

Reform and Practice of Introducing Project Method into "Architectural Drawing" Assessment Method

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Abstract: This essay takes the course of "Architectural Drawing" as the research object, and puts forward some problems existing in the course assessment. Meanwhile, this essay proposes the improvement methods to explore a more suitable curriculum assessment and evaluation system for professional training objectives.

1. Introduction

"Architectural Drawing" is a compulsory and practical basic course for students majoring in civil engineering and related majors. It mainly trains students' spatial thinking ability, reads and draws professional engineering drawings, and is the basis for learning follow-up professional courses. It has great influence on curriculum design, graduation design and future work. Examination is a very important link in the teaching process, and is also the main means to test the teaching effect. With the reform of teaching content, teaching methods and means, the traditional written examination method also shows the disadvantages of lack of accuracy and authenticity ^[1], which cannot fully reflect the students' mastery of the whole knowledge and deviates from the training goal of focusing on practice in the curriculum. Therefore, it is necessary to reform the existing performance examination method.

2. Research on the reform of assessment methods

In order to effectively monitor the learning process, assessment and evaluation can be carried out in various aspects and stages. Through periodic examination and diagnosis, summarize the problems and improve the promotion. According to the analysis of the specific teaching process, each stage collects the data of students in the aspects of theoretical knowledge, operation skills, innovation ability, learning enthusiasm, etc., quantifies all kinds of judgment elements, and evaluates them in a hierarchical and diversified way ^[2]. After the reform, the assessment method adopts the project method. According to the teaching progress plan, it is divided into three major projects according to the building construction drawing, structure construction drawing and equipment construction drawing, and sub-projects are appropriately set according to the difficulty degree of the content included in the major projects. The selection of the project is based on strengthening the cultivation of students' reading and manual drawing, leading to improving students' interest in learning and stimulating students' reading patterns with work tasks. The design of the project not only closely combines the actual work of the enterprise, but also meets the actual needs of teaching reform. Make full use of the teaching practice base inside and outside the school, collect a large number of drawings of buildings under construction, and arrange students to the construction site to read engineering drawings, so that students can deeply realize the importance and practicability of drawing recognition and increase perceptual knowledge ^[3].

3. Project-based assessment system

The overall idea of the new project assessment system is: to assess students' professional skills and professional abilities, which can reflect the learning process of students and stimulate students to learn professional knowledge; Diagnose students' problems in learning and adjust and improve teaching methods in time; A comprehensive understanding of students' learning process helps students to realize their strengths and weaknesses in learning methods and thinking habits. Pay attention to their cognitive level and their feelings and attitudes in the learning process.

Under the new assessment system, the performance assessment criteria are: 40% of the normal performance including attendance and the completion of the problem book, 60% of the phased and procedural project training results. The final closed-book examination is cancelled and replaced by phased project training results. The traditional theoretical examination mode is broken down and the assessment is conducted in the form of open and large-scale homework. The students can complete the work of drawing, drawing or changing drawings in the studio within a period of time, which not only tests their drawing ability, drawing reading ability, but also assesses the comprehensive mastery of basic knowledge. The assessment is comprehensive and applicable. Through periodic practical training tests, the learning effects of students at various stages are tested, and the abilities of students at various stages are specifically assessed. At the same time, students are urged to actively and effectively carry out periodic summary to promote the development of students' professional skills and professional abilities. Promote students to attach importance to each teaching link and master the teaching contents step by step; Promote the formation of students' active learning ability, autonomous learning ability and lifelong learning ability.

Phased and procedural project training assessment results accounted for 60% of the total results. Such a large proportion carries out all-round and multi-angle examination on students' learning process, thus improving their enthusiasm for learning architectural drawing. In the whole learning project, students' level and ability can be directly reflected, and students' knowledge mastery, skill operation, reform and innovation, emotion and attitude can be comprehensively evaluated by means of students' self-evaluation and teachers' evaluation.

