

Received: 19 February 2022

Revision received: 20 April 2022

Accepted: 30 July 2022

Copyright © 2022 JESTP

www.jestp.com

DOI 10.12738/jestp.2023.1.002 ♦ January 2023 ♦ 23(1) ♦ 15-27

Article

## Analysis of Innovation and Entrepreneurship Education in Chinese Universities

Zhang Yingying

Zhejiang University of Water Resources  
and Electric Power, Hangzhou 310018,  
China

ORCID: <https://orcid.org/0009-0005-0961-5153>

Wu Mei

School of Computer Science and  
Technology, Hangzhou Dianzi  
University, Hangzhou 310018, China

ORCID: <https://orcid.org/0009-0007-3395-2891>

Seng Dewen\*

School of Computer Science and  
Technology, Hangzhou Dianzi  
University, Hangzhou 310018, China

\*Corresponding author: Seng Dewen  
([sengdw@hdu.edu.cn](mailto:sengdw@hdu.edu.cn))

ORCID: <https://orcid.org/0000-0003-0921-848X>

### Abstract

The crux of innovation and entrepreneurship education within universities lies in nurturing individuals, thereby upholding the initial purpose and fundamental essence of education while concurrently fostering innovation and entrepreneurial capacities. This paper seeks to elucidate the backdrop of innovation and entrepreneurship education in Chinese universities, chronicle its evolutionary trajectory and associated research, depict the present status and specific advancement of innovation and entrepreneurship education in these institutions, encapsulate its emblematic models and distinguishing features, and scrutinize the extant quandaries besetting innovation and entrepreneurship education in Chinese universities. By critiquing prevalent disorder and delving into the underlying rationales, it underscores the imperative to reorient towards the authentic core of innovation and entrepreneurship education. This exposition furnishes insights for the global academic community to comprehend innovation and entrepreneurship education in Chinese universities, offers theoretical underpinnings for a foundational comprehension of innovation and entrepreneurship education, and proffers discernible reference for the implementation of analogous initiatives across diverse international academic landscapes.

### Keywords

China Innovation and Entrepreneurship Education, Chinese Universities, Chinese Student

Correspondence to Seng Dewen, School of Computer Science and Technology, Hangzhou Dianzi University, Hangzhou 310018, China.

Email: [sengdw@hdu.edu.cn](mailto:sengdw@hdu.edu.cn)

Citation: Yingying, Z., Mei, W., Dewen, S. (2023). Analysis of Innovation and Entrepreneurship Education in Chinese Universities. *Educational Sciences: Theory and Practice*, 23(1), 15 - 27.

<http://dx.doi.org/10.12738/jestp.2023.1.002>

The coronavirus epidemic since 2019 has led to the closure of small and medium-sized enterprises, causing a direct loss of jobs. Meanwhile, the expansion of enrollment in Chinese colleges and universities has led to an increase in the number of graduates and a worsening employment situation. The number of college graduates in China exceeded 10 million for the first time in 2022, and the youth unemployment rate reached close to 20% (China Youth Entrepreneurship Development Research Group, 2021). Due to the economic slowdown and sluggish job market caused by repeated outbreaks of the coronavirus since 2020, the employment pressure on college students has continued to rise. According to the 2020-2022 "College Student Employability Survey Report" by Recruitment, as of mid-April 2022, only 46.7% of graduates have been invited by companies, a decrease from 62.8% in 2021 and 75.8% in 2019 (Xie & Yang, 2022).

As shown in Figure 1, the employment destinations of recent college graduates have changed significantly. When choosing where to graduate, "employment pressure" has become the most important consideration. The proportion of college students employed by units has been decreasing year by year, and the proportion of flexible employment and slow employment has been increasing. Affected by the epidemic, the proportion of continuing education is on the rise, and the proportion of self-employment has experienced a development process of decline first and then rise. It weakened during the outbreak period and increased again as the epidemic became normalized. According to the "2021 Chinese University Student Entrepreneurship Report", 96.1% of the interviewed college students have had or still have the idea and willingness to start a business. In this context, mass entrepreneurship and mass innovation have become even more necessary and important (Zhou, 2022).

