

Diversified Reform and Practice of Graduation Design of Computer Major

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Keywords: Graduation Design; Innovative Practical Ability; Diversification

Abstract: This paper takes the graduation design of computer application technology major as the research object, takes the training of innovation practice ability as the goal, follows the principle of "demand orientation, strengthen practice, highlight application", carries on the graduation design diversification reform and practice research. The traditional single guidance mode of passive topic selection for graduation design is changed to a diversified independent choice and guidance mode to fully mobilize the enthusiasm of students to participate in scientific research, discipline competition and innovation and entrepreneurship activities, so as to meet the needs of personalized development of students and ensure the quality of graduation design.

1. Introduction

Graduation project is the last learning task that students need to complete in school. It is also the most important practical teaching link in higher education. It is a comprehensive practical training for students to analysis and solves problems independently by comprehensively applying the basic theories, professional knowledge and professional skills they have learned [1]. It is very important for students to master the knowledge systematically, perfect the knowledge system and cultivate the comprehensive application ability. In view of the computer application technology professional graduation design the problem of heavy theory to study the practice application of the innovative practice ability as the goal, actively explore suitable for computer application technology professional talent training demand the diversity of graduation design, arouse the enthusiasm of students to do graduate design, strict inspection standards and process management, to ensure the quality of graduation design.

2. The Traditional Problems of Graduation Design

2.1 Students Lack Interest in and Attach Insufficient Importance to the Graduation Project

Students lack interest in and attach insufficient importance to the graduation project^[2]. Because the time to do the graduation project coincides with the peak of job hunting and employment, most students put job hunting in the first place, the time and energy invested in the graduation project is insufficient. Some students even use the Internet to "collage" graduation design papers by means of patchwork and grafting, resulting in water injection of graduation design, which also seriously affects the cultivation of students' innovative and practical ability^[3].

2.2 The Guidance Teacher Guides the Way Improper.

The existing phenomena mainly include: first, lack of guidance. Due to the heavy task of teaching and scientific research, some teachers only open and close the questions, regardless of the middle process of follow-up guidance. The second is to use the graduation design, let students for the teacher's subject service, ignore the training of students. Third, some teachers have been

engaged in teaching and scientific research activities in schools, lacking work experience in enterprises and engineering background^[4]. In addition, most colleges and universities attach more importance to scientific research than practice, and new teacher lack special training in practical teaching, so they lack experience in guiding the graduation design of the real topic.

2.3 The Topic Selection of Graduation Design Has the Problem of Passive Singleness

The topic selection of graduation design has the problem of passive singleness^[5]. Due to various restrictions, most of the students' graduation design is limited in the classroom, computer room, only a few students in the laboratory or the enterprise site to do the graduation design. The topic of traditional graduation project is drawn up by the instructor, and the students accept the topic passively or make the design within the scope provided by the teacher. There are some problems in this propositional model, such as old topic, too simplified formalization and different workload. Because with student obtain employment direction or the research field that continues to study is not connected closely, student does graduation project to lack enthusiasm initiative, have to deal with suspicion.

3. Suggestions and Comments

3.1 To Raise the Importance of Teachers and Students on Graduation Design

In the process of graduation design, teachers should communicate with students face to face, more timely solve the problems of the students raised, for complex issues to deepen understanding, fully arouse the enthusiasm of students, and patient guidance, regular check, effective supervision, and found that the problem solves promptly, the potential of students, mainly cultivate independent ability to analysis and solve practical problems of outstanding graduates. At the same time as the main body of graduation design -- students, more should be fully aware of the importance of graduation design, improve the importance of graduation design, in-depth thinking, serious study, and strive to do the best graduation design.

3.2 Improve the Engineering Quality and Scientific Research Ability of Instructors, and Actively Play the Role of Enterprise Mentors

Schools should encourage teachers to take an active part in engineering practice and improve their engineering experience. The school can hire a design engineer with rich practical experience and solid theoretical knowledge as an enterprise tutor to patiently guide students' graduation design and strictly check it with the school instructor. At the same time, the school can establish a teaching and research base and an experimental, which can not only meet the requirements of students' practical practice, but also improve the practical engineering experience of instructors, so that the school and the enterprises and design units are more closely connected, so that the level of instructors can be improved, and students can be more handy in their graduation projects.

