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The School-enterprise Collaborative Training Experience of Foreign Professional Degree Postgraduates: Enlightenment for China

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Abstract

School-enterprise cooperation is an important link to improve the training quality of professional degree postgraduates. Based on the analysis of the main measures and guarantee systems of school-enterprise cooperative training of foreign professional degree postgraduates, this paper compares and analyzes the common characteristics and different advantages. It is found that the common characteristics and important weight factors of the foreign school-enterprise cooperation mode are mainly manifested as the following aspects, namely the improvement of laws and regulations, the high attention of the government, the active participation of social forces, and implementation of school-enterprise cooperation in universities. Therefore, in the new era, the cultivation of professional degree postgraduates should emphasize the guidance mechanism, evaluation mechanism, incentive mechanism, and guarantee mechanism. Only in this way can we comprehensively improve the quality of the school-enterprise collaborative training.

Keywords

Professional degree postgraduate; School-enterprise collaboration; Experience; Enlightenment.

1. Introduction

According to the needs of specific professional fields in society, the professional degree postgraduate education is carried out to train high-level talents, who are required to have good moral level, rich professional knowledge, and strong practical ability. Therefore, compared with academic postgraduate education, its training direction has obvious particularity, pertinence, and professionalism. In its training process, we always attach great importance to practical teaching and take it as the key to tutor employment, teaching quality inspection, and student ability training. However, there are still many contradictions in the practical teaching of professional degree postgraduates. The training quality and market competitiveness of professional degree postgraduates are affected by many factors, such as the lag and low quality of practical teaching links, insufficient attention of training enterprises, imperfect practical teaching methods and approaches, immature practical teaching mechanisms, and so on.

To solve the existing problems in practical teaching, theoretical scholars and practical experts both attach great importance to innovation and constantly explore the frontier theory of professional degree postgraduate training. Therefore, the "school-enterprise cooperation" model was born, and gradually became the key to solving the mismatch between school education and social needs. Combined with the concrete development, it can be seen that the effect of cooperation between universities, enterprises, financial institutions, and other departments in talent training is very obvious. However, we should deeply realize that there are still some shortcomings in China's professional degree graduate education, which need to be solved overcome.

The professional degree postgraduate education system stemmed from the United States. The United States gave full play to its pragmatic spirit and creatively formulated the professional degree graduate education system, which enriched the original education system. After years of development and

progress, the professional degree postgraduate training system has been recognized all over the world. Most developed countries pay more attention to the practical ability of postgraduates and actively promote the implementation of collaborative training between schools and enterprises. Of course, the content and direction of school-enterprise collaborative training programs in various countries have their characteristics. By comparing the experience of school-enterprise collaborative training of professional degree postgraduates in developed countries, this paper summarizes its overall characteristics and forms a talent training scheme for professional degree postgraduates in China.

2. Main Measures and Guarantee Systems of Foreign School-enterprise Cooperation

2.1 Main Measures

2.1.1 Enterprise Practice

The key link of school-enterprise collaborative training of foreign professional degree postgraduates is enterprise practice. In the process of practice, postgraduates can directly accept the guidance of enterprise tutors and complete the combination of theoretical knowledge and practical learning. As a result, postgraduates can not only improve their ability to solve practical problems, but also enrich their professional theoretical knowledge. Most countries attach great importance to the enterprise practice training of professional degree postgraduates and even formulate the training plan of professional master from the needs of enterprises.

At present, the United States has built an efficient enterprise practice system, whose main mode is to alternately carry out enterprise practice and school education. After systematically learning the theoretical knowledge, professional degree postgraduates need to enter enterprises for practical learning. The alternating time and frequency can be flexibly adjusted. Students can choose various alternation frequencies from half-day alternation system to semester alternation system [1]. Furthermore, Canada's higher education system also places students' enterprise practice in an important position. The joint training mode requires students to be interns in relevant departments or enterprises, then schools will score students' performance. In order to protect the rights of students and enterprises, the school will set up professional departments to supervise and manage school-enterprise cooperation. Besides, local governments can give tax incentives to enterprises providing internship positions, which will encourage enterprises to provide more internship opportunities for students.

