

## Research and Practice of Studio Mode of Teaching in Local Universities

—case study of profession of urban and rural planning

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**Abstract**—Taking the practical teaching of the profession of urban and rural planning in local universities as object of study, this thesis elaborates the history and current situation of studio mode of teaching, and puts forward an applicable practice-oriented teaching mode - studio mode of teaching adaptable to local economic development. A practice-oriented studio teaching system is to be built through the setting of research studios, the studio mode of teaching, the organization of the teaching team, the configuration of environment devices, as well as quality assessment of studio teaching, and so on.

**Keywords**—Studio; mode of teaching; rural and urban planning

### I. INTRODUCTION

The rapid development of local economy has brought unprecedented development opportunities for the urban and rural planning industry; therefore, more application-oriented talents with innovation and practical ability are required to be cultivated by local universities to meet the social needs of professionals in urban and rural planning. Relying on the studios and led by professional teachers, the studio mode of teaching takes auxiliary teaching and undertaking of technical projects as main tasks. By integrating production, learning and researching as a whole, it is the teachers who will guide the students to undertake and complete the engineering design projects. Therefore, the studio mode of teaching is the useful complement to build a practical teaching-oriented university, as it is such a teaching mode that ultimately enables the students to improve comprehensive professional quality and practical ability [1]. It was created to meet the development of the times, as such flexible and efficient teaching mode will become the major development trends on future professional education of design.

### II. HISTORY AND CURRENT SITUATION OF STUDIO MODE OF TEACHING

#### A. History of Studio Mode of Teaching

The studio mode of teaching came into being in Staatliches Bauhaus, Germany in the early 20th century. Taking the apprenticeship system as basis and emphasizing bringing teaching into the society, the school combined school education to social production, which required students to improve both theoretical attainments and practical abilities [2]. Focusing on developing the training on students' skills, such mode of teaching has pioneered the modern design education and made outstanding

achievements. Since then, a number of universities in such developed countries as the United States, the United Kingdom, and Finland began to make adjustment and reform in teaching mode according to that of Staatliches Bauhaus. During the transformation from workshops to studio, their education modes have the same features, i.e. combining teaching to social practice, school to enterprises, and production to learning and research.

It is in the 1950's that the universities of China began to try the teaching reform of studio system in the practice of higher art education. At the beginning of this century, a number of universities in such areas with more developed market economy as Shanghai, Zhejiang, Shenzhen, and Jiangsu, tried to introduce the studio mode of teaching into their original teaching system, by taking the project as core, the studio as teaching platform and carrier, and object-oriented method as a means to complete the teaching and management work. It not only facilitates the completion of "double-competency teachers", but also materializes the linkup of school learning with social employment, which has provide valuable ideas for the reform and practice of universities in the new century.

#### B. The Current Situation of Studio Mode of Teaching

Nowadays, the art and design education all over the world takes the studio mode of teaching as the main tool, as it aims to develop the students' creative ability practically. The studio mode of teaching, as an apprenticeship system in modern education, generally exists in the stage of postgraduate teaching. Currently, the development of undergraduate education of architecture and urban and rural planning professions in universities are booming. How to improve teaching quality, overall ability, and practical capacity of students has become the focus of the education of urban and rural planning profession. Domestically, the studio mode of teaching has been implemented in such application-oriented professions as art design, environmental design, architecture, and urban and rural planning in many major universities; however, due to the restrictions of teaching conditions, teaching teams, and hardware facilities in local universities, such teaching mode fails to be widely promoted. By linking up with the credit system, improving the elective system, promoting individualized method of instruction, and developing students' personality, the studio mode of teaching not only facilitate the all-round development of high quality engineering talents with innovation and practical ability, advancing teachers' professional level and overall quality, but enhancing the students' teamwork spirit during the

learning [3]. Therefore, the establishment of studio mode of teaching in urban and rural planning profession of local universities will be conducive for the training of high level urban and rural planning personnel for local economic development.

