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Research on the Mode of Cultivating Entrepreneurial and Innovative Talents in Colleges and Universities from the Perspective of Industry-Education Collaborative Innovation

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Abstract: Since World War II, the world political and economic pattern has undergone subversive changes in the past few decades, and the world politics and economy have entered the process of deep adjustment. During this period, China's economic has made rapid progress, and China's economy have achieved remarkable results in both the developing speed and development model. At the same time, with China's economic development towards higher efficiency and quality development, the demand for high-quality compound innovative and entrepreneurial talents is increasing day by day. However, the education and teaching mode of innovative and entrepreneurial talent in China's colleges and universities has not yet been established and perfected. Therefore, in the future, colleges and universities must build up effective ways and methods in the cultivation and education of innovative and entrepreneurial talents, so that colleges and universities can truly undertake the new mission and task of cultivating innovative and entrepreneurial talents. Through the research on the important value, the existing main problems and the research strategy of training mode of innovative and entrepreneurial talent in colleges and universities from the industry-education collaborative innovation, this paper provides valuable reference for the research and innovation of this subject.

Keywords: Industry-education collaboration; Innovation; Colleges and universities; Innovative and entrepreneurial talent

1. Introduction

Under the premise that colleges and universities will cultivate innovative and entrepreneurial talents for the purpose of education and teaching transformation and upgrading, carrying out innovative and entrepreneurial talent education for innovative talents has become the core orientation of education and training in colleges and universities. The goal of cultivating students in innovative and entrepreneurship education is to cultivate students' practical application ability, with distinct practicality and applicability. Therefore, in the process of cultivating innovative and entrepreneurial talents, colleges and universities need to take the cultivation of students' application ability, technical ability and innovation ability as the focus of education and teaching. Only by building the education and teaching path based on application and innovation, can we create students' professional ability and professional style driven by innovation and creation.

2. The Important Value of Training Mode for Innovative and Entrepreneurial Talents in Industry-Education Collaborative Colleges and Universities

2.1. Establishing the innovative and entrepreneurial talents training mode is an inevitable trend for the transformation and development of colleges and universities

With the historical stage of China's economic development, the transformation and upgrading of industrial structure and economic development mode, breakthrough and innovation have become the new driving force for economic development. Therefore, compound, applied and innovative talents will become the first productivity to promote the future economic development. Therefore, for colleges and universities, the cradle of cultivating new talents, breaking through the traditional education and teaching mode and creating a new education and

training mode, has constituted a more severe challenge and development opportunity under the background of the new era. In this situation, how do colleges and universities turn their teaching ideas and models to serve the economic development as the goal, and cultivate students with the ability of entrepreneurship and innovation through the integration of industry-learning and industry-teaching education has become an inevitable trend for colleges and universities' transformation and upgrading.

2.2. The cultivation of innovative and entrepreneurial talents will gradually form a situation in which the training objectives of colleges and universities meet the social needs

After investigating the employment situation of college graduates in recent years, it is not difficult to find that the embarrassment in the process of graduates' socialization (i.e. the transformation process of graduates' going out of school to enter the society), and its essence lies in the fact that there are still some deficiencies in the transformation of cultural knowledge into students' vocational ability. With the changes of the global economic and political pattern, the transformation of China's economic development mode and driving force has put forward more stringent requirements and expectations on the employment talents in the aspect of entrepreneurship and innovation. If the graduates trained by colleges and universities are weak in comprehensive ability and quality, it will not only be a serious problem for the employment situation of college graduates, but also affect the implementation of the strategic deployment of transformation and upgrading of China's industrial structure and economic development. Therefore, in the process of education and teaching transformation and development, colleges and universities must take innovation and entrepreneurship education as the basis of talent training. Through school-enterprise cooperation and industry-university integration, it is necessary to create feasible key measures of innovation and entrepreneurship education in the process of building the transformation and development mode for colleges and universities. On the premise of all-round and multi perspective deep cooperation between universities and industrial institutions, colleges and universities can provide more internship and training opportunities for college students' innovation and entrepreneurship, and also provide professional technical guidance and career consulting services for students' innovation and entrepreneurship. The purpose is to gain the knowledge and skills in teaching and education, so as to obtain broader growth space and development potential in the process of social and economic construction and development in the future.

3. The Main Problems Existing in the Training Mode of Innovative and Entrepreneurial

Talents in Industry-Education Collaborative Colleges and Universities

3.1. Some colleges and universities do not have enough awareness of cultivating innovative and entrepreneurial talents

China's economic development has entered a stage of rapid growth, and the basic economic operation has been transformed from relying on the competitive advantage of low labor factors to a high-quality development mode that relies on continuous innovation and creation to obtain competitive advantage. Therefore, the cultivation of innovative and entrepreneurial talents is not only a problem of university education and teaching mode innovation, but also the core of talent strategy for China's national development in the new era. However, some colleges and universities only regard the cultivation of innovative and entrepreneurial talents as the innovation problem of university education mode, or solve the employment problem of college graduates, which fails to rise to the talent strategy level and height to support the national development. Therefore, these colleges and universities focus on students' entrepreneurial practice and employability in the process of cultivating innovative and entrepreneurial talents, but ignore the cultivation of the core competence of innovative and entrepreneurial talents in terms of comprehensive ability, professional character, entrepreneurship and innovation spirit, concept and will.

