

Cultivating Mode of University-Enterprise Cooperated Postgraduates with Professional Degree

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Abstract

In order to meet the enterprises' demand for senior talents and enhance the practical and innovative abilities of postgraduates with professional degree, this paper puts forward the cultivating problems of postgraduates with professional degree through university-enterprise cooperated cultivating mode. In practice, the "two stage" education is applied to achieve mutual benefits between the postgraduates ability cultivation and the profitability of enterprise, while the implementation of two tutors model achieve complementary advantages between enterprise tutor and university tutor, which enrich the postgraduates' experience and uncertainty knowledge, At the same time, it improves the practical and innovative abilities of postgraduates.

Keywords: Innovative abilities; Postgraduates with professional degree; university-enterprise cooperated

1. Introduction

With the development of the economy and the continuous progress of science and technology, talents and economy are becoming closer and closer. Meanwhile, the great leverage of education and talents has embodied more and more in the economy. While the limitations of

talents cultivated under the traditional academic education mode in practicality, creativity, adaptability and other aspects make it more and more unadapted to the demand of social development. As the most advanced applied talents, postgraduate with professional degree has become the top cultivating priority of every country. Among them, Europe and America are the most developed countries in education for postgraduate with professional degree. And the postgraduates with professional degree have successfully replaced the postgraduates with academic degree, and has become the main part of education in Europe and America[1].

In recent years, our country is also readjusting postgraduate cultivating mode and targets, transiting gradually from the academic postgraduate cultivating mode to professional postgraduate cultivating mode, attempting to conform the development trend of the world higher education and provide talents for the strategy of prospering the nation with science and education and the strategy of sustainable development[2,3].

2. Comparison of Chinese traditional cultivating mode and foreign advanced cultivating mode

Cultivation of postgraduates with professional degree is different with that of postgraduates with academic degree.

In the postgraduates with academic degree cultivating process, more attentions are paid to theoretical knowledge learning and the abilities of scientific research, and most talents are supplied to the universities and scientific research department. While the postgraduates with professional degree pay more attention to learning of practice, experience and uncertain knowledge, the talents cultivated are more professional and more close to the society[3]. Professional degree postgraduate cultivating modes in the world can be divided into the following.

(1)"Cooperative Education" in the United States and Japan. After having studied half a year in the university, the postgraduates enter the factory practice stage, during which the study and practice alternate with a cycle of about two months. Although the theoretical knowledge learning and practical experience accumulation are also alternate, the correlation between the learning content and working field of postgraduates is more emphasized, and the combination of subject study and work experience in actual production is more emphasized[4].

(2)"Combination of Education and Production" in Russia. The use of enterprise power and resources are emphasized to cultivate the postgraduate and save the educational investment for our country.

(3)"Dual Mode" in Germany. Under this mode, professional degree postgraduates are both university postgraduates and enterprise employees. In the cultivating process, more emphasis is put on practice, in which a third of the time is at school, the rest of time is participating in practice in the enterprise, in order to make the content learning in university serve for in the enterprise.

(4) "Learning - Practice - learning" in Britain. Integration of theory with

practice is emphasized to develop theoretical knowledge in practice and guide the practice work better.

3. Course education mode

Considering the shortcomings in traditional professional degree postgraduate education and learning from foreign advanced cultivating mode, our school adopts "two stage" education to cultivate professional degree postgraduates. The so-called "two stage" education is based on the characteristics of engineering postgraduate, the cultivating process is divided into two stages of the theory knowledge learning in university and practice education at cultivating base. In the first stage of the theory learning, the curriculum should be designed based on the research direction of the subject, mainly to lay a solid theoretical foundation for base practice of the second stage. In the second stage, the postgraduates first complete learning of the basic practical skills in the base, then mainly do deep research on thesis subject, collect and collate data to finish thesis writing under the guidance of the enterprise tutors[5].

Compared with the traditional "basic course - professional basic courses - professional courses -professional practice" mode, the cultivating mode of "two stages" has the following advantages:

(1)In "Two Stages" cultivating mode, postgraduates directly participate in the production of enterprises, acquaint with the profession standard and the related process in details. Aiming at problems such as the key projects, technical problems, production reform in the front production line, postgraduates carry out subject research to complete the degree thesis. Cultivating programs and related courses are jointly established by both

university and enterprise according to the actual production.

