Cultivation of Unique Campus Culture in Universities of Science and Engineering and Its Illuminations: Based on “Free Your Talent” Material Culture Festival in Wuhan University of Technology

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Abstract. Campus culture represents the core and spirit of a university, the key embodiment of its personality and essential constituent of its core competitiveness; university campus culture has a subtle effect on the shaping of students’ values, characters and behavioral habits. Given the uniqueness of universities of science and engineering, promoting connotative development of tertiary education is incomplete without exploring the concepts, means and pathway of cultivating unique campus culture in universities of science and engineering in order to fundamentally improve and tailor the culture-cultivation to blend with curriculum features and advantages.

1. Introduction

Opinions on further strengthening and improving ideological and political education of university students clearly stated that campus culture, as the key factor in education, should embody the socialist, contemporary and campus characteristics, and facilitate the formation of the style of schooling, teaching and study [1]. The 18th Party Congress Work Report pointed out that culture is the lifeblood of a nation, and it gives the people a sense of belonging; to complete the building of a moderately prosperous society in all respects and achieve the great renewal of the Chinese nation, we must create a new surge in promoting socialist culture and bring about its great development and enrichment, increase China’s cultural soft power, and enable culture to guide social trends, educate the people, serve society, and boost development [2]. In recent years, campus culture cultivation has received universal attention from education administration departments at all levels and the public. Many tertiary institutions began to include the campus culture cultivation in the outline of overall development planning as a key item. Universities of science and engineering take up a great share of domestic tertiary institutions. They usually have high academic rankings and schooling qualities. Thus how to cultivate the campus culture accordingly, extend its influence and advance the education via culture influence has been a pressing issue and research project for tertiary educators.

2. Connotation and Significance of Campus Culture Cultivation at Tertiary Institutions

Campus culture cultivation at tertiary institutions has undergone a process of better understanding, content enrichment and continuous innovation. In retrospect, campus culture cultivation was initially regarded as extracurricular activities and then connected with essential-qualities-oriented education as the concept of education via culture influence was gradually recognized. In the early 21st century, particularly when the Central Document 16 was issued, campus culture cultivation has been further standardized and enhanced [3]. Campus culture is the important mental power that will help the students to improve cultural and moral cultivation, shape the right and positive values and embrace integrity and talents. Tertiary institutions shall always prioritize the campus culture cultivation, endeavor to build a brand of unique campus culture with
their own schooling characteristics and educate high caliber professionals. To carry out varieties of campus cultural activities and build a brand of unique campus culture that is recognizable and influential will contribute to the formation of positive cultural environment on campus, comprehensive reform and development in all fields and enhancement of talent education qualities.

3. Status Quo of Campus Culture Cultivation in Universities of Science and Engineering

Science and engineering are the dominant disciplines in universities of science and engineering, with the support of other courses. They often advocate the campus culture with its core values of “pursuit of rationality, rigorous research and seeking truth, science-based study, innovation, practical abilities”; focus on fostering logic thinking, balance between teaching and research, close interaction between theory and practice; encourage innovation and originality; put more emphasis on scientific studies than humanistic cultivation. The campus environment construction, campus spirit fostering and cultural resources are all inclined to scientific and engineering disciplines; humanistic culture and environment are more absent.

Some universities of science and engineering failed to recognize their uniqueness of curriculum setting and tried to excessively expand, leading to unilateral development. The propensity for scientific and engineering courses has entailed the underdevelopment of humanistic disciplines, improper planning for humanistic curricula and absent support for campus culture cultivation.

Now universities scramble to secure the construction fund and project budget, so they blindly expand the disciplinary construction, resulting in dispersed and wasted resources, weakened disciplinary advantages and specialties. Consequently, the construction of first-class universities and disciplines are constrained, and campus culture cultivation is kept in limbo.