2.1.2 Double Tutor System

In order to ensure the education quality of professional degree postgraduates, foreign governments will formulate policies and provide funds for the establishment of double tutor system. The double tutor system is one of the important characteristics of modern education, which is conducive to training high-level applied talents. Therefore, in the process of school enterprise cooperation, the educational quality of double tutor system directly determines the practical ability level of professional degree postgraduates. For example, Germany's "dual education system" model is the successful representative of the school-enterprise collaborative training system based on enterprises. It is an effective vocational education model recognized by the world, and it is suitable for undergraduate education and professional master's education. German professional degree postgraduate education draws lessons from the "dual education system" model and adopts the joint training of off-campus tutors and on-campus tutors. The off-campus tutors employed have rich professional experience and profound professional knowledge. In addition, the "cooperative education" system in the United States refers to a tutor group composed of two or more tutors to jointly guide teaching. In the 1960s, with the sharp increase in the demand for applied talents, professional degree postgraduate education began to occupy a major position in the American postgraduate education system. Stanford University creatively put forward the joint tutor system and invited off-campus enterprise tutors to participate in postgraduate education. Off-campus tutors are mainly responsible for the practical education and off-campus work of professional degree postgraduates, which has achieved remarkable results.

2.1.3 Establish School-enterprise Collaborative Training Base

Foreign universities actively build school-enterprise collaborative training bases. The University cooperates with enterprise groups or scientific research institutes to build training bases, which can not only train postgraduates' practical and innovation abilities but also effectively solve the practical problems faced by society or enterprises.

With the help of the training base, postgraduates can complete a series of work, such as school enterprise project research, experimental technology application, participation in management decision-making, and so on. Over the years, American universities and enterprises have been formulating scientific research cooperation plans and jointly establishing research bases. While solving the practical problems faced by enterprises, the joint research base provides a mature training system and superior external environment for postgraduates, so students can effectively combine theoretical knowledge with practical research [2]. Meanwhile, French universities also attach great importance to the practical education of their postgraduates and have made remarkable achievements in the collaborative training between schools and enterprises. The cooperation between enterprises and universities includes not only the establishment of joint training bases and the provision of internships. The enterprise will also provide funds for the student associations of the school, trying to build the student associations into groups that can learn professional skills. As the leader of the school-enterprise joint training base, enterprises can train students according to the needs of society and ensure their employability. In addition, enterprises can obtain applied talents in professional fields while solving practical problems [3].

2.1.4 Professional Associations Involved in School-enterprise Cooperation

Professional associations in developed countries were established earlier and have great authority in specific professional fields. Professional associations and academic groups participate in the evaluation of postgraduate teaching quality and supervise the whole process of cooperative training. At the same time, professional associations will also help universities and enterprises formulate cooperative training plans and improve the methods of training students' application ability. Professional associations have played a great role in promoting the cooperative development of professional degree graduate schools and enterprises, which fully reflects the professionalism and objectivity of professional associations.

Among them, the professional certification system is the most direct manifestation of professional associations participating in postgraduate education. For example, the British professional association has created a "vocational qualification certificate system" to encourage professional degree postgraduates to participate in enterprise work, exercise professional skills, and improve professional ability. Students can be exempted from some subjects of the vocational qualification examination after completing the courses with professional certification. However, professional certification has high requirements for school practical education, and universities need to establish a perfect school-enterprise collaborative training system. In addition, the United States has established a national licensing system and certification standards, and the professional certification activities of professional associations are very reasonable. Its professional certification system attaches great importance to school-enterprise collaborative training and practical learning, so it effectively promotes the development of professional degree graduate education [4,5].

2.2 Guarantee System

2.2.1 Legal and Policy Guarantee

Law is the most powerful weapon which we can use to ensure the right to education. Foreign laws and regulations on promoting the level of postgraduate education are rich, which effectively promotes the development of school-enterprise collaborative training systems. For example, the Morrill Land-

Grant Act of the United States, the School Educational Law of Japan, the Higher Education Law of Germany have all made outstanding contributions to the training of senior technical talents. The birth of various bills not only makes the whole society pay more attention to applied talents but also breaks through the original training scope of universities and makes the national higher education system more diversified. At the same time, with the guidance of relevant educational laws and regulations, society pays more and more attention to the cultivation of postgraduates' practical abilities. Universities and enterprises spontaneously unite to establish a school-enterprise collaborative training plan, and gradually raise the capital investment in the training of professional degree postgraduates.

