The Establishment and Development of Related Disciplines of Urban Ecological Planning in Macau Universities

-- Take the City University of Macau as An Example

Yile Chen1, a

1Faculty of Humanities and Arts, Macau University of Science and Technology, Macau 999078, China.
a chenyile1996@163.com

Abstract

This article explores and analyzes the establishment and development of urban ecological planning-related disciplines in institutions of higher learning in the Macau Special Administrative Region, and takes the city University of Macau's urban planning and design major, which first established this discipline as an example, to take personal experience, field research and comprehensive network The data is used to analyze in-depth the background and time of opening, the purpose of opening, the subject structure, the curriculum, the teaching method, the teaching staff, the foreign exchange and practice methods, etc., in order to summarize and summarize the current urban ecological planning of the Macau SAR colleges and universities. The current development of the subject, a comparative analysis of the similarities and differences between the subject and related subjects of inland urban ecological planning, expounding the influence, social participation and shortcomings of its subject and related urban ecological courses in Hong Kong and Macau and the entire Guangdong-Hong Kong-Macau Greater Bay Area, and Put forward the future development ideas and prospects of urban ecological planning related disciplines in the professional setting of colleges and universities in Macau, and put forward relevant views and feasible reference suggestions for them.

Keywords

Urban Planning Course, urban Ecology Course, Macau, City University of Macau.

1. Introduction

As far as China’s urban planning discipline is concerned, as early as 1952, it was presided over by Professor Jin Jingchang of Tongji University. The city planning major (four-year system) was first established in China, which was called "Urban Planning and Management Major" at that time. Plan teaching and research section [1,2]. So far in the 21st century, the discipline of urban planning is no longer a singularity that only stays at the level of the city for planning. It involves the combination of multidisciplinary and multiple training methods. The construction of society and ecological needs also make the establishment of urban planning disciplines gradually integrate with ecological disciplines, and through the protection and utilization of prior history, humanities, and natural resources, to create a beautiful and livable ecological habitat for mankind[3].

In the present or future society, what do the relevant disciplines of urban ecological planning need to do? What curriculum should be included in a more comprehensive urban ecological planning related discipline? And in the Macau Special Administrative Region, which is the 20th anniversary of its return to the motherland, what role will urban ecological planning related
disciplines or ecological courses play? In the future, what kind of urban ecological planning talents will be needed in Macau to drive the construction and development of the SAR? For these questions, based on the research and thinking of the first batch of students who have personally experienced the establishment of the city planning major in Macau, this article attempts to analyze and answer.

2. The Status Quo of Related Disciplines of Urban Ecological Planning in Macau Universities

2.1. The Similarities and Differences of the Urban Ecological Planning Discipline between Universities in Mainland China and Macau

As of 2018, according to relevant statistical data, a total of 226 majors related to urban and rural planning (including majors in urban planning) have been opened in mainland China’s colleges and universities, and a national professional steering committee for the discipline of urban and rural planning for colleges and universities has been set up to conduct subject evaluation and urban and rural planning. Professional construction of disciplines, etc. Most colleges and universities in mainland China that have established a major in urban and rural planning have five years of undergraduate study, and those who pass the examination are awarded a degree in engineering. Take South China University of Technology and South China Agricultural University, both of which are located in the Guangdong-Hong Kong-Macau Greater Bay Area. Both institutions of higher education have established urban ecology and environmental protection, urban and rural ecological environment and infrastructure planning, subtropical ecology and landscape, Courses or professional directions such as landscape planning and ecological restoration are available for study. In the early days, the mainland still named the subject after "urban planning". In recent years, it has catered to rural revitalization, coordinated urban and rural development, and is based on the national conditions. Most of it has been changed to "urban and rural planning". Before 2017, the "registered urban planners" also Has been changed to "registered urban and rural planners".