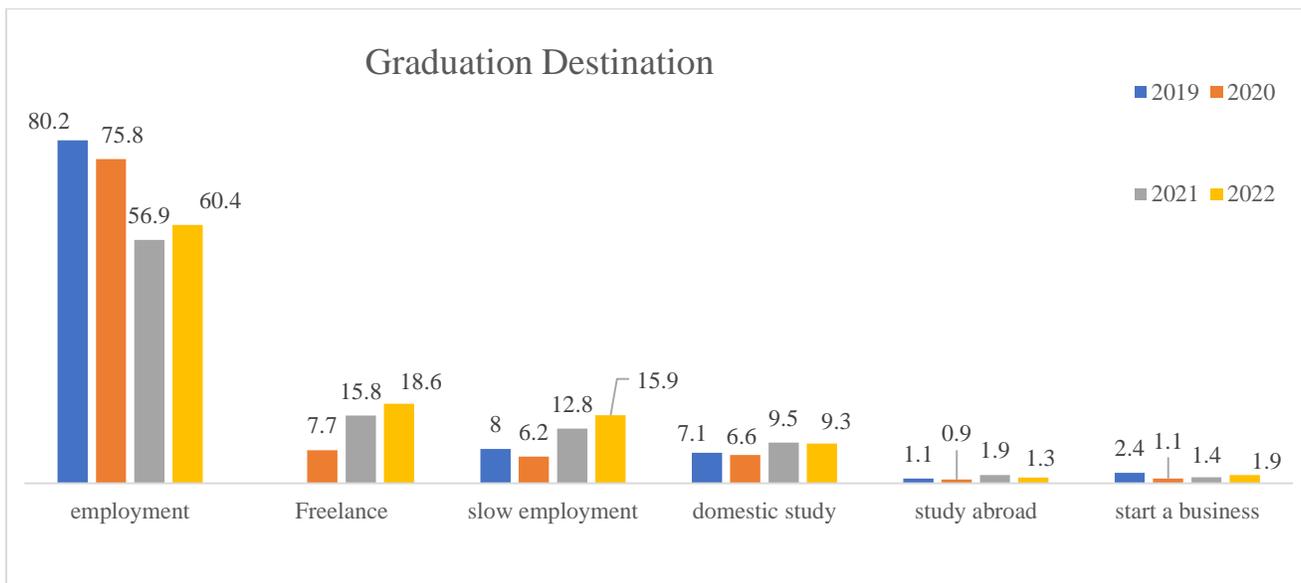


Figure 1. Destinations of recent college graduates from 2019 to 2022

Universities are the cradle of entrepreneurial talents, and talents play a vital role in the entrepreneurial ecology. Chinese colleges and universities have trained a large number of necessary technical talents (such as technology, IT, marketing, management, language, etc.) for college students to start businesses. It has also provided external services for early-stage startups. Chinese colleges and universities have a certain scale and are relatively mature in the construction of an ecological atmosphere for innovation and entrepreneurship. For example, Tongji University’s Entrepreneurship Valley has more than 400 mentors, Shanghai Jiao Tong University has more than 100 active mentors, and almost all colleges and universities have established platforms at various stages such as general entrepreneurship courses, entrepreneurial acceleration camps, and incubators.

The degree of friendliness of the external market towards entrepreneurship projects of Chinese universities is relatively high. The market cannot make negative comments because this product was created by college students, and college student entrepreneurial projects have a great chance of entering the market. Many Chinese college students’ entrepreneurial projects first started from the internal campus market. For example, “Ele.me” first started to compete for “sites” from the campus. But not all colleges and universities promoted the products or services of student entrepreneurship on campus (Alkorta & Mujika, 2022).

At present, Chinese colleges and universities have relatively complete platform construction and atmosphere cultivation for entrepreneurship, but there is still a lot of room for improvement in the performance of campus entrepreneurship projects. The Chinese government, society, and schools provide a very supportive environment for entrepreneurship, and startup companies also have a relatively friendly financing environment at the seed stage. However, the depth and sustainability of the follow-up development of entrepreneurship are still insufficient (Lee & Yang, 2019). The current study aimed at exploring the level of innovation and entrepreneurship education in Chinese universities, with a historical perspective. It also attempted to provide insights to the global academic community about innovation and entrepreneurship education in Chinese universities, and offer a blueprint of of innovation and entrepreneurship education.

## Literature Review

According to the "2020 Global Entrepreneurship Ecosystem Index Report" released by the global entrepreneurship research organization Startup Blink, China ranks 14th among the world's 100 major economies and ranks first in Asia. According to the latest global survey released by the USNEWS website, China ranks third in the "2020 Best Entrepreneurial Countries in the World". In terms of the number of start-ups, there are more than 8.5 million new market entities, and the activity rate is stable at about 70%. In terms of start-up quality: the number of unicorns is second in the world, and the number of listed companies on the Science and Technology Innovation Board has increased by 107%. These data show that the overall entrepreneurial situation in China is still good. However, the achievements and effects of college students' entrepreneurship are not very optimistic (Acs et al., 2021).

The distribution of Chinese youth entrepreneurial groups in terms of educational background is as follows: Entrepreneurs with a college degree or above account for more than 85%. From the perspective of age and occupational background, 19-23 years old accounted for 51.3% in total, of which 20 years old is the peak of entrepreneurship; 43.6%, fresh college graduates accounted for 13.1%, unemployed persons after graduation accounted for 12.0%, and the total of the three was 68.7%. Entrepreneurs with a college degree or above accounted for 86.1% of the total, reflecting the generally high educational level of entrepreneurs. From the perspective of entrepreneurial manpower, 59.0% of the entrepreneurial enterprises have relatively stable personnel since their establishment, and 26.5% of the entrepreneurial enterprises have a stable number of employees but a large change or an unstable number of employees. Venture capital, social resources and knowledge reserves are the main difficulties faced by Chinese youth entrepreneurship. These aspects happen to be the shortcomings and deficiencies of college students' entrepreneurship (Gao, Zhan, & Wang, 2016).

Nearly half of young entrepreneurs in China have fluctuations in their profits and losses, and 70% of them started making profits within three years. In terms of profit and loss, 46.7% of entrepreneurs are in an unstable period of profit and loss, and nearly 20% are in a state of loss, which reflects the operating risks of entrepreneurial enterprises to a certain extent. The survey shows that out of every 100 startups in China, only 20 to 30 can survive for one year, and no more than 30% of them can survive three years. As for the college students starting their own businesses, the failure rate is as high as 99% (Leendertse, Schrijvers, & Stam, 2022). Interestingly, in short term, college student enterprises at the start-up stage can still survive due to the support of universities and the government; but in long run, the survival of most of these enterprises is worrying, and it is quite common for college students to fail in entrepreneurship. According to the survey data, most of the start-up companies incubated by Chinese universities stay in the early stage, and there are very few enterprises that have fast financing, rapid growth and entered the later stage. If such a low growth rate is maintained for a long time, it will lead to a lack of confidence among college entrepreneurship educators themselves, and will subtly pass this extreme uncertainty about "entrepreneurship success" to students.

The formation of the above-mentioned issues has reasons at multiple levels, ranging from the micro-level of university students and parents, to the meso-level of universities, and to the macro-level of government, nation, and society (Xie, 2020).

