

Entrepreneurship Education Practice and Challenges in E-commerce in Higher Vocational Colleges

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Abstract: *With the increasing number of Chinese university students, employment pressure has reached an unprecedented scale. In this context, in 2015, former Premier Li Keqiang proposed the initiative of "mass entrepreneurship and innovation," and entrepreneurship education has been highly emphasized. Currently, research on entrepreneurship education mainly focuses on the theoretical level, with limited practical research, particularly lacking studies on the integration of professional education and entrepreneurship education. Therefore, this paper focuses on higher vocational colleges and aims to explore the practice of entrepreneurship education and the challenges faced by the electronic commerce major in higher vocational colleges. This study contributes to a deeper understanding of the entrepreneurship education situation in the electronic commerce major at higher vocational colleges and provides valuable insights for improving entrepreneurship education.*

Keywords: *Higher Vocational Colleges, Electronic Commerce, Entrepreneurship Education*

1. Introduction

Since the beginning of the 21st century, the number of graduates from Chinese universities has significantly increased, reaching a staggering 9.6726 million in 2022. Consequently, this has led to intense competition in the job market, resulting in a declining employment rate. Against this backdrop, the Chinese government has successively issued several policy documents, including "Notice on Strengthening Entrepreneurship Training and Promoting Employment through Entrepreneurship" by the Ministry of Human Resources and Social Security and "Guidance on Promoting Employment through Entrepreneurship" forwarded by the General Office of the State Council, emphasizing the integration of entrepreneurship education into the curriculum system to stimulate employment among university students through entrepreneurial activities. Particularly, since the proposal of the "Mass Entrepreneurship and Innovation" initiative in 2015, "entrepreneurship education" has become a hot topic of concern in Chinese higher education institutions.

After over two decades of exploration and practice, entrepreneurship education in Chinese universities has evolved from simple entrepreneurship competitions to encompass various forms of educational activities, including entrepreneurship courses, entrepreneurship competitions, entrepreneurial policy support, and entrepreneurial services. However, despite its rapid development, entrepreneurship education at many universities in China has yielded few industrialization outcomes. Taking the "Internet + College Students' Innovation and Entrepreneurship Competition" as an example, which involves a large number of participants and has a significant impact, even projects that have won major awards often have a low rate of actual transformation into successful entrepreneurial enterprises. According to the "2022 China College Graduates Employment Report (Employment Blue Book)" published by the Michael Institute, the entrepreneurship rate and the success rate of independent entrepreneurship among college students in 2021 were both less than 5%, far below the levels seen in developed countries. This reflects that Chinese universities still face significant challenges in entrepreneurship education, and how to enhance the effectiveness of entrepreneurship education has become an important issue of concern for both academia and industry.

In recent years, some scholars have pointed out that the development of entrepreneurship education is not independent or self-contained. They argue that entrepreneurship education in higher education institutions must be integrated into professional education to effectively enhance the quality of entrepreneurial talent development. For example, Qian (2016) noted in their research that entrepreneurship education in Chinese higher education institutions has shifted from the "promotion and

popularization" stage to the "quality improvement" stage. They emphasized the need for targeted entrepreneurship education that aligns with the characteristics of specific academic disciplines^[1]. Similarly, Wang (2021) highlighted the importance of effective integration between entrepreneurship education and professional education. This integration should involve comprehensive reforms in talent development models, teaching content, and curriculum systems to enhance the quality of entrepreneurial talent cultivation^[2]. Based on existing research, it is evident that combining entrepreneurship education with professional education is a hallmark of the overall and comprehensive development trend in higher education entrepreneurship education.

As an emerging industry with rapid growth, the scale of the e-commerce market in China is currently the largest globally. It encompasses various models, including B2B, B2C, C2C, and O2O, and has given rise to well-known e-commerce enterprises such as Alibaba, JD.com, Pinduoduo, Meituan, TikTok, and Kuaishou. Looking at future trends, the e-commerce industry in China is expected to continue experiencing high growth and offers numerous entrepreneurial opportunities^[3]. Given the rapid development and potential of the e-commerce market, e-commerce programs have become a focal point of entrepreneurship education in higher education institutions.

Simultaneously, as a significant component of Chinese higher education, higher vocational colleges possess a dual nature of higher education and vocational education. They emphasize the integration of theory and practice more than traditional universities, making them a primary platform for cultivating entrepreneurial e-commerce talent.

