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## Construction of Economical Campus Landscape Based on the School Cultural Characteristics: A Case of Southwest Petroleum University

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### **Abstract**

The construction of campus landscape should adapt to the type and nature of the school, especially reflecting the school cultural characteristics and the humanity education. Taking the economical campus landscape design and planning of Southwest Petroleum University as an example, the paper describes that the college cultural characteristics—oil and natural gas—is presented by typical oilfield equipments, landscape or road names, and sculptures. This construction of campus landscape indicates the campus culture is close–knit association with the oil and natural gas industry. The implementations of the characterized campus landscape and road culture are of great significance in the construction of economical and characteristic campus, as well as the reflection of the school-running features in modern universities.

**Key words:** Cultural characteristics; Economical campus landscape; Landscape design

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### INTRODUCTION

With the mention of human material standard of living, high cultural quality of the progress and extension of spiritual pursuit, to create a distinctive campus landscape has become an important goal of the campus landscape construction. The present campus landscape system has been promoted to a higher level from functional perfection and pure beautification. Campus landscape that is diversified, humanistic and ecological has become the basic demands of the times, and characteristic landscape has been the optimal approach for universities and colleges to distinguish from others (Wang, 2011; Chen, 2010). Campus landscape as a kind of large-scale and dense landscape is to satisfy the functions of the university and the demands of students for living, studying, scientific research, production and entertainment, and it should be equipped with a complete set of service facilities and a scientific operation system. Campus landscape has multiple functions. It not only provides good material conditions for the teachers and students' work, study and living, but also is closely related to the college image, brand, honor and quality. A good campus landscape brings beautiful enjoyment for teachers and students, as well as exerts a positive imperceptible influence on students' growth (Liang, Ge & Chen, 2010). With the booming development of higher education, construction of campus cultural landscape in economical and characteristic types has been paid increasing attention of the community, and it has become the theme of universities cultural landscape construction (Li, Ming & Cai, 2010). Moreover, this type of campus cultural landscape is the fundamental way to achieve the sustainable development in campus cultural construction.

# 1. THE SIGNIFICANCE OF THE ECONOMICAL CAMPUS CULTURAL LANDSCAPE

The construction of an economical society is not only the major premise of the survival of mankind security, national stability, social welfare and people's fundamental

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interests, but also is the common responsibility of the whole society. Building the economical campus cultural landscape is one of the significant aspects in the construct of an economical society (Yue, 2010). The significance of the economical campus cultural landscape is reflected in maximizing the eco-efficiency and environmental benefits, meeting teachers and students' material needs and spiritual needs, conserving resources such as material resources, improving utilization efficiency of resources and energy, and gaining better comprehensive benefit with lower investment (Ding & Liu, 2012).

# 2. CULTURAL CONNOTATIONS OF CAMPUS LANDSCAPE

If campus landscape is designed without cultural connotations, even if successful results are achieved in form and artistic sense, they will be only application and packing of design techniques without spirit or soul. Campus landscape should pay more attention to cultural inheritance and cultural expressions. Campus landscape with rich cultural connotations will have positive and farreaching influence on its students who will memorize the particular atmosphere of their universities and feel its impact on the formation of their personality (Feng & Su, 2010). Just like the first president of Stanford University Jordan said that all corridors and their delicate columns would play a positive role in cultivating students, and even every stone in the wall would teach them beauty and honest (Xu, 2007).

Since the material culture in the campus culture is carried by campus landscape, the construction of campus landscape should reflect the nature of the university, educational goals and characteristics. The campus landscape lays stress on mining the environmental characteristics to create a unique campus cultural landscape which is full of memory and character of times, as well as comprises personality and highlights characteristics. Campus material cultural landscape has a great imperceptible influence on college students, i.e. fostering students' feelings of the college, promoting interests in their majors, and sublimating these feelings and interests to the further positive emotions of the country and the nation then inspiring spirit of patriotism and building right outlook on life and the world. On the other hand, campus cultural landscape effectively enhances self-confidence and pride of all the teachers and students.

Cultural landscape is the mark of cultural inheritance. As an accumulation of social culture, a record of the past history, a wealth of storage archives, and an old photo of entrepreneurial process of predecessors, campus cultural landscape records the styles and features of the university in different historical periods, and it also reshows the information of the past era. The interpretation

of the past and present cultural information in the specific cultural landscape is a new life experience of teachers and students, which will affect the reconstruction of the meaning of their study and living.

