

Construction and Research of Entrepreneurship Curriculum System for Regional Economy under the Background of High-level Specialty Group Construction

Yawen Lu*

Hangzhou Vocational College of Science and Technology, Hangzhou 310018, China

*Corresponding Author

Abstract:

In this paper, firstly, the current situation of innovation and entrepreneurship education at home and abroad and the construction of curriculum system were analyzed. Then, the existing problems of innovation and entrepreneurship education system under the background of high-level professional group construction were put forward. Finally, the paths of building entrepreneurship curriculum system for regional economy were put forward, such as establishing the entrepreneurship guidance of higher vocational colleges which combine major with entrepreneurship, employment before entrepreneurship, constructing the ecology of innovation and entrepreneurship education, formulating a lifelong entrepreneurship curriculum system, developing transboundary integration of entrepreneurship curriculum with professional characteristics, establishing a lifelong education resource pool, forming a teacher team with the combination of full-time and part-time teachers, and studying the relationship between the resource utilization rate and the success rate of entrepreneurship.

Keywords: Higher vocational colleges, Regional economy, Innovation and entrepreneurship education, Cultivation of innovative and entrepreneurial talents

I. INTRODUCTION

UNESCO has praised entrepreneurship education as the "third passport" of education in the 21st century, giving it equal importance to academic education and vocational education. In January 2019, the State Council issued the *Implementation Plan for the Reform of National Vocational Education*, proposing to launch the construction plan of high-level vocational schools and professional groups with Chinese characteristics. In April 2019, the Ministry of Education and the Ministry of Finance jointly issued the *Opinions on Implementing the Construction Plan of High-level Higher Vocational Schools and Major with Chinese Characteristics*. Under the background of high-level specialty group construction, it has become an inevitable choice for local higher vocational colleges to carry out innovation and entrepreneurship education to improve the quality of specialty group personnel training, serve the regional economy and achieve the goal of specialty group construction with high quality^[1].

II. ANALYSIS ON THE CURRENT SITUATION OF ENTREPRENEURSHIP CURRICULUM SYSTEM CONSTRUCTION IN DOMESTIC AND FOREIGN UNIVERSITIES

2.1 Development Status of Entrepreneurship Education in Foreign Universities

The innovation and entrepreneurship education in foreign countries started earlier than that in China. Professor Myles Mace of Harvard Business School in the United States started the course "Management of New Ventures" as early as 1947, which is considered as the first entrepreneurship education course in the world. Currently, more than 2,000 colleges and universities in the United States have opened more than 2,400 entrepreneurship courses in various forms, and at least 50 universities have provided students with four or more entrepreneurship education courses. In 1996, Stanford Graduate School of Business started the Entrepreneurship Education Research Center, mainly for developing the entrepreneurship curriculum system, implementing entrepreneurship courses and social practice activities, establishing the connection among students, entrepreneurial teams and enterprise personnel, giving corresponding guidance and planning, and establishing the network innovation and entrepreneurship data resource database, so as to facilitate the lifelong learning of university entrepreneurs. Obviously, entrepreneurship courses in American universities have been systematized and the management of entrepreneurship courses is scientific^[2].

In British entrepreneurship education, the ultimate goal of entrepreneurship education is entrepreneurial efficiency, which consists of entrepreneurial thinking, entrepreneurial awareness and entrepreneurial ability. Because students have different internal factors such as personality, motivation, learning structure, situation and self-ability, they will use various ways to get different degrees of entrepreneurial effect^[3].

2.2 Status Quo of Entrepreneurship Curriculum System Construction in Foreign Universities

For many years, an entrepreneurial curriculum design system has been formed in American universities, which is based on the knowledge and skills that entrepreneurs should possess and the needs of students who choose courses. For example, Babson College divides the curriculum system into three modules: discovery, exploration and major according to students' learning process; Cornell University and Stanford University, on the other hand, focusing on the entrepreneurial process, have developed courses on the skills that should be possessed before starting a business, the establishment, operation and expansion of enterprises and other different stages. In terms of curriculum content, American colleges and universities attach great importance to the combination of specialty and innovation. For example, Rochester University and Stanford University have built entrepreneurial curriculum groups based on professional knowledge and industry development needs in different majors such as health care, engineering, energy, etc., which have strong pertinence, higher requirements for teachers and better teaching effect^[4].