Compared with Macau, the world's third-largest economy in terms of GDP per capita, and one of the four major centers of the world’s gaming industry. Villages are rare in the Macau SAR, and more attention is paid to the local world cultural heritage and architectural heritage of Macau. The planning and construction of coastal cities, so the majors opened are still named "Urban Planning and Design". For the time being, only the City University of Macau has a Bachelor of Arts degree in Design. The third stage includes the direction of urban and landscape design, urban planning and design. The master's and doctoral courses include subjects related to urban ecological planning. Moreover, Macau belongs to overseas, and the academic qualifications belong to overseas students. The document system is adopted. Undergraduate study for four years, master study for two years, and doctorate study for three years. But apart from focusing on local urban planning, there is not much difference in the setting of course content.

2.2. The Status Quo of the Discipline of Urban Ecological Planning in Macau Universities

The Macau SAR has been returned to the motherland for the 20th anniversary, but the number of higher education institutions in the Macau Special Administrative Region is not huge. Local higher education institutions include the University of Macau, City University of Macau, Macau University of Science and Technology, Macau Polytechnic Institute, Institute of Tourism, Macau Security Forces Institutions of higher learning, Macau Jinghu School of Nursing, Macau School of Management, Chinese and Western Innovation College, and University of St. Joseph, but with the right to grant degrees at three levels of undergraduate, master, and doctoral degrees, only
the University of Macau, City University of Macau and Macau Three higher education institutions of Macau University of Science and Technology. In accordance with the construction of the Macau SAR and the national-level strategy of the Guangdong-Hong Kong-Macau Greater Bay Area, Macau's higher education institutions have gradually opened relevant subjects, but according to the current situation, they are still in the initial stage of exploration.

Through the search of the official websites of ten higher education institutions and the information on the courses offered by the Macau Higher Education Bureau, currently only St. Joseph University offers an undergraduate major in architecture (the 52nd issue of the publication on December 28, 2016) The first group "Official Bulletin of the Macau Special Administrative Region"), which involves urban landscape and environmental courses; and the only master and doctoral major in urban planning and design in Australia opened by the City University of Macau (the publication was published on February 27, 2017 The first group of the ninth issue of the "Macau Special Administrative Region Bulletin"), set up ecological city theory and practice courses, and recently undertook the National Natural Science Foundation youth project "Research on the Planning and Layout of Construction Land Based on Ecological Regulation Simulation and Spatial Mathematical Matrix" And the 2018 Macau Cultural Affairs Academic Research Scholarship "Research on Disaster Prevention and Management of Historical and Cultural Districts in Macau" and other topics on the ecology of Macau.

3. Discussion on the Establishment of Urban Ecological Planning Disciplines at City University of Macau

3.1. Exploration on the Subject of Urban Ecological Planning

Facing the problems of urban planning education and subject development under the trend of globalization, City University of Macau is studying its own situation and advantages, and proposing its own school-running characteristics to meet the needs of the development of social economy and science and technology, and to improve the quality of talents and market requirements. The City University of Macau explores the following aspects:

Start with education and cultivate comprehensive talents. The City University of Macau actively carries out various internal and external activities, jointly with universities around the world, to meet the requirements of rapid urbanization construction and to establish an academic status suitable for its own discipline.

Closely integrate the characteristics of urban ecological planning, organize the compilation of relevant theoretical textbooks and papers. Constantly summarize and summarize to promote the development of disciplines.

Generally speaking, students of urban planning and design must be creative and divergent thinking. The key is to adopt scientific education methods and what kind of correct guidance can be adopted to enable urban planning students to develop in globalization and Chinese and Western development. Under the two challenges of cultural exchanges, he has grown into a new generation based on the development of urban planning and design in the world.

3.2. Exploration on the Subject of Urban Ecological Planning

In September 2005, the 8th APSA Biennial International Conference was held in Penang, Malaysia. Many scholars from planning schools on all continents participated in the speech. The meeting raised a problem: the scale of planning departments in China and the West is too different. This means that the model of improving our developed countries is not perfect, and our purpose and methods for diversifying discipline development need further discussion. The discussion should combine the following characteristics:

(1) Characteristics of competition in the context of globalization;
(2) The characteristics of the historical transformation of the social structure;
(3) The development characteristics of information network innovation technology.

Under the background of imperfect urban planning theory and practice system, the development of urban planning discipline is worthy of discussion. There are many issues to be discussed, and one should not blindly follow the hot spots of the international academic circle.

