Research on Innovative Methods of Landscape Design based on Big Data

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Abstract: With the development of economy society, the teaching of higher education in our country is facing a great opportunity period of reform and development. At present, the education and teaching reform with curriculum reform, teaching method reform and teaching content reform as the core has gradually entered a critical period. Big data is a data processing method based on data analysis. Big data is already widely used in many industries. From the application effect, the system based on big data can effectively improve the service level and capacity of various industries. Landscape design is an important branch of higher education in China. Under the background of big data, how to explore a suitable way for the development of landscape design specialty is a historical task for every practitioner.

1. Characteristic of big data

What is big data? What are the characteristics of big data? This is a fundamental problem in big data applications. Big Data is simply a generic term for massive amounts of data. But big data is not just a collection of big data. From B,to TB,PB,EB,ZB,YB and so on, with the development of technology, data storage capacity continues to increase. According to the statistics, people have come and gone to produce a total of 200 petabytes of text published. Since the printing technology. Since 2012, global publications have generally remained at 18 ZB levels. Big Data is based on this explosive growth of things, it is the total amount of data as a whole, but also represents a new way of data storage and processing.

The data processing under the big data must rely on the modern information processing means. Under the condition of modern information technology represented by computer technology, cloud computing, distributed computing and other advanced data processing and dissemination means provide a broad platform for the application of big data. The analysis and processing of big data can achieve the effect of real-time.

In general, big data is a system that integrates data acquisition, data analysis, data processing, data dissemination, and data feedback. The processing methods and means of the system can be customized according to customer needs, and the effect of data processing can also be displayed on a variety of platforms. The combination of big data and new media technology, can be boring, boring digital data to enrich the lives of pictures, video and other ways to show customers.

The big data system itself is an open system, it is not closed, it is not fixed. With the continuous development of technology, more and more advanced technology and means have been

incorporated into the big data system. This allows big data systems to take on a different look each year. The combination of big data and new media systems, big data and artificial intelligence systems is getting closer and closer, and the means and methods are constantly being developed and expanded.

2. Present situation and problems of landscape design teaching.

Landscape design is a practical, highly applied course. But at present, there are many problems in our landscape design major, not only in teaching idea, but also in teaching methods. The author is engaged in the related specialized teaching many years, regarding the author thought, its existence main question boils down as follow

2.1 Ossify teaching into a simple explanation of knowledge

At present, the biggest problem in landscape design teaching is that the teaching process is simplified into knowledge explanation. This phenomenon is mainly manifested in the teachers' lack of comprehensive understanding of the curriculum, viewing the landscape design teaching process only as a simple accumulation of knowledge points, while ignoring the rich scientific connotation of the curriculum system It completely separates knowledge from the technical attributes of a discipline. This kind of situation has not only the social reason, but also has its own cognitive reason. Under the tide of economy, the commercial interests have given birth to many fast-food culture and misunderstanding. Landscape design is considered by many people to be a minority specialty, without much economic benefit, and even some people think that learning this subject well will be of little use in the future. Some teachers, because of their single knowledge structure, often lay stress on the knowledge points of textbooks in teaching, and do not connect the links between the knowledge points so as to dilute the rich and colorful connotation of the subject itself. As a result, many students find the lessons boring.

2.2 The utilitarian learning purpose

The proportion of those who hold the utilitarian learning purpose is not small. Students from the beginning of the focus is not on learning the course itself, but the first consideration is to graduate good employment, there is no good way out, and whether can find a stable and decent work. Driven by this kind of utilitarianism, they naturally show little interest in what they consider to be of little use. Some of the landscape design teaching content as only to deal with errands. Everything is for the test and study. It is accustomed to taking notes in class, rote memorizing before the exam, and everything is fine after the exam. According to the statistical data, the systematic knowledge learning of college students in our country is generally at a low level, and some landscape design students are not even better than other liberal arts students in computer level. This is by no means an isolated phenomenon. For many students, the day-to-day, universal application of modern technology is still very weak until graduation. This potential effect may not be apparent in the short term, but in the long term it can be fatal to the development of the relevant majors.

2.3 The over-theorization of teaching materials

The over-theorization of teaching materials related to landscape design in Chinese universities has been a long-standing problem. Many scholars have made extensive and in-depth research on this issue, and have made certain explorations in both theory and practice. And it's working really well. At present, the teaching materials related to landscape design in colleges and universities are

based on abstract theory, rarely supported by actual cases. This mode is contrary to the law of People's understanding and the law of education and teaching. Because of the influence of history and system, the students of our country have been confined to a small range of knowledge since the beginning of their schooling. We do not deny the importance of theoretical knowledge here, but emphasize that we can not let the theoretical content and system constrain the motivation of students, shackle and affect the enthusiasm and initiative of students in learning.