4. “Free Your Talent” Material Culture Festival in Wuhan University of Technology

4.1 Background

“Free Your Talent” Material Culture Festival was organized by the Material Science and Engineering School (hereinafter referred as the School) which is the key and quality school and an established one in Wuhan University of Technology, dating back to the program of national key discipline and the first-class discipline of material science and engineering. It boasts of 2 nation-level key laboratories, 1 national-level engineering laboratory and 6 province-level R&D bases, with a total area of labs of 40 thousand square meters. With the support of innovative research teams and internationally renowned professors, the School has seen decades of development and become a talent incubator, an important base for scientific research in which grows its unique culture of material science. Therefore, “Free Your Talent” Material Culture Festival has found its solid foundation here.

4.2 Significance

Material Culture Festival is guided by the spirit of “education through morality building”, “Virtuous, Knowledgeable and Excellence” and the belief of education through culture. Since its establishment in 2003, Material Culture Festival has been aiming for “first-class internationally, industry-connected and research institute”, consistent with the motto “moral virtues, intelligence, knowledge and talents”, inherited and carried forward the history and culture of material science; programs within the festival have been continuously enriched. It is planned out by creating an environment of science culture, hosting scientific and technological innovation activities and providing platforms for students’ talent show. It is committed to building close connection between students and this discipline, enhancing students’ core competitiveness, serving as the stage for communicating the forefront knowledge about material science, promoting professional thinking and independent innovation, and for students to show their own talents. It proves to be an essential part of campus culture cultivation and an important carrier for talent nurturing.
4.3 Activities

“Free Your Talent” Material Culture Festival is composed of three sections, “Focus on the spirit”, “Listen to the voices” and “Embark on your own journey”.

4.3.1 Focus on the spirit

To help students know more about the material science, establish the sense of acknowledgement and belonging and take a glimpse at the culture, the School arranges varieties of science and culture activities such as “visiting national key laboratories and other research centers”, “Micro material - Macro View”, visiting the well-known companies and “Material Star” talent exhibitions of outstanding students. These activities have greatly promoted students’ awareness of the history and development of this discipline, and strengthened the sense of honor for the school and acknowledgement of the culture.

4.3.2 Listen to the voices

During the Culture Festival, the School will host the yearly event of “teaching and research result exhibition of the innovative team from material discipline & undergraduate tutoring election”. This event is open for all staff and students to take a look at key research findings achieved by innovative research teams led by top professors; the tutoring selection event lays the foundation for the undergraduate tutoring system. Lectures such as “doctor supervisors’ message”, “academic enlightenment” and “essential-qualities-oriented education” are arranged to nurture students’ humanistic caliber, encourage students to devote themselves to material science and new material industries.

4.3.3 Embark on your own journey

The School encourages young lecturers to involve more students into various scientific and technological innovation competitions, which will add points to lecturers’ competitive performance examination at the end of each year. They are also encouraged to lead students on the national-level student innovative training program and on-campus independent innovative research fund program for undergraduates. Competitions are held by discipline every year.

5. Influence

5.1 Integration of resources from material discipline facilitating the collaborative environment for education

The school has set up organizing committee and offices for the Material Culture Festival, as well as leaders’ group for scientific and technological competition events. Many professors and scholars from the school contribute their ideas and advice for the events. The festival has witnessed the joint participation of staff and students, and further integrated and utilized the discipline resources, thus forming a more intensely collaborative environment for education.

5.2 Disciplinary advantages facilitating the extension of students’ innovation platform

With the support of disciplinary advantages, scientific research centers and sponsoring companies, platforms for scientific and research innovation have been consistently expanded and shifted from single-sided “pottery competition” to “scientific and research competitions” open for all the students. Now more varieties of activities are organized and its influence has reached beyond the borders. Meanwhile, the school attaches great importance to its external links. The strengthening university-company cooperation has bridged the research and practice, thus igniting students’ passion for both the discipline and industry.

