

Discussion on Teaching Reform of Construction Drawing in Interior Design Specialty

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Abstract—At present, there are many problems in the construction drawing teaching of interior design major in colleges and universities, such as being unfamiliar with drawing specifications and design related dimensions, interior decoration materials, construction technology, construction knowledge reserve is not enough, drawing ability is not up to the requirements. In view of this situation, it is necessary to reform the relevant drawing courses, train the teachers' practical skills, introduce the construction drawing teaching into the actual projects, and train the construction drawing ability through the whole teaching system.

Keywords—University, Interior Design, Construction Drawing, Teaching Reform

I. INTRODUCTION

Interior design is a subject separated from architectural design and closely related to practice. Interior design not only requires designers to have good ideas and ideas, but also requires that these ideas and ideas must be able to be translated into objects. This requires a large number of practical operations to complete these ideas, complete and accurate construction drawings is the premise to achieve design ideas.

Colleges and universities aim at cultivating "higher technical applied talents" and pay more attention to cultivating students undefined skills and application ability. For the interior design major in colleges and universities, the cultivation of drawing ability is an important part of teaching. According to the employment situation and the feedback from employers in recent years, it is difficult for students to "connect seamlessly" with enterprises after graduation. Therefore, it is necessary to reform the teaching of interior design specialty in colleges and universities, and the teaching reform of construction drawing is an important link in the teaching reform of interior design specialty.

II. THE IMPORTANCE OF CONSTRUCTION DRAWING TEACHING

A. The Position and Function of Construction Drawing Design in Interior Decoration Project

At present the routine interior decoration project operation process is generally: by the designer and its design team to listen to the views of Party A; the completion of the project design, this time generally by the effect of the form of performance, submitted to Party A for examination; After the examination and approval, the project deepening design is carried out, and the deepening designer draws the complete construction drawing according to the designer undefined design plan; the project budget personnel obtain the accurate project budget through the construction drawing; the construction side carries on the construction according to the construction drawing; After the completion of the construction, draw the completion of the plan to Party A for engineering acceptance.

For the whole interior decoration project, construction drawing is indispensable. First of all, in this process, the drawing of the construction drawings is related to whether the designer undefined intention can be fully understood by the construction side, which directly affects the completion effect of the project. The designer undefined design plan only makes the general design orientation of the project, and many specific details need to be further supplemented by the designer. If there is no complete, accurate construction drawings, only rely on the design drawings, the construction will not be able to carry out construction. Secondly, the project budget personnel must determine the cost of the project through accurate and detailed construction drawings, so as to effectively guide the construction and control the cost.

B. The Position and Function of Construction Drawing Teaching in Interior Design Specialty of Higher Education

Some opinions of the Ministry of Education on improving the teaching quality of higher education in an all-round way are pointed out: "the goal of talent training in higher education is not only to train theoretical talents who are excellent in science and technology, but also to train them to adapt to production, construction and management." Serving the first line of advanced technical and applied professionals. Colleges and universities train high-end skilled talents, pay attention to cultivating students undefined practice, application ability, and make use of the laws that have been discovered to provide direct services to the economy and society. "

From many years of teaching experience in interior design major, graduates of interior design major in colleges and universities are mainly engaged in interior decoration engineering design, architectural decoration engineering design and other engineering design for large, medium and small decoration engineering companies, design institutes, etc. Work in construction, management, etc. There are three types of jobs for interior design students after graduation:

First Draftsman: mainly responsible for the basic work of design, such as drawing construction drawings, organizing construction documents, etc.

Second Designer: a certain innovative design ability, a relatively good performance of the program and oral presentation ability, can communicate with customers, skilled in the design process, can independently complete small and medium-sized interior decoration design projects.

Third Constructor: familiar with the interior decoration project construction process and various construction technology, able to carry out small and medium interior decoration project management and have a certain capacity of site design.

In view of the actual situation of our school, more emphasis on students undefined skills and application ability. It is one of the problems that ordinary colleges and universities have been exploring how to make students quickly integrate into the post after graduation and realize "zero distance" employment. According to the employment situation of graduates in recent years, most students are cartographers and constructors for the first time. Both jobs require less professional competence than designers, and students begin their work with the most basic construction drawings. Because if you want to become an excellent designer or project manager, you must be honed at the construction site and understand the materials, construction techniques and construction structures commonly used in the design from the construction site. Understand a series of processes from design to construction, which are the basics of construction drawing. It can be said that construction drawing is a basic skill that interior design practitioners must master. No matter what kind of jobs students choose, they must have a solid ability to draw construction drawings. Therefore, construction drawing teaching is a very important link for interior design teaching in colleges and universities.

