

Multi-level Practical Teaching System Based on Graduation Design (Thesis)

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Abstract: Graduation design (thesis) has a very important role in training high quality talents in the university. This paper put forward a multi-level practical teaching system based on graduation design (thesis). The construction method of this system is to take the school of management of Xiamen University of Technology as an example, and to analyze professional achievements from experimental course, courses design, professional internships, college students' innovative project, academic competition and teachers' scientific research, and then to convert these professional achievements into the graduation design (thesis). The system has good practical significance and application value.

Introduction

Graduation design (thesis) has an irreplaceable role in cultivating college students to explore the truth, strengthening students' social consciousness, training their scientific research, improving their comprehensive practical ability and quality. It is an important embodiment of the combination of education, productive labor and social practice and it is an important practice link to cultivate students' innovation ability, practical ability and entrepreneurial spirit.

Therefore, we put forward a multi-level practical teaching system^[1-3] based on graduation design (thesis), which is in line with the thought of "cultivating talents with innovative consciousness and practical ability". We take the school of management of Xiamen University of Technology as an example, and analyze professional achievements from experimental course, course design, professional internships, college students' innovative project, academic competition and teachers' scientific research, and convert these professional achievements into the graduation design (thesis) for gradually increasing the proportion of "real topic really does", and then realize a multi-level practical teaching system.

Status Analysis

Converting professional achievements from experimental course into graduation design (thesis)

In past three years, school of management has 26 experiment courses and 11 opening-up experiment courses. These experiment courses can give students inspiration and foundation on carrying out scientific research activities during college years. And they can help students to declare research projects and to carry out scientific research activities so that students can get better

achievements in scientific research activities. And then they can convert these achievements into their Graduation design (thesis). We show that about 10% of graduation design (thesis) is related to the professional achievements from experimental courses.

Converting professional achievements from Course design into graduation design (thesis)

In past three years, school of management has 12 Course design. The Course design can enhance students' practical ability, teamwork ability and innovation ability. So, students can convert these achievements from course design into graduation design (thesis) through further improving them. We show that about 7% of the graduation design (thesis) is converted from course design.

Converting professional achievements from professional internships into graduation design (thesis)

Professional internships include social investigation, social practice and graduation practice. These courses provide data, case and empirical materials for students' scientific research. In past three years, we show that about 10% of graduation design (thesis) is related to the professional achievements from professional internships.

Converting professional achievements from college students' innovative project into graduation design (thesis)

College students' innovative project can include innovation training program, entrepreneurial training program and entrepreneurial practice project. They can further stimulate students' enthusiasm for innovation and entrepreneurship, and create a good atmosphere to support students' innovation and entrepreneurship, and mine innovative entrepreneurial projects with great potential, and build a platform innovation and entrepreneurial team. In the past three years, there are 20 students' innovative projects, and most of them are converted into graduation design (thesis). Two students of them have declared an exemption of Graduation design (thesis).

Converting professional achievements from the academic competition into graduation design (thesis)

Academic competition is becoming more and more popular because it can improve the students' practical ability and creative ability. Our college has invested a lot of funds into the special academic competition to build a group of projects of promoting students to apply their knowledge. In the past three years, school of management carry out the academic competitions including: "International Marketing Competition for College Students", "National Enterprise Competition Simulation Competition for College Students", "National Entrepreneurship Competition for College Students", "National Logistics Design Competition for College Students" and so on. There are more 30-heavyweight awards in all kinds of academic competitions. And we show that about 3% of the graduation design (thesis) is converted from the academic competition.

Converting professional achievements from teachers' scientific research into graduation design (thesis)

Teachers' scientific research not only improves teachers' creative ability, but also promotes teacher's teaching ability through combination of "teaching and research". So, we encourage some students who study well to participate in the teachers' scientific research projects. On one hand, it can enhance students' learning and research ability; on the other hand, it can strengthen the teachers' research team. In the past three years, we show that about 5% of the graduation design (thesis) are converted from teachers' scientific research.

Problem Analysis

Consciousness of scientific research is not strongly enough

Most of both the teachers and students have the misunderstanding that the main task in college is to finish four years' courses on schedule, and they believe that scientific research has nothing to do with the students but teachers. Therefore, there are some problems following: the publicity of students' taking part in scientific research is almost zero, which leads to the weak consciousness of scientific research. Even many students don't know what is scientific research, and many of the senior students don't know what topic should be chosen when they start with the graduation design (thesis), and then they don't know how to carry out scientific research activities for design (thesis). As a result, it exists low quality and other series of problems in the final graduation design (thesis) draft.