5.3 Disciplinary features highlighting the unique charm of material science culture

The Material Culture Festival stages innovation practice platforms for students, focuses on students’ all-around development and creates an atmosphere of diligent study, proactive thinking and seeking for innovation. The scientific and technological innovation cultural activities unfold in four key areas, professional awareness, hands-on practice, innovative training and scientific
research. The school is committed to preparing the soil for innovative thinking, advocating innovative integrity, stimulating innovation and vitality and at the same time cultivating innovative culture, improving competition mechanisms and creating innovative and humanistic atmosphere, reflecting the gradual process of the education system for innovative abilities. It is helpful to single out the top innovative talents when they are ready.

5.4 Extended disciplinary influence facilitating the normalization of high-level competition award-winning for students

Students from the School have received numerous awards in high-level competitions, for instance, the “Challenge Cup” national college students’ extracurricular academic and scientific products contest, “Youth on the run” national college students’ entrepreneurship competition and the national college base knowledge contest of inorganic non-metallic materials. Many talented students from the material science major stood out at those competitions, among them Wanli Guo, Changgui Lin, Yunlong Zhao and Fangyu Xiong won the China Youth Science and Technology Innovation Award. In addition, “new nano-energy storage device team” was the first to win “Xiaoping Science and Technology Innovation Team” title; Yunlong Zhao was chosen as one of the 2012 Chinese College Students Annual Figure, received by President Xi Jinping and covered on People’s Daily and other media coverage as one of the key publicized figures appointed by the Ministry of Education; Fan Peng and Pengjian Lu from the school are the influential entrepreneurs.

6. Conclusion

Universities are melting pots of talent, treasures of brilliant ideas, and the palace of science. Campus culture cultivation has profound influence on the university itself, universities’ own unique and enriched campus culture has become one of its core values, and how to create and maintain such campus culture are one of the most long lasting and important strategic challenges many universities are facing. In combination with the recent “Free Your Talent” Material Culture Festival held by Wuhan University of Technology, we have concluded that the following principles should be followed in the construction of campus culture:

6.1 Adhere to the socialist core values

Socialist core values are not only the backbone of Chinese culture, but also the guiding values of universities’ campus culture development, which provide universities with the right directions and basic rules to follow. As a national spirit goal, it contains the most important socialist communities’ cultural core ideas, pointing university students with constant mental guidance as the progress through their studies. Universities must maintain the socialist core values during their campus culture development, and keep in mind their root causes of “what kind of people shall they teach, how to teach them, and who are they teaching those people for?”, so that universities can increase their campus culture’s influence and significance. These are also the fundamental mission of universities’ teaching, to train the competent constructors of socialism and reliable inheritors of their legacy.

6.2 Combine the education of scientific and humanistic spirit

In science and technology universities’ traditional teaching pattern, they are generally more focused on the students’ development of scientific thinking and creative skills, but often lack the cultivation of arts and social knowledge and spirits. If one were to make the analogy of science focuses on the problem of “what is it?”, then social spirits is about “what should it be?”. In some ways, science and society are the two wheels of development, without which we can not advance. Thus, science and technology universities must be daring to break their usual pattern of only focusing on science and results, and increase their emphasis on social responsibility, socialist values, and humanities. Universities should gradually achieve the joining of science and humanity spirits so that the two can help each other advance, eventually reaching the goal of campus culture.
of cultivating students with complete characteristics and a full development in morality, intelligence, health, and arts.

6.3 Incorporate its own uniqueness

Uniqueness is the life of campus culture, each university of science and technology has its own unique academic background and teaching norms. Universities should actively combine their campus culture with their own unique background, emphasizing their campus history, scientific achievement, academic specialties, and culture legacy. Campus cultures cannot be simply copied, but instead must be created from scratch on top of the university’s actual conditions, incorporating its cultural resources, showing their unique charismas and advantages, and activates its inner potential; so that instructors and students can all share the same sediment, devote themselves in the creation of campus culture’s sparkling points and brand influence, and consistently increase their campus culture’s cohesion.

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