While academia generally recognizes that university students are one of the most innovative and entrepreneurial groups^[4], implementing entrepreneurship education is a significant strategic initiative for universities to promote employment and serve the national innovation agenda. However, existing research in this area has primarily focused on theoretical and macro-level aspects. There is a scarcity of practical studies on entrepreneurship education, particularly those specific to certain fields of study. Therefore, this research focuses on higher vocational colleges and aims to delve into the main measures for cultivating entrepreneurial talent in the field of electronic commerce and the challenges faced. It also provides recommendations and strategies with the goal of serving as a reference for the further development of entrepreneurship education in the electronic commerce major at vocational colleges.

2. Problem Statement

This study aims to investigate the current status and challenges of entrepreneurship education in the field of electronic commerce in Chinese vocational colleges, with the objective of providing guidance for the cultivation of entrepreneurial talent in this domain. The specific research questions addressed in this study are as follows:

What initiatives are being implemented for the cultivation of entrepreneurial talents in the field of electronic commerce in higher vocational colleges?

What are the challenges faced during the cultivation of entrepreneurial talents in the field of electronic commerce in higher vocational colleges?

3. Research Methodology

The objective of this study is to explore the primary measures and challenges in cultivating entrepreneurial talent in the field of electronic commerce in vocational colleges. To achieve this goal, a semi-structured interview method was employed for data collection, followed by qualitative analysis.

The participants in this study included 12 teachers who serve as heads of the department and lead instructors in the electronic commerce program at six vocational colleges, including Shaanxi Industrial Vocational College and Yangling Vocational and Technical College. These teachers are typically the most familiar with the development of the electronic commerce program and the level of implementation of entrepreneurship education. It is worth noting that the selection of these six vocational colleges was based on the ranking of Chinese vocational colleges, with two colleges selected from each of the A, B, and C categories. This approach is more conducive to reflecting the overall status of entrepreneurship education in the field of electronic commerce in vocational colleges.

The research employed a semi-structured interview method to inquire about four main questions posed to the interviewees. These questions covered the interviewees' understanding of entrepreneurship

education, the measures taken by their respective institutions in fostering innovative talent in the field of electronic commerce, the challenges encountered, and their recommendations for cultivating entrepreneurial talent.

The interviews were conducted primarily during the months of July and August in 2023, with each interview lasting between 21 to 38 minutes. The interviews were initiated and guided by the researcher to collect verbal data from the interviewees. Subsequently, the interview recordings were transcribed into written transcripts for thematic analysis.

4. Findings and Discussion

4.1. Primary Initiatives in Cultivating Entrepreneurial Talents in Electronic Commerce at Higher Vocational Colleges

Through thematic analysis, it was found that the primary initiatives in cultivating entrepreneurial talents in the field of electronic commerce at higher vocational colleges are manifested in three main aspects: rich entrepreneurship courses, rich entrepreneurship competitions, and diversified assessment and evaluation systems. The specific details are summarized in Table 1.

Table 1: The initiatives in the cultivation of entrepreneurial talents in e-commerce in higher vocational colleges.

Theme	Frequency	Sample Response
Rich Entrepreneurship Courses	7	Our school offers three entrepreneurship courses. These courses provide students with a comprehensive understanding of entrepreneurship.
Rich Entrepreneurship Competitions	6	Our school organizes an entrepreneurship competition every year and encourages students to participate in provincial and national-level entrepreneurship competitions. Through these competitions, students enhance their entrepreneurial abilities.
Diversified Assessment And Evaluation Systems	4	Our assessment mechanism for entrepreneurship courses is highly flexible. In addition to exams, students can directly earn grades by participating in entrepreneurship competitions or by launching actual businesses.

4.1.1. Rich Entrepreneurship Courses

Curriculum design is the primary means to achieve talent development goals and a core component of cultivating entrepreneurial talent^[5]. The purpose of curriculum design for cultivating entrepreneurial talent is not merely to teach students how to engage in entrepreneurial activities; it primarily focuses on nurturing students' innovative spirit, entrepreneurial awareness, and entrepreneurial skills.

Through interviews, it can be observed that, driven by national policies, all vocational colleges currently offer at least one entrepreneurship-related course, such as "Fundamentals of Innovation and Entrepreneurship," "Entrepreneurship Studies," "Entrepreneurship Management," "Entrepreneurial Thinking," and others. These courses, to some extent, guide students to pay attention to the latest trends in the e-commerce industry's development and entrepreneurial opportunities. They also provide insights into the steps of entrepreneurship and the methodology of writing business plans.