(2)The cooperation of university and enterprise can be very effective and make complementary advantages. As senior talents, postgraduates participate directly in the enterprise key projects, production technology improvement to make up for the theoretical knowledge, promote the technological innovation, and improve the effectiveness to bring benefits to the enterprise. At the same time, the postgraduates participating in the actual production can make the enterprise have better understanding for the postgraduates and choose talents.

(3)In the "Two Stages" cultivating mode, the enterprises not only offer site for postgraduates, but also directly afford relevant expenses to reducing the burden of the nation and university, which is a good solution to the lack of educational finance for postgraduates.

(4)The enterprises not only fulfill their responsibility well and contribute their strength to the national talent cultivation, but also disseminate their own enterprise culture to expand social influence.

4. Subject selection mode

The important aim of university-enterprise cooperative cultivation lies in that the postgraduates really participate in actual production of the enterprises, which strengthen the practical and innovative abilities. Therefore, the research subjects are derived inevitably from the actual production of the enterprises, which means that the enterprises select and propose the thesis subjects according to the projects of key scientific research and technical innovation projects in actual production. Because of the enterprise selection mode, the postgraduates participate in the actual production of the enterprise without distance, and the enterprises inevitably

spend a number of manpower and material resources on their own key scientific research projects, which solve the deficiencies of practice funds and experience of the university to realize the "three win-win" of the postgraduates, university and enterprises. The whole postgraduates cultivating process are centered around the thesis subject, based on the adapting to subject position, and focused on cultivating the practical and innovative abilities of postgraduates.

5. Thesis guidance mode

In the university-enterprise cooperated cultivating mode, the postgraduate thesis is derived from the actual enterprise production, and postgraduate research is solving practical problems in the base through the practice way, which makes the limitations of traditional guidance mode more obvious. In order to give better guidance on postgraduate thesis, our school decides to adopt the two tutors guidance mode, in which a university tutor and an enterprise tutor are selected. A university teacher possessing tutor qualification is mainly responsible for the thesis theoretical problems in academic guidance, review and defense. The enterprise tutor is taken by experienced technicians with medium or senior technical title in relevant enterprises, who is mainly guide on the thesis subject selection, technical and engineering problems encountered in practice. The enterprise tutor is responsible for the supply of practice field and funds, review thesis and host defense activity together with the university tutor.

6. Thesis defense mode

After finishing subject research and thesis writing in the base, the postgraduates submit their theses for the enterprise and university tutors to review respectively.

After the two tutors review and qualify the thesis, the postgraduate enters the thesis defense stage. In the "Two tutors" cultivating mode, the enterprise tutor and university tutor host the thesis defense together. The defense group members are comprised of the enterprise and university tutors, senior technicians of the enterprise, university teachers and professors of other universities. Thesis defense is carried out in the form of postgraduate narration and on-the-spot questions of the defense group, in which the enterprise experts and technicians mainly ask questions on the practical aspects of engineering and technology, and the university tutor and professors focus on questions of the theoretical analysis. In the defense process, investigation of practical applicability and innovation is emphasized, at the same time, the thesis should have certain theoretical height based on amounts of data testing. Finally, the defense group gives advice according to the thesis standards, thesis content and postgraduate's comprehensive performance in the defense.

7. Conclusion

On the basis of reference to foreign advanced cultivating mode, our school puts forward the "Two Stages" education and "Two Tutors" mode on postgraduate education and thesis guidance, respectively. The "Two Stages" education fully improves the practical and innovative abilities and the occupational qualification of the postgraduates, brings benefit to the enterprise, spreads enterprise culture, and reduces funding burden of the state and the university. The two tutors thesis guidance mode gives full play to the respective advantages and characteristics of the university tutor and enterprise tutor,

which is more adaptive to the thesis subject derived from the actual enterprise production, and cultivates the ability to solve actual problems, and enrich the postgraduates' experience and uncertain knowledge, and lay a solid foundation to improve the postgraduates' innovative ability.

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9. References

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