

Practical Problems and Innovative Strategies of Higher Vocational Dual-Creation Education in the New Era

Yueming Zhan, Aihong Wang*, Wendie Wang, Liqun Xu

Chongqing Energy College, Chongqing 402247, China

*Corresponding author: Aihong Wang, 573390550@qq.com

Copyright: © 2024 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: The implementation of innovation and entrepreneurship education practice is the direction of in-depth research and reform of higher vocational education in China. This paper discusses the problems and innovation strategies of higher vocational “dual-creation” education practice in the new period, objectively analyzes the problems existing in the innovation and entrepreneurship education of higher vocational colleges, and puts forward the innovation path with the core concepts of “four-fold integration,” “five-step progression,” and “six-dimensional support,” aiming to provide a reference value for China’s higher vocational colleges.

Keywords: Higher vocational colleges and universities; Dual-creation education; Innovation strategy

Online publication: September 2, 2024

1. Introduction

On May 4, 2015, the General Office of the State Council issued “Implementation Opinions on Deepening the Reform of Innovation and Entrepreneurship Education in Colleges and Universities” (Guo Ban Fa, 2015, No. 36) which explicitly puts forward the need to deepen the reform of innovation and entrepreneurship education in colleges and universities. The social development in the new period has an increasing demand for the innovation and entrepreneurship ability of higher vocational talents, and with the transformation and upgrading of society, the rapid development of new industries, and the wide application of new technologies, higher requirements have been put forward for the knowledge structure and skill level of talents. On the one hand, the industry’s demand for higher vocational talents with innovation spirit and innovation ability is becoming more prominent. Under the changing market environment, only higher vocational talents with innovative spirit can find and seize opportunities to promote the sustainable development of themselves and even the industry. On the other hand, higher vocational talents must have an entrepreneurial willingness and entrepreneurial ability to meet the demand of society for talents who are capable of realizing industrial innovation under the background of the rapid development of emerging industries. Therefore, how to realize the innovation and entrepreneurship

education innovation for higher vocational talents has been an important issue and direction of focus in the field of higher vocational education at present.

2. Overview of the practice of higher vocational innovation and entrepreneurship education in the new era

2.1. Connotation of higher vocational innovation and entrepreneurship education

As an educational model centered on innovative thinking and entrepreneurship, higher vocational innovation and entrepreneurship education aim to cultivate students' independent thinking and innovation abilities. It highly emphasizes the construction and application of knowledge in educational work, to fully activate the vitality of students' thinking, and to improve their mastery of the basic methods of science and the spirit of seeking the truth. At the same time, higher vocational innovation and entrepreneurship education needs to cultivate students' entrepreneurial spirit, and entrepreneurial skills, including entrepreneurial practice ability, organization and coordination ability, and risk prevention and control ability. Through practice, it allows higher vocational students to understand the whole process of entrepreneurship, emphasizes teamwork, and improves their ability to bear pressure.

2.2. Key points of higher vocational innovation and entrepreneurship education

The key points of higher vocational innovation and entrepreneurship education are focused on cultivating students' awareness, enhancing their ability, environment cognition, and practice simulation.

Among them, cultivating awareness is one of the first points of innovation and entrepreneurship education. Schools need to guide students to establish correct innovation concepts and entrepreneurial spirit so that they can understand that innovation is not only a behavior in the field of science and technology, but also a mode of thinking for discovering problems and exploring solutions to new things. Entrepreneurship, on the other hand, is a kind of behavior of courageously taking risks, while searching for and innovating solutions, to realize personal and social values. In terms of ability enhancement, innovation, and entrepreneurship education not only needs to equip students with unique perspectives and a courageous mindset but also needs to be supported by solid professional knowledge and certain practical skills. Environmental cognition aims to let students understand the market demand, social change, industry development trends, and so on through the study of innovation and entrepreneurship environment, to improve the adaptability and sensitivity to environmental changes, and to find the right position and adapt to the local conditions in entrepreneurship.

Practice simulation, that is, through the simulation of entrepreneurship. From the idea into practice behavior, students through field investigation, market research, business plan writing, and other practical operations fully experience and understand the whole process of entrepreneurship. This enhances the interest and confidence in innovation and entrepreneurship.