4.1.2. Rich Entrepreneurship Competitions

In 1989, the Central Committee of the Communist Youth League, the China Association for Science and Technology, the Ministry of Education, the All-China Students' Federation, and local governments jointly organized the first "Challenge Cup" competition. This competition adopted the operation mode of venture capital and required participants to form complementary competition teams. The teams had to propose a technology, product, or service with market prospects and, based on this technology, product, or service, complete a comprehensive, specific, and in-depth business plan for the purpose of obtaining venture capital. Since the successful launch of the "Challenge Cup" competition, an increasing number of entrepreneurship competitions have emerged, such as the "Internet+ College Students' Innovation and Entrepreneurship Competition" and the "National College Student E-commerce Innovation, Creativity, and Entrepreneurship Challenge."

According to the interview results, encouraging students to participate in various entrepreneurship competitions is one of the important measures for vocational colleges with electronic commerce majors

to conduct entrepreneurship education. Through participation in these competitions, students have the opportunity to apply the knowledge and skills they have learned in entrepreneurship courses to practice, showcase their potential for innovation and entrepreneurship, and receive feedback and rewards in return.

4.1.3. Diversified Assessment and Evaluation Systems

Assessment and evaluation systems are education activities designed to test, discern, and evaluate the knowledge and skills students have acquired, based on the needs of achieving the talent development objectives in higher vocational education. The establishment of an assessment and evaluation system for entrepreneurship education aims to enhance the quality of entrepreneurship education, ensure the achievement of educational management functions, and facilitate the successful attainment of entrepreneurship talent development objectives^[6]. At the national level, entrepreneurship education has become a key indicator for evaluating the overall strength of vocational colleges, including key data such as entrepreneurship rates and the number of awards in entrepreneurship competitions.

Furthermore, at the institutional level, each vocational college develops its own entrepreneurship education assessment and evaluation system based on its specific circumstances. For instance, Interviewee 1 mentioned, "Our school has established a diverse assessment and evaluation system, which includes not only classroom performance and final assessments but also factors like entrepreneurship project reports, performance in innovation competitions, and the outcomes of entrepreneurship practices." Interviewee 5's institution, on the other hand, uses actual entrepreneurial achievements as indicators for assessing and evaluating entrepreneurship courses. Team members who have won entrepreneurship competitions or registered their businesses receive additional points.

A well-designed assessment and evaluation system can objectively assess the degree to which entrepreneurship education objectives have been achieved, as well as gauge teaching quality and identify problems and their causes in entrepreneurship education work.

4.2. Challenges in Cultivating Entrepreneurial Talent in E-commerce at Higher Vocational Colleges

Through thematic analysis, it was revealed that the main challenges in cultivating entrepreneurial talent in the field of electronic commerce at higher vocational colleges are reflected in four aspects: lack of specialized entrepreneurship guidance teachers, lack of open entrepreneurial platforms, lack of entrepreneurial atmosphere, and insufficient entrepreneurial support. The specific details are summarized in Table 2.

Table 2: Challenges in the cultivation of entrepreneurial talents in e-commerce in higher vocational colleges.

Theme	Frequency	Sample Response
Lack of Specialized Entrepreneurship Guidance Teachers	9	"At our school, entrepreneurship courses are taught by instructors from the general teaching department, and these instructors lack entrepreneurship experience and a deep understanding of the e-commerce industry."
Lack of Open Entrepreneurial Platforms	7	"Although the school has established an Entrepreneurship Center, its connections with businesses and industries are limited, and its actual utilization rate is very low."
Lack of Entrepreneurial Atmosphere	5	"The school does not promote successful entrepreneurial stories much through channels like broadcasting and the internet, resulting in an overall lack of an entrepreneurial atmosphere."
Insufficient Entrepreneurial Support	4	"Many college students on campus often lack startup capital, but the support provided by the school in this regard is very limited."

4.2.1. Lack of Specialized Entrepreneurship Guidance Teachers

Unlike teaching in other foundational and specialized courses at universities, entrepreneurship education does not have a standardized curriculum. Many times, adjustments to entrepreneurship education content and teaching methods are necessary due to changes in entrepreneurship policies, the entrepreneurial environment, as well as differences in students' majors, personal interests, and abilities^[7]. This situation emphasizes the crucial role of a dedicated team of entrepreneurship guidance teachers.

For example, in the case of teachers at the Israel Institute of Technology, there are Nobel laureates,

renowned scientists, and prominent entrepreneurs who have been introduced as entrepreneurship guidance teachers. These guidance teachers share common characteristics such as strong professional competence, extensive work experience, and a passion for entrepreneurship.

