

# The Discussion about Green Building and Reflect the Interaction of its Functions

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**ABSTRACT** Building performance, mainly due to its internal and external image and projecting the overall morphology and outer space color performance. If, after the construction is completed, only a single performance of building three-dimensional surface, it is just isolated to the ground (space) of a group or a group of only isolated and boring. However, if the landscape designer landscaping, configuration greenery, into this important element, it will not only exhibit architectural art architectural charm of its own and can display the rich culture of the building.

## KEYWORDS

Green building  
Interaction  
Function

## 1. Green important role in the building

Green building refers to flowers, grass, trees and other plants in the building interior and exterior space, environment greening planting, green configuration. On the relationship between architecture and green combination, should give priority to the construction, combined with a green. However, in certain special environmental conditions, sometimes building to go along with the green, especially those with special meaning of rare plants. Urban population growth in recent years, the rapid development of construction, people's social activities, science and technology, culture and arts, production, and tourism continues to increase and expand, so that people feel more and more to improve the environment, the importance of environmental beautification. However, improving the environment, beautify the environment the most effective way is green. Building and green to match each other, combined with each other to become a harmonious whole, as a return to nature, is conducive to people's health, protecting our green home.

## 2. Improve green space inside and outside the building, the charm of the role of environmental performance and feature rich architectural expression

### 2.1. The charm of architectural art, mainly because of its inner and outer space and its shape

Like substance levy, once integrated into the green plant, equipped with green plants, the more enriched the performance of the charm of architectural art. For example: Guangdong Sanshui Garden Chiba is building in Forest Park forest greenery not only create a unique architecture and greening embraced each other, and movement combine to form a three-dimensional beauty of art; Guangxi Wuzhou Zhongshan Memorial Hall, Building in Beishan Beishan park trees leaves, to commemorate Sun Yat-sen is the first monumental architecture [1]; Mausoleum in Nanjing, around which are close planting pines, cypresses, cypress, camphor, and Ixora, azalea, mountain Jane Lan and other ground cover plants, they set off each other, looked solemn and beautiful.

### 2.2. Improve architectural art and art viewing features green

Green ornamental feature is that it can cultivate character, spiritual cultivation, purification of the mind, it is good for the soul and good health. In real life, due to the rapid development of the city, the population continues to surge, to green space (space) less and less. However, in many green spaces within the building range, particularly public green, small gardens, attractions and other green places it has gradually become the people's leisure and entertainment venues. In this case, the green is more of its importance. Play its special features, while green, must play a green natural growth patterns, and architectural cooperating with

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doi: 10.18686/wcj.v4i1.7

Received: January 18, 2015; Accepted: February 27, 2015; Published online: March 28, 2015

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each other to improve the ornamental art between.

### 2.3. Green function improved external environment and building space

(1) With the city building an important measure with a modern urban development, green building beautiful homes, model the general direction of the city, the use of green plants green building, urban construction, environmental cooperation, improve environmental protection, is an important measure with green building [2].

(2) Green plants green plants can purify the air, with the function of photosynthesis exhale oxygen. Due to the increasing urban population surge, the population was intensive focus, with industrial plant hotels, transport and other daily in a large amount of carbon dioxide emissions (CO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>) and other harmful gases, noise, poison and pollute our cities, but also affects the play of architectural art. If we use green plants, especially anti-pollution plants, both inside and outside the building environment, building space (space), wall, road greening up, the use of green plants absorb carbon dioxide (CO<sub>2</sub>) and other toxic gases, noise reduction features for our purification space, thus creating a fresh air for us, the spirit of people happy, relaxed and happy, good ecological environment, physical and mental health.

(3) The use of green plants, the protection of the building harmful gases, acid rain and strong typhoon, torrential rain, tides, hail, sand and other man-made or natural disasters, attacks at any time in our city, our buildings. Use of green plants, especially trees, root trees such as: Banyan, Ficus large, white Putao, water, stone Yung et al., Not only beautify the environment, but also from the insurance dike, berm role. Casuarina Beach planting, both anti-wind, but block a typhoon. Protection embankment shop big leaf oil grass, fake sword grass, centipede grass, road greening both, but also from the berm, bank protection, keeping the role of soil and water.

Green itself has a natural growth patterns, we use this feature green plants, plus artificial pruning, the building greening up, not only to protect the building, and set off the building, combined with the art of architecture, has become one of the art of crystallization.

(4) The use of green plants to regulate building temperature inside and outside space, reduce the impact of noise on human health, form suitable for people to live, learn, work and comfortable microclimate.

According to the botanist survey data show:

(A) Determination on an acre of land plants and trees, results in the following data: 120 tons of water a year evaporate, absorbing 30 million cards; 22 tons a year can suck dust; day can suck close 47 kg of carbon dioxide, exhaled oxygen 49 kg; 140 tons a year water; 10 acres of farmland can be protected from wind and sand damage. Acre eucalyptus forests, white dry storied day to secrete 2 kg spinosad, can kill tuberculosis, diphtheria, typhoid bacte-

ria. Acre woods one day reduce the 120 dB of noise. 35 °C in the hot summer, you can reduce the temperature of 4-5 °C.