### III. PRACTICE OF STUDIO TEACHING SYSTEM ON URBAN AND RURAL PLANNING IN LOCAL UNIVERSITIES

#### A. Construction of studio mode of teaching

The studio mode of teaching on urban and rural planning is a teaching mode combining professional project practice to teaching process. Taking the actual needs of the urban and rural planning industry as the starting point, it enables the students to come into direct contact with the actual work case and work mode of company. Then, the project shall be completed by group discussion and collaboration in accordance with specific work flow and project requirements [4]. The teaching team shall select appropriate project to make teaching arrangements according to the teaching program, complete real projects on regulatory detailed planning, urban design, concept planning and design, and so on, or take a theme design contest as the target to be completed by the studio, and change the traditionally enclosed teaching system. Under such mode, the teacher's instruction, the exchanges between students, and the professional practice highly consistent with the actual job, enable the students take initiatives to adjust their own knowledge and ability structure, learn to think and do creative work in exploration, and acquire valuable experience. According to the industrial norms and standards, the studio should be equipped with working tables, chairs, multimedia devices for program presentation and teaching, computers, drawing boards, printers, and related professional books, and other professional equipment. As the students in the first year of university, regardless of their profession, should learn the foundations courses, all the students above the second year of university may apply to enter the studio, although there are basic requirements for students' knowledge structure before admission. New rural studios, constructive planning design studio, and conceptual planning design studio have been set up for the urban and rural planning profession in accordance with the career direction of employees in combination of the characteristics of local universities. All the professional courses of the students are to be taught in studio mode, and an independent teaching team shall be responsible for a studio. Corresponding teaching program shall be formulated in accordance with the capability requirement of work positions and the basic ability of students.

#### B. Formation of Teaching Teams Under Studio Mode of Teaching

The teachers of the studio must possess necessary research and design capabilities. Generally speaking, a teaching team of the studio is usually composed of a number of teachers with primary and intermediate titles who are led by one with senior professional title. In the process of project teaching, besides imparting knowledge, the role of

the teacher has been converted to general chief of project design. Such conversion requires the teachers to constantly improve their knowledge structure, broaden the field of knowledge, including professional theories, professional practice, and project management capabilities. The studio mode of teaching requires teachers to make personalized training programs for different students, and to focus on the improvement of students' comprehensive quality while teaching professional knowledge. The studio mode of teaching is of great significance to improve the professional level and ability of teachers, as it combines teaching to scientific research.

Once the studio project is formulated, we will take measures to develop the team for teachers. Firstly, in the teaching teams composed of institute teachers and industrial experts, an advisor-responsibility system will be adopted. As local universities are mostly made up of several schools with different characteristics and levels, the teachers are of uneven capacities. Due to the obvious subdivision of subject branches, some teachers lack experience in production practice; therefore, the projects in studio teaching have higher requirement for teachers' professional and technical capacity. Thus, we require teachers above lecturer title with competent professional and practical abilities to fully take charge of work in the studio; on the other hand, invite local industrial experts as part-time teachers to participate in the teaching management of the studio. However, the teaching team of the studio must have the participation of young teachers who are guided by senior teachers, so that the young teachers can enrich themselves and improve their own professional abilities through practice. Secondly, as there are limited human resources in the local can be qualified as studio teachers, therefore, we strongly advocate to make full use of the existing resources in teaching. Meanwhile, select young backbone teachers to participate in relevant training and learning of relevant industry organizations, and require studio teachers, especially young instructors to practice annually for one month or two in enterprises or industries. We can truly implement studio teaching by strengthening the teaching team construction through these measures.

#### C. Configuration of Environment Equipment

Firstly, the construction of urban and rural planning studio can take the actual situation of local universities into consideration by establishing an independent yard similar to experimental laboratory to meet the requirements. The size of the studio should be determined in accordance with the numbers of research fields of studios, but normally, no less than 60m<sup>2</sup>/room. Secondly, in addition to the area requirements, the studio also should create a teaching atmosphere, for example, a variety of presentation data should be put up in specific areas, so that students can experience all stages of the design and have creative inspiration at any time in such studio. Finally, the studio should be equipped with a variety of laboratory equipment necessary for designs. With the development of computer and multimedia technology, the design means of urban and rural planning has been inseparable from the computer.

