

## *Original Paper*

# Probe into Necessity and Path of Campus Culture Construction in Technological Universities

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### ***Abstract***

*According to the current situation of engineers' training in our country, this paper analyzes the necessity of campus culture construction to improve the quality of engineers in the future, and proposes some construction paths to strengthen the sound development of campus culture in technological universities, such as strengthening the construction of general education curriculum, promoting the effectiveness of practice links inside and outside the university, and offering lectures inside and outside the university.*

### ***Keywords***

*Technological University, campus culture, necessity path*

## **1. Introduction**

Engineering education in China undertakes the mission of providing talents and intellectual support for China's industrial development. The Quality Report of Engineering Education in China released in 2017 states that China has established the world's largest engineering education supply system with distinct levels, diverse types, full range of specialties and regional matching. Data shows that the number of enrollment for engineering majors, students and graduates in China's ordinary colleges and universities ranks first in the world, three to five times higher than that in the following countries such as Russia and the United States. But at the same time, the Global Competitiveness Report also shows that although the number of "active" and "backup" engineers in our country ranks first in the world, the overall quality of engineers is not high. One of the main reasons is the technological universities students lack the awareness of improving the overall quality of engineers. In recent years, the Ministry

of Education has raised various reform ideas and issued a series of policies and measures to improve the overall quality of engineering education. However, most of them are top-down reform measures with strong concept and poor operability, which fail to arouse the enthusiasm of the majority of students. Passive participation is one of the main reasons for their involuntary absence. Nevertheless, it is undeniable that the students of technological universities only focus on acquiring specialized and practical knowledge, lack of due sense of responsibility and value judgment for nature, society and individuals, and lack of cultivation of independent personality and critical spirit are also the main reasons for their unconscious absence. The students of technological universities will be the future engineers and they will be the ultimate carrier of improving the overall quality of engineers. In order to accelerate the improvement of the overall quality of engineering talents, college reform must involve students' conscious participation. Only by carrying out reforms in the same direction can the maximum energy of the reform be stimulated and the reform can be well implemented.

## **2. Necessity of Campus Culture Construction in Technological Universities**

Campus culture is invisible, which can't be seen or touched, but it can be truly felt through various complicated campus activities, such as the students' faces full of desire for knowledge in the classroom, the nonstop lights in the self-study classroom all night long, the meticulous questioning in the face of problems, the data checking in the laboratory over and over again, the enlightening words in the teacher's mouth, the exploration of the patriotism and the truth, goodness and beauty in the lectures, etc. Campus culture not only embodies the spiritual value of the university, but also showcases the life style of the university students in every aspect. Positive and progressive construction of campus culture can not only stimulate students' subjective initiative and subjective consciousness, guide them to actively adapt to the national strategy and meet the development needs of new economy, new technology and new industry, but also play an important role in improving the quality of college students, quality casting, temperament cultivation, sentiment cultivation and soul shaping.

## **3. The Probe into Path of Campus Culture Construction in Technological Universities**

Engineering is closely connected with science, technology and industry, but it has its own essential characteristics. Practicality, comprehensiveness and innovation are the essential attributes of engineering. The talents cultivation in technological universities needs to highlight the essential attributes of engineering and show distinctive features. Campus culture, as the embodiment of the spiritual value of the school, also shows different spiritual pursuit and value orientation from other universities. How to strengthen the construction of campus culture, help technological college students to correctly understand the world today, grasp the world today, and then transform the world today is a problem that needs to be seriously explored.

### *3.1 Strengthen the Construction of General Education Curriculums and Guide Technological College Students to Build up Correct Scientific Spirit, Engineering Consciousness and Humanity*

Engineering is a process of “creation”, centered on integration and construction activities. It is the integration, selection and optimization of scientific elements, technological elements, economic elements, management elements, cultural elements, environmental elements and other elements. Engineering activity itself is also a process of strategy, decision-making, planning, design, construction, operation and management, which involves the integration and application of engineering ideas, engineering epistemology and engineering methodology. With the advent of the post-industrial era and the deepening of economic globalization, the scale, complexity and uncertainty of engineering projects are increasing, the engineering talents are required to have broader vision, more flexible thinking and overall cognitive ability, and be able to consciously integrate social, natural and humanistic knowledge into the learning and construction process of engineering science knowledge.

Although technological college students are only the “rough” of engineers, they need to understand that the improvement of the overall quality of engineering talents not only includes the updating of specialized and practical knowledge, but also is an overall improvement process of engineering knowledge, culture, quality and ability. In the learning process, it is necessary for the engineering majors to consciously strengthen the cultivation of scientific spirit, engineering consciousness and humanity, consciously learn about the national strategy, and meet the development requirements of new economy, new technology and new industry.

### *3.2 Strengthen the Construction of Practice Links inside and outside the School, and Guide Students to Strengthen the Cultivation of Engineering Quality and Engineering Ability*

Practicality is the most essential attribute of engineering, and the growth of engineers cannot succeed without practice. Through practice, facing the complexity, systematicness and uncertainty of engineering projects, students can not only learn to combine many scientific and technological methods in the process of practice to achieve the purpose of finding and solving problems, but also, in the process of experiencing from cognitive rationality to operational rationality to realistic rationality, they can be urged to unify the external exploration, understand and transform of the objective world with the internal understanding and comprehension of the subjective world, fully embody the unity of “nature-man-society” and accomplish the goal of putting the knowledge of into practice.

There is an essential difference between the characteristics and laws of engineering talents training and scientific talents training. In the process of talents training, attention should be paid to carrying forward practice, guiding practice and strengthening the construction of practice links, thus students can establish the concept that there is no engineering without practice and effectively improve their engineering quality and engineering ability.

### *3.3 Hire Experts both inside and outside the School to Offer Various Lectures to Broaden Students' Horizon and Cultivate Their Sentiment*

High-level lectures delivered by experts both inside and outside the school can often bring students the latest trends in scientific and technological development, the declaration with the most humanistic feelings, the latest achievements in interdisciplinary development, and the development trend of national industries, etc. They can also arouse students' interest, broaden students' horizons, bring about various academic viewpoints, and inspire students to actively explore and think about increasingly comprehensive and complex social and engineering issues beyond professional education. In order to increase the cross-border, cross-industry, cross-discipline, cross-discipline scientific and technological development and the exchange and integration of educational ideas, and to make up for the lack of teaching links in the class, technological universities should recruit more and more experts both inside and outside the school, deliver various lectures, broaden students' horizons and cultivate students' sentiment.

Although campus culture is reflected in every respect, it has strong self-concealment. It is intangible but has numerous and complicated components, which is finally expressed as the entirety of the school spirit, the knowledge value of teachers and students, the attitude of employees and their behavior patterns. Campus culture construction has become a difficult field to explore for a long time because of the self-shielding nature of campus culture. However, it is obvious that the positive campus culture construction provides value guidance and soul shaping for technological university students. It is hoped that under the guidance of active campus culture, our future engineers will actively face nature, society and themselves and will never be absent on the road of development.

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