

Research and reform of graduation thesis (Design) of engineering management major in application oriented Undergraduate Colleges-- Take Xi'an Eurasia University as an example

Liping Cui, Zhen Du, Rongbin Qin, Zirui Wang

Xi'an Eurasia University, Xi'an 710065 Shaanxi Province

Abstract: under the background of the development of the times, as a key link affecting the quality of talent training, the graduation thesis (Design) of application-oriented undergraduate colleges is in urgent need of reform. This paper explores the overall status of the graduation thesis (Design) of engineering management major, expounds the optimization direction of the graduation thesis (Design) of engineering management major in application-oriented undergraduate colleges, and puts forward innovative strategies on the organization form, topic selection, assessment and other aspects of the graduation thesis (Design), so as to provide reference for strengthening the quality of engineering management personnel training.

Key words: applied undergraduate colleges; Engineering management major; Graduation thesis (Design)

Graduation thesis (Design) is an important link in the practice of talent training program, and it is also a comprehensive evaluation of students' four-year study in University, which can effectively reflect the quality of talent training. With the help of graduation thesis (Design), students can effectively improve their comprehensive quality and professional ability, and use the knowledge and skills learned to find and solve the problems existing in the process of project management. Under the background of the development of the times, how to change the graduation thesis (Design) of engineering management major in Application-oriented Undergraduate Colleges and universities to meet the actual needs of the development of the times and work is an urgent problem for teachers to solve.

1. Overall status of graduation thesis (Design) of Engineering Management Major

1.1 overall arrangement and organizational form of graduation thesis (Design)

Students majoring in engineering management completed all course tasks in the second semester of their junior year, and started their graduation thesis (Design) in the first semester of their senior year. They mainly completed the following work: determining the topic of graduation thesis (Design), guiding teachers to issue task books, and students completed the opening report and formally wrote their graduation thesis (Design). In the second semester of the senior year, we mainly completed the mid-term defense, misconduct detection, review, evaluation, graduation thesis (Design) defense and other work, and finally determined the students' graduation thesis (Design) score.

From the perspective of teaching organization, the composition form is relatively single, and most of the practical activities related to the graduation thesis (Design) are graduation internships (about six months). Most of the graduation internships have insufficient practice base settings, students' safety problems can not be guaranteed, and their due role can not be fully played.

1.2 Topic selection and content of graduation thesis (Design)

When teachers propose topics, they will mostly choose topics similar to those in previous years according to the Convention, or divide their own research projects into different sections. The former will lead to students' lazy psychology, and directly refer to the graduation thesis (Design) of previous students. The latter is due to the particularity of research projects, and it is difficult for students to complete the research content, For example, the topic "Research on the influence of silica fume on the performance of 3D printing concrete". Each student sets up a topic, which is independent of each other, has no relevance, and lacks innovation consciousness.

1.3 Graduation thesis (Design) process control

After the topic selection of the graduation thesis (Design) is finished, the graduation thesis (Design) practice link will be officially started. This process takes a long time (about 12 weeks). Except for the opening, mid-term defense, final defense and other processes, most of the time there is the participation of instructors to solve problems for students. In this process, there are mostly two situations: first, the tutor can not contact the students in time. Individual students are not at school with the excuse of taking the postgraduate entrance examination / civil service examination, looking for a job and so on. The tutor can only provide online guidance to students, but the effect of online guidance is not very ideal. Second, in the process of helping students complete their graduation thesis (Design), the instructor may also be busy with professional course teaching or scientific research affairs, etc., with limited work energy.

1.4 Graduation thesis (Design) assessment method

The comprehensive score of graduation thesis (Design) mainly includes review score, review score and defense score. From the perspective of the score proportion of the graduation thesis (Design), the score evaluation of the content of the graduation thesis (Design) mainly lies in the process of students' completing the final defense, and students' scores will be measured according to their final performance. Although there are certain standards for grades in different intervals, there is a certain subjectivity in Teachers' scoring and evaluation. When reviewing and evaluating the results, the instructor can only guarantee the fairness between the students he or she brings, but cannot guarantee the fairness between the students in the group and the students outside the group, which is likely to result in the low score of the graduation thesis (Design) with good quality.