Entrepreneurship courses in British universities are divided into two categories, namely "about entrepreneurship" and "for entrepreneurship". The course "about entrepreneurship" is designed to help students understand and absorb the existing resources and knowledge about entrepreneurship, so as to help students think deeply and understand entrepreneurship. The course "for entrepreneurship" is more focused on helping students to establish a positive attitude and learn to find out what is positive, so as to improve

market insight and practical operation ability for becoming an entrepreneur in the future. At present, an opportunity-oriented entrepreneurial talent training curriculum system has been established in British universities, which includes three levels: entrepreneurial awareness, entrepreneurial general knowledge and entrepreneurial career, providing innovative entrepreneurial courses for special groups, such as women's entrepreneurship, social non-profit organizations' entrepreneurship, profit-making organizations' innovation, and ethnic minority entrepreneurship courses.

The British implantation model, the German mentoring model, the Japanese linkage model and the American comprehensive model all bring entrepreneurship education into the personnel training system [5] all include entrepreneurship education in the talent training system and have perfect curriculum system and curriculum group after long-term development.

2.3 Status Quo of Entrepreneurship Curriculum System Construction in Domestic Universities

The innovation and entrepreneurship education in Chinese universities has made great progress since 1990s. In 1997, the MBA program of Tsinghua SEM opened the course of innovation and entrepreneurship, which started the stage of independent exploration in colleges and universities. The Ministry of Education launched the pilot program of innovation and entrepreneurship education in nine universities, including Renmin University of China and Tsinghua University, and built the innovative experimental area of talent training mode of innovation and entrepreneurship education, which marked the beginning of the pilot reform phase of innovation and entrepreneurship education. In 2010, the Ministry of Education established the Steering Committee of Entrepreneurship Education in Colleges and Universities to gradually institutionalize, standardize and make innovation and entrepreneurship education scientific. According to regulations, all colleges and universities should offer innovation and entrepreneurship courses from 2016.

In May 2015, the General Office of the State Council issued the *Implementation Opinions on Deepening the Innovation and Entrepreneurship Education Reform in Colleges and Universities*, pointing out that deepening the innovation and entrepreneurship education reform in colleges and universities is an urgent need for the country to implement the innovation-driven development strategy, promote economic quality improvement and efficiency upgrading, and an important measure to promote the comprehensive reform of higher education and promote higher quality entrepreneurship employment for college graduates. Focus should be laid on nine tasks: improving the quality standard of talent training, innovating the talent training mechanism, perfecting the curriculum system of innovation and entrepreneurship education, reforming the teaching methods and assessment methods, strengthening the practice of innovation and entrepreneurship, reforming the teaching and student status management system, strengthening the teaching ability construction of teachers' innovation and entrepreneurship education, improving the guidance service for students' entrepreneurship, and perfecting the financial support and policy guarantee system for innovation and entrepreneurship. In February 2019, the General Office of the CPC Central Committee and the General Office of the State Council issued the *Implementation Plan for Accelerating Education Modernization (2018-2022)*, which emphasized the importance of innovation and entrepreneurship education.

2.4 An Analysis of College Students' Entrepreneurship at Home and Abroad

According to statistics, the entrepreneurship rate of university students in Europe and the United States is as high as 20%-30%, while that in China is less than 1% of the total number of graduates, probably due to insufficient entrepreneurial insight, lack of entrepreneurial spirit, insufficient entrepreneurial ability, lack of entrepreneurial practice and unsound entrepreneurial psychology, lack of ability to integrate resources, and unsmooth access to counseling ^[6].

As local comprehensive higher vocational colleges have the characteristics of taking root in local economy and setting up majors with local economic characteristics, they should cultivate high-quality technical and skilled talents with entrepreneurial ability for regional economic development. Entrepreneurial opportunities must be combined with regional economic development, entrepreneurial practice must be combined with majors, and entrepreneurial teams must be integrated across majors, so as to improve the entrepreneurial success rate of higher vocational students.

To sum up, it is of great significance to study the entrepreneurship curriculum system suitable for local comprehensive higher vocational colleges, integrate it with regional economy and combine it with majors to improve students' entrepreneurial literacy and entrepreneurial success rate.