## 3. CONSTRUCTION PRACTICES OF CAMPUS CULTURAL LANDSCAPE

### 3.1 Typical Equipments of Oil and Natural Gas Industry as Campus Landscapes

Southwest Petroleum University is the second petroleum university created by P. R. China. It is a petroleum professional-based and highly professional college with a prominent feature of the oil and natural gas. The teachers of the university are mainly from the oil fields or oil professional universities, and the graduates will devote themselves to the domestic and international petroleum system. Based on the cultural characteristics, the university creates an economical campus decorated by some oil machinery equipments during the design and planning of campus landscapes. To be specially mentioned, the equipments are disused that are provided by Chuanging Drilling Engineering Co., Ltd. as well as Oil and Gas Field Southwest Branch of CNPC. The devices are placed in the green area of the campus after repainting, just like three-dimensional, colorful and attractive textbooks, and they will be as cultural symbols permanently displayed in the college. Figure 1, Figure 2, Figure 3 and Figure 4 show the various cultural campus landscapes distributed in the Southwest Petroleum University.



Figure 1 Drilling Faucet

Drilling faucet is professional equipment in the drilling rigs. It is a "joint" part of three working units (enhancing, rotating and cycling), and plays an important role in composition of the drilling rig.



Figure 2 Roller Shaft

Roller shaft is one part of the drilling winch which is the executive component in the lifting system, as well as the core component of the entire rig.



Figure 3 Beam Pumping Unit

Beam pumping unit as a sort of the oldest and most widely used type of oil production equipment in the oilfield, is reliable, solid and easy to maintain. Presently, the beam pumping unit has been developed in various models based on conventional types.



Figure 4
Oil or Gas Wells' Christmas Tree

As a part of the oil or gas wellhead, christmas tree is the important ground equipment to guide and control the flow direction and flow rate of oil and gas mixture.

These campus cultural landscapes with oil and natural gas characteristics not only reflect the development of oil and natural gas industry, but also display a refreshing feeling due to their revealed academic atmosphere. Campus cultural landscape focuses on exhibiting cultural characteristics. That the landscape with the equipments as the theme is brought into the college so as to provide a healthy study environment for students, arouse their enthusiasm for studying, incarnate the spirit of the college and highlight features of running the school.

# 3.2 Names of Campus Roads, Buildings and Landscapes Reflecting Oil and Natural Gas Characteristics

Naming of campus roads, buildings and landscapes plays an important role in enhancing the cultural atmosphere. and it is the significant content of constructing campus culture. To further enhance the cultural heritage and educational function of campus environment, the college carries out the naming solicitation activities of campus roads, buildings and landscapes. And now, the names of roads, buildings and landscapes show three characteristics: secondary aspect matching the primary one, the realistic respect organically combining the impressionistic one, location marks easily being remembered and distinguished. For example, a small river of the campus landscapes is named as "dream brook", because the petroleum is the first time described and officially named in the Sketchbook of Dream Brook by Shen Kuo, who is a Northern Song Dynasty scientist. The "dream brook" implies symbolically that the oil system is the place to achieve the dream of being oilmen for students of Southwest Petroleum University. The names embody the spirit and characteristics of running the school, and they have inherited the school's cultural beliefs and cultural pursuit.

# 3.3 Campus Landscape Sculpture and Landscape Stone Reflecting the Alma Mater Complex

Sculpture and landscape stone with prominent personalities are the most common-weal and ornamental artwork in the campus image elements. Sculpture and landscape stone, especially the monumental sculptures, often reflect the school's history, culture and style. They are signs of school spirit, as well as the epitomes of the campus historical process, such as the Sun Yat-sen statue of Sun Yat-sen University, and the "December 9th Monument" of Peking University (Liu, 2011).

The existing sculpture and landscape stone of Southwest Petroleum University are not finished products purchased from the market. They are meticulously designed according to the great historical events of the school. The themes of them are based on the school

history, science and technology, and main majors. The kind of campus landscapes present campus characteristics, and improve the students' aesthetic appeal and scientific quality. When the students enjoy the sight of sculpture and landscape stone, they will realize the difficulty and glory of the construction of the college.

Figure 5 displays the "Cuiying tripod" donated by schoolfellow of Oilfield Chemistry major. Figure 6 shows the landscape stone designed by graduates of the Architectural Engineering Institute, where the latitude and longitude and the elevation of the school are caved. By the way, the data on the stone is accurately obtained by the students' professional knowledge of surveying and mapping. Campus landscape sculpture and landscape stone not only beautify the campus environment and inherit the campus culture, but also provide a positive opportunity for the graduates expressing their gratitude to the alma mater.



Figure 5
The "Cuiying Tripod" Donated by Schoolfellow of Oilfield Chemistry Major



Figure 6
The Landscape Stone Designed by Graduates of the
Architectural Engineering Institute

### CONCLUSION

When constructing campus cultural landscape in economical and characteristic types, it should take science and technology as the support and establish the concept of economy. Moreover, it should stop abusing and wantonly claiming resources. That the subject characteristics integrating into the campus landscape and the concept of economy naturally embodying in the campus culture, have become a fashion for the construction of campus culture, and make the campus cultural landscape be more unique as well.

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