Conversion methods of professional achievements are not clear

Students have brought relevant professional achievements from the experimental courses, course design, professional internships, college students' innovative project, academic competition and teachers' scientific research. However, they can't revise and improve them on the base of the pre-outcomes and then convert them into graduation designs (thesis). There are main two reasons following: for one thing, students and part of teachers are lack of consciousness of converting the professional achievements into graduation design (thesis). For another, students are lack of initiative so that they cannot communicate with tutor in time to see whether their own professional achievements can be further improved and at last convert into graduation design (thesis).

Curriculum setting of practical teaching is relatively independent

Practical teaching curriculum includes sorts of experimental course, course design, professional internships and graduation designs (thesis), which are hard to be linked with one another, because different teachers give them lessons to students. It is hard for students to effectively combine the methods and technologies, which they have been taught in the experimental course, course design and professional internships and then convert into graduation designs (thesis). Hence, it stays a lower proportion by referencing data and case from practical teaching curriculum in the graduation design (thesis).

Proportion of “real topic really does ”of graduation design (thesis) is low

According to the statistics of graduation designs (thesis) in past three years, it shows that the proportion of “graduation design” is relatively low; the proportion of “real topic really does” of graduation design is lower. Most graduation design (thesis) still remains in the stage of “real topic hypothetically does” and “ hypothetical topic really does”. The main reason is the lack of real data and cases to analyze. However, it is hard to acquire them in short time, which needs previous scientific researches, accumulation of study activities and guidance of teachers.

Strategy Research

Strengthening publicity and service to improving consciousness of scientific research

We suggest strengthening publicity and service of students' carrying on scientific research. Firstly, when the freshmen take the entrance education, they are promoted the importance to carry out scientific research activities, and are offered a special lecture systematically and comprehensively to clear what is scientific research and how to carry on. Secondly, our school can increase credits for students' scientific research in the training program for undergraduates, set research scholarships

and other incentives to strengthen students' initiative consciousness of scientific research. Thirdly, our school can set special guiding institution for scientific research so that teachers can offer scientific guidance to students at any time.

Strengthening the communication between teachers and students to make clear conversion methods of professional achievement

Students have brought professional achievements in the experimental courses, course design, professional internships, college students' innovative project, academic competition and teachers' scientific research. However, some of them cannot be converted into graduation design (thesis); some of them need to be further modified; Of course some of them can directly be converted into graduation design (thesis) and some of them even can be used to apply for exemption. How to make clear whether the professional achievements can be converted into graduation design (thesis) needs professional advice and students' objective intentions. Hence, we suggest strengthening the communication between teachers and students. Students who own professional achievements give a request for converting and then teachers confirm whether their achievements can be converted into graduation design (thesis). If it can be converted, teachers will offer guidance continually. As a result, they can achieve a win-win teaching effect.

Constructing multi-level practical teaching system to link with practical teaching courses each other

Practical teaching system is a set of systematic engineer. It can achieve the teaching system "experimental course + course design + professional internships = graduation design (thesis)". We suggest strengthening to construct multi-level practical teaching system when our school develops the training program for undergraduates, and provide systematic training for the teaching staffs that engage in the practical teaching curriculum. So a multi-level practical teaching system makes experimental course, course design and professional internships to link with each other and then to serve for graduation design (thesis).

improving the proportion of conversion of the professional achievement to improve the proportion of "real topic really does" of graduation design (thesis)

"Graduation Design (Thesis) Management Regulation in School of Management of Xiamen University of Technology" clearly demands that the topic should be combined with yield practice, social development and science frontier. More than 50 percent of graduation designs (thesis) should be finished in experiment, internship, engineering practice and social practice. Based on the topic requirements of graduation designs (thesis), firstly secondary college should be as early as possible to clear the requirements to both students and teachers. Secondly, they should accumulate data, case and empirical materials from experimental courses, course design, professional internships, college students' innovative project, academic competition and teachers' scientific research. Finally we together realize a multi-level practical teaching system based on graduation design (thesis).

Conclusion

In this paper, we have carried out a full range of investigation and research on graduation design (thesis) of school of management of Xiamen University of Technology, and analyzed the current situation of the conversion of professional achievements. The current situation indicate that the conversion work has been started, and has been achieved some results in the past three years. At the same time, in the implementation process, this work has encountered some problems about consciousness of scientific research, conversion method of professional achievements, curriculum

setting of practical teaching and proportion of “real topic really does ”of graduation design (thesis). Aiming at these problems, we put forward the corresponding solutions including: strengthening publicity efforts, strengthening the communication between teachers and students, constructing multi-level practical teaching system, and improving the proportion of conversion of the professional achievements. Finally, we hope to have a good reference for my school leaders and other brothers’ colleges and universities.

References

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