2.3. Analysis of the value of innovation in higher vocational innovation and entrepreneurship education

The value of innovation in higher vocational innovation and entrepreneurship education for the development of higher vocational students lies in the ability to form a professional education system and adopt a step-by-step approach to comprehensively realize the cultivation of innovation and entrepreneurship ability of talents from multiple dimensions. Firstly, innovation in higher vocational innovation and entrepreneurship education can make innovation and entrepreneurship education and professional education an organic combination, based on the integration of multi-dimensional education methods, and the formation of a specialized education

system, to diversify the form of cultivation of high-quality talents. Secondly, the innovation of innovation and entrepreneurship education can promote the form step by step, give full play to the students' subjective initiative, and gradually cultivate their independent thinking and active learning habits. Thirdly, multi-dimensional resource support can not only cultivate students' practical ability, but also cultivate students' organization and coordination ability, risk response-ability, and gradual improvement of decision-making ability in complex situations, which provides a strong guarantee for students' future career development ^[1].

3. Problems in the practice of higher vocational innovation and entrepreneurship education in the new era

3.1. Lack of integration between bicultural education and other educational means

The lack of close integration between bicultural education and other forms of education is mainly reflected in the four dimensions of professional teaching, skill competition, entrepreneurial culture, and employment guidance. Firstly, in terms of teaching content, the combination of bicultural education and professional teaching requires further improvement. Most higher vocational education has the issue of theoretical knowledge and professional skills teaching focusing too much on the form, and lack of attention on the cultivation of innovation and entrepreneurship which leads to the fact that although students master professional knowledge, they cannot apply the knowledge to realize innovation and entrepreneurship.

Secondly, in the skill competitions organized by some schools, the emphasis is often on skill demonstration, ignoring the practical application of skills in the process of entrepreneurship. For example, not making full use of the platform in skill competitions to enhance students' innovation and entrepreneurship skills, so that the skill competitions and innovation and entrepreneurship education are independent and out of touch with each other.

Thirdly, most schools have the problem of insufficient construction of entrepreneurial culture, and weak guidance of entrepreneurial spirit and entrepreneurial awareness, which makes a part of the students fearful of entrepreneurship and unable to actively engage in entrepreneurial practice.

Lastly, some schools' employment guidance focuses too much on providing students with employment information and improving employment skills and lacks guidance and cultivation of innovation and entrepreneurship, which makes it impossible to realize a close combination of dual-creation education and career guidance.

3.2. Poor ecological chain path of dual-creation education talent cultivation

Currently, some higher vocational colleges and universities lack a perfect ecological path for talent cultivation during the development of dual-creation education, resulting in the knowledge structure of some students being in a long-term defective state. On the one hand, some students are put into project incubation too early during the education of dual-creation, and in the absence of sufficient systematic training in innovative thinking, entrepreneurial skills, and related knowledge, students lack a complete understanding of the entire entrepreneurial process and preliminary preparation.

On the other hand, in the stage of dual-creation education, although some students have already improved their practical level through skills competitions to meet the basic requirements of the technical dimension of innovation and entrepreneurship, the lack of effective self-knowledge and business opportunity identification capability training makes some students face the challenges of innovation and entrepreneurship with unclear direction, inability to formulate clear goals and unable to formulate effective strategies and means.

3.3. Enterprises' participation in the dual-creation education practice platform lacks sufficient depth

In the practice of higher vocational innovation and entrepreneurship education in the new era, although major higher vocational colleges and universities have realized the mechanism of school-enterprise cooperation, the degree of enterprises' participation in the practical platform of dual-creation education is often not deep enough. At present, the participation of enterprises focuses on providing students with internship experience, professional training, and opportunities to practically utilize their professional skills, which is not an effective impetus to the implementation of the purpose of dual-creation education, even though the students' professional practice ability has been significantly improved. From one perspective, while improving their professional skills, students are often unable to adapt to the challenges and requirements brought by the special environment of enterprises and industries if they are unable to effectively participate in the incubation of enterprise projects and knowledge transformation. From another perspective, in addition to the technical achievements provided by enterprises, the university-enterprise joint provision of post-service also determines the development of students' innovation and entrepreneurship. In the absence of effective innovation and entrepreneurship services, students cannot understand the industry policy promptly, cannot obtain timely financial and technical support, will seriously affect the development process of students' innovation and entrepreneurship, which may lead to their innovation and entrepreneurship projects cannot meet the market demand, or the project's economic benefits before its premature termination ^[2].