III. PROBLEMS OF ENTREPRENEURSHIP CURRICULUM SYSTEM IN HIGHER VOCATIONAL COLLEGES IN CHINA

3.1 Cognitive Misunderstanding of Entrepreneurship

Due to the widespread employment pressure in higher vocational education and the concept that starting a business is equal to employment, there is a deviation in the guidance of entrepreneurship courses, which leads students to mistake starting a business after graduation for starting a business and fails to establish a correct guidance for starting a business after employment at first. However, the students in higher vocational colleges lack the ability of technological innovation, which leads to the low technological content of enterprises and low survival rate of enterprises. As a result, the latecomers are afraid of failure and lack confidence in starting a business.

3.2 Imperfect Curriculum System of Entrepreneurship Education

Entrepreneurship education courses in higher vocational colleges are generally included in general courses. In many higher vocational colleges, an innovation and entrepreneurship guidance course with only 2 credits is responsible for entrepreneurship education in the whole school. However, the establishment of entrepreneurial awareness and the cultivation of entrepreneurial ability is a long-term process, which requires a complete curriculum system to support the three-year cultivation of entrepreneurial talents in higher vocational education.

3.3 Separation of Entrepreneurship Course from the Regional Economic Development and Specialized Courses, with Insufficient Curriculum Segmentation

Entrepreneurship courses in higher vocational colleges are often separated from professional courses, focusing on the cultivation of basic entrepreneurial skills. They do not integrate the characteristics of higher vocational colleges into their majors, nor do they integrate the characteristics of regional economic development and remain in form. At present, most of the higher vocational schools offer courses such as "Entrepreneurship Guidance", "KAB Practice" and "Career Planning" in the form of public courses. Almost no entrepreneurship courses based on major and regional economic development are available to meet the learning needs of students of different majors and different stages of entrepreneurship.

3.4 Lack of Hierarchical and Classified Teaching, and Transboundary Integration Thinking

Most of the practical cases cited by teachers in the innovation and entrepreneurship courses are celebrity entrepreneurs, which are considered unattainable by students and lack practical pertinence and typicality, making it difficult to get inspiration from them. In addition, the content of the course is mostly on entrepreneurship awareness and entrepreneurship management, lacking of transboundary integration thinking of various professions, training of professional skills needed for entrepreneurship, and teaching resources for students in different periods of entrepreneurship.

3.5 Lack of Teachers and Inadequate Guidance

The overall professional level of the teaching staff is not high. To be specific, most of the entrepreneurial teachers are ideological and political teachers or professional basic teachers part-time, without a strong teacher professional teacher system. Because these part-time teachers often rush to work just after receiving the training of entrepreneurship teachers, they not only don't have a deep understanding of entrepreneurship, but also have no entrepreneurial experience, let alone combine with the local economy, so they can't guide students to embark on the road of entrepreneurship.

3.6 Lack of Research on Entrepreneurship Education and Success Rate

Due to the lack of long-term research on the relationship between entrepreneurship education and success rate, it is not possible to accurately understand which knowledge elements play a positive role in entrepreneurship success, and therefore it is not possible to update and iterate in the curriculum system.

IV. THE PATH OF BUILDING ENTREPRENEURSHIP CURRICULUM SYSTEM IN LOCAL COMPREHENSIVE HIGHER VOCATIONAL COLLEGES FACING THE REGIONAL ECONOMY

4.1 Establishing the Entrepreneurial Orientation of Higher Vocational Colleges with the Combination of Major and Entrepreneurship, Employment before Entrepreneurship

The logic is reconstructed and the relationship between entrepreneurship and major and between employment and entrepreneurship are re-sorted. First, it is further clarified that entrepreneurship education is a part and supplement to professional education, both of which are complementary and independent. Professional-based education is the foundation, and entrepreneurship education based on major is the promotion of professional education, which is in line with people's all-round development needs. Second, it is a common fact that employment before entrepreneurship is in line with the law of starting a business under the guidance of the law of people's career development. High-quality and purposeful employment can facilitate the formation of a team for starting a business, discover business opportunities and improve the success rate of starting a business. The two are in a progressive relationship