The reform of innovation and entrepreneurship education carried out by Peking University focuses on the cultivation of students' innovative consciousness, thinking and ability (Mei & Symaco, 2022). Therefore, the cultivation of innovation and entrepreneurship is infiltrated into all aspects of education to cultivate students' entrepreneurial spirit and quality. Tsinghua University's innovation and entrepreneurship education is mainly reflected in the complete curriculum system, emphasizing the combination of compulsory courses and elective

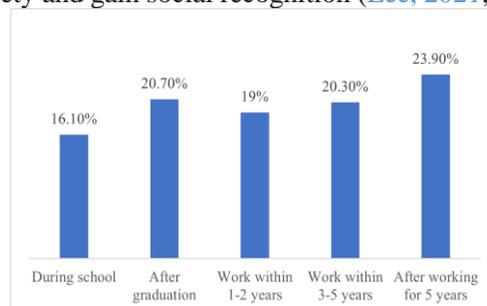
courses, and the combination of entrepreneurship courses and professional courses (Liu et al., 2020; Mei & Symaco, 2022). At the same time, it offers social training courses and breaks the traditional teaching mode. Education curriculum system. Fudan University focuses on creating a comprehensive research-oriented innovation and entrepreneurship talent training model with school characteristics, demonstration and leading roles, and strives to create an innovation and entrepreneurship environment that meets the needs of college students for growth and success, and accelerates the construction of an innovation and entrepreneurship ecological chain (Zhiyi, Abdul Aziz, & Rahim, 2023).

Through sorting out the development modes of innovation and entrepreneurship education in Chinese colleges and universities, it can be divided into three modes. The first is "broad-spectrum" innovation and entrepreneurship education. A survey at Beijing university (Lai & To, 2020) pointed out that the core concept of "broad-spectrum" innovation and entrepreneurship education is to face all students, integrate professional education, and run through the entire process of talent training. Its basic goal is full coverage, layered and differentiated, and it is a brand-new educational concept and model that is closely combined with all-oriented and layered teaching, closely connected with school education and continuing education, and coordinated with quality education and vocational education (Li et al., 2019).

The second is "ecological network" innovation and entrepreneurship education. If the innovation and entrepreneurship education in colleges and universities is regarded as an organism, all internal and external factors that restrict and regulate innovation and entrepreneurship education are ecological factors. Innovation and entrepreneurship education.

The third is the "mentor system" for innovation and entrepreneurship. The tutorial system is a talent training mechanism currently being explored in the reform of innovation and entrepreneurship education in colleges and universities. Bai Hua proposed to introduce the "built-in and external introduction" innovation and entrepreneurship mentor system, that is, school teachers with high theoretical level and rich practical experience are used as "built-in" mentors, and entrepreneurs and successful entrepreneurs outside the school are hired as "outside introduction" mentors. Built-in tutors teach basic knowledge of innovation and entrepreneurship to improve students' entrepreneurial quality; external tutors provide practical guidance on entrepreneurship to improve students' practical ability.

Through a comprehensive examination of the available data and analysis of key trends, this literature review would provide readers with a deeper understanding of the unique opportunities and challenges that confront entrepreneurs in today's business environment. The current circumstances surrounding entrepreneurs have led them to focus on various issues they encounter as they navigate the complex and dynamic world of business. These entrepreneurs have faced challenges in terms of access to capital, market competition, regulatory hurdles, and other factors that impact their ability to start and grow successful enterprises. Historically, the proportion of college students starting a business during school is 16.1% as shown in Figure 2. The Chinese students at the college level start a business generally within 5 years of their graduation, accounting for 70% or more of college students starting a business (Lee, 2021; Zhang, 2021). These studies had taken the survey samples which comprised 14.1% of entrepreneurs who were typical survival entrepreneurs, that is, they used entrepreneurship instead of employment due to the poor employment situation. Furthermore, nearly 50% of college students' entrepreneurship was opportunity-based entrepreneurship, including 19.3% of college students' entrepreneurship who challenged themselves to gain more space for individual development, while 18.3% of college students' entrepreneurship realized self-worth and wished to enhance their social status, 6.5% of college students started their businesses in order to make contributions to society and gain social recognition (Lee, 2021; Zhang, 2021).



**Figure 2.** Time taken by Chinese college students to start their own businesses  
Source: (Lee, 2021; Zhang, 2021)

## Research Methodology

- **Research design**

This study used documentation study, investigation and case study methods. The documentation study method mainly refers to collecting, identifying and sorting out relevant literature, and forming scientific understanding of innovation and entrepreneurship education in colleges and universities through documentation search and analysis. Investigation method refers to the method of collecting materials about the reality or historical status of innovation and entrepreneurship education in a purposeful, planned and systematic way. The study used comprehensive surveys, key surveys, sample surveys, individual investigations, to collect the data. The case study method allowed to study a specific educational example in a real situation (usually a long-term follow-up study) to understand the effectiveness of our research.

- **Research tools**

The instruments used in this investigation mainly included observation, case analysis, questionnaire surveys, interviews with college students' entrepreneurs, and platform big data analysis these tools helped in learning about the opportunities brought by the development of Internet platforms for college students' employment and entrepreneurship, and understand the current situation of college students' employment and entrepreneurship through e-commerce platforms. In July 2022, questionnaires were distributed to merchants on Taobao platform and 4,047 valid questionnaires were received. These tools helped in fully understanding the basic situation of college students' employment and entrepreneurship on Internet platforms through empirical data. these tools allowed to analyze the characteristics and quality model of college students' employment and entrepreneurship on e-commerce platforms through real cases, and discover the potential of this field to drive college students' employment and entrepreneurship through new opportunities emerging in the e-commerce ecosystem.

