Exploration and Research on the Cooperative Education Model of Production, Teaching and Research in Applied Undergraduate Colleges and Universities

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Keywords: Applied Undergraduate Colleges; Production-University-Research Coordination Mechanism; School-Enterprise Community; Cooperative Education Platform; Multiple Cooperative Education;

Abstract: With the development of economy and the great demand for Applied Talents in society, higher requirements are put forward for the training mode of Applied Undergraduate Colleges and universities. Traditional Applied Colleges and universities are relatively outdated in the mode of educating people, and their corresponding production, education and training system is still not perfect. Based on this, this paper will discuss the symbiosis theory of industry-university education in the ecological, social and economic disciplines of colleges and universities, and make a deep analysis of collaborative innovation and collaborative education. Based on the correlation analysis, this paper will put forward the multi-system collaborative education model, and further expand and deepen it as the mainstream model of school-enterprise community, and finally form a collaborative education platform for application-oriented undergraduate colleges, so as to break through the constraints of traditional school-enterprise cooperation, and make the multi-education mechanism of application-oriented undergraduate colleges get a new one.

1. Introduction

With the development of economy and society, the application-oriented undergraduate education system is constantly improving and progressing. With the vertical development of Applied Undergraduate education, the reform of higher education's training mode for talents has become the key direction of development and change in various countries [1-4]. As the only strategy to meet the needs of social development for Applied Undergraduate education, industry-university-research collaborative education can well meet the needs of various countries to deepen the reform of education system, and at the same time, it can also achieve a diversified talent innovation training mechanism, so that schools and enterprises can share technological resources. Material resources, experimental resources, brand resources and many other resources [5-10]. However, the traditional collaborative education of industry, University and research still has some drawbacks, such as simplicity, inefficiency and hierarchy. Therefore, the study of a diversified mechanism of collaborative education of industry, University and research is very important and meaningful [11].

Under the background that applied undergraduate universities vigorously carry out the collaborative education mode of production, teaching and research, a large number of research institutions and scholars have analyzed and studied the corresponding education mode. Western theory [12-14] first defined the cooperative education between industry, University and research institutes and put forward the famous triple helix theory. It holds that the cooperation between industry, University and research institutes should be studied from the sociological point of view. It also points out that universities, industries and governments should be the main bodies of industry, University and research institutes. It should break the boundary between the three main bodies of industry, University and research institutes, and emphasize collaborative innovation. American [15] related enterprises and universities think that industry-university-research collaborative education should be a dual system, and school students should also receive skills training in enterprises while receiving professional theoretical knowledge and cultural quality training; Japanese [16] thinks that industry-university cooperation should be implemented, and that schools and enterprises should carry out in-depth cooperation. The owner is mainly responsible for the investment of Zijin and

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R&D, while the school is mainly responsible for the task of training and transporting talents, so as to maximize the benefits through such operation.

Based on this, this paper will discuss the symbiosis theory of industry-university education in the ecological, social and economic disciplines of colleges and universities, and make a deep analysis of collaborative innovation and collaborative education. Based on the correlation analysis, this paper will put forward the multi-system collaborative education model, and further expand and deepen it as the mainstream model of school-enterprise community, and finally form a collaborative education platform for application-oriented undergraduate colleges, so as to break through the constraints of traditional school-enterprise cooperation, and make the multi-education mechanism of application-oriented undergraduate colleges get a new one. Development and progress.

The structure of this paper is as follows:

The second section of this paper will specifically analyze the factors affecting the cooperative education mechanism of production, teaching and research in Applied Undergraduate colleges.

The third section of this paper will specifically analyze and study the strategies and development suggestions of diversified industry-university-research collaborative education in Applied Undergraduate colleges.

Finally, I will make a summary of this paper.

2. The Factors Affecting the Cooperative Education Mechanism of Production, Learning and Research in Applied Undergraduate Colleges and Universities

There are many factors affecting the cooperative education mechanism of production, teaching and research in Applied Undergraduate colleges, which are mainly divided into legal and policy factors, institutional and mechanism factors, corporate interests and culture factors and basic conditions factors. Figure 1 shows the main influencing factors mentioned above and the corresponding details.

