students in other schools of Chongqing University can apply to attend the cooperative education program and enroll if they pass the language tests. The fee is \$60,000 per degree.



Teachers of the University of Cincinnati pick up the first batch of students from the CQU-UC Joint Co-op Institute studying in the United States at the airport. PHOTOS PROVIDED TO CHINA DAILY



Chinese vice-dean Zhang Zhigang (sixth from left) and US co-dean Tom Huston (fifth from left) declare Aug 17 as CQU-UC Joint Co-op Institute Day.



**Students** of the University of Cincinnati welcome students from the CQU-UC Joint Co-op Institute.

## What they say

It wasn't easy getting a university to change its entire curriculum model. But Chongqing University recognized the value of the cooperative education experience for its students. When Chinese students spend their last year at the University of Cincinnati in the United States, they are exposed to international experience when they interact with their classmates. We get more international prestige. We increase our campus diversity. And we also have teaching assistants who go to China. Eventually, we would like to partner with companies that can offer cooperative education positions to alternating students from UC and CQU.

**Tom Huston**, co-dean of the CQU-UC Joint Co-op Institute



I am amazed that they can take these courses in English. To put myself in their place I would struggle mightily if a course were taught in Chinese. For CQU students, I think it provides them with some excellent opportunities to get exposure to Chinese industry and research of the United States, as some students travel to Cincinnati to do cooperative education assignments. The first group of Chinese students is currently in Cincinnati completing their last year of study. This took a lot of work and persistence by people in both countries to get this far. The relationships that have been formed are very strong and meaningful.

**Steve Ettorre**, professor at University of Cincinnati, now teaching at Chongqing University



Educational innovation makes for success. Students create a more specific future plan through the internship experience, and they will have more confidence in their future work.

This teaching model — four months classroom education and four months at an internship — effectively integrates theory and practice. Students can put the knowledge into practice and promote the ability of studying.

Compared to lessons I gave before, I now introduce the reality of a whole engineering project to the class to make sure students have a clear mind to solve problems when they work in real companies.

**Luo Yuanxin**, vice-dean of Mechanical Engineering School, Chongqing University



By 2018, we will have three interns from CQU. The job we offer is testing devices and analyzing problems. I found they are very motivated to learn, though it may take some time for them to handle high-tech machines. Chinese undergraduates may find it difficult to go through the first few months working at multinational enterprises. The cooperative education program is the best way for engineering majors to learn how to apply knowledge into real-world scenarios when exposed to real-world problems. For companies, it creates a population of students who already know our system and policy. We will call them back to interview and it may be easier for them to pass the test.

**Prasanna Malavtya**, senior director of research and development at One Ethicon & DePuy Synthes China of Johnson & Johnson Medical (China) Ltd



I think the cooperative education program is fantastic. The students participating in the program will graduate with thousands of other engineers. The advantage for them is that they not only have a degree but also have real working experience, as well as presentation and communication training. In addition, students with work experience can better appreciate the importance of research. It is not just for fun in laboratories, but to address real challenges that companies face.

Through the program, they learn more on how to solve real world problems, which will be helpful to advance their careers.

**Fu-lin Tsung**, professor at University of Cincinnati, now teaching at Chongqing University



I am so surprised by the practical ability and studying attitude of the undergraduates from the Joint Co-op Institute. One of the interns solved a difficult technical problem, which could not be solved by the regular employees. I never thought that internships could play such an important part in our team. I hope the JCI will deliver more outstanding students to us and other innovative companies in the future.

**Mao Shangwei**, big data department manager of CISDI Research and Development Co