Therefore, at least a server with data backup systems, 4-6 computers for teachers and students to design and matching computer desks should be equipped in an independent studio. In order to facilitate the panel discussion, a working table can hold 6-8 people as well as a multimedia projector are also needed. Due to the particularity of urban and rural planning, it is often necessary to conduct field survey at construction site; therefore, digital cameras and other basic surveying instruments, as well as some professional storage devices are also necessary. In the later stage when the design is completed, a laptop and a laser pointer, as well as other equipment are necessary when reporting the programs; in addition, a color output device with A3 print format are required for the production of design results and texts. In addition, some professional books on computer installation, design software information, and urban and rural planning are indispensable.

#### *D. Teaching Quality Evaluation and Achievement Exhibition*

The most important aspect of studio mode of teaching is the evaluation of teaching quality. The teaching teams shall evaluate each stage of the students in the implementation process of the project, such as program development of the project, production process, design ideas and themes, norms and standards, as well as progress of work and work attitude, give reasonable suggestions and improvements, and at the same time, proceed a comprehensive scoring. We should put the appraisal and evaluation emphasis on students' integrated competence in knowledge, the ability to analyze and solve problems, as well as design practical capacity and teamwork spirit.

Students' achievement exhibition and comprehensive evaluation of project teaching is also an important part in the entire process of studio teaching, as well as a method to determine if the students can meet the learning objectives. The assessment is not used to distinguish the students, but to encourage the students do better in learning, as project teaching focuses on the whole process of teaching. Assessments are generally divided into personal assessment, peer assessment, and teachers' assessment. In addition, the activities of achievement exhibition are also necessary in studio teaching. First of all, it is a kind of academic exchange between the studio and the outside world, as well as a platform to exhibit achievement and to make up the shortfalls. The achievement exhibition may enhance students' sense of honor; on the other hand, the exchange with the outside world may find out and solve problems. In addition, it is also a means for the studio to conduct public programs. Through achievement exhibition, more students may know about the studio, meanwhile, more enterprises may realize the students' professional ability. This has provided foundation and promotive opportunities for the studio to undertake more and larger projects in the future. On the other hand, such achievement exhibition plays an active role in enhancing school's reputation, cultivating more outstanding design talents, recruiting reserve students, and establishing new practicing and teaching bases.

#### IV. CONCLUSION

As a new-rising teaching model integrating teaching, researching, and production as a whole, the studio mode of teaching breaks the old teaching system in practical application by materializing the linkup with the credit system and perfecting the course selection system, which is conducive to individualized method of instruction and the development of students' personality, and beneficial to the all-round development of high-quality engineering talents with innovative spirit and practical ability, and helpful to the improvement of teachers' professional skills and overall quality and enhancement of students' teamwork spirit in learning.

The practice of studio mode of teaching in local universities has powerfully proved the increasing importance of such teaching mode in deepening teaching reform, highlighting the school characteristics, and enhancing the qualities of talents. It emphasizes a comprehensive training of the students' personality, knowledge, quality, and ability, as well as a better way for "double-competency teachers" [5]. Noteworthy, a principle of "bi-lateral participation with complementary advantages for mutual benefit" should be followed by the studio and the local enterprises in the operation course of the studio, during which the universities may combine to enterprises and market jointly to train more talents with high-quality and high-skills. Such studio mode of teaching has provided a good operation model for the exploration of the talent cultivation mode combining learning and working. The practice in the studio not only improves the students' employability and competitiveness, but also lays a solid foundation for students' work after graduation.

#### ACKNOWLEDGMENT

The research fund for the project comes from the funding program for research projects of Wuhan Education Bureau, named "Research and practice of studio mode of teaching in local universities taking the profession of urban and rural planning for example".

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