2.2.2 Government Supervision and Social Evaluation

Governments all over the world pay great attention to the education of professional degree postgraduates and have high requirements for the quality of school-enterprise cooperation. The foreign modern higher education system was established earlier, but the education of professional degree postgraduates started late. Therefore, the professional degree postgraduates were not widely recognized by society in the initial stage. In order to improve the social status of professional postgraduates, the government has formulated a series of policies to improve the training quality of professional postgraduates. For example, the French government will levy an "apprenticeship tax" on enterprises, which will be used to pay the salaries of off-campus tutors and the costs of practical teaching. In addition, the mass media has also played a great role in the establishment of schoolenterprise cooperative training system. The media works with professional institutions to evaluate the quality of university education. The evaluation indicators include the quality of collaborative training, scientific research achievements, and students' employment quality. After that, the media will rank the education quality of the University, and the ranking results will affect its popularity and reputation in the society. A good ranking can bring more funds and cooperation projects to the University, which is conducive to improving its status. On the other hand, the media will give free publicity to enterprises with good performance in school-enterprise cooperation, so as to bring good social reputation to enterprises.

2.2.3 Universities Internal Guarantee

First of all, foreign universities pay great attention to the practical ability of professional postgraduates, so the corresponding school-enterprise collaborative training system is relatively perfect, and the assessment standard of students' practical achievements is relatively strict [6].

In order to obtain a professional master's degree, postgraduates must complete practical courses according to the cooperative training plan [7]. Second, foreign universities strictly implement the double tutor system in the process of professional postgraduate education. According to the regulations of the University, off-campus tutors are mainly responsible for practical training and helping students solve the problems they face during their internship. In addition, the internship results of professional postgraduates will also be used as the assessment contents of on-campus tutors, which will affect their professional title evaluation and salary payment. Last but not least, foreign universities attach great importance to the quality of joint training bases. Therefore, the school will maintain a good cooperative relationship with enterprises and relevant institutions and jointly establish practical teaching bases. The bases are not only conducive to the professional practice of postgraduates but also conducive to the brand construction and reputation promotion of enterprises [8].

3. The Common Characteristics and Differences of Foreign Cooperative Training

3.1 Common Characteristics

3.1.1 Laws and Regulations are Relatively Perfect

Law is the most powerful guarantee force. The higher education system in developed countries was established earlier, and the professional degree postgraduate training has a long history, so the

relevant laws and regulations have been relatively perfect after years of development. The initial legislative goal is mainly to improve the social recognition of professional degree postgraduates. With the development of The Times, the legislative goal has gradually evolved into improving the education quality of professional degree postgraduates.

In the meantime, perfect laws and strict judicial procedures provide a strong guarantee for the collaborative training system and effectively protect the rights of universities, enterprises, and students.

3.1.2 High Attention from the Government

Foreign governments pay great attention to the education of professional degree postgraduates, improve the social status of professional degree postgraduates, and improve the school-enterprise cooperation training system. Specifically, foreign governments actively promote the formulation of relevant laws and invest funds to support collaborative training, so that the training quality of professional degree postgraduates has been significantly improved and widely recognized by society. The government gives encouragement and policy support to enterprises actively participating in collaborative education and talent training and also gives enterprises certain tax incentives. Therefore, the government's support and guidance has become an important force to promote the development of school-enterprise cooperative training system and enhance the society's attention to the practical ability of professional degree postgraduates.

3.1.3 High Participation of Social Forces

Enterprises and professional associations highly participate in the training of professional masters, which is conducive to grasping the training direction of students and train applied senior talents to meet the needs of society. Enterprises, professional associations, and universities jointly formulate training plans, and train applied talents by establishing joint training bases and experts to guide graduate teaching practice [9]. Western countries attach great importance to the professional certification system of professional master education. The main evaluation factors of a professional certification include the quality of school-enterprise collaborative training and the quality of students' practical learning. The professional association is independent of the government and universities. It belongs to the supervision and management at the social level to ensure the objectivity and professionalism of the certification results. Moreover, public opinion also attaches great importance to the quality of school-enterprise collaborative training. The media supervises the whole process of school-enterprise collaborative training and reports on outstanding companies, which not only effectively improves the social reputation of enterprises, but also proves the professional and practical ability of postgraduates cultivated by the school-enterprise collaborative system.