(B) To 1 strains diameter 30 cm, height 5-6 m, crown width of 7 m measured Banyan's fixed, draw the following data: about 80,000-100,000 leaf bears the storage of nutrients and gases switching function; year absorbent reservoir 800-1,000 kg; day can absorb carbon dioxide, sulfur dioxide, 9.5 kg, exhaled oxygen 9.6 kg; 35 °C in the hot summer, the tree. Be cool under 3-4 °C of green belt, boulevards measured data show: more than no green belt, no avenue open road, 56.7 percent less plant road dust; noise can be reduced 10-16 dB [3]. The concentration of carbon dioxide and other harmful gases can be reduced by 47.9% tested, general lawn air temperature than cement concrete pavement, asphalt road air temperature low 4-5 °C. Green not only can reduce the air temperature in the summer, it can also increase the air temperature in winter 2-3 °C. Using Greening temperature can be increased relatively by green building configuration, you can also adjust the indoor and outdoor temperature, improve local microclimate.

### 3. The choice of plant varieties of green building elements

Green building with green plants, should the region, climate, different environments purposefully choose to grow, cannot be stereotyped. In the southern region, due to the hot and rainy and humid climate, good green living conditions, suitable for the growth. Therefore, plant varieties choice, variety, colorful. But in the northern region, due to the dry climate and little rain, especially in the winter, the temperature is relatively low, it does not apply to many plants grow in this environment conditions. Regardless North and South, are encouraged to choose native species in the region, the survival rate will be high.

Plants, different varieties of ecological habits are different, and so forth. Different plants have different views of the site, there is foliage, and there is a flower. Thus, during the time of green building, it is necessary according to the form of the regional environment, architecture, configuration suitable, high ornamental value of the plant, in order to show the interaction and artistic value of architecture and greenery [4].

### 4. The form of green building green

The form of green building green building has natural formula, rule-based and hybrid, are described below:

(1) Natural formula: Natural-style building on the green in use, and are based on individual raw green shaped posture planting and maintain a beautiful landscape to its natural form. There are few tall, large crown, branches clustered, affect the safety of the building, according to the shape of the tree, slightly trim can, try to keep them original beauty of natural forms. In the design of natural style green diagram, it should make the building and the natu-

ral greening, forming an artificial deliberately mixed with natural providence into a three-dimensional whole.

Greening using natural style design and planting, tough sense lines reduce the construction area.

(2) Rule type: rule-based green design of various plants, not only in the plane, but also three-dimensional in. It can also show the geometry of the plant. Note pruning and shaping plants, dignified and orderly. During the design, the first to make the arrangement symmetrical along the main axis of the building, pay attention to the rules of style arrangement. You can also line the main entrance of the building, draw a central axis, then this axis of symmetrical entrance planting. Reserved land space in the building, the atrium, vestibule, after the court, then use geometric body type pattern layout and planting. This practice green are often able to achieve better coordination with the building itself.

(3) Hybrid: too much to use rule-based green layout, they tend to make people feel there is a rigid and stiff feeling. In the building space is limited, finite environment, using natural style, and difficult to grasp the overall image of the building and green binding. In order to protect the building as a whole maintain its three-dimensional, must apply the rules of style and natural style combine to form a hybrid green design, planting. Is: in building local space, with natural design, natural style planting, easier for people to outdoor activities, people have a natural relaxed feeling; at the edge of the building entrance, sidewalks on both sides of the axis, then apply the rules style, people have a bright and cheerful feel. In the building vestibule, atrium, after court, and the use of natural formula combines rule-based design and planting. This combination of green and architectural design and planting, it has a natural feeling.

## 5. The constituent elements of green building

Elements that constitute building green include a variety of trees (trees), flowers, ground, lawn, shade, vines, aquatic plants, etc., used in building green. Since the plant variety, shapes, different growth habits, the choice of species but also according to local climatic conditions, geographical environment, growing conditions, soil conditions. Therefore, the difference in building green should be applied [5].

(1) Trees (trees) are divided into large trees, the trees, small trees. Generally have a higher body large, branch grow neat, wood hard, long life. In the design, planting, they should be selected according to the purpose of building shapes, colors and planting space.

(2) Shrubs: Plant shrubs suitable arrangement planting trees in the middle of people, carried a single clump planting or planting within the range of interest can be. Shrubs can be pruned into various forms of artificial planting ar-

range it can also be used for hedges.

(3) Flower varied and colorful, are the most active elements of green building. Divided into: herbaceous flowers, woody flower, flower bulbs, flower stems Lin. Flower shape, color, aroma, body and taste, but life is short, flowering period is short, usually for emphasis decorated and lively atmosphere purposes. It can also be planted in pots for decoration purposes.

(4) Aquatic species have lotus, water lily, Wang Lin, Ping wind, false daffodils, turbot, windmill grass, its growth characteristics is life in the water, suitable for planting in the landscape pool arrangement and being.

(5) Vine (climbing plant): There are morning glory, firecracker flower, Passionflower lotus, Pu Tizi, Sparrow flowers and other varieties. Climbing and growth characteristics with its adsorption, design, layout, planted in flower gallery, above the flower. Also planted tiger climbing walls, etc. adsorbed on the wall growth, so building the wall forms a green barrier.

(6) Bamboo plant growth morphology is very beautiful nature, more planted in the building vestibule, atrium, after court, Fu Ya sold out high ethical realm.

(7) Shade plants: shade plants shade features, and green verdant, vibrant. Therefore, the design, layout, when its interior decoration of the building is appropriate.

(8) Lawn: a low herb, also covering the ground the best ground cover plants. It's not only ornamental value, but also practical function. It can be used to regulate microclimate, but also for people to rest purposes.

Green building and integration, both set off each other, and complement each other. Green building cannot be separated, and the greening of conduct and must be carried out after the building is completed. So, play architectural art must be compatible with the greening of art, function and role in order to perfect embodiment of art in order to form a complete crystallization.

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