However, based on the research findings, it is observed that in Chinese higher vocational colleges, entrepreneurship courses are typically taught by instructors from the general teaching department. These instructors often join the school directly after graduation and lack practical entrepreneurship experience. Moreover, they teach students from various majors, which can result in oversimplified teaching approaches. This disconnect between course content and resources and the specific needs of different majors significantly contributes to the suboptimal effectiveness of entrepreneurship education.

4.2.2. Lack of Open Entrepreneurial Platforms

Entrepreneurial platforms refer to platforms that provide open resources and support for entrepreneurs. Open entrepreneurial platforms are crucial for entrepreneurship education in higher vocational colleges. They help students access entrepreneurship knowledge and information while facilitating interaction and collaboration among students, entrepreneurship mentors, entrepreneurs, and other members of entrepreneurial teams^[8].

For instance, at the Massachusetts Institute of Technology (MIT), the institution has established partnerships with over 200 prominent companies and established the Global Industry Alliance (S-W-P). Additionally, MIT has 18 student entrepreneurial clubs, including clubs dedicated to energy and financial technology.

In China, in 2021, the State Council General Office issued "Guiding Opinions on Further Supporting College Students' Innovation and Entrepreneurship," which emphasized the active establishment of various entrepreneurship service platforms to create a favorable ecosystem for supporting college students' innovation and entrepreneurship. As a result, many higher vocational colleges have established entrepreneurship centers or incubation centers.

However, through interviews, it was found that the current entrepreneurship centers at higher vocational colleges in China are primarily managed independently by the schools. They often provide students with basic facilities and equipment support but have limited interaction with enterprises and industries. This limitation makes it challenging for students' entrepreneurial projects to be effectively implemented and receive support from businesses and industries.

4.2.3. Lack of Entrepreneurial Atmosphere

The self-determination theory suggests that changes in the external environment can influence individuals' intrinsic needs and enhance their motivation^[9]. In turn, individual motivation is a key factor in driving behavior. Therefore, creating a conducive entrepreneurial atmosphere can, to some extent, stimulate students' entrepreneurial behaviors.

For example, at Osaka Business University, the institution organizes the "OBP Course Association" and regularly holds alumni meetings and lectures. They also invite professionals to give entrepreneurial lectures. In addition, students voluntarily establish investment groups, management research clubs, and multiple entrepreneurial associations. This creates a strong entrepreneurial atmosphere on campus, leading to high student enthusiasm for entrepreneurship.

However, according to the interviews conducted, it was found that many Chinese higher vocational colleges still do not place significant emphasis on entrepreneurship education. Entrepreneurship education often appears superficial, with schools focusing on fulfilling tasks such as offering required entrepreneurship courses, participating in entrepreneurship competitions, and establishing entrepreneurship centers. There is limited promotion of entrepreneurship education in the day-to-day activities of these schools, which contributes to low overall student enthusiasm for entrepreneurship.

4.2.4. Insufficient Entrepreneurial Support

Finances are crucial for the operation, expansion, and innovation of businesses. Unlike regular entrepreneurs, college students often lack a source of income and do not have assets or credit to secure loans from financial institutions. Additionally, most entrepreneurial projects are based on creativity, making it even more challenging to secure direct market financing. Therefore, financial support for college student entrepreneurship is especially important^[10].

For instance, at the Massachusetts Institute of Technology (MIT), apart from government support and tuition revenue, the institution actively seeks funding from entrepreneurial donations and contributions

from outstanding alumni, which are then used to support entrepreneurial teams.

However, based on the interviews conducted, it was found that Chinese higher vocational colleges typically rely solely on government support for entrepreneurial funding. This typically involves awarding students who successfully register their companies with a sum ranging from 3,000 to 10,000 RMB, which is considered meager by most entrepreneurs.

5. Conclusion

Through qualitative analysis, this study has revealed that higher vocational colleges have taken various measures in cultivating entrepreneurial talents in the field of e-commerce, particularly in terms of entrepreneurship course offerings and entrepreneurial competitions. However, these institutions also face several challenges in nurturing e-commerce entrepreneurial talents, including a lack of specialized entrepreneurial guidance teachers, lack of open entrepreneurial platforms, lack of entrepreneurial atmosphere, and insufficient entrepreneurial support.

5.1. Guidance and Recommendations

Based on the research findings presented in this paper and considering the practices in countries such as the United States, Japan, and Israel regarding entrepreneurship education at higher education institutions, the following guidance and recommendations are proposed for furthering entrepreneurship education in Chinese universities:

5.1.1. Enhance the Overall Competence of Entrepreneurship Guidance Teachers

Introduce part-time instructors, such as founders or partners from the e-commerce sector, to teach entrepreneurship courses. These instructors can provide real-world insights and practical knowledge to students.