4. Innovative strategies for higher vocational innovation and entrepreneurship education practice in the new era

To solve the lack of integration of dual-creation education with other educational means, the innovation of dual-creation education practice can be centered on the "Four-fold Integration," "Five-step Progression," and "Six-dimensional Support".

4.1. Create a "four-fold integration" professional education system

In the new era of dual-creation education practice, the construction of the "four-fold integration" professional education system is a key part of the innovation strategy, aiming to build a practical teaching mode of "integration of classroom and competition, competition and teaching," and to provide students with a pioneering and tolerant of failure "dual-creation DNA" during the period of dual-creation education.

Firstly, the integration of dual-creation education and professional education should integrate the concept of innovation and entrepreneurship into the teaching of professional knowledge, so that students can understand and master professional knowledge and at the same time be based on the innovation and entrepreneurship skills needed by the modern society, and encourage students to apply what they have learned to actual entrepreneurial projects, to enhance their ability to combine theory and practice.

Secondly, the integration of skills competition, as one of the important means of practical teaching, plays an important role in improving students' hands-on ability and teamwork ability. During the integration period, the school can take advantage of some innovation and entrepreneurship skills competitions to encourage students to apply their professional knowledge and technology to specific competition projects and to improve students' project planning, operation, and management abilities based on skills competitions. Moreover, for the integration of dual-creation education and entrepreneurial culture, schools should actively build an entrepreneurial culture of "dare to be the first and tolerate failure," and encourage students to dare to innovate and practice. In the practical stage, schools can organize a series of activities, such as speeches, symposiums,

workshops, etc., to enhance students' sense of innovation and entrepreneurial spirit, and to cultivate their resilience in facing difficulties and challenges.

Finally, for the integration of dual-creation education and career guidance, schools can regularly invite successful entrepreneurs and business leaders to communicate with schools and share their entrepreneurial stories and experiences, which will have a positive influence and guidance on students' career choices and entrepreneurial behavior ^[3].

4.2. Connecting the “five-step progression” talent cultivation pathway

In the practice of higher vocational innovation and entrepreneurship education in the new era, a new ecological chain of talent cultivation should be created based on the “five-step progression,” which promotes the gradual growth of talents and gradually equips them with good innovation and entrepreneurship spirit.

The first stage is self-knowledge. This stage is for all senior students, through counseling, curriculum design, and guidance from academic mentors, to help students carry out self-knowledge and self-discovery so that they can deeply understand their personal interests, talents, strengths, and potential career goals, and further determine their professional choices and development directions. This self-knowledge and understanding will advance the student's personal development process and lay a solid foundation for subsequent stages of study and practice.

The second stage is business opportunity identification. This stage is aimed at students who wish to start their own business. Business opportunity identification education requires students to link and apply their professional knowledge to identify and search for potential business opportunities based on market trends, technological developments, and social needs. This process requires students to have a solid foundation of professional learning, as well as good social sensitivity and insight ability.

The third stage is competitive leadership. For students with entrepreneurial intentions, we arrange for them to participate in various innovation and entrepreneurship competitions, daily innovation and practice activities, or project-based learning programs, so that they can apply what they have learned and combine it with practical operation to improve their practical ability and skills in finding and solving problems.

The fourth stage is project incubation. This stage is mainly for students who are ready to start their own business, i.e. the entrepreneurial group in the student body. Higher vocational colleges and universities need to provide a series of resource support, including entrepreneurial mentors, incubation bases, and the necessary initial funding, resources, and technical support to assist students in transforming innovative entrepreneurial concepts into concrete practices, and to guide students in identifying and coping with innovative entrepreneurial risks.

The final stage is enterprise operation. This stage is mainly for students who have already started their own businesses. This is to help students transform their projects into actual business organizations, and to cultivate students' functional literacy from various aspects such as legal affairs, finance, market development, team management, and so on.

Through the above “five-step progression” ecological chain, higher vocational colleges and universities will provide students with a more complete innovation and entrepreneurship training process, effectively guide students from self-knowledge to actual entrepreneurship, and enable them to correctly sort out their personal career development line.