3.3 Emphasis on Graduation Practice

Many students just go through the motions of their graduation practice, and some students even don't go to the practice at all, which has a great impact on the subsequent graduation design. Prior to the internship, students should make preparations to familiarize themselves with the topic and content of their graduation project. During the internship, students should take construction drawings to correspond with the site and be familiar with the whole design process. The instructor should remind students of common problems in the graduation design. Students can actually operate with their hands, deepen their understanding of the whole design process, communicate with the site construction personnel and supervisors more, and find the answers to the problems encountered in the design process in practice. Such practice will make the graduation design twice the result with half the effort.

4. The Contents and Methods of the Diversified Reform of the Graduation Design of Computer Application Technology Major

Engineering graduation design should focus on the cultivation of students' innovation and practice ability, not only the basic training of scientific research and engineering design. In order to solve the above problems and achieve the expected goal of the graduation project, this paper carries out the reform and practice of the diversification of the graduation project of computer application technology major. The specific measures are as follows:

4.1 Enrich the Topic Types of Graduation Design to Meet Students' Personalized Development Needs.

According to the practical application of computer technology, on the basis of the traditional graduation design, this paper puts forward that students can choose scientific and technological works or skill program works to replace the graduation design, so as to mobilize students' enthusiasm to participate in scientific research, discipline competition and innovation and entrepreneurship activities, so as to meet students' personalized needs.

The scientific and technological works used to replace the graduation project mainly include: academic papers, discipline competition works, achievements of college students' innovation and entrepreneurship projects, patents (software Copyrights) or achievements of participating teachers' scientific research projects.

Skills program works are mainly systematic and complete programs for specific problems in professional fields, which can reflect professional comprehensive skills. The topic must meet the requirements of professional training, and the content must have a certain depth and innovation.

4.2 Scientific Development of Classification and Evaluation Standards to Ensure the Quality of Graduation Design

Diversified in order to ensure that graduation design does not go through the motions, not become a mere formality, we in the process of traditional graduation design topic selection, opening, guidance, review, on the basis of key links such as management, formulated the graduation design, the traditional skills scheme works, science and technology quality standard and quantitative standard and scoring rules, defense requirements and performance assessment method. At the same time also formulated the implementation rules of graduation design replacement, and set up a leading group for the specific organization and implementation of graduation design. Strictly examine and verify the application for the replacement of students' graduation design, organize specially-assigned persons to evaluate and appraise the replacement results of graduation design, issue the verification form, publish the list of approved students and report to the academic affairs office for the record. In addition, the guidance of the graduation design for the early, middle and late three times to strengthen the process management, to ensure the quality of the graduation design.

5. Reform and Practice Results

5.1 To Meet the Personalized Needs of Students Graduation Design, Graduation Design Quality Steadily Improved.

Taking the 2017 class of computer application technology graduates of Xijing University as an example, a total of 49 students chose the real project of the internship enterprise, 23 students chose the undergraduate innovation and entrepreneurship project as the topic, 15 students chose the subject competition as the topic, 8 students chose the scientific research project of the tutor as the topic, and 2 students chose the application of software copyright as the topic. Fifty-three percent of the class of 2017 chose innovative topics. Compared with the last two years, the number of excellent graduation projects has been increasing steadily, and the proportion of excellent graduation projects has been increased from 8% to 12%. According to the survey of graduation design satisfaction of the graduating class, more than 80% of the students are satisfied with the diversified evaluation mode of graduation design.

5.2 The Cultivation of Innovation and Practice Ability is Highlighted, and the Quality of

Talent Cultivation Is Improved.

The current diversified reform program of graduation design makes students' graduation design closely combine with their major, job demand, personal specialty, personal interest, development direction, etc. The topic of graduation design can stimulate students' interest and emphasize the cultivation of students' innovative spirit and practical ability. The assessment of different types of graduation design is also classified management, the assessment of comprehensive quality is more comprehensive, the application of students' comprehensive knowledge, ability is clear, and the workload requirements are more specific and scientific, making the implementation of graduation design more in line with the computer application technology professional talent training objectives.

Summary

In the graduation design of computer application technology major of Xijing University, through introducing real projects of enterprises, discipline competitions, teachers' scientific research projects and innovation and entrepreneurship activities, and following the principle of "demand orientation, strengthening practice and highlighting application", the passive topic selection of traditional graduation design is changed to diversified independent topic selection. Change the traditional single guidance mode of graduation design to a diversified guidance mode. The innovative process management, assessment and incentive mechanism have been established. The diversified reform and practice of graduation design not only solves many problems existing in the existing graduation design, but also contributes to the cultivation of students' innovation and practice ability and improves the quality of graduation design.

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