Encourage instructors in e-commerce programs at higher vocational colleges to engage in entrepreneurial activities or start their own businesses. This hands-on experience will enable them to offer higher-quality entrepreneurship education to students.

5.1.2. Strengthen Collaboration between Schools and Industries/Enterprises

Foster deeper collaboration between educational institutions and businesses. Involve industry experts and companies in the development of entrepreneurship centers and curriculum design.

Actively utilize industry and corporate resources to provide students with more internship opportunities in the e-commerce field. This practical exposure will help students gain a better understanding of market trends and industry developments, providing a strong theoretical and practical foundation for entrepreneurship.

5.1.3. Update Entrepreneurship Education Concepts and Cultivate an Entrepreneurial Campus Culture

Disseminate entrepreneurial ideas and concepts to the entire school community through means such as school mottos and educational philosophies.

Promote stories and achievements of successful entrepreneurs and establish entrepreneurship clubs or societies to encourage students and faculty to actively participate in entrepreneurial activities.

Cultivate a supportive entrepreneurial atmosphere within the campus to inspire creativity and innovation.

5.1.4. Integrate Social Resources and Optimize Entrepreneurship Services

Entrepreneurship education involves multiple stakeholders and a complex process. Higher vocational colleges should integrate resources from various parties to offer comprehensive support to students throughout the entire entrepreneurial journey.

Pay special attention to key resources from the government, businesses, and alumni networks. These three entities can play pivotal roles in supporting entrepreneurship education, especially in facilitating the transformation and implementation of entrepreneurial projects.

These recommendations aim to address the challenges identified in the study and promote the development of entrepreneurship education in higher vocational colleges in China, particularly in the

field of e-commerce. By implementing these strategies, institutions can better prepare students for entrepreneurial endeavors and foster a culture of innovation and creativity within the educational environment.

5.2. Other Recommendations

Since entrepreneurial education is a dynamic and evolving process, and the effectiveness of entrepreneurial talent development may exhibit potential lag, it is advisable to conduct long-term case studies and dynamic tracking in the future. This will enable a deeper understanding of the long-term impact and outcomes of entrepreneurial education, allowing for adjustments and improvements based on real-world observations. This approach will help higher vocational colleges better meet the training needs of students majoring in e-commerce, fostering a greater number of innovative and entrepreneurial talents.

References

- [1] Qian, J. (2016). *Research on the Interactive Integration Mode of Innovation and Entrepreneurship Education and Professional Education in Universities*. *Education Exploration*, (11), 84-87.
- [2] Wang, X. (2021). *Practice of the Integration of Innovation and Entrepreneurship Education with Professional Curriculum Education*. *Heilongjiang Education: Theory and Practice*, (10), 3.
- [3] Jiang, Z., & Chen, S. (2023). *Research on the Development Strategy of the E-commerce Industry*. *Economic Outlook around the Bohai Sea*, (2), 53-55.
- [4] Maric, M., Subotic, M., Dudic, B., Melovic, B., & Milisavljevic, S. (2021). *Evaluating relations between originality, efficiency, conformism and entrepreneurial potential of students in a fast changing business environment*. *Sustainability*, 13(4), 1593.
- [5] Schmitz, A., Urbano, D., Dandolini, G. A., de Souza, J. A., & Guerrero, M. (2017). *Innovation and entrepreneurship in the academic setting: a systematic literature review*. *International Entrepreneurship and Management Journal*, 13, 369-395.
- [6] Duval-Couetil, N. (2013). *Assessing the impact of entrepreneurship education programs: Challenges and approaches*. *Journal of small business management*, 51(3), 394-409.
- [7] Bell, R., & Bell, H. (2020). *Applying educational theory to develop a framework to support the delivery of experiential entrepreneurship education*. *Journal of Small Business and Enterprise Development*, 27(6), 987-1004.
- [8] Sandoval, M. (2020). *Entrepreneurial activism? Platform cooperativism between subversion and co-optation*. *Critical Sociology*, 46(6), 801-817.
- [9] Al-Jubari, I., Mosbah, A., & Talib, Z. (2019). *Do intrinsic and extrinsic motivation relate to entrepreneurial intention differently? A self-determination theory perspective*. *Academy of Entrepreneurship Journal*, 25, 1-14.
- [10] Ndofirepi, T. M. (2020). *Relationship between entrepreneurship education and entrepreneurial goal intentions: psychological traits as mediators*. *Journal of Innovation and Entrepreneurship*, 9(1), 1-20.