- **Research Procedure**

A survey of 13,742 questionnaires from 1,431 colleges and universities covering 275 cities in China showed that the Internet industry was still the first choice for Chinese college students to start a business because of its low threshold, and intelligent manufacturing and big health. These have gradually become popular fields for college students to start a business. The survey on college students' entrepreneurship on e-commerce platforms shows that the number of fresh graduates who have opened stores on Taobao within two years of graduation has reached 510,000, of which 146,000 are run by female fresh graduates. More than 60% of college students start their own businesses after accumulating a certain amount of work experience, and the "post-80s" and "post-90s" entrepreneurs have become the mainstay (Huang, 2014). The Pearl River Delta and Jiangsu, Zhejiang and Shanghai are still gathering places for e-commerce platforms for college students, accounting for more than 60% of entrepreneurial units. The employment of college students in the new employment form is mainly concentrated in the fields of e-commerce platforms, community economy, webcasting, and online appointment services.

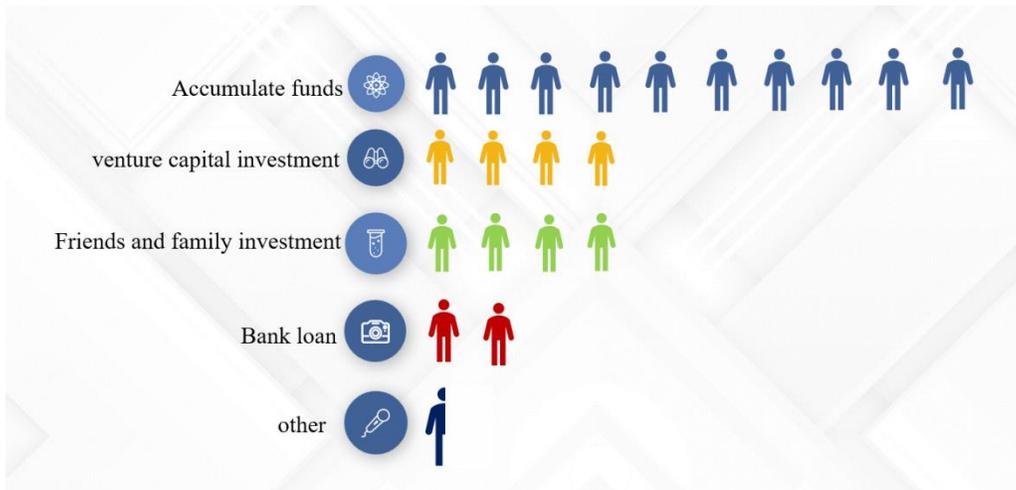
- **Data analyses**

The data was analyzed using the case-based analysis approach and a comparison of the empirical data received through questionnaires and surveys. The purpose of using these analytical methods was to analyze the level of innovation and entrepreneurship education in Chinese colleges and universities. It was also imperative to know its weaknesses and find out why entrepreneurship started late and slow development.

## Results

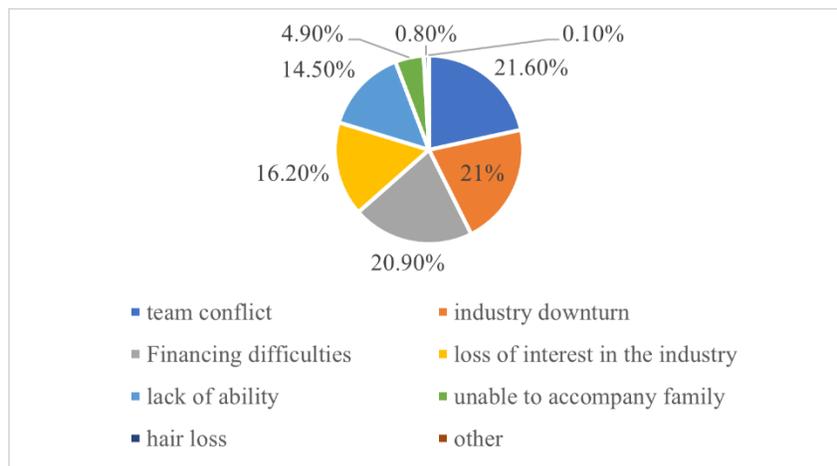
According to a survey, only 20.7% of college students believed that they should seek investment from venture capital institutions as shown in Figure 3. This suggests that the lack of understanding about venture capital institutions and the funding process has been a significant hurdle for college student entrepreneurs. This gap between the two has led to a majority of college students being unsure about seeking investment from venture capital institutions. The limited knowledge about how to obtain funding and support from the capital market has

caused many college student startups to fail in the early stages of competition. Therefore, it is crucial to bridge this gap by providing college students with more opportunities to learn about venture capital institutions and the funding process.



**Figure 3.** Chinese college students' entrepreneurial financing methods

Among the top 20 reasons for startup failures are included lack of market demand and insufficient funding. These two are the most significant causes as shown in Figure 4. In the context of Chinese college students, the "Core team issues" are also the most common obstacles that college students face when starting a business, accounting for as much as 21.6% instances of failures. Market and financing-related problems are closely followed, accounting for 21% and 20.9% respectively. In addition, a lack of interest and skills in the industry is also a significant obstacle for college student entrepreneurship (Guo, 2020).



**Figure 4.** The main obstacles for Chinese college students to start a business

This underscores the importance of having a strong and capable core team in order to effectively navigate the challenges and complexities of launching and sustaining a new venture. Moreover, it highlights the need for students to develop their entrepreneurial skills, as well as acquire practical experience and knowledge about financing, marketing, and other essential business practices. Furthermore, it also suggests that more attention should be given to developing and nurturing entrepreneurial ecosystems in universities, including providing mentorship, networking opportunities, and access to funding and other resources. By doing so, students can acquire the skills, knowledge, and support they need to successfully launch and grow their businesses, ultimately contributing to the overall development of the economy and society as a whole.

