



On the Campus Construction Environment under the Background of Modern Quality Education

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Abstract

Improving the quality of the whole people plays an important role in the rise and fall of the Chinese nation and the realization of China's modernization. The most important and biggest content of educational reform is campus construction, taking environmental construction as the place of education into account. This paper analyzes the relationship between the campus architectural environment and modern quality education, hoping to give some inspiration to the campus architectural environment design.

Subject Areas

Architecture, Civil Engineering

Keywords

Campus Environment, Quality Education, Communication Space

1. Introduction

“A campus is a place for educating people, and the environment is a silent classroom” [1]. School campus architecture is the main place for children to study and live. In this place, they learn knowledge and learn the normal communication between people, which is the most important external environment during the period of their growth. With the rapid development of China's economy, the continuous renewal of science and technology, competition becomes fiercer, the social requirements for the comprehensive quality of workers are higher and higher, and the nation pays more and more attention to the quality education of the next generation. How to construct the campus building environment to meet the needs of modern education development has been attracted more and more at-

tention by society.

2. The Relationship between Quality Education and Environment

“Mencius’ mother moved three times and chose to live next to her”. The influence of environment and atmosphere is very important. Educational buildings at all times and in all over the world pay attention to good environmental conditions and have a profound brand of the times, and are always intertwined with educational concepts and models, which has a distinct “architectural education” phenomenon.

The traditional view of education in ancient China originated from the thought of “different respect and inferiority, order and nobility” in Zhouli. Therefore, the traditional campus form is represented by the Academy buildings, and the plane layout and space are closed to the outside and open to the inside.

As well as the folk use ancestral halls and temples as educational places, such architectural forms have clear axes, rigorous and symmetrical layout and strict hierarchy. It is inextricably linked with rigid academic philosophy, which emphasizes art rather than science. This rigid academic philosophy has lasted for thousands of years. With the progress of science and technology and the change of educational concept, the campus architecture in some western countries in modern times has broken through the convent organization mode, developed into an organization structure combining road, square and architecture, and emphasized the idea of rationality, democracy and science. It can be seen that the campus architecture and environment are the direct reflection of the educational concept and mode.

Campus is a place where students grow their talents, exercise their will and improve their quality. Students have many common needs and life rules in campus. The elegant, beautiful and pleasant campus environment will leave a memorable impression on teachers and students for a lifetime. Homogenization, beauty, sharing and order are the design features of campus architecture. Students’ life, study, rest, communication, entertainment, etc. on campus, as well as the comprehensive requirements for security, privacy and environment atmosphere, the overall environmental design of campus should be able to integrate different factors into consideration, and in order to create a place for students to display their nature and play. Thus, the purpose of improving the students’ behavior quality can be achieved. Campus environment is not only a simple space for preaching and teaching, but also a place to cultivate sentiment and make personality develop harmoniously and establish a mode of “architectural education”.

3. Integrate Campus Architecture and Environment with the Concept of Quality Education

Modern education theory aims at improving the overall quality of students. Education is no longer limited to the indoctrination mode of “you teach me to learn”.

It makes full use of advanced teaching methods and relies on a good campus environment to create an atmosphere of creative thinking for students to communicate, interact and expand. Therefore, the campus building environment should fully implement the thought of quality education. From the pedagogy, physiology, psychology, sociology and environmental design research, and with the distinctive educational, unified and symbolic characteristics, the purpose of “architectural education” has been realized.

3.1. Planning of Campus Environment

The student period is the longest and most important period for a person to receive basic education. In this period, Young students will comprehensively and systematically cultivate and exercise in understanding of society, identification of “truth, goodness and beauty”, formation of personality and improvement of physical fitness. The purpose of campus environment planning and design is to create an elegant, quiet and cultural learning environment, cultivate students’ creative thinking, and embody their vigorous character.

1) The functions of the school should be clearly divided, the functions of teaching, sports, life and administration should be reasonably organized, and a convenient and smooth connection system should be established.

2) Focus on history. The exploration and shaping of cultural characteristics, the use of natural and human landscape, the formation of a traditional awareness and rich connotation of the education environment, create “education in the landscape, emotion in the landscape” of the environmental atmosphere, improve and enrich the cultural characteristics of educational architecture.

3) In the reasonable and unified group layout, we should pay attention to the interpenetration and transformation of space, and use different space elements such as corridor, courtyard, square and platform to provide places for communication, assembly, activities, emotional and information exchange for teachers and students, so as to form an organic campus environment.

4) By using the methods of composition, metaphor, symbol and association, we can organize the space and interface, and create the “campus core” with unique atmosphere to form a dense and rich campus space and cultural landscape.

5) Combining with the concept of ecological environment and sustainable development, we can use some image vocabulary that students can easily understand, create biological garden, courtyard greening and other places. The interactive campus environment and interesting space of “teaching in fun” are formed to expand the learning and communication environment for teachers and students.

