Research on reform plan of civil engineering adult education graduation design

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Abstract. As for civil engineering adult education graduation design, reform program is put forward combined with our school. The main points of reform include the following aspects. New pattern of graduation design which is consisted of basic training of engineering design, technical application and engineering innovation training is formed. Integration model of graduation design and employment is carried out. Multiple professional guidance graduation design pattern is put forward. Subject of graduation design is chosen based on the school actual circumstance. A "three stage" quality monitoring system is established. Performance evaluation pattern that concludes two oral examinations of the dissertation is strictly carried out.

1. Introduction
Graduation design is the last teaching link of adult education. It is an important stage to realize the goal of talent training, and also an important evaluation content to evaluate its teaching quality and school-running benefit. At the same time, graduation design is an important process which is helpful for students to deepen and widen, and make comprehensive application of professional knowledge and professional basic knowledge. What’s more, it is also an occupation training students on job. The employment of university is a bridge and the key way to cultivate students' comprehensive quality which is helpful to enhance the sense of social responsibility, practice ability and innovation ability. Therefore, improving the quality of graduate design has always been a long-term goal of the school organization, teaching and teachers in implementation of teaching process. But the adult education is different from full-time undergraduate education, and it faces many problems. Therefore, according to the present situation and characteristics of this, relevant research on adult education, including some practices and explorations which are aimed at establishing management system of graduation design quality of adult education, is promoted.

2. Some research on experimental teaching reform about establishing the quality management system of graduation has been into practice.
Improving the quality of graduation design is a systematic project, which mainly serves the existing problems and the situation of graduation design of civil engineering specialty of adult education. Some research on experimental teaching reform about establishing the quality management system of graduation has been into practice.

2.1. Forming a new pattern of graduation design which is consisted of basic training of engineering design, technical application and engineering innovation training
This model not only exercises and strengthens students' basic ability of engineering design by using professional knowledge, but also improves the practical application of engineering technology. It effectively stimulates students' engineering innovation consciousness, which is beneficial to meet their individual needs and autonomy. Taking civil engineering specialty as an example, its basic training of engineering design can focus on the design of multistory frame with simple appearance and rules. Focusing on training and strengthen structure concept, steps and methods of design, construction design, design content can be compress into frame structure layout plan determination, basic selection and plane layout, beam board structure layout, calculation of plates and beams and design of construction drawings, stair calculation and construction drawing design, etc. They can be served as the professional ability and the occupation quality a civil engineer have to master. Technology and engineering innovation can be fully engaged in work for students. Based on analyzing the actual application status of some professional skills in students and summarized, students can study and explore the approach to application of technology to improve professional level and innovation under the guidance of teachers. Finally, they are able to write graduation thesis. Technology and engineering innovation subjects both come from actual project. In this way, graduation design results can not only help enterprises solve practical problems, and improve production efficiency, but also they will make students understand their benefits, and improve the complete graduation design. Analysis of constraints examples and results

2.2. Carrying out integration model of graduation design and employment

In the process of graduation practice and related courses, teachers remind students to pay attention to their love of work and ready to choose the graduation design topic. Teaching students in accordance with their aptitude, they can also make the design and the interest of students come into contact with graduate and work as far as possible. For those students who find jobs or require to practice, they are distributed to production and design units to do graduate design, graduate design, and construction in actual engineering design as far as possible. But the guidance and management of graduation design must be put in the first place. It is a good way to take production design department take double tutors with teachers, guidance teachers and college students as model. Under this model, teachers are responsible for in the study and life of the unit, and make a timely contact with the guidance of school teachers.

2.3. Putting forward multiple professional guidance graduation design pattern

People of the design team are teachers and students who are selected by the institute of civil engineering, architecture, project management professional. First, architecture specialty put forward construction design scheme. Then, students majoring in civil engineering are responsible for structure design. Finally, students of engineering management conduct construction organization design. The biggest advantage of this model is letting students complete the undergraduate graduation design at the same time, and learning to cooperate with other specialties. This work model has a certain similarity with the design institute, so that, during the design process, team cooperation ability and professional skill of students can be exercised effectively. And students will achieve good learning effect.

