

The Experience and Enlightenment of Foreign Industry University Research Cooperation Education

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Abstract

There are many ways in the world, but all countries have their own characteristics. Through the comparative study of different countries, we can learn from the experience of advanced countries to promote the development of our domestic research cooperation education. This paper describes the experience of the United States, Canada, Japan, and Japan, and hopes to provide valuable experience for the successful cooperation in the development of our country.

Key words: The education of industry university research cooperation education; Development status; Revelation

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INTRODUCTION

From the practice of some developed countries in the world, the study of the cooperation of each country has its characteristics, which is not the same as the elaboration of the cooperative education.

The United States National Cooperative Education Commission is described as a unique form of education,

which will be a combination of classroom learning and work experience in the public or private sector, which allows students to cross school boundaries, face the real world to obtain basic practical skills, enhance students' confidence and determine their career direction.

The Canadian Cooperative Education Association is described as a form of CO education program, which is a combination of theoretical learning and work experience in a cooperative education employer organization, which provides students with a regular rotation of work practice and professional learning in the fields of business, industry, government, and social services.

The world cooperation education association is described as a cooperative education to combine classroom learning and work in the work of students to apply the theory to the practice of real knowledge, and then to bring challenges and insight into the work of the school to promote the school's teaching and learning.

1. THE BASIC SITUATION OF THE RESEARCH AND COOPERATION EDUCATION IN THE MAJOR DEVELOPED COUNTRIES IN FOREIGN COUNTRIES

1.1 The Basic State of the United States of America, the Cooperative Education

Through the combination of learning and work, the education of the University, the University, is the effective education mode of the high quality talents with innovative spirit and practical ability. There are two main types of cooperative education in the United States: One is the emphasis on skill learning and the cooperative education system which is beneficial to the students in the future. This kind of cooperative education model is advocated in the engineering, construction, mechanical design and other applications, as well as students should be stable

in a related company to carry out social practice, so as to help students master the practical application skills and determine the future employment and orientation. Another is to Antioch College as representative to study and the social practice regularly convert based cooperative education system, it requires all students must be in accordance with the 'school work - study' finish school, each of the graduates should be with in a number of social production areas and departments of work experience. This model will improve the students' practical experience and the ability to improve the students' comprehensive quality.

1.2 Basic Situation of Canadian University Research Cooperation Education

The basic approach is: Students in the completion of a certain professional learning, is arranged to work with the professional related companies, enterprises and other practical work, the time for students to engage in practical work of the 1/2. The university is responsible for contacting the practice unit, and the employer pays the students' work. The university is responsible for tracking and checking the students' internship performance, the employer is responsible for guiding and identification of students' work practice. Canadian universities believe that the three parties to participate in the education of industry, research and cooperation in this mode of income. Students can get practical work experience in the practical work of this profession, which lays the foundation for the graduate employment. The employer can find outstanding students, enrich the development of enterprises with young technical talents. The Canadian model pays special attention to the position of 'learning', which makes the function of higher education to be truly reflected in the cooperation, and it is the most significant difference between the other models.

1.3 The Basic Situation of Japan's Cooperation Education

As the basic national policy of cooperative education. The Japanese government believes that the University's teaching, academic research must be closely integrated with the industry's production. In order to promote the education industry, Japan has taken new initiatives, and has established a series of systems

to promote the development of the teaching of industry and research cooperation. In July 1996, the government formulated the basic plan of science and technology, the research and development cooperation as a basic national policy, the requirements of colleges and universities and enterprises to earnestly implement. 1997 years, proposed the "education reform plan", which contains the Japanese government to promote the development of industry and research in the development of policy and strategy.

2. THE BASIC CHARACTERISTICS OF FOREIGN UNIVERSITY INDUSTRY COOPERATIVE EDUCATION

2.1 System and Strict Management

Cooperative education is a new requirement for school management. Therefore, there are a large number of students in the school, the responsibility of a major and high efficiency of cooperation education management institution is another important feature of foreign cooperative education.

2.2 To Student Employment as the Direction

From the University of Cincinnati in 1906, the first cooperative education program, to the University of Waterloo in 1957 when the establishment of the implementation of a year three semester system of cooperative education mode, the cause is very simple and realistic, that is to solve the problem of students after graduation, because of the cooperation in school, there is a lot of time, out of school to participate in the actual work, greatly improving the students' employ ability.

2.3 Post Work, Paid Work

In order to make the students real mastery through work term employment in some of the practical skills, they must real swords and spears to full-time work rather than on the sidelines, therefore, whether it is the United States or Canada students in semester work full-time work is another important feature of cooperative education.

2.4 Promote and Promote Educational Reform

The fact that the development of foreign cooperative education has proved that cooperative education and education reform, especially the reform of the teaching reform, is very active in promoting the teaching of science and technology, production and economic development and improving the teaching quality.

3. THE MANAGEMENT MODE OF FOREIGN UNIVERSITY RESEARCH COOPERATION EDUCATION

The mode of cooperative education is closely related to the management mode, and the parallel mode is usually some small plan, so the management is relatively dispersed, the main part is the small scale of the part-time participation of teachers is often decentralized management. No matter what kind of management mode, the school has increased the management workload and the expense, the cooperative education management expense to be higher than the non cooperative education. Therefore, cooperative education students' tuition fees are higher than those of non cooperative education students.

