

Study on the Cultivation of Ecological Concept and Design Ability in Landscape Environment Design Teaching

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Abstract: With the rapid development of economy, the state attaches great importance to the construction of ecological civilization and is committed to maintaining the natural ecosystem and protecting the environment. Therefore, the society has new requirements for landscape environmental designers' ecological awareness, and colleges and universities need to emphasize the cultivation of ecological concept and ecological design ability when carrying out landscape environmental design course teaching activities. This paper expounds the concept, value orientation and basic principles of ecological design, analyzes the current situation of cultivating ecological concept and design ability in curriculum teaching, and puts forward the construction of ecological design special courses and specific teaching methods, in order to provide corresponding reference for the teaching of landscape environmental design courses.

Keywords: landscape environment; ecological concept; design ability

1. Introduction

With the rapid development of society, people's awareness of environmental protection is constantly strengthened, and the requirements for environmental quality are gradually improved. In this context, the field of landscape environmental design has gradually attracted people's attention, and the concept of ecological civilization has gradually been recognized by the public. In the process of cultivating relevant design talents, colleges and universities should not only pay attention to the teaching of theoretical knowledge, but also pay attention to the cultivation of ecological concept and practical design ability, so as to improve the overall quality of talents and meet the actual needs of society. But in fact, at present, the teaching effect of landscape environmental design in some colleges and universities is not ideal, students fail to deeply understand the ecological concept, and the ability of ecological design needs to be improved. Therefore, how to cultivate students' spontaneous ecological awareness and ecological design ability in the teaching of landscape environmental design courses has attracted the attention of relevant professional researchers in colleges and universities ^[1].

2. Connotation, value orientation and principles of ecological concept and ecological design

2.1. Ecological concept and ecological design

"Ecology" originated from ancient Greece, which refers to residence and habitat. Ecology symbolizes the primitive state of all living things, and ecology focuses on the correlation between the living conditions of primitive creatures and their relationship with the surrounding environment. Just like today, people generally call healthy, beautiful and harmonious things ecological things.

Ecological concept refers to people's concept of things that may affect the relevant environment, and the research focuses on the relationship between human beings and their environment. Specifically, the ecological concept and characteristics of landscape environmental design include persistence, efficiency, circulation, diversity and comfort.

In a narrow sense, ecological design is considered as green design, while in a broad sense, the basis of ecological design is macro-systematicness. The design process must fully consider environmental factors and carry out research from the perspective of design. Ecological design contains two basic

contents. On the one hand, it reduces the interference to the environment and the loss of resources as much as possible to achieve the goal of sustainable development. On the other hand, the design tries to control the cost to improve the competitiveness and achieve the cycle of the system [2]. As far as the current global development situation is concerned, the essence of ecological design is human reflection on the development benefits at the expense of the ecological environment in the industrial development stage, which is one of the symbols of human civilization and progress.

2.2. Value orientation and principles

From the ecological point of view, landscape environmental design not only has functional characteristics, but also needs aesthetic communication effect and the responsibility of guiding people to pay attention to the ecosystem. At present, landscape environmental designers should establish correct ecological values, attach importance to the harmonious coexistence between man and nature, emphasize the construction of ecological civilization, abandon the traditional values that focus on short-term interests of human beings and improve the economic level as the sole purpose, promote the coordination between human development and environmental ecology, and achieve the goal of sustainable economic development. Under the background of ecological concept, the values of landscape environmental design no longer take human economic construction as the first priority, but restrict human behavior, minimize the damage of human activities to the ecological environment, and promote the coordinated development of human and ecological environment. In order to realize sustainable development, landscape environment designers should establish three concepts: ecological ethics, ecological values and ecological aesthetics:

(1) Ecological ethics mainly refers to the moral principles and codes of conduct for human beings to solve the problem of harmonious development between themselves and nature. Ecological ethics has the following four characteristics: first, social value is higher than individual value; second, it is obviously mandatory; third, it enriches the content of moral standards, not limited to the relationship between people; fourth, actively promote the harmonious coexistence between man and nature.

(2) Ecological values, which can be further subdivided into economic value, ecological ethics value and ecological function value. The so-called ecological values mainly define the values of the relationship between ecology and human beings, which belongs to the value embodiment in the field of philosophy. Traditional environmental design values take human production and construction as the core, which leads to the current natural ecology being damaged to a great extent. Future landscape environment design will inevitably take ecological values as the design center, emphasizing that human beings are a part of the earth's ecological circle. Designers need to shoulder the responsibility of protecting the stability and safety of natural systems, and pay attention to the maintenance of other species and individuals in the value system to ensure the integrity of the overall ecosystem [3].