3.1.4 Universities Attach Importance to School-enterprise Cooperation

Universities attach great importance to school-enterprise collaborative training in the process of postgraduate training. Because this training model can break the organizational boundary between enterprises and universities, give full play to the unique advantages of enterprises in cultivating applied talents, and make full use of the experts, technology, information, and other positive factors of schools and enterprises to cultivate applied talents needed by the society. Universities attach importance to school-enterprise cooperation, which is mainly reflected in the following four aspects. First of all, when formulating the professional degree postgraduate training plan of the University, they will fully consider the suggestions and needs of relevant enterprises, and even give enterprises the right to formulate part of the postgraduate training plan. Second, at present, most universities adopt the dual tutor system to train professional degree postgraduates, and enterprises are required to send outstanding talents as off-campus tutors to guide students. Third, vigorously promote the construction of a collaborative training base, make full use of the advantages of enterprises and provide more practice opportunities for students. In addition, the quantity and quality of school-enterprise collaborative training bases are important indicators to evaluate the training quality of professional degree postgraduates. Fourth, support the school-enterprise cooperation project,

cultivate the practical ability of postgraduates in the project, and effectively solve the practical problems faced by enterprises in production while training the practical ability of postgraduates.

3.2 Differential Performance

3.2.1 Differences in Corporate Control

Each country has its unique national conditions, so the training direction of professional degree postgraduates, the requirements for students' practical teaching, and the quality requirements of school-enterprise collaborative training are also different. There are two main models of schoolenterprise collaborative training systems. The first is the enterprise-led model. Enterprises are responsible for the establishment of joint practice base and determining the specific arrangements for research projects and students' practice. Considering that the cooperative training system focusing on practical learning is relatively advanced, the University gives enterprises great autonomy, allows enterprises to participate in the formulation of graduate training plans, and defines the direction of school-enterprise cooperation projects. At the same time, enterprises can use the practical schoolenterprise collaborative training system to train applied master talents who can bring help to enterprises. In addition, the internship will be arranged in the place designated by the enterprise, so that the enterprise guidance runs through the whole process of graduate practical training. Second, the university-led model. That is, with universities as the main and enterprises as the auxiliary, universities have greater control over the establishment of joint practice bases and the selection of school-enterprise cooperation projects. However, in some countries, the construction of the professional degree postgraduate training system is relatively late, and there is a lack of advanced practical teaching plan and school-enterprise cooperative training system, resulting in the overall control of colleges and universities over school-enterprise cooperative training, low enterprise participation, and unable to effectively give full play to the maximum value of society and enterprises in cultivating applied talents. Therefore, enterprises can completely entrust universities to cultivate applied talents, and universities will choose some enterprise projects as the content of students' practical training.

3.2.2 Different Supervision Subjects

The supervision subjects of school-enterprise collaborative training in western countries are slightly different, mainly divided into external supervision and internal. The former is led by government education departments and professional associations, while the latter is led by University alliances or universities. External supervision is led by the education department of the government. Government education department cooperates with professional associations to manage school-enterprise cooperation training and ensure the education quality of professional degree postgraduates. The effective combination of government authority and specialization of professional associations has played an important role in controlling the quality of school-enterprise joint practice teaching by supervising and managing the whole process of school-enterprise cooperation. Internal supervision refers to the quality supervision of school-enterprise cooperative training led by colleges and universities. It is a perfect internal supervision system established by the university to ensure excellent education quality and advanced cooperative teaching level. Moreover, in order to strengthen selfmonitoring, the university has established a degree evaluation committee and carried out internal quality control by formulating self-evaluation policies. This will play a great role in real-time monitoring the whole process of school-enterprise collaborative training, summarizing experiences and lessons, and correcting deficiencies in time. At the same time, the university has established a special organization to operate the collaborative training quality feedback system, it can collect and summarize the feedback information from enterprises, tutors, students, and other aspects, besides, it can also correct mistakes and adjust direction in time. The collaborative training quality feedback system will also collect the experience of school-enterprise collaborative training all over the world. We can use this data to put forward effective improvement schemes in combination with the situation of schools and enterprises, so as to promote the existing school-enterprise collaborative training system.