3.3. Regional Thinking on the Subject of Urban Ecological Planning

Today's architecture and urban planning are in a period of "chaos", impacted by foreign cultures, and regional characteristics are losing. Facing this kind of cultural crisis, the educational responsibility and obligation of urban planning and design cannot be ignored. We must attach importance to the continuation of regional culture and develop our own culture. The most important thing is to start with education. The values, ways of thinking and cultural level of the new generation of designers are the key to the development of urban planning. If they are not careful, they will become "destroyers" of urban construction and "blockers" of regional culture.

The regional culture of Macau is very rich. Professional talents from different regions and different undergraduate backgrounds will fundamentally realize the diversified development of urban planning disciplines is one of the important links of the planning disciplines of the City University of Macau.

3.4. Establishment of Ecological Discipline of City University of Macau

The Master of Urban Planning and Design of the City University of Macau has set up a course of "Eco-City Theory and Practice". The teaching content includes the impact of urban rail on Macau and Zhuhai Hengqin Port; the solution to the waterfront city problem; how to transport and landscape Balance the population density and improve the environment; the Macau government attaches importance to the impact of hills on the city; the artificial islands at the Zhuhai port of the Hong Kong-Zhuhai-Macau Bridge and the planning and design direction of the new city of Macau, etc.

The curriculum combines the ecological and urban planning development of the Macau region, the theory and practice are combined, and the thinking and innovation are connected. Vigorously advocating ecological cities is an inevitable requirement for the development and evolution of modern cities, and it is also a need to promote sustainable urban green development. Therefore, in order to realize the coordination between urban economic and cultural development and ecological environment construction, the establishment of ecological subjects is indispensable for urban planning courses.

In the 2017 class, the lessons are taught in English by foreign teachers from Portugal, combined with the advanced urban planning theory and ecological practice cases brought by the Portuguese colonization, the mode of field research and classroom teaching is adopted to deepen the course content To understanding. In the courses in the 2018 class, the lectures are taught by local corporate engineers in Macau, combined with local ecological planning cases in Macau, to give lectures. Regardless of how the teachers are changed, the core of the teaching will start from the local urban ecological planning in Macau, and promote the subject to become a planning subject with local characteristics. The only drawback is that most of them are lectures, and the practical cases that students can experience are still relatively few, which leads to a lack of deep awareness of urban ecological planning related courses.

4. Conclusions and Future Prospects

Urban planning and design is one of the important subject areas of economic and social development. It undertakes important tasks such as the construction, development, social
service and physical form planning and design of a country's city. Urban ecological planning is an important branch link in line with the current national conditions. With the continuous development of modern social economy and the increasing demand for talents, the classification of urban planning disciplines continues to increase, which expands a broad platform for education. The discipline and specialty of urban planning and design requires practice and exploration in various aspects such as adapting to social development and diversified training goals, a school model full of local characteristics, and its own characteristic teaching system, so as to meet the needs of the broad social market and professional development Talent training. At present, the modern social environment is the object, the efficiency of land use and the rational planning of urban space are the goals, and the planning theory and development policy combined with local actual conditions provide support for the education and development of urban planning and design.

The establishment and development of the urban planning and design discipline of the City University of Macau, in addition to continuously absorbing the planning thinking and successful cases of developed countries, also presents the professional connotation and social practice of urban planning and design with its own development characteristics. In terms of theory, it integrates the framework of Chinese and Western urban planning theoretical systems; in terms of practical exploration, Macau has presented different types of urban designs in different periods, providing it with theoretical and practical places; in terms of organization and operation, the Macau government cooperates with schools and gives great efforts. Support and help. So far, the subject has not been opened for a long time, and it is still exploring a curriculum framework with its own characteristics. In the future, Macau will need talents in urban ecological planning related disciplines to plan and construct Macau, such as seawater intrusion caused by land reclamation, Macau’s waterlogging, urban disaster prevention, how to build a green, livable, low-carbon community in the new city reclamation area, etc., are all issues related to urban ecology that need to be resolved urgently. In the future, they will develop in the direction of multi-disciplinary background and multi-university cooperation.

References