According to the survey data, the proportion of college students' entrepreneurial groups on the Taobao platform has reached 54.9% as shown in Figure 5. Among them, the proportion of college students is the highest,

31.9%, followed by high school for vocational graduates of 30%, of undergraduates at 20.9%, and the proportion of graduate students is 2.1%. In addition, 2.5% of entrepreneurs are currently school students. The low-threshold e-commerce entrepreneurial model has attracted some college students who chose to start their own businesses part-time during their studies. In the survey sample, the proportion of male entrepreneurs among college student entrepreneurs on Taobao platform was three times that of female entrepreneurs: 73.7% for men and 26.3% for women. This was slightly higher than the average level of 25.5% for female entrepreneurs on all platforms.

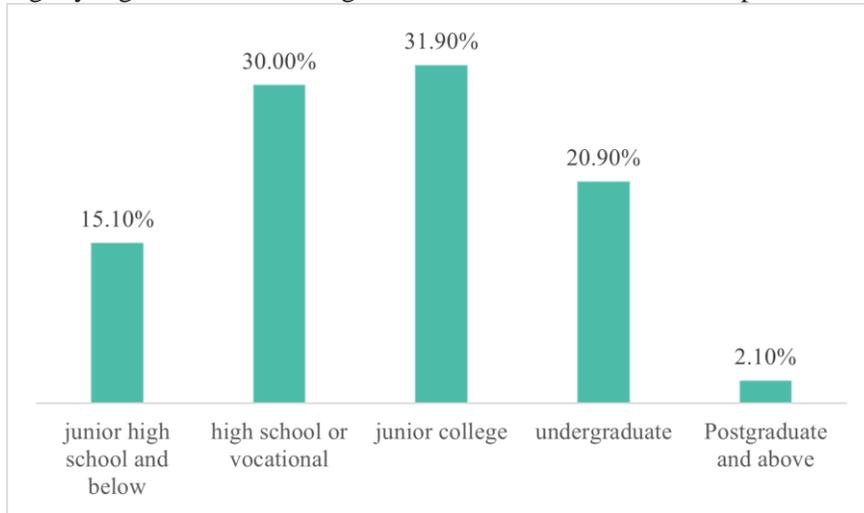


Figure 5. Educational distribution of Taobao e-commerce entrepreneurs

But after starting, these entrepreneurial units achieved some success, but there are still some obvious problems that needed to be solved urgently. In recent years, innovation and entrepreneurship education has become increasingly popular in Chinese universities, and has brought about both positive and negative impacts on college students.

As shown in Figure 6, the survey shows that students who had received entrepreneurship education at the undergraduate stage are more likely to choose to start a business after graduation than students who had not received entrepreneurship education. Entrepreneurship education can improve students' human capital related to entrepreneurship on the one hand, and improve their social capital related to entrepreneurship on the other hand. Under the influence of a series of factors, students who have received entrepreneurship education often have stronger personal abilities and are more active with entrepreneurship ideas and willingness, as well as with better opportunities and a more conducive environment. Therefore, entrepreneurship education can help improve the entrepreneurial rate of students after graduation (Zhang, 2016).

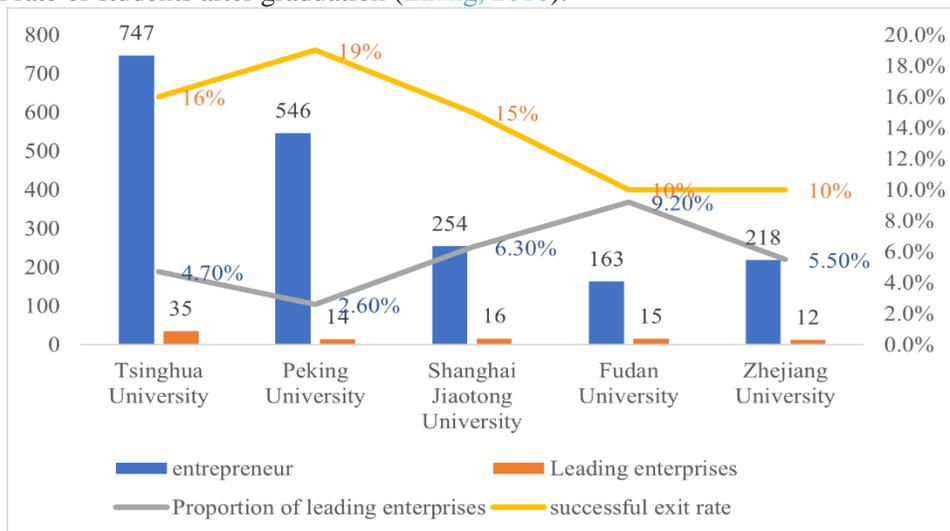


Figure 6. Overview of Entrepreneurship in Some Famous Universities in China

- ***Micro-level: University Students and Parents***

At the micro-level, several factors contribute to the issues surrounding innovation and entrepreneurship education among Chinese university students and their parents. Firstly, university students often lack a comprehensive understanding of innovation and hold conservative attitudes towards entrepreneurship, which leads to a limited emphasis on innovation and entrepreneurship education in universities. When transitioning from the demanding academic workload of high school to university, Chinese students may have limited awareness of the current employment landscape. Moreover, inadequate promotion and awareness campaigns result in students being unclear about the rationale behind offering innovation and entrepreneurship education courses in universities. Research indicates that while most students acknowledge the importance of innovation, their understanding is primarily confined to innovative knowledge, methods, and models. Conversely, their comprehension of entrepreneurship remains superficial. Consequently, there is a widespread lack of recognition among Chinese students regarding the necessity of innovation and entrepreneurship education in universities, leading to a diminished focus on this aspect (Lee, 2017).

