

Engineering education in China

With the continuous development of China's national economy, social progress, great changes are also taking place in the field of engineering education in China. Nowadays, China is the largest producer of engineering graduates in the world, with nearly 2200000 engineering graduates of the colleges and universities in 2014 while the total number of graduates in China is 7270000.

Concerning the engineering education in China, it is considered that it dates back to the time when China restored the policy of holding the Entrance Exams for Universities 40 years ago. But as far as I am concerned, engineering education remounts to the Westernization Movement of Qing Dynasty. Certainly, engineering education has existed before Qing Dynasty, however, it did not form a system. In other words, almost no one studied the engineering and neither engineering education received publicity at that time.

Chinese society has started its long journey of modernization since the beginning of the Westernization Movement and it convinced lots of Chinese to feel the importance of the engineering. At the same time, many Chinese students started to learn engineering as the establishment of Westernization College. In this way, China begins the path of engineering education and constantly improves it. After restoring the policy of the Entrance Exam for Universities, the number of the engineering graduates which belong to the fields of engineering management, engineering science, and engineering physics increased continuously. Chinese government put a great deal of effort and money into improving the development of the engineering education. During the 1960s, many techniques have been devised by the scientists represented by Hsue-shen Tsien, such as atomic bomb. These inventions of the techniques stimulate Chinese students for studying the engineering. Engineering education developed rapidly after that and the number of the engineering colleges and universities also increased greatly.

After entering 21st century, as the economy continues to expand and improving of the living conditions, Chinese students can put more efforts into studying without living and economy pressure. Therefore, more and more Chinese students select to learn engineering and most parents believe that technology can make money and make life better.

There are hundreds technical colleges and universities in China and most of them locate in the municipalities and provincial capital of China, like Beijing, Shanghai, Nanjing and so on. These colleges and universities emphasizes the students' automatic study and teachers connect the students and multimedia as mediators. In addition, more and more well-known engineering colleges and universities have gotten more recognition internationally and graduates from these universities can also get a good job in the company or be engaged into scientific researches in universities, such as Tsinghua University, Beijing Institute of Technology, Beijing University of Posts and Telecommunications, Nanjing University of Science and Technology, etc.

China also has launched the engineering educational program accreditation in 2006 and began to establish the accreditation system. Till 2011, there are 219 programs in 6 fields of Architecture and Civil engineering have been accredited and 132 programs in Mechanical, Chemical, Electrical, Computer, Hydraulic, Transportation, Environmental, Light Industry, Food, Safety, and Mineral engineering education were accredited also.

In 2014, the number of engineering students in universities reached 2200000 which accounted for nearly 30.2 % of all the undergraduate students in China, and made China the largest engineering education country in the world. At the same time, 30 % of the educational programs in universities are engineering programs. These professional engineers are really welcome in the job market. I just want to make a few points that indicate this phenomenon. I studied science during

high school because I could get good grades in Physics and Chemistry and my parents also thought that I could get a good job and a good salary if I choose science. Another reason why many students choose science is that all good students choose science and we can have better classmates in science classes. After the college entrance examination, my parents chose the computer science as a major for me and I accepted their decision. It is the present situation in China and parents decide everything what they want concerning their children.

With the development of engineering education in China, some problems were beginning to appear. I mainly divide these problems into two parts:

- Interests decide everything. If we choose the major we do not like, we would not have any interests and ideas in doing that. Many students can finish their studies in universities, but they do not work hard to dig into the technology, particularly the girls.

- Some outstanding Chinese youth in currently society don't want to choose engineering as their major. They are unlikely to be engineers and professional and many young people prefer to choose hot specialties, such as Finance, Foreign language, Law and so on. Then think that engineering study is dull and uninteresting and economic situation can make them more flexible. Students currently are more fickle than settled down.

Of course, it is no need to deny that the development of the engineering education in China is very successful. Fortunately, above mentioned phenomena have attracted the attention of Chinese government. Chinese people also reflect that why none of Nobel Laureates are from China mainland and students are less diligent than previous students. The society needs better engineers and better professional, so Chinese government advocate young people to be modern engineers in the 21st century [2].

To exactly locate the higher engineering education is of vital importance to the engineering education and the national economy construction. The aim of the Chinese engineering education is very clear and accurate. The quality of the engineering education also has improved a lot compared to the previous period. As far as I am concerned, currently Chinese people should know the necessity of the reform of the engineering education and begin to do it. In addition, the transformation of the educational thought is very important for innovations and the development of the engineering education.

References

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Scientific supervisor: E.Yu. Kosheleva, Associate Professor, TPU (Tomsk polytechnic university), Russia