4. The Practical Enlightenment from Foreign School-enterprise Collaborative Training

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The construction and improvement of the school-enterprise collaborative training can effectively improve the practical ability and innovation ability of professional degree postgraduates, which is also conducive to developing senior applied talents in the new era. Specifically speaking, when conducting the school-enterprise collaborative training in China, we should take China's national conditions into consideration to choose a suitable approach, instead of blindly imitating the foreign training system, otherwise, we might obtain a counterproductive consequence.

4.1 Guiding Mechanism

Establish the guidance mechanism and reshape the orientation of practice teaching. First, the laws and regulations will provide a solid legal guarantee for professional degree graduate education, so we should improve relevant laws and regulations as soon as possible. Second, the improvement of teaching quality and the recognition of senior applied talents are both effective ways for cultivating professional degree postgraduates. Meanwhile, more attention should be paid to the school-enterprise collaborative training, no matter for society or universities. Besides, governments should actively promote schools and enterprises to cooperate deeply, control the development direction correctly, and utilize the advantages themselves to construct an information platform to facilitate the communication between schools and enterprises. Third, from the perspective of school-enterprise collaborative training, the teaching implementation plan should be suitable for the training characteristics and attribute orientation of school-enterprise collaborative training, with overall, systematic, and strategic features. Moreover, the reform of the practical teaching system and curriculum system for professional degree postgraduates needs to be carried out through multiple measures to enhance the collaborative training quality, which can further improve the training quality and market positioning of professional degree postgraduates comprehensively.

4.2 Evaluation Mechanism

Fulfill the evaluation mechanism and "double tutor" system. First, establish the evaluation mechanism of professional associations, improve the authority of professional associations, and give full play to the professionalism and objectivity of professional associations. Professional associations provide guidance and evaluation for the training of professional degree postgraduates, pay attention to students' practical education, and comprehensively supervise the quality of school enterprise cooperation training. Besides, they can establish institutionalized and standardized professional certification procedures, national licensing system, and certification standards to carry out professional certification on the quality of practical education of professional degree postgraduates and the collaborative training between schools and enterprises. In the process of professional certification, they can also use their own professional ability to help colleges and enterprises improve the school-enterprise collaborative training system. Second, strengthen the assessment and employment of dual tutors. The University's management of enterprise tutors is still in the access stage and has not evaluated its practical teaching links. This is also the main reason why the "double tutor" system is not effective at present. Therefore, a competition mechanism should be introduced to implement the "final elimination system" for out of school counselors who fail to perform their duties of practical teaching guidance or poor evaluation effect of practical teaching, so as to fully mobilize the enthusiasm of out of school tutors to guide professional degree postgraduates. The existing oncampus tutors generally guide the dual work of academic graduate students and professional postgraduates at the same time, and the guidance methods do not reflect the corresponding differences. Thus, in the assessment mechanism of on-campus tutors, we should introduce the scope of practical teaching, gradually increase the proportion of evaluation, promote the change of guidance methods and contents of school tutors, and comprehensively improve the comprehensive skill level of professional postgraduates. Of course, if we want to comprehensively evaluate the school-enterprise collaborative training system, we need to establish a quality evaluation index system for schoolenterprise collaborative training of full-time professional degree postgraduates after repeated research

by training units, postgraduate schools, and enterprises, and predict the possible problems in implementation [10].