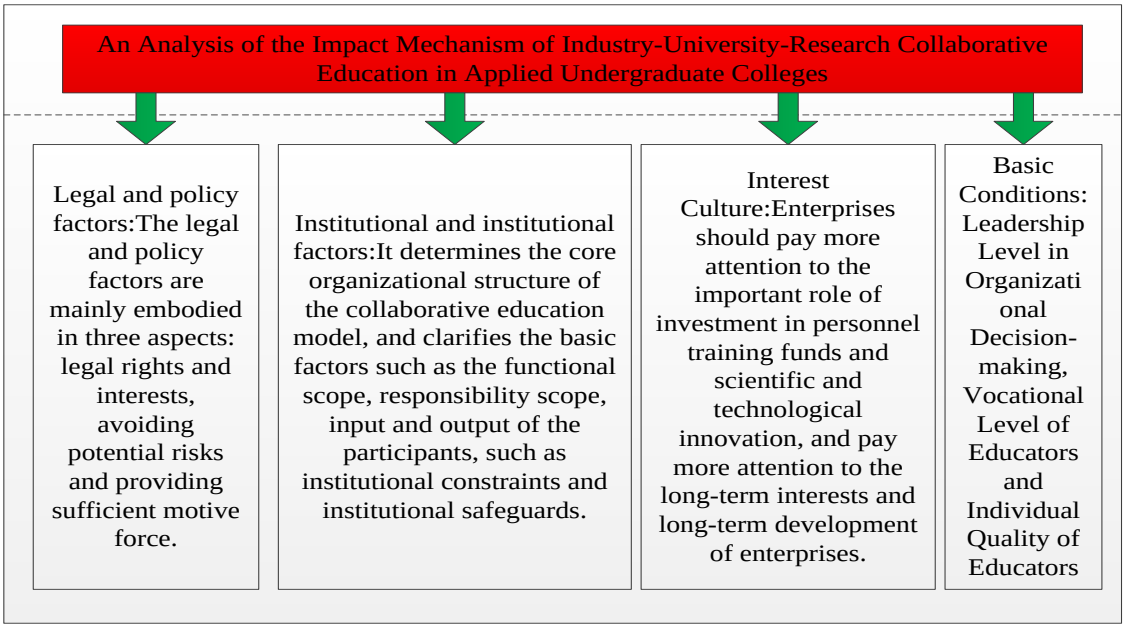

Figure 1 Analysis on the influence mechanism of collaborative education of production, teaching and research in Applied Undergraduate Colleges

The following conclusions can be drawn from the figure:

Legal and policy factors are the most mainstream influencing factors. They are the basis for maintaining the cooperative education of production, teaching and research in Applied Undergraduate Colleges and universities. They directly affect the development direction of the whole higher education. The legal and policy factors are mainly embodied in three levels: legal rights and interests, avoiding potential risks and providing sufficient impetus. Effective legal and policy support can make the Industry-University-Research collaborative education develop

smoothly and healthily.

At the level of institutional factors, it determines the core organizational structure of the collaborative education model, and clarifies the basic factors such as functional scope, responsibility scope and input-output among various participants, such as institutional constraints and institutional safeguards.

In terms of interest culture, it is mainly related to the related enterprises cooperated by applied undergraduate colleges and universities. Schools should cooperate with enterprises in depth and reach a consensus of interests on the basis of Industry-University-Research collaborative education. Enterprises should pay more attention to the important role of investment in personnel training funds and scientific and technological innovation, and pay more attention to the long-term interests and long-term development of enterprises.

At the level of basic factors, it includes the level of leadership involved in organizational decision-making, the professional level of the educators involved and the personal accomplishment of the educators. From the perspective of participants'abilities, the innovative ability of Applied Undergraduate Colleges and the reserve of excellent talents will directly determine the results of the whole industry-university-research education; from the perspective of decision-making and organizational level, the vision, knowledge and ability of decision-makers will be fully reflected in the process of docking with the market and enterprises.

3. Strategy and Development Suggestions of Diversified Industry-University-Research Collaborative Education in Applied Undergraduate Colleges

This paper applies the symbiosis theory to the specific research and analysis of the strategy and development suggestions of the diversified industry-university-research collaborative education in Applied Undergraduate colleges. The concrete manifestation of symbiosis theory and the corresponding evolutionary relationship are shown in Figure 2. The figure shows that the evolution of symbiosis relationship mainly goes through the formation stage, growth stage, maturity stage and corresponding development stage. The corresponding evolutionary relationship also mainly shows two kinds, namely, the evolution of interest relationship and the evolution of organizational relationship. In this paper, when dealing with the symbiotic relationship, the mainstream object is the enterprise and the corresponding Application-oriented Undergraduate Colleges and universities.