2.4 The unscientific assessment system

The relevant assessment system for landscape design that we currently use is not tailor-made for the study of landscape design, but follows the traditional examination-oriented assessment and serves for examination-oriented education. Such an assessment system is neither reasonable nor scientific and has been widely criticized. The impact of this assessment model on students' learning is negative and negative, and it is easy for students to unilaterally learn the purpose of learning. The traditional assessment system is the most widely used in the assessment of landscape design students, and it is also the most urgent to break

2.5 Low teachers' overall quality

What kind of teacher is a good teacher, for this issue, there are a thousand Hamlets in a thousand people's eyes. For landscape design teaching, a good landscape design teaching teacher must first have a relatively comprehensive knowledge system, and at the same time have their own methods and insights on how to do a good job in education and teaching, rich in modern technology control and application level. As a kind of social science, landscape design teaching system originates from life, is higher than life, and it is the life each constituent synthesis. Therefore, the landscape design teaching itself is a more complex, it requires teachers to have a strong comprehensive quality, not only limited to the profession, and the subject. The problem of low overall quality of teachers is not only an educational problem, but also a social problem. How to improve the comprehensive quality of teachers is an urgent problem that the whole society has to face.

3. Landscape design innovation method under the background of big data

The big data is not only a technology, but also a platform. The landscape design based on big data completely abandoned the traditional education and teaching methods, such as research, field questionnaire and so on. The traditional way is time-consuming, laborious and inefficient, and students' practical ability can not be improved qualitatively.

Landscape design based on big data mainly brings into play the ability of efficient information collection and processing, and the level of information display is not at the same level as traditional methods.

3.1 The introduction of satellite map and GIS system.

The commercialization of satellite map in China has been gradually opening up. At present, the commercial operation mode based on satellite image and 3D satellite data has been growing steadily. The combination of satellite map data and Geographic Information System (GIS) can realize the multivariate quantification of big data.In landscape design, we can make full use of satellite map data and GIS system to realize the accessibility and all-weather real-time information acquisition. However, due to the limited conditions, especially the price of real-time satellite image is still very high. When extracting the specific geographic information of a certain area, we try to narrow the

range of data application according to the specific requirements of the design. Geographic Information System (GIS) is a graphic and graphical system designed and developed for geographic information. It is simple and easy to operate. At present, many colleges and universities in China have introduced the teaching mode based on satellite map and GIS into landscape teaching, which has achieved good practical application results.

3.2 The introduction of artificial intelligence technology

Artificial intelligence technology design has a wide range of applications in landscape. Artificial Intelligence Systems can do a lot of things that are difficult to judge by humans, or can not achieve accurate results. For example, artificial intelligence systems can accurately measure and read certain horizontal and vertical data, and artificial intelligence systems can assist in some jobs that are beyond human reach and even dangerous. At present, intelligent robot has been widely used in measurement and other fields. In the urban landscape design, because the conditions are not too harsh, so the application of artificial intelligence technology is not very popular. But in the harsh environment, the application of big data system can not be separated from the wide participation and decision-making of artificial intelligence technology.

3.3 The introduction of new media display technology.

The term "new media" has become familiar to many people over the years. But really defining new media is not an easy thing to do. The so-called new media, in a sense, refers to the current environment of all things media. In short, new media is more of an environment. New Media includes almost all digital media forms, including traditional network, network media, mobile media, digital TV newspapers and periodicals. New Media has interactive and timely characteristics, it can be a huge, diverse form of information between individuals and communities to spread seamlessly. New media has many advantages over traditional media. First of all, the new media is novel in form and vivid in image. New media is a kind of three-dimensional information transmission carrier and means of transmission. New Media combines various expressive contents such as sound, image, text, etc. In the process of transmission, it adopts the ways of color, light and shadow, text interaction, etc. The content of the dull plane is presented to the audience in a novel and vivid form. Secondly, the new media, a means of information, with a large amount of information storage and centralized display function. Finally, compared with the traditional media, the new media has a very powerful interactive function, which enables the new media not only to display rich content, but also to achieve multiparty point-to-point communication and interaction. The introduction of new media technology in big data systems can make landscape design feel refreshing

3.4 The introduction of the open teaching platform.

Under the big data mode, the teaching system and the landscape design system may realize the seamless docking. We can make a one-to-one connection between teaching points and points and actual landscape data through the application of communication technology and new media technology. Students and teachers in the open teaching platform client can real-time see the actual measurement data, the actual data map, the actual flow, including the final effect of the design. This open teaching system provides a new experience mode for teachers and students, and breaks the traditional teaching mode of a blackboard, a piece of chalk.

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