4.3. Construction of “six-dimensional support” school-enterprise incubation platform

The innovation and entrepreneurship education practice in higher vocational education of the new era should also be based on the idea of “six-dimensional support.” This helps to build a school-enterprise incubation

platform, through the “experience, training, practice, transformation, incubation, service” of the six supports, to create a unified set of education, innovation, and entrepreneurship as a whole.

The first is experience support, that is, in the stage of school-enterprise cooperation, through observation, internship, and other ways to guide students into the enterprise to realize close contact with the work scene. This experience can help students understand the development of the industry, and the status quo of enterprise operation, to enhance the students’ awareness of practice.

The second is training support. Through the customized innovation and entrepreneurship curriculum system, we provide students with systematic and modularized internship opportunities, which not only improves students’ technical skills, but also promotes their understanding of enterprise culture, rules, and regulations, and lays a solid foundation for future innovation and entrepreneurship practice.

The third is practical support. Through students’ participation in the actual implementation of the project, the implementation of innovation and entrepreneurship practice activities promotes students to improve their problem-solving and teamwork abilities.

The fourth is transformation support. Transform students’ achievements in learning and practice into products and services with commercial value. This link needs to highly emphasize the commercial feasibility and market acceptance of innovative projects.

The fifth is incubation support. Relying on school-enterprise cooperation, provide students with project incubation opportunities, including the provision of physical resources such as laboratories, equipment, funds, etc., and at the same time provide human resources such as mentors and experts to promote the growth of innovative projects.

The sixth is service support. By providing students with a full range of innovation and entrepreneurship services, including policy advice, financial assistance, project counseling, etc., to protect student innovation and entrepreneurship at the same time, as well as for the development of the school and enterprises to bring value.

The construction of the “six-dimensional support” school-enterprise incubation platform can realize the full integration of school-enterprise resources, better support the innovation and entrepreneurship practice of students, cultivate high-quality talents with innovative thinking and actionability, and also help to promote the in-depth development of school-enterprise cooperation as well as the sustainable development of the regional economy^[4].

5. Conclusion

To sum up, this paper is oriented to the development of innovation and entrepreneurship education in higher vocational colleges and universities in the new period, and puts forward a brand-new system of innovation and entrepreneurship education centered on “four-fold integration,” “five-step progression,” and “six-dimensional support”. The innovation and entrepreneurship education system can build a full-factor integration, full-process coherence, and all-around guarantee education mechanism for students in higher vocational colleges and universities in the new period. Simultaneously, the strategy of this paper can help educators of innovation and entrepreneurship in colleges and universities to carry out dual-creation education for students taking into account synergy, enhancement, mechanism, transformation, and management. This comprehensively improves the dual-creation ability of higher vocational students, enhances the quality of student employment, and provides a new theoretical framework of dual-creation education in the field of higher vocational education to promote the development of China’s high-quality professional education. I

Funding

Chongqing Municipal Education Reform Project “Four-fold Integration, Five-step Progression, Six-dimensional Support” Construction and Practice of Innovation and Entrepreneurship Education System in Higher Education Institutions (Project No. Z233319)

Disclosure statement

The authors declare no conflict of interest.

References

- [1] Xiong F, 2024, Exploration of the Influence Mechanism of Dual-Creation Education on Students’ Vocational Ability in Higher Vocational Colleges and Universities. *Journal of Chongqing Electric Power Higher Specialized School*, 29(02): 43–47.
- [2] Li Y, Jiang Y, Chen L, 2024, Research on Talent Cultivation Mode of Higher Vocational Industry-Education Integration Type “Double Creation” Practice Base. *Innovation and Entrepreneurship Theory Research and Practice*, 7(08): 135–140.
- [3] Niu H, Wang Y, Li Z, et al., 2024, Research and Practice of “Double Creation” Education of Chemical Industry Majors based on Statistical Analysis. *Innovation and Entrepreneurship Theory Research and Practice*, 7(07): 71–75.
- [4] Liu X, 2024, Research on the Development of Art Teaching in Higher Vocational Colleges and Universities under the Background of “Double Creation” Education. *Beauty and Era (In)*, 2024(03): 87–89.

Publisher’s note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.