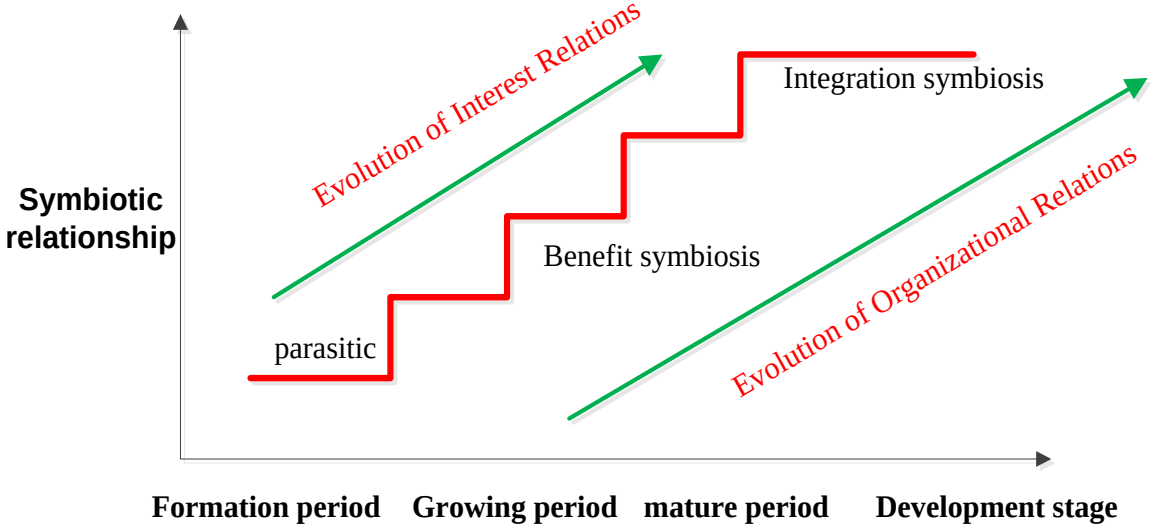

Figure 2 Evolution sketch of the symbiotic relationship between production, teaching and research collaboration in Applied Undergraduate Colleges and Universities

Based on the discussion of the above symbiotic relationship, at the level of enterprises and applied universities, the corresponding strategies of diversified industry-university-research collaborative education are as follows:

3.1. Forming a typical training mode of industry, University and research talents

At this level, it mainly relies on the new mode of company management and the co-management of the secondary colleges of the corresponding schools to form a modern professional talent training mode based on apprenticeship, and to realize the consistent mode of combining talent training with market demand dynamics. Actively construct the integrated curriculum and teaching mode of school-enterprise learning and training, and jointly develop the corresponding core curriculum and training projects.

3.2. Developing a Deeply Diversified School-running Cooperation Model

We should actively solve the permanence and normative problems of school-enterprise cooperation in applied education, solve the pervasive problems that have long plagued the cooperative education of production, teaching and research in Applied Undergraduate Colleges and universities, and actively create an application-oriented higher education base of “mixed assets of government and enterprise”, “coordinated development of production, teaching and research” and “joint governance by investors”.

3.3. Operating mechanism of innovation and cooperation

At this level, the main mechanisms include the formation of a daily operation mechanism for all parties to govern together, the realization of a set of two groups to form a team mechanism in the collaborative education of industry, University and research, the improvement of operational efficiency and the saving of operating costs. In this process, both sides of the school and the enterprise need to clarify the related matters such as talents and property. Enterprises need to stimulate the vitality of the college in time. Colleges need to provide qualified personnel and professional skilled personnel for enterprises in time.

3.4. Innovation of new forms of social services

At this level, it mainly includes the following measures: building the corresponding own brand of skill training, enhancing the degree of industrial participation, focusing on international construction and playing the role of diversified main body cooperation. Among them, in order to play the role of diversified main body cooperation, we need to give full play to the strength of school running, the credibility of industry authorities and the market vitality of cooperative enterprises. Schools should adhere to market-oriented, carry out various forms of training, and enhance the training effect of colleges.

4. Conclusion

With the development of economy and the great demand for Applied Talents in society, higher requirements are put forward for the training mode of Applied Undergraduate Colleges and universities. Traditional Applied Colleges and universities are relatively outdated in the mode of educating people, and their corresponding production, education and training system is still not perfect. Based on this, this paper makes an in-depth discussion on the symbiosis theory of industry-university education in the disciplines of ecology, society and economy, and makes a deep analysis of collaborative innovation and collaborative education. Based on the correlation analysis, this paper puts forward the multi-system collaborative education model, and further expands and deepens it as the mainstream model of school-enterprise community. Finally, an application-oriented undergraduate university collaborative education platform has been formed, which breaks through the constraints of traditional school-enterprise cooperation and makes the multi-education mechanism of Application-oriented Undergraduate Colleges and universities come into being.

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