Secondly, university students demonstrate limited practical entrepreneurial capabilities. Surveys reveal that a significant proportion (96.1%) of university students express entrepreneurial aspirations, yet only a small fraction (14%) takes concrete steps and prepares for entrepreneurship. Other research suggests that most university students lack execution skills and exhibit a fear of challenges. An objective analysis of current innovation and entrepreneurship practices among university students highlights that their entrepreneurial endeavors primarily rely on their personal life experiences. As their experiences predominantly revolve around academic activities within the confines of their schools and families, there exist significant disparities between university students and real-world entrepreneurs. Consequently, the innovation and entrepreneurship activities of university students are inherently constrained by their circumstances. Furthermore, the characteristics of the student population, including limited financial resources, lack of entrepreneurial experience, absence of social networks, and alternative career pathways, contribute to their weak entrepreneurial foundations. Due to relatively favorable living conditions, many students lack the perseverance and resilience required to overcome hardships and setbacks, which significantly hampers their success in innovation and entrepreneurship.

Thirdly, parents exhibit cognitive biases regarding innovation and entrepreneurship education. Surveys indicate that a majority of parents possess limited awareness of innovation and entrepreneurship education, and they believe that stable economic income can only be achieved through pursuing postgraduate studies or securing positions in government agencies. Most parents hold conservative views on employment and prefer their children to pursue relatively stable careers or further studies. Even if students demonstrate an interest in innovation and entrepreneurship, few individuals are willing to take the risk due to parental discouragement stemming from the perceived minimal chances of entrepreneurial success.

These perceptions are influenced by two primary factors. Firstly, many parents associate working in government agencies with respectability and stability. The experience of the COVID-19 pandemic over the past three years, accompanied by numerous failed entrepreneurial ventures, has reinforced these beliefs among parents. Additionally, most parents have limited understanding of entrepreneurship, primarily associating it with low-tech basic service industries and perceiving it as a last resort for individuals unable to find employment after graduation.

- ***Mid-level Perspective: School Level***

Chinese universities have completed task-oriented innovation and entrepreneurship education. The concept of entrepreneurship education in China has undergone changes and improvements from the pilot stage focusing on students' independent entrepreneurship from 2002 to 2010, to the emphasis on integrating innovation and entrepreneurship education throughout the talent development process after 2010. However, some universities have not adequately prepared for this. The lack of unified understanding among the school's leadership and academic departments has resulted in a lack of strong consensus on the significance of innovation and entrepreneurship education in cultivating applied talents. It is a common phenomenon for Chinese universities to simply complete the innovation and entrepreneurship education tasks assigned by the government.

In order to meet the targets and goals, some universities have resorted to "innovation for the sake of compliance" and "entrepreneurship for the sake of tasks." In reality, they lack innovative practices, ideas, and concepts but fabricate so-called innovation through various means. Examples of "term-coining innovation" involve

using new terms for existing content without substantive changes. "Trend-following innovation" is the tendency to proclaim oneself as a leader or inheritor in a certain field after certain buzzwords such as "trailblazer" and "successor" become popular. Additionally, "replication-based innovation" involves making minor modifications to previous projects and presenting them as new ones. These phenomena have become increasingly common.

In the practice of innovation and entrepreneurship education, some universities have misconstrued the essence of innovation and entrepreneurship. In order to take shortcuts and save effort, they resort to opportunism, cosmetic changes, deceit, and even deliberate misrepresentation. Innovation and entrepreneurship require accumulation and occasionally require certain opportunities; they cannot be forced or pursued solely for the sake of fulfilling tasks. The phenomenon of "pseudo-innovation" and "chaotic entrepreneurship" stems from the pressure of task-oriented innovation and entrepreneurship under the current system, which universities are struggling to cope with.

Currently, the utilitarian nature of innovation and entrepreneurship education in Chinese universities is evident. The focus is more on projects that can win awards and gain commercial opportunities. The emphasis is on achieving satisfactory results and recognition in terms of awards and team participation, while neglecting whether students' innovation consciousness, entrepreneurial spirit, and entrepreneurial abilities have truly improved. Many second-tier and third-tier universities treat innovation and entrepreneurship education as a perfunctory task, solely aimed at improving the overall employment rate of the institution and fulfilling teaching requirements. In universities, colleges and individual faculty members, without the pressure from the institution, tend to stick to their traditional teaching methods and course materials, unwilling to engage in field research at the grassroots level or in enterprises and reluctant to actively update teaching content and methods to genuinely cultivate students' innovation and entrepreneurship abilities.

Innovation and entrepreneurship education in Chinese universities is characterized by a single form, primarily focusing on theoretical instruction. Although the Ministry of Education has long emphasized the fundamental task of innovation and entrepreneurship education, universities have not attached great importance to its implementation. Most universities simply offer one weekly class on innovation and entrepreneurship theory, and some do not even have relevant courses or practical activities, leading to ineffective implementation of innovation and entrepreneurship education in universities. Practice is an essential part of achieving the educational objectives of innovation and entrepreneurship. During interviews, it was found that many university students have little recollection of practical courses related to innovation and entrepreneurship. They perceive the innovation and entrepreneurship practices in their universities as limited to business plans or entrepreneurial competitions like the "Challenge Cup," without other forms of application and practice of the knowledge learned in the courses (He, 2021).