4.2 Establishing an Entrepreneurial Ecological Circle in Higher Vocational Education

To build a "mass entrepreneurship and innovation education ecosystem" is to guide students to start their own businesses from the perspective of educational ecosystem system theory, and to form an organic unity of mutual promotion and common development by establishing effective operation and guarantee mechanisms among the interacting subjects, thus realizing a virtuous circle between education and all parties in society. Ecosystem is an open system, which refers to a unified whole composed of organisms and environment in a certain space of nature, where organisms and environment interact and restrict each other, and are in a relatively stable dynamic equilibrium state in a certain period of time. To maintain its own stability, the ecosystem needs to continuously input energy. The construction of "entrepreneurship education ecosystem" should also follow this rule, and a coordinated and unified systematic development plan should be established through mutual communication and cooperation to promote the formation of a benign ecosystem. For example, the entrepreneurial ecological map of HangZhou Polytechnic is shown in Fig1 below. First of all, it is necessary to strengthen the relationship among the main elements of the entrepreneurial education ecological circle to form a coordinated development trend. Then, it is also necessary to set up an entrepreneurship curriculum system from general entrepreneurship courses, professional entrepreneurship courses to entrepreneurship competitions, combine the Eyas Program, Lanneret Plan and Eagle Plan, and make full use of industry, enterprise, and government resources to create a two-line cycle of entrepreneurship practice assistance mechanism. Secondly, students should be helped to establish employment and entrepreneurship paths. By making use of a large number of in-depth cooperative enterprises (industries) in the school and the Zhejiang Collaborative Entrepreneurship Center in the school, the advantages of their talent pool should be brought into play, and employment should be taken as the starting point to cultivate entrepreneurial talents. The School Pioneer Park is used for initial incubation. Students within 5 years of graduation are welcome to enter the park. Incubated enterprises can enter Zhejiang Science and Technology Incubator or Fuyang Pioneer Park.

4.3 Developing a Lifelong Entrepreneurship Curriculum System that Pays Equal Attention to the first Class and the Second Class Throughout the Talent Training program.

With standardized courses as the core and personalized courses as the expansion, a structured and modular entrepreneurship curriculum system should be constructed. According to the design of the

entrepreneurship education curriculum system, following the principle of paying equal attention to the first class and the second class, the five levels of entrepreneurship education should be progressive from the universal curriculum and the specialized and integrated curriculum to the entrepreneurship community, entrepreneurship practice and entrepreneurship incubation, from thinking consciousness, knowledge and skills to applied practice. HangZhou Polytechnic, for example, has 2 structured main courses in the first classroom, 6 courses with the combination of major and entrepreneurship and 3 practical projects in the second classroom, as shown in Fig 2. The structured curriculum design can show the characteristics of combining major with entrepreneurship, and meet the needs of online learning and online and offline mixed learning, as well as the needs of lifelong learning for entrepreneurs.