3.1 Centralized Management Mode

University management, in the school set up a specialized agencies, is responsible for the management and guidance to cooperative education, allied with Cooperative Education Coordinator, Office Coordinator is responsible for new jobs education cooperation, development, consulting, job placement, evaluation and education direction, including the work of employment guidance, cooperation education larger schools are generally used this kind of management style.

3.2 Decentralized Management

To the hospital, Department, management, mainly from the teaching staff to take the cooperative education management and guidance work, is usually as a cooperative education of part-time consultants, a cooperative education program, but not the size of the school, usually using this management approach.

3.3 Centralized and Decentralized Management Approach

The work of management and guidance by the coordinator and faculty is usually determined by the coordinator or post developer, which is approved by the faculty, and the evaluation of learning and giving the credit.

3.4 Compulsory and Selective

A school or a system requires all students to complete their studies in the form of cooperative education.

Students can choose whether to participate in the cooperative education program, or not to obtain a degree in non cooperative education.

3.5 Fractional and Non Academic Studies

To complete the required work experience can be obtained, which is also divided into the attached and non-additive. The attached type is the credit plus the total credits required for graduation, and the no -added type of credit can be used as a substitute for a number of elective courses.

Just as a request, do not remember the credits.

4. THE ENLIGHTENMENT OF FOREIGN COOPERATION EDUCATION

4.1 The Training Objectives of Education of University

Cooperative education is essentially based on the general education, plus a piece of vocational training. Therefore, in addition to maintaining the same academic goals and degree requirements of non cooperative education, in this sense, cooperative education does not exist the problem of low levels of education. It is suitable for the cultivation of applied talents. In this period, we should have some kind of standard requirements for cooperative education,

we should have our own national conditions, and we should be suitable for the basic requirements of different development period, which is conducive to the exploration of cooperative education.

4.2 Should Be Clear in Our Country to Carry Out the Purpose of the Education of Cooperation

An important purpose of the cooperative education in our country is to carry out the educational policy of the combination of education and production, improve the students' comprehensive quality, which is the guiding ideology of the development of cooperative education with Chinese characteristics. Therefore, cooperative education should have its own personality, and it should be the main purpose of the reform. With the deepening of the reform of the school system, more and more students are independent employment. In the face of difficult employment of graduates, we should improve the quality of students and graduates.

4.3 The Government Should Further Intensify the Support for the Education of Industry, Research and Education

From the perspective of the development of cooperative education in the United States, the government's support is essential, but the government's support needs to grasp the opportunity to take different forms of support in different stages of development. According to the current development of cooperative education, government support should be reflected in two aspects, one is the establishment of a number of special funds through the fund, the establishment of cooperative education pilot incentive mechanism and restraint mechanism; two is the policy support, which is currently the most important and most needed support, mainly to improve the students in enrollment system, employment and other aspects of flexibility, while encouraging the community to actively support and participate in cooperative education.

4.4 The Education of Industry University Research Cooperation Education Should Have Some Standard Requirements

Cooperative education model is a continuous development in the long-term practice, but also a process of continuous innovation, the model can have a variety of. But we must have the basic characteristics of cooperative education, to achieve the basic requirements of the specific benefits, otherwise it should not be called cooperative education. In this regard, the United States in the development of cooperative education is a profound lesson for us to learn from. In this period, the cooperative education should be standardized. We should have our own national conditions, which are suitable for the basic requirements of different development stages of cooperative education, which is conducive to the exploration of cooperative education.

4.5 There Should Be a Basic Requirement for the Work Practice of the Cooperative Education

The characteristics of cooperative education in the combination of “work” and work and “reading”, the United States and Canada cooperative education is very clear about the nature of the “workers”, but in fact, in the specific operation, workers’ range is quite wide, to a large extent, the experience of a work. Work is very important, not just a question of income, but also the role of responsibility and restraint. In our country, the cooperative education students can arrange for the actual working position is a primary problem, and whether to give the work reward is a deeper problem. It now appears that how to solve the problem of how to solve the work of the students, in particular, after the introduction of the payment system, this issue will have a significant impact on cooperative education.

CONCLUSION

In the 80 years, our country began to cooperate, and has achieved rapid development, in the development of science and technology and economic integration plays an important role. But the effect of our domestic research cooperation is not very good. We can learn from the experience and lessons from foreign countries, and explore

the effective ways and methods to develop the cooperation education in the socialist market economy system.

REFERENCES

- Li, C., & Lin, N. (2011). China industry university institute cooperation policy change analysis and consideration. *Science and Management of Science and Technology*, (11), 21-26.
- Wu, Y. (2009). Aliment pharmacol the small and medium-sized enterprises and research institutes factors restricting the manufacture-learning-research cooperation study. *Technology and Management*, (01).
- Xiao, H. (2001). The cooperation mode and mechanism of innovation. *Higher Education in Jiangsu*, (06)
- Zou, X. D., & Lin, W. L. (2010). Analysis of the development trend of. *Education in China*, (17).
- Shen, Z. Q., & Zhou, Y. H. (2010). The index system of evaluation. *Journal of Suzhou Vocational University*, (04).
- Liu, D., Zhu, L. J., & Wang, B. J. (2011). Existing problems and Countermeasures in the new era of research cooperation mechanism innovation. *Journal of Hebei University (Philosophy and Social Science Edition)*, (01).
- Liu, W. N. (2010, July 27). The combination of production and research, five years of innovation and innovation results. *Yangcheng Newspaper*.