3.2. The mechanism and target oriented management method of the cultivation of innovative and entrepreneurial talents are not perfect

So far, although the education and training of innovative and entrepreneurial talents in colleges and universities has become the consensus of all sectors of the society, there are still some imperfect phenomena in the mechanism and target oriented management method in the process of cultivating of innovative and entrepreneurial talents in colleges and universities. For example, for teachers, the corresponding incentive mechanism has not been established and perfected, which leads to the lack of innovation motivation of relevant teachers in the process of education and teaching of innovative and entrepreneurial talents. To a certain extent, it affects the achievement and effect of the education and training of innovative and entrepreneurial talents. On the other hand, for students, the lack of effective assessment methods in the field of innovation and entrepreneurship results in students' weak guidance in innovation and entrepreneurship, which directly affects their enthusiasm for mass entrepreneurship and innovation.

3.3. The teaching staff for innovative and entrepreneurial talents education and teaching is relatively weak

In colleges and universities, the core resource of education and teaching of innovative and entrepreneurial talents is the faculty. However, up to now, the number of teachers engaged in the education and teaching of innovative and entrepreneurial talents in Chinese universities is not only insufficient in scale, but also in the knowledge structure of teachers and the experience and ability of education and teaching of innovative and entrepreneurial talents. At present, some colleges and universities are transforming their educational and teaching abilities through short-term competence training such as KAB and SYB. For this reason, the connotation of education and teaching courses for innovative and entrepreneurial talent in some colleges and universities lays stress on the theoretical level, and lack the guidance of practical cases and experience of innovation and entrepreneurship, so it is difficult to arouse the learning interest of college students.

3.4. The curriculum system of innovative and entrepreneurial talents education in universities needs to be improved urgently

Nowadays, the core content of the education and teaching system for innovative and entrepreneurial talents in colleges and universities is still limited to designing some courses with connotation of innovation and entrepreneurship and career planning. At the same time, the content of the course is only limited to some lecture level on the methods, approaches and skills of students' entrepreneurship. This kind of teaching curriculum system is extreme-

ly lacking in the preciseness and systematicness of the corresponding entrepreneurship and innovation ability and quality training curriculum, and it has not yet formed an organic fusion structure that supports and penetrates each other between theory and practice, and also a curriculum system that runs through every step of the teaching process. In the education and teaching process of innovative and entrepreneurial talents in some universities, it appears that innovation and entrepreneurship education is only a part of students' career planning, and there is no systematic curriculum planning. At the same time, in terms of curriculum arrangement and teaching content, there are many common components, and basically it fails to adopt the mode of determining professional positioning.

4. Research Strategies on the Training Mode of in Industry-Education Collaborative Colleges and Universities

4.1. The research strategy frame structure design of innovative and entrepreneurial talents training mode in colleges and universities from the perspective of industry-education collaborative innovation

The research strategy frame structure design of innovative and entrepreneurial talents training mode in colleges and universities from the perspective of industry-education collaborative innovation includes three levels of progressive structure, see Figure 1.

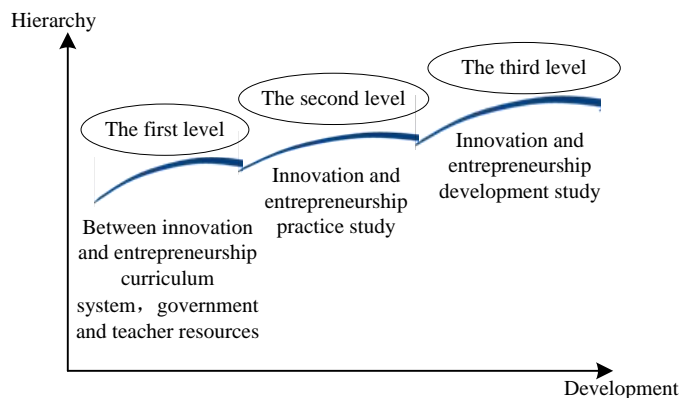


Figure 1. The research strategy frame structure design of innovative and entrepreneurial talents training mode in colleges and universities from the perspective of industry-education collaborative innovation

The core content of each level is as follows: the first level is research on supporting relationship between innovation and entrepreneurship curriculum system, government and teacher resources; The core of second level is innovation and entrepreneurship practice study; the core of third level is innovation and entrepreneurship development study.