(3) Ecological aesthetics. The aesthetic view of landscape environmental design must change the concept of emphasizing material satisfaction and the adaptation of environment and status, require respect for nature, attach importance to the combination of design aesthetics and natural environment, and take ecological aesthetics as the guiding ideology of design. Eco-aesthetics is essentially the fusion of ecology and aesthetics. Through long-term practical experience, we can know that beauty is caused by the attribute characteristics of physical objects, and everything with this attribute characteristic can cause people to enjoy beauty. The concept of eco-aesthetics begins by looking for things with this attribute in the ecological circle, with the aim of building a harmonious relationship between man, nature and society.

As far as the basic principles of ecological concept and design are concerned, the ecological evaluation of landscape environmental design needs not only formal analysis, but also comprehensive assessment from different aspects such as functionality, efficiency and ecological sustainability. In short, it is based on the basic principle of nature-oriented, and it is optimized to apply the principles of symbiosis, art and utilization.

3. The application of ecological design concept in landscape environmental design teaching

3.1. The implementation of ecological design concept in teaching

First, help students build ecological awareness. To some extent, students' life practice is determined by relevant theoretical study. Therefore, in the actual teaching of landscape environment design in

colleges and universities, the ecological concept must be taken as the primary premise to ensure that its design behavior will not be disturbed by traditional factors, and the ecological concepts and methods will be fully displayed in the actual design. Teachers should guide students to establish a correct concept of ecological civilization, so that students can have a more comprehensive and correct understanding of ecological concepts. In the actual teaching process, teachers should appropriately guide students to deepen their understanding of ecological values, infiltrate ecological design concepts and methods into the construction of ecological civilization, and improve students' ecological design ability^[4].

Second, carry out ecological practice teaching activities. The field of landscape environmental design not only needs to deliver more professional and excellent talents for the society, but also needs to actively innovate. In this way, the teaching quality of landscape environmental design specialty can be effectively guaranteed. Teachers majoring in landscape environmental design should not only infiltrate the concept of ecological design, but also guide students to integrate ecological design elements as much as possible in the design of practical projects.

Third, the case teaching method of ecological landscape environmental design. Teachers majoring in landscape design in colleges and universities should actively improve students' learning enthusiasm and lay a good foundation for cultivating students' autonomy by relying on teaching activities and actual cases in actual teaching activities. Only by relying on the integration of modern design teaching methods and ecological landscape design concepts to the greatest extent and actively creating a good teaching atmosphere can teachers realize the functional value and humanistic connotation of contemporary landscape environmental design and make the ecological landscape environmental design technology scientific and forward-looking. Moreover, in the teaching design stage, teachers should integrate a large number of ecological case teaching, and try to organically integrate theoretical teaching and practical teaching in the form of cases. In this way, students can realize the organic combination of ecological design concept, landscape environment design practice and contemporary space design techniques^[5].

3.2. The current status of cultivating ecological design concept and ability

Environmental design is an interdisciplinary subject that integrates art, science and engineering technology. It takes environmental planning and physical environment as the core design content of research, and through the integration of planning, design and implementation, the whole vertical system of environmental design is constructed. The ultimate goal of environmental design is to promote the sustainable development of human living environment, and the disciplines involved include ecology, architecture, sociology and landscape design. Nowadays, many colleges and universities in China include environmental design, and the curriculum structure includes general courses, basic courses, professional practice courses and professional core courses. Among them, the proportion of general courses is about 40%, the proportion of basic courses and professional core courses is about 40%, and the proportion of practical courses is about 20%. In the teaching of professional courses, courses such as landscape series design direction and indoor series design direction are generally the main courses, with detailed classification and wide coverage, and each knowledge point is independent of each other and basically distributed in a point-like plate-like manner. At the same time, with the help of practical teaching and experimental teaching, students are trained to fully show their personal design intentions by using different ways of reasonable expression, and finally realize the teaching goal of landscape environmental design. For the cultivation of ecological concept and ecological design ability in the teaching of landscape environmental design course, it is necessary to combine the regional and geographical environment, reasonably apply the contents of ecology, design and environmental science, and create an environmental system that meets the actual needs of human life, work and development, so as to finally achieve the effect of coordination between human living environment and ecological system, and at the same time ensure the inheritance of the essence of human history and culture. But at present, the teaching system of landscape environmental ecological design needs to be further improved because of the influence of university policies, resource conditions and social consciousness.

4. The cultivation strategy of ecological concept and design ability in landscape environmental design teaching

4.1. Establish special courses on ecological design

The key to the teaching reform of landscape environmental design education lies in the cultivation of ecological design concept, and teachers need to integrate the relevant course contents of ecological design

into the talent training program. The cultivation of ecological design concept and ability does not require students to memorize some conceptual theories in the course teaching, but must be grounded in the actual professional design teaching, combined with diversified practical landscape environment thematic design courses such as landscape design principles, residential landscape design, block landscape design, square landscape design and landscape thematic design. Teachers advocate moderate design in practical teaching activities according to design cases, and guide students to gradually develop the thinking of dealing with landscape environmental design problems from the perspective of ecological design. Finally, students will establish a clear design concept in future design work, implement the ecological design concept, actively explore low-impact landscape environmental design methods, and continuously improve their ecological design ability.