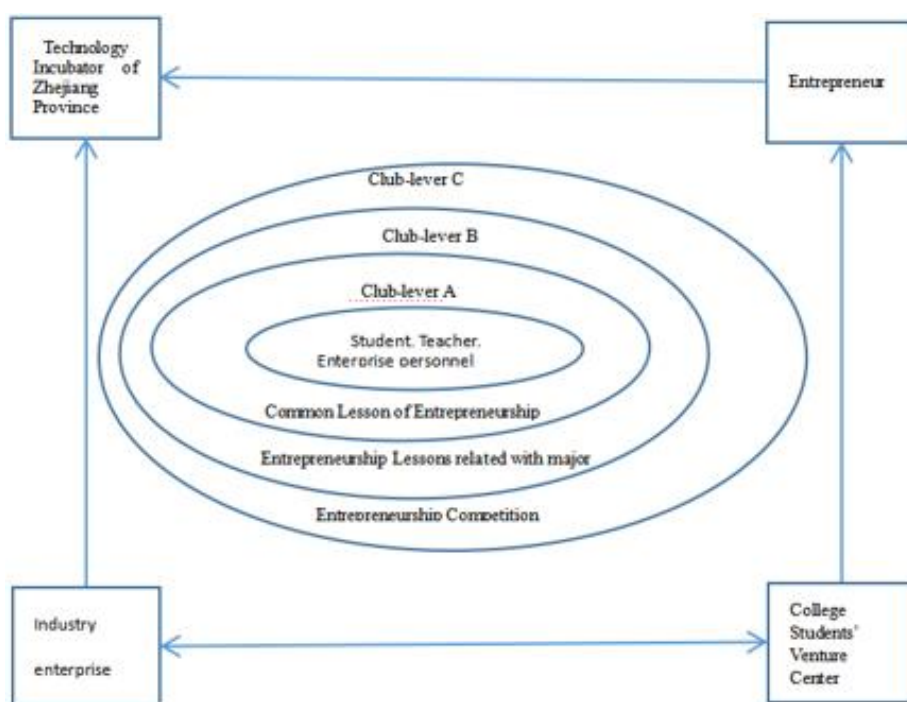


Fig 1: Entrepreneurship education ecosystem

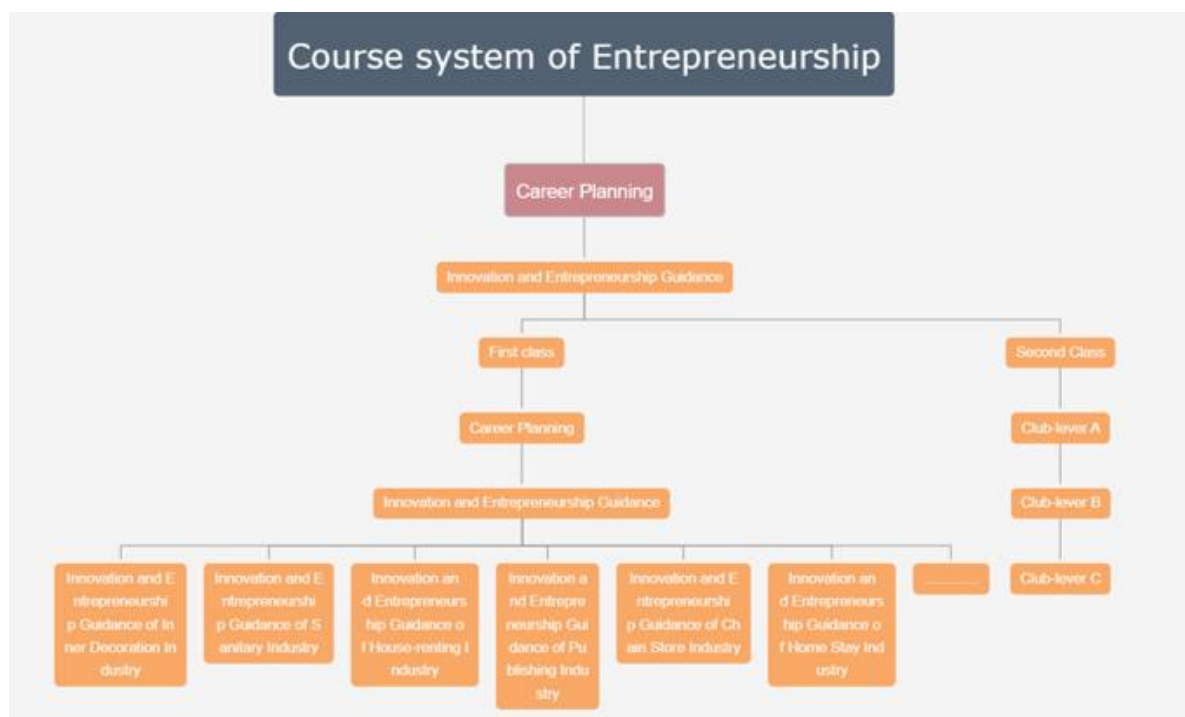


Fig 2: Entrepreneurship curriculum system

4.4 Developing Transboundary Entrepreneurship Courses with Professional Characteristics and Establishing Entrepreneurship Lifelong Education Resources

The entrepreneurial process of small and micro enterprises should be positioned according to the characteristics of local economy, and the content should be reconstructed according to three modules: business opportunity discovery of small and micro enterprises in specific industries, preparation for starting businesses, how to solve professional problems encountered in business operations and how to promote marketing. For example, the curriculum design of "Entrepreneurial Practice in Famous Hostel Industry" of Hangzhou Polytechnic, as shown in Fig 3, follows the path of entrepreneurs' entrepreneurship, from the understanding of hostels, to site selection and decoration, to business strategy formulation, promotion plan implementation, cost control, and finally how to provide housekeeping services, front desk professional services and guest room professional services when customers come to their homes. The course design covers all the important links that entrepreneurs will encounter on the road of starting a business, so as to help entrepreneurs start from scratch and run the project well. The curriculum resources should follow the principle of granular resources construction, and the basic resources construction should follow the principles of fragmentation, structure and systematization, so as to facilitate users to search resources according to their needs, learn and extract resources quickly, fully and systematically understand the curriculum resources, and freely combine the curriculum microstructure to meet the needs of learners in different periods and improve learning efficiency and quality.