and implementation of graduation thesis (Design). After the completion of the graduation thesis (Design) experience course, students should select the appropriate topic for graduation thesis (Design), and the topic selection work should be completed before the end of the second semester of junior year. The topic selection should focus on the two-way choice between teachers and students. Students can actively communicate with teachers, and propose the desired topic according to their own interests and future development plans. After the topic selection is confirmed, students can complete the corresponding investigation work according to their own topic selection, and can also find relevant data in daily life and complete the data collection with the help of the summer vacation. Some students' graduation practice and graduation thesis (Design) work are combined, and students' completion of practice is also conducive to the normal development of graduation thesis (Design) work. The above forms can optimize and integrate the graduation thesis (Design) process, help students improve the overall quality of their graduation thesis (Design), and effectively enhance the display effect of graduation thesis (Design).

3.2 Topic selection of graduation thesis (Design) based on practical engineering

Graduation thesis (Design) topics are divided into two types: one is application-oriented, the other is research-oriented. The application-oriented projects mainly select real projects according to students' personal interests, internships, employment directions and positions to carry out graduation thesis (Design) and real projects (such as bidding control price, BIM modeling and application, green performance analysis, etc.), or select topics in combination with professional related competitions (such as the national BIM graduation design competition, real estate planning competition, etc.); Research projects are mainly carried out in combination with teachers' scientific research projects, professional development direction and students' research direction. With the help of information technology, industry problems are solved, and students are actively encouraged to complete cross disciplinary drafts. The form of graduation thesis (Design) is mainly divided into team cooperation and independent completion. On the basis of single question, students are encouraged to cooperate in teams. This content can be divided from two aspects. One is to complete the questions according to the sequence around the implementation cycle of a project; Second, students complete part of a project independently and complete the problem from different angles. □3□ Strengthen the control of graduation thesis (Design) process

(1) After the topic selection of the graduation thesis (Design) is determined, the instructor shall hold a special meeting for the students under his guidance, announce the overall arrangement, time and schedule of the graduation thesis (Design), ask the students to formulate a personal graduation thesis (Design) schedule, and complete the contents of each stage in strict accordance with the schedule, and the instructor shall conduct tracking inspection and guidance every week.

(2) The graduation thesis (Design) is linked to professional competitions, such as the BIM design competition in Colleges and universities held every year. The final topic selection is completed through discussion and design. On the premise of clarifying personal tasks and learning objectives, the enthusiasm of students' participation is effectively improved through the form of competition.

(3) Build a reasonable supervision mechanism, and cover the inspection scope to the whole process of practice, not limited to the opening, mid-term and defense. The instructor is required to guide the students in the process for at least 1 class hour every week through online meetings, face-to-face teaching, etc., check the students' progress, and log in the graduation design system every week to complete the process guidance record.

3.3 Optimize assessment methods

(1) Team graduation thesis (Design) graduation thesis (Design) score is composed of four parts: mutual evaluation among team members, teacher score, overall quality score of team graduation design, and quality score of individual completed part. Score the team members according to their performance, mutual cooperation and smooth connection of each process; Teachers score according to the performance and cooperation ability of members in the whole process; The overall quality of the team's graduation thesis (Design) and part of the quality of the individual's completion will be graded by the defense teacher through the defense link, changing the traditional assessment method of determining the score in the past.

(2) Invite enterprise tutors to participate in the defense of the graduation thesis (Design), assess and evaluate the results of the graduation thesis (Design) from a practical perspective, and increase the fairness of the score. On the one hand, the participation of off campus judges makes students pay attention and seriously carry out graduation thesis (Design) work; On the other hand, promote the combination of topic selection and completion of graduation thesis (Design) with practice as much as possible.

4. Concluding remarks

Under the background of the development of the times, the cultivation of engineering management talents is imminent. The graduation thesis (Design) is the key factor affecting the cultivation of talents, and innovation and reform are inevitable. Based on the objective analysis, this paper explores the status, problems and causes of graduation thesis (Design), explores the reform direction of graduation thesis (Design) of engineering management major in application-oriented undergraduate colleges, and puts forward the strategies of graduation thesis (Design) reform from multiple angles, which is of great significance to strengthen the cultivation of engineering management professionals.

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