- ***Macro level: National government and social level***

Each department operates independently, lacking unified coordination. For example, in China, the Development and Reform Commission is responsible for promoting mass entrepreneurship and innovation, but its scope is limited to surface-level work and it does not participate in specific field-related activities. The Ministry of Science and Technology is responsible for technological innovation and the establishment of innovation platforms, but its support mainly targets high-end talent, with insufficient and insufficiently targeted support for college students' innovation and entrepreneurship. Although the Ministry of Education is the governing body for higher education institutions, its role is not fully utilized, and there is insufficient coordination among various departments. Promoting innovation and entrepreneurship education and supporting college students' innovation and entrepreneurship are systemic endeavors that require the participation of multiple stakeholders to form a collaborative effort. However, China is still in the stage of fragmented promotion and has not achieved unified progress.

Secondly, policies are scattered and lack specificity. Compared to the United States, entrepreneurship education in China originated from the need to build an innovative country, facilitate economic transformation and address employment pressures, under the promotion of government policies. The government attaches great importance to innovation and entrepreneurship, and has issued a series of policies and measures at various levels of government. For example, at the national level, there are documents such as "Opinions on Promoting High-Quality Development of Innovation and Entrepreneurship and Upgrading the 'Double Innovation'" and "Opinions on Strengthening the Implementation of the Innovation-Driven Development Strategy and Further Promoting

Mass Entrepreneurship and Innovation" (Han, Luo, & She, 2018). Local governments have also issued corresponding supporting documents. However, most of these documents are aimed at the whole society, with few specifically targeting college students and graduate students, and the policies supporting college students' innovation and entrepreneurship are relatively limited and scattered, lacking policy coherence. In terms of supporting innovation and entrepreneurship education in universities, the country has issued two significant policy documents in 2010 and 2015, and relevant detailed rules and supporting documents have been formulated at various levels of government. However, most of these documents are drafted by the education department, with low participation from other departments, and the policy content mostly focuses on education itself.

Thirdly, although there are multiple policies, there is a lack of implementation and support for innovation and entrepreneurship activities in universities. The policies supporting graduate entrepreneurship, such as preferential loans and interest subsidies, mainly target graduates who have left the campus, while no special funds have been established to support entrepreneurship projects by current students. The innovation and entrepreneurship resources held by the Human Resources and Social Security Bureau and the entrepreneurship education centers established by enterprises are not open to universities, which creates a disconnect between the rich entrepreneurial resources outside the campus and the innovation and entrepreneurship education inside the campus. There is a lack of interaction between university entrepreneurship education and the external entrepreneurial society, and a lack of support from social resources.

Fourthly, the traditional approach of implementing educational reforms in a rapid and extensive manner, coupled with the society's single evaluation standard and KPI assessment, has created an overall atmosphere of impatience, impulsiveness, and short-sightedness.

Innovation and entrepreneurship are not smooth processes and cannot be quickly generated by imposing deadlines and various quantitative indicators. Relying solely on temporary enthusiasm is unlikely to lead to sustainable success. In the Chinese context, many educational reform initiatives are launched in a top-down, rapid manner and have become a habit and tradition. These reform initiatives heavily rely on the support of the leaders in power at the time. Once the main leaders are replaced, their practices are quickly "overthrown" and it becomes difficult to sustain their impact. This is also an important reason why Chinese universities easily fall into temporary trends [Jian \(2017\)](#).

The essence of innovation and entrepreneurship education is to cultivate independent thinking in the younger generation of students, enabling them to be bold in innovation and creation. However, behind the phenomenon of universities in China blindly engaging in innovation and entrepreneurship education, there is a lack of independent thinking and innovation consciousness.

- ***The root levels***

The deeper reason behind the aforementioned issues is that implementers of innovation and entrepreneurship education in Chinese universities have forgotten its essence [Wang \(2015\)](#). Recent statistical data shows that the success rate of college students' innovation and entrepreneurship practices is less than 2%, yet the government continues to invest substantial resources and encourage entrepreneurship among college students. Why is this? The underlying reason is that college student innovation and entrepreneurship is not just about starting a company or engaging in individual business activities; it is an organic combination of "classroom-practice". This embodies the educational concept of "learning by doing". College student innovation and entrepreneurship provides excellent opportunities for students to demonstrate their unique insights into projects, business opportunities, or their own disciplines. Some innovation and entrepreneurship projects can even facilitate interdisciplinary exchanges and integration.

Therefore, college student innovation and entrepreneurship education should not solely focus on short-term indicators, data, economic goals, and profitability. It should prioritize the cultivation of the process itself. The process of innovation and entrepreneurship is the process of talent development. It is an education that takes real-life as its teaching material. In essence, college student innovation and entrepreneurship is a form of innovation in the higher education model. Since it is an innovative educational model, its essence remains a part of the educational model and should not forget the original intention and purpose of education. However, in reality, a significant number of Chinese universities do not consider the development of innovation and entrepreneurship abilities as part of their main higher education objectives and do not pay sufficient attention to teaching management. Currently, innovation and entrepreneurship education is still marginalized ([Ouellette, 2021](#)).

## Discussion

These results have far-reaching implications. Entrepreneurship education received at the undergraduate stage will help to improve the centrality and structural holes of entrepreneurs in social networks related to entrepreneurship, and the social capital of these two relationship dimensions will help to improve their corresponding entrepreneurial achievements. Entrepreneurship education at the undergraduate level, on one hand, will enable students to learn and grow together with a larger number of high-quality entrepreneurial enthusiasts with different backgrounds; on the other hand, it will also provide many opportunities to communicate with outstanding entrepreneurs, and venture capitalists. This will also greatly enrich the entrepreneurial-related social networks of the trainees, and increase their opportunities and abilities to connect with relevant entrepreneurial actors. In addition, the personal abilities cultivated by the trainees in the process of accepting entrepreneurship, such as communication skills, negotiation skills, and logical analysis skills, will make them more likely to become more active nodes in social networks related to entrepreneurship.