4.3 Incentive Mechanism

Improve the incentive mechanism and mobilize the enthusiasm. First of all, according to the workload, teaching quality, and scientific research achievements, the on-campus and off-campus tutors who carry out joint teaching will be rewarded. The reward contents include increasing class hour allowance, improving teaching and scientific research projects, active publicity, and other measures. Meanwhile, to encourage high-level teachers and academic leaders to engage in practical teaching and comprehensively improve the quality of joint teaching, the university should strive to build a school-enterprise joint teaching team with rich practical experience, high academic level, and reasonable structure. Second, the government should give strong support to enterprises participating in collaborative training by setting up special funds, increasing financial investment, implementing tax incentives, and improving the system, so as to fully mobilize the enthusiasm of building practical teaching bases and joint teaching. Third, universities and enterprises should further deepen their cognition and establish a professional degree postgraduate practical teaching base with perfect functions and standardized operation. Based on the base, we will explore and establish a long-term incentive mechanism of win-win cooperation, and comprehensively promote the upgrading of the school-enterprise collaborative training system for professional degree postgraduates and the sustainable development of professional degree education in China [10].

4.4 Guarantee Mechanism

Enhance the teaching quality supervision and establish the guarantee mechanism. The quality of school-enterprise collaborative training of professional degree postgraduates can be supervised through two levels. The first level is the internal guarantee mechanism with training units and postgraduate tutors as the main executive body. Relevant universities should actively explore and establish an effective self-evaluation mechanism for the quality of training. Besides, they should strictly review the implementation and the training effect. Trying to achieve an objective, professional internal examination, and a periodic self-reflection. Within them, the review contents include the quantity and quality of the training bases, the work of on-campus and off-campus tutors, feedback and evaluation of professional degree postgraduates, etc. The second level is to establish an external joint supervision mechanism in which the education department is responsible for guidance and control. What's more, the professional association is responsible for the implementation of specific work. Moreover, Professional associations can also expand their functions and carry out detailed professional supervision on the quality of higher education in their fields. In this regard, we can learn from the existing professional certification system in western countries to review the educational quality of corresponding majors in universities. The specific review contents include the number of scientific researches, the collaborative training between schools and enterprises, the quality of teachers and students' practical achievements, etc. At the same time, in order to control the quality of school-enterprise cooperative training and supervise the process of professional certification, government education departments should give full play to their authority and guiding role. Try their best to supervise the implementation and effect of school-enterprise collaborative training system, and ensure that the process and results of professional certification are fair, reasonable, and open.

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References

- [1] Jinling Bi, Yinxuan He: The Enlightenment of the Development of Professional Degree Postgraduates Education in Britain and America to China, Journal of Hubei University of Economics(Humanities and Social Sciences), Vol. 15(2018) No.9, p.148-150.
- [2] Yongze Zhang, Xiaoguang Liu, Weichun Dong: Exploration on Project-based School Enterprise Collaborative Training Mode for Professional Degree Postgraduates, Academic Degrees & Graduate Education, (2016) No.6, p.8-12.
- [3] Yi Zheng: On the ways of college enterprise cooperation in French Universities -- Taking the Ecole Centrale Paris as an example, Communication of Vocational Education, (2017) No.22, p. 58-61.
- [4] Shengnan Song: An Empirical Study on the Critical Influencing Factors on the Enterprise Practice Effect of Full-Time Professional Degree Masters (MS., The South China University of Technology, China 2012). p.6-13.
- [5] Qian Song: Characteristics and Enlightenment of American Higher Education Certification Practice, Teacher Education Forum, Vol. 25(2012) No.11, p.9-10.
- [6] Anne Marie Delaney: Quality Assessment of Professional Degree Programs, Research in Higher Education, Vol. 38(1997) No.2, p.241-264.
- [7] Maria Theodosiou, Jean-Philippe Rennard, Arsia Amir Aslani: The Rise of the Professional Master's Degree: The Answer to the Postdoc/PhD Bubble, Nature Biotechnology, Vol. 30(2012) No.4, p.367-368.
- [8] Wei Wang: The Research on the Development of Professional Master's Degree of American Postgraduate Education(Ph.D., Hebei University, China 2020), P.20-30.
- [9] Emily Drabinski: Valuing Professionalism: Discourse as Professional Practice, Library Trends, Vol. 64(2016)No.3, p.604-614.
- [10] Song Jiang, Han Liu, Qinghua Huang: Problems in Practical Teaching of Full-time Professional master's degree Postgraduates and Their Coping Mechanisms, Education Forum, (2016) No.18, p.153-154.