To build a reasonable curriculum combination and structure, always adhere to the Scientific Outlook on Development and show sustainable design, we must improve the curriculum system and reasonably increase the content of ecological design. It is necessary to strictly follow the idea of "theory-method-practice" in landscape environmental ecology teaching, and try to set up theoretical special courses before the second grade, including introduction to environmental science, ecological planning principles and landscape ecology, to help students build basic target concepts and design concepts. In the senior stage of university, it is necessary to systematically introduce ecological environment planning, ecological design methods and ecological practice into the teaching of landscape environment thematic design course, and at the same time design effective experimental teaching activities and project practice for students [6].

4.2. Attach importance to the combination of technical courses and ecological design

In the traditional teaching activities of landscape environmental design, the focus of teaching lies in the cultivation of the external image, functional characteristics and artistic sense of landscape. However, many students can't form real cognition and application because the courses of material structure, technology and technology are divorced from practical projects. Therefore, the courses of materials, structure and technology are usually the weak points in the knowledge system of landscape environmental design students. They overemphasize the effect of formal design, which may lead to relatively more material energy consumption, which is contrary to the ecological design concept. Although many colleges and universities have realized this and begun to attach importance to the courses of structure and technology, the actual teaching effect is not ideal. Knowledge points such as materials, technology and technology are important components in design work. If the landscape environment design itself lacks the overall consideration of ecological concept, it is difficult for design works and practices to achieve true ecology. Therefore, students should emphasize recycling and sustainability, consider regional and natural ecology, and take recyclable or degradable materials as the main design materials according to local conditions. In the practice of landscape environment design, the protection of natural landscape elements and ecosystems is very important. In the design practice, we should avoid damaging the above contents and minimize the loss of resources and other substances. Designers should make clear the value of natural resources, make full and rational use of natural resources in landscape environment design, effectively improve the utilization rate of resources, make them serve the environmental ecology and provide more possibilities for the sustainable development of the environment [7]. Teachers try their best to analyze successful cases of ecological landscape environment design for students in technical practice teaching, such as transforming some closed factories or abandoned sites, and restoring their destroyed soil, water and other resources through ecological technology, which has become a place for citizens to gather for leisure, entertainment and pursuit of market trends. In addition, designers should pay attention to the whole life cycle of environmental design, and minimize the resource consumption of design and implementation by improving construction technology and matching green ecological materials, so as to achieve the ecological management of the whole life cycle of landscape environment.

4.3. Strengthen the value of the natural environment to ecological design

With the improvement of the national economic level, people's material conditions have improved obviously, but it has also caused the distance from the natural environment to become increasingly alienated. Therefore, in practice teaching, it is necessary to strengthen the value and application of natural environment to ecological design, which is also one of the goals of contemporary landscape environment design. Teachers need to guide students to make clear the principles of ecological design, respect the natural environment of the design target, adjust measures to local conditions, scientifically use the

existing resources of the target, and build an ecological landscape environment that conforms to the actual use function and is rich in design aesthetics, so as to meet people's psychological needs of being close to nature. Therefore, landscape environmental design requires students to absorb creative inspiration from the natural environment, and take the buildings, water bodies and vegetation contained in the environment as an important standard to evaluate the quality of landscape environmental design. Various buildings in the landscape environment, that is, real scenes; Based on this, create an imaginary space for users, that is, a virtual scene; The space design created by landscape environmental elements can form an organic combination of virtual scene and real scene, that is, the traditional aesthetic artistic conception of combining reality with reality. This design form inherits the dialectical thought of "emptiness" and "reality" in Chinese traditional aesthetic concepts, and is the same as the goal of "Unity of heaven and man" in Chinese traditional humanities. Strengthening the value of natural environment to ecological design is also one of the necessary ways to realize ecological design of landscape environment [8].

5. Conclusions

With the continuous development of national construction and social economy, the ecological concept has penetrated into various fields, and the ecological design of landscape environment has gradually attracted people's attention and attention. As landscape environment designers, they need not only to master skilled landscape design ability, but also to be guided by ecological concepts. Therefore, teachers should pay attention to the integration of ecological concept of landscape environment design in teaching, and improve students' cognitive and practical ability of ecological design by setting up special courses of ecological design, attaching importance to the combination of technical courses and ecological design, and strengthening the value of natural environment to ecological design, so as to achieve the goal of talent training to meet the needs of society and industry.

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