3.2. Architectural Monomer Design and Spatial Organization

If we say that the campus environmental landscape planning and the historical and cultural connotation are the soul of the school. So, the shape of the building unit and the design of the room are the schematized expression of campus envi-

ronment. The tangible design vocabulary and techniques such as the shape of the monomer, the design of the facade, the organization of space, etc. transform the concepts of beauty, comfort and place into perceptible information, which can form the influence on human vision and psychology.

With the development of educational ideas and the change of educational methods, the closed indoctrination teaching mode has been gradually replaced by the open teaching mode focusing on quality education and enlightening and counseling. Therefore, in the individual design and space organization, we should expand the communication space, adapt to the interactive teaching environment, meet the modern education means as the goal, and create a personalized, multi-functional and diversified learning environment.

In many schools built before, we often see students curling up in the 1.5-1.8 meter-wide corridor, gazing eagerly. Due to the lack of appropriate design, the open space of the campus cannot form a place of belonging. Therefore, in the context of quality education, in the design of campus environment, designers should carefully organize the traffic system, pay attention to the interpenetration of different spaces, integrate the traditional space elements, such as square, courtyard, corridor, platform and stairs, and endow them with the functions of communication activities and information, so as to enhance the sense of place and symbolism of individual buildings. The corridor in front of the classroom can be widened to 2 - 3 meters, and some schools lift the walkway out of the mountain, which not only enriches the shape, but also provides a small space for activities. For example, the teaching building of an eight-year school in foreign countries, on the plane, what the school arranges outside the classrooms of each grade is not the corridor, but the interconnected rest room. Besides the function of corridor, it obviously provides a place for students to have recess extracurricular and extracurricular communication and activities, and its large area is one that our domestic schools are unlikely to achieve. The teaching building of Beijing NO.4 middle school, which was completed in 1984, has a regular hexagon classroom, which makes the concave part of the classroom joint expand the area of the corridor, and is also conducive to students' recess activities. At this time, the corridor is no longer just the concept of transportation, it can accommodate more content and become a multi-functional activity space. At the same time, the gray space framework and the gray space structure are adopted in the transportation system. With appropriate scale and different materials, the canopy and other components form a retractable and active space element, like a beating stream across the mountains and valleys, bringing vitality to the whole campus building, becoming a place for teachers and students to communicate, rest and meditate, and a spiritual space, leaving a deep impression in the memory of children's growth [2].

Freud believed that human thought and behavior are rooted in a certain motivation in their heart. When this desire motivation is suppressed, it will lead to abnormal behavior. We are familiar with the quadrangles of thousands of fami-

lies and the excellent gardens in the style of military barracks or Municipal Bureau. Is it fun in a place like that? An environment full of affinity is conducive to the formation of pro-social behavior of helping others, while an environment that makes students feel depressed and uncomfortable will only lead to intense response, and even “aggressive” destructive behaviors.

Campus architecture should be a paradise for children, not a factory for instilling knowledge. The form and place of learning is no longer limited to the classroom, but extended to the whole campus, students in addition to learning in the classroom. Students can not only study in classrooms. More independent activities such as mutual communication and dialogue in corridors, courtyards and other activity places are all ways to acquire knowledge and promote the improvement of students’ comprehensive quality.

4. The Influence of Advanced Teaching Methods on Campus Building Environment

The 21st century is an era of high development of information technology. The impact of computers and networks on people’s inherent thinking has caused great changes. Its influence not only involves science, technology and economy, but also has a profound impact on people’s concept, study, work and lifestyle”. The introduction of “multi-media” teaching mode has an immeasurable role in promoting the cultivation of teaching mode and quality education. With the development of electronic teaching aids, projectors and computer networks, interactive education, distance education and classroom teaching are developing rapidly, which greatly improves the efficiency of the classroom and gives full play to the modern education concept of “teacher led, student-centered”. As a result, the demand for technology in teaching places and the use of teaching buildings will be more diversified, which will bring all-round and multifaceted changes to campus buildings. Therefore, in the design and construction of the campus, it is necessary to have sufficient antecedents for the development of informatization and intellectualization. Sufficient space should be reserved in the aspects of generic cabling and computer room construction. In the space design of the classroom, as well as the technical design links such as line of sight and acoustics, it should be fully considered to meet the needs of development. At the same time, with the development of information and technology, the organization, exchange and update of information are developing and changing. All of these constantly put forward new topics for campus planning and architecture, and also need us to continue to study, master and use.

5. Conclusions

Today’s students, tomorrow’s pillar of society. Education is the hope of the future. As the carrier and cradle of education, except for optimizing campus architecture and environment, we must focus on the development of modern education mode and quality education concept closely; while serving education, we

should establish the characteristics of “architectural education”, and provide the special material and spiritual places for educating people.

According to the particularity of campus architecture, architects should extensively study pedagogy, physiology, psychology, sociology and environmental in campus architectural design, understand modern teaching mode and methods deeply, and base on the cultivation of quality education.

The campus environment space is provided with the expressive power and creativity of architecture, providing the campus environment space which adapts to the enlightenment education, intelligence, skills as well as physical and mental development.

Conflicts of Interest

The authors declare no conflicts of interest.

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