4.2. Connotation of the strategic framework structure of innovative and entrepreneurial talents training mode in colleges and universities from the perspective of industry-education collaboration

4.2.1. The first level research on supporting relationship between innovation and entrepreneurship cur-

riculum system and government and teacher resources

Firstly, the teaching curriculum system of innovative and entrepreneurial talents in colleges and universities must be integrated with professional education, and effectively connect with the corresponding knowledge structure education curriculum system, so as to cultivate innovative and entrepreneurial talents with entrepreneurship and innovation spirit, concept and ability. Therefore, colleges and universities need to build corresponding curriculum system of innovative and entrepreneurial talents education, that is, the teaching contents of innovative and entrepreneurial talents education are integrated into the training program. In this process, first of all, we must pay attention to the cultivation of students' innovative spirit, creative thinking ability, entrepreneurial consciousness and ability quality; Secondly, it is necessary to design and effectively carry out innovation and entrepreneurship education in line with the professional characteristics of relevant disciplines and carry out targeted education, teaching and training of entrepreneurship and innovation talents; thirdly, it is necessary to further establish and improve the assessment methods, and take effective measures to encourage teachers to innovate and develop education and teaching methods. At the same time, it is also necessary to fully cooperate with modern information such as multimedia and big data technology, conduct education and teaching, stimulate students' awareness of innovation and entrepreneurship education. Secondly, colleges and universities, as the main body of implementation and responsibility of entrepreneurship and entrepreneurship education and training, must constantly strengthen the construction of teaching staff in line with the requirements of entrepreneurship and entrepreneurship education and teaching, and constantly improve the overall level of innovation and entrepreneurship education teachers team, especially for the cultivation and introduction of double qualified teachers. Thirdly, in the process of cultivating innovative and entrepreneurial talents, government agencies will play an important role. Therefore, the government needs to formulate and promulgate relevant policies and measures to encourage the cultivation and development of entrepreneurship and innovation talents for students. At the same time, we should mobilize all kinds of favorable resources to build various innovation and entrepreneurship incubation platforms, and provide corresponding training, consulting and financing services.

4.2.2. The second level of innovation and entrepreneurship practice study

Firstly, the best way to implement innovation and entrepreneurship education in colleges and universities is to provide students with diversified and multi-level practice bases and platforms. Its purpose is to strengthen the prac-

tice and training, and drive students to participate in the practice deeply by teaching practical cases. At the same time, we can also make full use of the innovation and entrepreneurship carriers such as co-operation space, Science and Technology Park, national incubator and other innovation and entrepreneurship carriers to improve students' practical ability, and continuously improve their innovation and entrepreneurship ability and level. Secondly, we should fully grasp and implement the policies and measures formulated and promulgated by governments at all levels to support the teaching and education of entrepreneurship and innovation talents in colleges and universities, solve the problems in the process, and earnestly implement relevant policies and measures.

4.2.3. The third level of innovation and entrepreneurship development study

Firstly, in view of the fact that the purpose of training entrepreneurship and innovation talents in colleges and universities is to meet the talent demand of national economic and social development, colleges and universities must closely follow the actual demand for talents in the transformation and upgrading of relevant industrial structure, and cultivate applied and innovative talents in line with the basic principle of education and teaching. At the same time, universities and enterprises must cooperate closely to jointly research, develop and formulate the operation plan for the transformation and upgrading of disciplines, and build a discipline and specialty system closely connected with relevant enterprises, so as to make the specialty innovation setting highly fit with the industrial chain and innovation chain. Secondly, in the process of education and teaching of entrepreneurship and innovation talents, colleges and universities must build a practical environment conducive to students' innovation and entrepreneurship. At the same time, the relevant government agencies, enterprises and colleges and universities must fully realize the importance of strengthening the entrepreneurship and innovation talent education to improve the comprehensive quality of college students, improve the actual effect of scientific and technological achievements transformation, and build a knowledge-based economic society and an innovative country. Therefore, colleges and universities must establish the trinity of industry, teaching and research with relevant enterprises, integrate more excellent enterprises to join the school enterprise cooperation system according to the needs of education and teaching programs, and actively and effectively promote the sustainable and healthy development of entrepreneurship and innovation talents education in colleges and universities in the new period.

5. Conclusions

To sum up, colleges and universities, as an important base for cultivating innovative and entrepreneurial talent,

bear the important mission and responsibility of cultivating innovative and entrepreneurial talents in China. Therefore, colleges and universities need to deeply promote the transformation and upgrading of the teaching system and mechanism of the cultivation of innovative talents based on the creation of innovative teaching mode. At the same time, the education and training of entrepreneurship and innovation talents is not only a monodrama in colleges and universities, but also requires the full cooperation of the government, enterprises and other aspects of the whole society. Therefore, it is necessary to effectively and organically integrate the teaching resources of colleges and universities with other resources of the society. On the premise of deepening the cooperation between colleges and enterprises and the industry, it is necessary to promote the continuous establishment and improvement of relevant systems and mechanisms in the education and teaching of innovative and entrepreneurial talents in colleges and universities. Moreover, in the process of scientific and systematic reform and innovation, we should focus on cultivating students' innovative and creative thinking and innovation and entrepreneurial ability, cultivate high-quality and top-notch talents with ideal, ambition, ability and quality in the socialist modernization construction, and construct the strategic talent training system of China's socialist construction.

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