Each project is carried out step by step from simple training of individual ability to application of comprehensive ability. Each training sub-project refers to the project of skill competition, and each project comes from actual engineering project. A complete set of construction drawings is used to carry out skill training of the training project so as to realize the true task. Considering that the course is offered in the first grade, students do not know much about architecture, and it is difficult to read and draw architectural engineering drawings, so the drawings are all the existing types of buildings on campus, such as laboratory buildings, teaching buildings, dormitories, etc., in order to more intuitively understand the content and expression characteristics of architectural drawings. Different assessment contents are designed for each project. The content design is divided into two modules, one for professional knowledge training and the other for students' professional ability training. In the content design of professional knowledge, it mainly depends on whether the students master the knowledge of each project, including drawing standards and the use of tools, while completing the project. At the same time, each project will have the ability to read and read drawings. In terms of the assessment content of professional ability, it has set up self-management ability, team cooperation ability, problem-solving ability, innovation ability and self-improvement ability. The evaluation of students' ability to find and solve problems mainly depends on whether they can think about problems voluntarily, whether they can choose appropriate methods to solve problems, and whether they can form the habit of reflecting on solving problems themselves.

In the process of implementation, the evaluation subjects and methods are diversified, and the methods of self-evaluation and teacher evaluation are adopted to give full play to the role of self-evaluation, so as to better realize the goals of skills and ideological and moral education. After each project training, a training project evaluation form can be established so that students can fill in the evaluation results on the computer after completing the practice. The self-assessment results will be scored by myself according to the content of the training, and the gains and losses of this class will be written down, and what progress has been made. After implementation, it is found that

self-assessment can improve students' self-management ability, improve their enthusiasm for learning and their responsible attitude. Monitoring can be implemented in teaching, and teaching objectives can be adjusted at any time to make students understand the importance of the process. Learning is to learn knowledge and skills, not to cope with examinations. Before students hand in their homework each time, the teacher selects excellent homework and displays them. All the students are required to refer to self-criticism and self-revision, find out the problems, and the teacher will give a unified explanation in class. This method greatly reduces the workload of teachers, thus giving them more time to prepare lessons. At the same time, students' learning initiative and consciousness are greatly improved. Students help each other and learn from each other and jointly improve, thus strengthening students' awareness of autonomous learning. Each project is measured by grade system, and oral examination and results are combined in the final evaluation of project training results. Teachers read each drawing handed in one by one, refer to the students' self-evaluation, and score according to the drawing quality scoring standard of Architectural Drawing. They mainly give objective evaluation from the following aspects: the standardization of tools used in the drawing process, line type, dimension marking, various legends and whether they meet the requirements of the symbol drawing specification, whether the projection relationship is correct, whether there is any omission to draw more lines, proportional drawing, correct attitude, etc. During the oral examination, the teacher randomly asks each student 3 questions according to the results made by the students. If all 3 questions are answered correctly, the teacher can raise the grade (e.g. B) on the basis of the results (e.g. B-); If the answers to the two questions are correct, they will be determined according to the results. If you only answer one question, you will be reduced by one grade (e.g. to C+), based on your achievements. If none of the three questions are answered, the score will be reduced by two grades (e.g. to C) or directly determined as failing. At the same time, teachers should guide, answer and discuss the problems existing in the drawing process. To deal with the occurrence of similar, acting, copying and other violations of discipline.

4. Practical effect

The reform of the examination method has completely changed the bad situation of students studying in order to cope with the final examination in the past, so that they begin to attach importance to the effect of learning and the accumulation of knowledge at ordinary times, to the practical application of knowledge, and to the cultivation of their own comprehensive quality. Over the past two years, the reform of assessment methods for architectural drawing has achieved gratifying results. Students have generally shown high enthusiasm for the basic course of architectural drawing, an important major. The qualified rate, excellent rate and correct rate of homework in ordinary times have all improved significantly compared with before, with the qualified rate of final examination increasing by about 13%. This result shows that the teaching reform based on project-driven and reform of assessment methods is feasible.

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