Discussion of the Coalition of College and Enterprise Training Model of Full-time Professional Degree Postgraduate in Beijing University of Chemical Technology

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Keywords: Professional degree postgraduate; Postgraduate education; Coalition of college and enterprise; Training model

Abstract. With the reform of graduate education in China, the cultivation of professional degree graduate students has received more attention, and the Beijing University of Chemical Technology has also studied this issue. This paper introduces the training of professional degree graduate students in Beijing University of Chemical Technology, and discusses the advantages of the coalition of college and enterprise training model, which including promote students to take the initiative to learn, improve work efficiency and the coalition of college and enterprise training model closer to the actual project. At the same time, this article also analyzes the problems existing in the coalition of college and enterprise training model of Beijing University of Chemical Technology.

1. Introduction

With the rapid development of China's economy and society and the advent of the world's knowledge economy age, the demand for high-level applied talents is more urgent. As an important part of higher education, post graduate education is the key to cultivate high-level applied talents. It can be said that the postgraduate education based on scientific research and training of high-level specialized talents has become the key to comprehensive national competition[1].

Professional degree is a new type of postgraduate degree, and is the same level degree as academic degree[2]. The aim of the professional degree is to cultivate high-level professional talents with a solid theoretical basis and able to meet the needs of specific industries. In many respects, they are very different from academic degree: (1) Compared with the academic level, the professional degree is more emphasis on cultivating students' practical ability[3]. (2) The courses are different, and the course setting of the professional degree is more emphasis on the application course. (3) Professional degree is less demanding on published papers. (4) The training mode of two degree is different. The professional degree postgraduate generally use the combination of production and research training mode[4], but the academic degree postgraduate are basically not associated with the enterprise[5].

In order to meet the needs of social development for high-level applied talents, in 2009 the Ministry of Education decided to increase fifty thousand admission quota of full-time professional degree on the basis of the original graduate program. Then in 2010, the full-time professional degree postgraduate students enrollment reform efforts have been further strengthened[6]. March 2011, the Ministry of Education proposed that the professional degree graduate students accounted for the proportion of the entire graduate enrollment should be increased to more than 50% by 2015. It can be seen that the cultivation of professional degree postgraduate in China is entering a stage of rapid development. The full-time professional degree postgraduate has become an important source of high-level specialized talents and the focus of adjusting the structure of graduate education[7].
2. The Coalition of College and Enterprise Training Model of Full-Time Professional Degree Postgraduate in Beijing University of Chemical Technology

The full-time professional degree training in Beijing University of Chemical Technology (BUCT) has been carried out for several years, and a set of effective professional degree training system has been established. The training objectives of professional degree graduate students and academic degree graduate students are very different, the professional degree focus on the application and have a variety of training mode[8]. BUCT take the "0.5 + 0.5 +2" coalition of college and enterprise training model.

The first stage: classroom teaching. In the first semester, students will complete the theoretical course in the school, and the total credit should not less than 20 points. The learning content takes professional needs as the teaching objectives, training the awareness and ability of students to analyze and solve practical problems.

The second stage: professional practice. The professional practice uses the mode of coalition of college and enterprise. The purpose is to cultivate the ability of graduate students to solve practical problems, good overall quality and professionalism, and strengthen the contact between students and employers to explore the supply and demand interaction mechanism. This mode of cultivation can ensure that the talents training can be adapted to actual needs of social development. Professional practice time must be no less than 6 months. After the end of professional practice, the students need to write a summary of the work as a professional practice report. According to the student performance and practical results, the student's professional practice will be jointly evaluated by school professor and enterprise tutor.

The third stage: writing degree thesis. Thesis topics should come from actual engineering problem; there must be a clear professional background and application value. The types of papers can use the form of research reports, analysis of application situation, planning and design, product development, case analysis, project management, etc.