Fig 3: Course design of entrepreneurship practice in homestay industry

4.5 Making Use of Information Technology to Support Various Forms of Teaching and Improve Lifelong Learning Ability

A mixed online and offline teaching platform should be built relying on mobile internet technology, big data, cloud computing and other technologies, to help teachers implement flipped classroom and improve learning efficiency. ICVE and other information tools can be used to build an independent teaching and learning platform, so that teachers can conduct personalized group classes on the platform by looking for granular resources with the combination of major and entrepreneurship according to the learning needs, and students can choose their own learning resources through the ICVE, and realize process supervision, quality control, assessment and evaluation through the cloud platform.

Through the construction and updating iteration of online courses, students can extend their study from their school days to their graduation days, so that they can open online resources to learn and consult online whenever they find an opportunity to start a business.

4.6 Setting up a Team of Full-time and Part-time Teachers

A team of full-time and part-time teachers should be formed to give full play to their respective advantages. Professional teachers are mainly responsible for the teaching of professional entrepreneurship courses and the guidance of entrepreneurial associations. Entrepreneurship teachers are responsible for the teaching of entrepreneurship general education and the organization and management of entrepreneurship competitions. Enterprise tutors are responsible for guiding business incubation, offering business seminars, salons, etc.

An entrepreneurial teacher training system should be established. In addition to basic entrepreneurial teacher training, teachers should be provided with the opportunity to take part-time job training in entrepreneurial enterprises. Teachers should be encouraged to start businesses on the job, start businesses with students, and incorporate entrepreneurial performance into teaching performance.

4.7 Studying the Relationship between Resource Utilization Rate and Entrepreneurial Success Rate

In combination with that research on successful entrepreneur, the utilization rate of resources should be analyzed by means of informatization, and the resources that play a positive role in promoting successful entrepreneur should be summarized and analyzed to effectively guide the development and application of resources through research.

The curriculum resources construction of entrepreneurship education and teaching should follow the construction logic of "modularization of design and granulation of resources", and the lifelong learning and entrepreneurship resources framework of combination of major and entrepreneurship should be constructed, which can also absorb the curriculum resources of combination of major and entrepreneurship in higher vocational colleges. Students, enterprises and entrepreneurs can find the corresponding resources in lifelong learning and entrepreneurship resources according to their needs.

V. CONCLUSIONS

The construction of entrepreneurship curriculum system oriented to regional economy is based on the opportunity of the construction of schools under the double high-levels plan, starting from the creation of entrepreneurship ecological circle, and combining the construction of curriculum system with the construction of teaching staff to provide a replicable solution, integrating innovation and entrepreneurship into professional education and lifelong education, so as to cultivate innovative and entrepreneurial talents for regional economy.

ACKNOWLEDGEMENTS

This research was supported by China Vocational Education and Research Project in Zhejiang Province in 2020 (ZJCVC05).

REFERENCES

- [1] QiuZhihai. Innovation and entrepreneurship education in higher vocational colleges under the background of "Double High-levels Plan" construction. *Education and Career*, No.8, 2021: 92-95.
- [2] Li Hongxiu, Ma Luodan. Experience and enlightenment of entrepreneurship curriculum construction in American universities. *Research in Higher Education of Engineering*, No.1, 2017: 164-168.
- [3] Huang Zhaoxin, Zhang Zhongqiu, Zhao Guojing, Wang Zhiqiang. The status quo, characteristics and enlightenment of entrepreneurship education in British universities. *Journal of East China Normal University (Education Science Edition)*, No.2, 2016: 39-44.
- [4] Yu Suyang, Hu Yonghong. Exploration on the optimization of innovation and entrepreneurship curriculum system in colleges and universities from the perspective of collaboration. *China Adult Education*, Feb. 2020:60-62.
- [5] Xu Zhiqiang. Double helix mode of entrepreneurial talents training in colleges and universities, *Research in Educational Development*, 2015(5):30-34.
- [6] Huang Xiaoping. Discussion on the implementation path and effect of "full value chain" entrepreneurial talent training mode. *Vocational & Technical Education Forum*, 2019, 11:172-176