III. PROBLEMS IN CURRENT TEACHING

A. *Problems in the Specification for Drawing Construction Drawings*

Before 2012, there was no special drawing standard in the interior design industry. The architectural design mainly involves the exterior facade of the building, the division of the large space inside the building and the design of the peripheral supporting facilities, while the interior design is specially designed for the space division and interior decoration of the building, and the construction drawing has different objectives. Some details are not listed in the building drawing code. This resulted in a long period of time, the interior decoration industry drawings are very chaotic, each company has its own independent set of drawing model, the drawings of different companies are different, causing certain difficulties to the construction of the construction. Therefore, the Ministry of Housing and Urban-Rural Construction promulgated the Standard of Interior Decoration and Decoration drawing (JGJ/T244-2011) on March 1, 2012. The promulgation of the new standard makes the interior decoration industry have a unified drawing standard.

For the teaching of interior design specialty, before the new drawing standard was issued, the teaching of design drawing was always based on the building drawing standard, and the teaching materials were also compiled on the basis of building drawing code. After the promulgation of the new Standard of drawing for Interior Decoration and Decoration of Housing, although there is a new definition of the standard for drawing in the interior decoration industry, due to the relatively short time of promulgation, there are almost no textbooks written in accordance with the new standards on the market at present. This to interior design specialty construction drawing teaching has produced certain influence.

B. *The Connection between Design Drawing Course and CAD Software Course*

As a basic course in the teaching of interior design construction drawing, the course of design drawing aims to make students master the basic drawing standard and can draw the standard indoor construction drawing by hand. The interior decoration construction drawings in interior decoration enterprises are all drawn by computer. The computer drawing method is very different from the traditional manual drawing way, such as the setting of line width, the setting of printing proportion, the setting of drawing frame and so on. This is often the case in teaching: although students learn the drawing specification, they will draw the standard design drawing by hand, but once they use computer drawing, there will be many problems. Therefore, how to seamlessly connect the design drawing course with the CAD software course is always a difficult point in the construction drawing teaching. The teacher of CAD software course should not only teach students the basic operation command of drawing software, but also teach the students the concrete operation method of drawing construction drawing by computer in combination with the drawing specification.

C. *Lack of Knowledge of Decorative Materials, Construction Techniques and Construction Structures*

From the teaching practice for many years, the knowledge of interior decoration material, construction technology and construction structure is always the weak link of students. Familiarity with materials and understanding of construction technology and construction structure are the basis for drawing construction drawings correctly. A complete set of interior decoration construction drawings must clearly indicate the materials used and the specific construction structure. This knowledge is not fully understood by the students in books and must be observed and studied in the field at the construction site. It is precisely because of the lack of field inspection and study on actual projects that some students are still full of errors, let alone precise and rigorous, in drawing drawings up to the graduation stage. In particular, some nodes, drawings, profiles and other drawings are more wrong, making it difficult for readers to understand the contents of the drawings. This makes it difficult for students to participate directly in company projects after graduation and often take a long time to adapt. Higher

vocational colleges strongly promote the cooperation between schools and enterprises. The social practice is for students to enter the front line of production and contact with the real working environment so as to understand the real production process.

IV. TEACHING REQUIREMENTS

A. Develop the Ability of Map Recognition and Drawing

Knowledge of drawings and drawing ability is the basis of interior decoration construction drawing. Construction drawing drafters must be able to read the building drawings, air conditioning plumbing drawings, understand the original building structure and pipe network layout. These teaching contents should be covered in the course of design drawing. Drawing ability refers to the ability of drawing professional interior design construction drawing with drawing software, which involves the teaching content of software operation and drawing specification. Students must lay a solid foundation in these areas.

B. Grasp Drawing Specification and Design Related Dimension

The process of deepening the designer undefined plan and design drawing into a complete set of construction drawings is not only a continuation of the scheme, but also the first consideration of whether the design scheme can be carried out smoothly. Drawing drafters must use their own professional knowledge to perfect the scheme, to examine the implementation process, construction and details. Therefore, the construction drawing personnel must be familiar with the relevant national norms and standards of interior design, such as drawing code, building fire prevention code and so on. Also must remember the interior design commonly used dimensions, such as furniture dimensions, staircase dimensions, hallway dimensions, so that the design can be expanded and supplemented.