3. Advantages of Coalition of College and Enterprise Training Model

In BUCT, the professional practice of professional degree postgraduate use the coalition of college and enterprise training model, and professional graduate students must go to the enterprise for six months. Compared to the training model of only study in school, the coalition of college and enterprise training model has its unique advantages.

First of all, the coalition of college and enterprise is conducive to promoting students to take the initiative to learn.

In the process of school training, although there are also practice like the metalworking, but the main purpose of these practice is not to solve practical problems, but to let students understand the working principle. Besides, the students only need to follow the teacher's request step by step to complete the task, even do not need to take the initiative to think. But the coalition of college and enterprise is different. In the enterprise, the problems which need to be solved are no longer the teaching cases, but the real project and the actual requirements of clients. In order to meet require for the product, companies must be cautious about the product design, manufacture and installation. Therefore, the students have to thinking constantly while participating in these real projects.

Second, the coalition of college and enterprise can improve the work efficiency of students.

The biggest difference between enterprise and school is that the enterprise is hoped to get the maximum profit, which requires the companies must complete the task in the shortest possible time. However, the school is different. Whether it is classroom assignments or research tasks, teachers will give students enough time to think and research. Therefore, after entering the enterprise to practice, students need to consider whether they can complete the task within the time specified by the enterprise. The students will not be recognized by the enterprise and the enterprise will not give important work to the students unless they can improve their work efficiency. Therefore, when the enterprise assigns a real production tasks to the students that is mean recognition to students.
In addition, the coalition of college and enterprise is closer to the actual project. The aim of professional degree training is more focused on cultivating high-level applied talents who can take professional skills or management works in future, which requires students to contact a lot of practical projects. However, the research topics in the school are often more focused on academic research, and the lack of experiment equipment and funds is also the difficult that the professional degree training faces. The coalition of college and enterprise can make up for these disadvantages of the school. The enterprise's experiment equipment and funds are more abundant, and the projects that students in the enterprise access to are always the actual project, which has great benefits for the professional degree training.

4. The Problems Exist in the Coalition of College and Enterprise

Although the coalition of college and enterprise training work of professional degree postgraduate in BUCT has made many achievements in recent years, there are also some problems because the experience did not accumulate enough. These problems are mainly reflected in the following aspects:

1. The training objectives of professional degree postgraduate are similar to academic degree postgraduate, and the curriculum is not targeted. The training objectives of full-time professional degree postgraduate is to cultivate high-level professional talents with solid theoretical basis and able to meet the needs of specific industries, but it is not well reflected in the teaching activities. The most courses professional degree postgraduate learn are basic reference to the academic degree graduate program and the focus on application of courses is not prominent. Besides, the training programs of different research direction students are similar.

2. The existence of scientific research achievement ownership problem. The coalition of college and enterprise training model is not mature at the present stage in China, and the parties involved in the training have different views on the ownership of the scientific research achievement that all of them are hoping to obtain the possession of scientific research achievement. These problems can easily reduce the enthusiasm of both schools and enterprises, and hinder the promotion of the coalition of college and enterprise.

3. The society lack sufficient recognition on the full-time professional degree postgraduate. Although the country vigorously promote the reform of graduate education in recent years, the community and enterprises still have prejudices on the full-time professional degree postgraduate that their ability is not as good as academic degree postgraduate. Therefore, there is resentment in enterprise to accept the professional degree postgraduates to practice, and the employment pressure of professional degree graduate is also great.

5. Conclusion

Through recent years of continuous exploration, BUCT has established a set of effective professional degree training system. The coalition of college and enterprise training model has many advantages that past graduate training models don’t have, but there are still many problems at the same time, the coalition of college and enterprise training system needs to be further improved.

In general, the coalition of college and enterprise training model is not only beneficial to the students, but also can improve the innovation ability of enterprises and universities. Under the coalition of college and enterprise training model, enterprises and universities have enhance the contact through the students, and this model can accelerate the speed that the results of scientific research in colleges transform to the actual application and achieve win-win situation.

6. References


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