2.4. Choosing subject of graduation design based on the school actual circumstance

With a certain depth and breadth of graduation design, students can apply basic knowledge and professional knowledge to the process of graduation design. Teachers are required to collect subjects from multiple channels. The topics should be closely integrated with production, scientific research and technological development. Development level and frontier dynamics of the professional field will be reflected as much as possible. And subjects will be constantly updated. Design topics should all originate from the design institute or the actual project. Structural types include the commonly used structural forms. To stimulate students' interest in design and employment prospects, teachers should take the title, and announced two-way selection and comprehensive regulation practice. Students can make free choice according to their own conditions, intentions or interests. Finally, macro-control is
made by the guidance of Graduation Design Committee according to the actual situation of the students. Guidance of Graduation Design Committee makes the number that each teacher instructs students is relative to the average as far as possible. With the increase in the number of students, and student teacher ratio, the given design plans of graduation design is difficult to ensure that one of a problem. To this end, the given design plans method is changed to the design by the students according to the design requirements of their completed design. Students not only must have an independent thinking from preparatory work to the construction project feasibility analysis and the actual economic evaluation index, but also understand the problems with related work. In this way, under different conception and design scheme, “a man of a topic” is come true. Through the graduation design teaching practice, the ability of students use their learned theoretical knowledge to deal with the practical engineering is get cultivated. What’s more, copying each other between classmates can be avoided.

2.5. Establishing a "three stage" quality monitoring system
At early stage of graduation design, topic has requirements of authenticity, strict examination of teachers ‘graduation design task book and students’ opening report. Teachers and students are supposed to have a clear cognition of tasks and requirements. In the mid-term guidance stage, emphasis is placed on timely and in place, and the promotion of joint guidance within and outside the school is complementary. It not only requires business guidance, but also teaches and educates people, focusing on improving the overall quality and work ability of students. In addition to the guidance of teachers to students regularly carry out inspection and supervision department, in the middle of graduation design, department will also organize relevant teachers to cross check on students' graduation design problems in the rapid feedback to teachers. So that teachers can make a timely adjustment to solve problems. During the late summary of the defense, it is significant to insist on the unity of ability requirement and graduation design defense standard. It is important to take the appointment of teacher’s evaluation system which has a strict qualification examination and graduation thesis defense assessment.

2.6. Carrying out a performance evaluation pattern that concludes two oral examinations of the dissertation
The form of two-level defense is supposed to be stuck to. It is made up of department level defense and college defense. A comprehensive evaluation is made according to students' work ability, work attitude, design quality, etc. Class defense should take the form of group defense and implement pretrial system, which means that students who participate in the group's defense should be approved by teachers and reviewers. Public defense is adopted in the hospital level defense and college defense. Then academic committee of the college was formed. Students participate defense are those who fail the team exam and those who disagree with group's defense achievements. The graduation design achievement is consisted of three parts. They are the grades of instructor, reader and defense. Each of them accounts for a proportion of 30 %, 30 % and 40 %. For the students who fail to pass the exam, they will participate in college defense. The students who fail to pass the second defense will continue to delay the defense and even postpone their graduation. At the end of graduation design defense, organization college academic committee sets inspection on graduation design and quality assessment methods. All teachers meet to summarize shortcomings and needs improvement, so that the quality of graduation design teaching is improving year by year.

3. Conclusions
Although adult education civil engineering major of our college graduation design has adopted some advanced methods and modes to adapt to the characteristics of modern civil engineering requirements. But when compared with the method of domestic high-level university, it still has a certain gap. In order to improve managerial level and create conditions for a higher level of education, it also needs to be strengthened and improved in the continuous practice.
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