C. Understand Common Decorative Materials

Complete interior decoration construction drawings must indicate the materials used in all parts of the interior space. In drawing the construction drawings, we should not only have an understanding of the materials used, but also consider the cost of the project, whether the materials to be used are appropriate and, if the cost is too high, whether other materials can be used instead. This is a professional construction drawing deepening the designer must have professional quality.

D. Understand the Concrete Construction Technology and Construction Structure

In the drawing of the construction drawing, the nodes, sections and samples must be drawn in case of not clearly represented. These drawings must clearly indicate the interior decoration structure. Therefore, in the teaching process, let students understand the interior decoration construction technology and construction is an important link in drawing construction drawings.

V. SUGGESTIONS ON TEACHING REFORM

A. Reform of Related Cartographic Course

The drawing course of interior design construction plan involves design drawing and AutoCAD software course. From the previous teaching, the course of "Design drawing" is arranged before the AutoCAD software course, mainly teaches the related drawing standard of interior design, and trains the students undefined ability of recognizing drawing and drawing, and the students undefined homework is mainly in the form of hand drawing. Now all interior decoration companies no longer use hand-drawn form to draw construction drawings, but use AutoCAD software to draw them, which is usually used only for the expression of the sketch stage. The way of drawing construction drawings is very different from that of AutoCAD software. Therefore, we can try to combine the course of design drawing with the course of AutoCAD software to reduce the proportion of class hours taken by hand drawing. In the course of teaching AutoCAD software, taking the Standard of Building Interior Decoration and Decoration drawing as the standard, we use more classes to teach how to draw construction drawings with computer software.

B. Adjust the Teaching Progress and Make the Training of Drawing Ability Run Through the Whole Teaching System

The cultivation of drawing ability of interior design specialty is not a course that can be completed. It involves many courses such as design drawing, CAD software, interior decoration material, indoor construction technology and construction, etc., which should run through the whole teaching system. To this end, we should adjust the arrangement and progress of the current professional course design, solve the basic knowledge of map and drawing ability in the professional basic course, and let the students understand the decorative materials first in the specialized course. In the course of professional design, let the students understand the whole construction drawing process, and be able to draw the corresponding, complete, different types of interior space design. Standardized interior decoration construction drawings; finally, in graduation design link centralized inspection student undefined construction drawing ability.

C. Teachers should have Practical Experience in Project Operation

In recent years, the Ministry of Education has been advocating college teachers to enter enterprises for production practice. It is particularly important that teachers have a first-line working experience in colleges and universities that emphasize skills.

The drawing of interior decoration construction drawings belongs to the category of skills, which must be practiced over and over again. For the teachers, only after many years of actual project operation, can the interior decoration construction drawing design process, content and drawing method, as well as the difficulties that may be encountered in the drawing process have a deep understanding and deep understanding. Only in this way, can we give students better guidance in the teaching process. The practical operation items in which the teacher participates can be taught as a case, which makes the students feel more intuitively about the drawing of the interior decoration construction drawing.

Secondly, interior design as a fast-updated subject, new materials and new construction technology has been continuously developed. The education of interior design specialty must always connect with the market, otherwise it will be eliminated. This requires teachers to enter the enterprise at regular intervals to carry out practice. Only in this way can the teacher undefined professional level keep pace with the times, and only in this way can the teacher bring back the most novel design ideas and the most advanced discipline theories. In order to train the rapid integration with the market, "technical skills" talent.

D. Introduction of Construction Drawing Teaching with Actual Project

Interior design is a very practical subject. All courses of interior design should be introduced into the teaching process with practical items. The interior design specialty construction drawing teaching is no exception, can use the real case as the teaching content, let the student carry on the field survey; draw the original building map; participate in the demonstration of the design plan; Through the investigation of material market and actual project, the materials involved in the project and the construction technology that may be used are found. Finally, the drawing of the whole interior decoration construction drawing is completed. With the introduction of actual projects into teaching, students can enter the actual construction site, so that students can have a deeper understanding of the process and method of drawing construction drawings.

VI. SUMMARY

For the construction drawing teaching of interior design major in colleges and universities, it is necessary to constantly put forward new requirements, accumulate experience in practice and innovate constantly in teaching, in order to cultivate a rapid adaptation to the work position. The students who meet the requirements of the job really realize the "seamless docking" between the school and the enterprise.

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