A large number of successful and failed entrepreneurial cases show that entrepreneurs need to have "fast learning" and "stress resistance" in the process of starting a business. These two abilities are one of the necessary abilities for college students' entrepreneurs. Therefore, in innovation and entrepreneurship education in Chinese colleges and universities, we should focus on strengthening the cultivation of rapid learning ability and continuous stress resistance ability. Instead of being official and dogmatic, it is too comprehensive and pursues the so-called "systematization".

The real achievement of innovation and entrepreneurship education for college students is not only the success of entrepreneurial projects, but also enables students to learn to use innovative thinking to think about problems, integrate their own resources to solve practical problems, and maintain enthusiasm and motivation in future study and life. This is the essential difference between college students' innovation and entrepreneurship and ordinary social entrepreneurship. The pursuit of profit is not the fundamental purpose of education. The essence of education is people-oriented, preaching and teaching, teaching and educating people. Educating talents is the fundamental purpose of education, and the pursuit of economic profit is not the essential purpose of education, nor is it the only purpose, nor is it the highest purpose.

The fundamental purpose of education guides the specific training objectives and professional training objectives of each stage of education. The fundamental purpose of education is the overall requirement for personnel training standards at all levels and types of education. The fundamental purpose of education influences, restricts and determines the specific curriculum objectives and teaching objectives. Therefore, as one of the fields of education, innovation and entrepreneurship education should not only follow and must always follow the fundamental educational purpose of educating people, but also the training objectives, related curriculum objectives, and specific teaching objectives of innovation and entrepreneurship education should revolve around educating people. to this fundamental purpose.

## Conclusion

The essence of innovation and entrepreneurship education in colleges and universities is still educating people; whether in China or other countries, colleges and universities should not forget and abandon their original intention and essence of educating people in the process of continuously strengthening and developing innovation and entrepreneurship. Therefore, no matter in the implementation of courses related to innovation and entrepreneurship, or in the process of organizing and participating in various innovation and entrepreneurship competitions, the cultivation of students' innovative spirit and entrepreneurial ability should be put at the core position. Innovation and entrepreneurship education can return to its educating talents in a sense that China's innovation and entrepreneurship education can return to its essential attributes of educating people, and can truly reflect and implement its essential purpose and function of educating people.

## References

- Acs, Z. J., Szerb, L., Song, A., Komlosi, E., & Lafuente, E. (2021). *The digital platform economy index 2020*. Global Entrepreneurship and Development Institute. <https://investchile.gob.cl/wp-content/uploads/2021/04/dpe-2020-report-final-digital-plataforme-economy-index-gedi.pdf>

- Alkorta, J., & Mujika, M. (2022). Highlighting the role played by distance learning methods in strengthening the bioethics in the biotechnology curriculum in Singapore. *Journal of Commercial Biotechnology*, 27(5), 92-103. doi:<https://doi.org/10.5912/jcb1892>
- China Youth Entrepreneurship Development Research Group. (2021). *2021 China Youth Entrepreneurship Development Report*. China Youth Entrepreneurship Foundation. [https://qnzz.youth.cn/qckc/202112/t20211217\\_13355896.htm](https://qnzz.youth.cn/qckc/202112/t20211217_13355896.htm)
- Gao, Z. G., Zhan, Y., & Wang, G. (2016). On the Construction of the College Teaching System of Innovation and Entrepreneurship Education Course. *Heilongjiang Higher Education Research*, (03), 93-95. <https://doi.org/10.3969/j.issn.1003-2614.2016.03.024>
- Guo, F. Y. (2020). Literature review on the research of innovation and entrepreneurship education in China. *Innovation and Entrepreneurship Education*, 11(02), 44-52. <https://doi.org/10.3969/j.issn.1674-893X.2020.02.008>
- Han, F., Luo, T., & She, P. (2018). Research on Innovation and Entrepreneurship Education in Colleges and Universities. *Contemporary Education Practice and Teaching Research*, (2), 650-650. <https://doi.org/10.3969/j.issn.2095-6711.2018.02.501>
- He, J. Y. (2021). Exploration on Constructing College Students' Innovation and Entrepreneurship Education Model. *Teaching method innovation and practice*, 4(12), 35-37. <https://doi.org/10.12345/jxffcxysj.v4i12.7534>
- Huang, K. (2014). Discussion on the Mode of Entrepreneurship of Chinese College Students. *Times Education*, (23), 96-96. <https://doi.org/10.3969/j.issn.1672-8181.2014.23.062>
- Jian, L. (2017). China's new engineering construction facing the future. *Educational research of Tsinghua University*, 38(02), 26-35.
- Lai, L. S., & To, W. M. (2020). E-Entrepreneurial intention among young Chinese adults. *Asian Journal of Technology Innovation*, 28(1), 119-137. <https://doi.org/10.1080/19761597.2020.1713832>
- Lee, L., & Yang, W. (2019). Research on Time and Space Features of Hot Sports of College Students' "Internet +" Innovation & Entrepreneurship and Its Enlightenment to High Education. *Future and Development*, 43(07), 20-27. <http://www.nmglib.com:8901/article/read.aspx?id=7002546063>
- Lee, Y. (2017). Research on the Innovation and Entrepreneurship Education of College Students. *Education and Teaching Forum*, (16), 42-43. <https://doi.org/10.3969/j.issn.1674-9324.2017.16.018>
- Lee, Z. F. (2021). Hot spots and characteristics analysis of innovation and entrepreneurship research based on bibliometrics. *Innovation and Entrepreneurship Education*, 12(01), 29-37. <https://doi.org/10.3969/j.issn.1674-893X.2021.01.006>
- Leendertse, J., Schrijvers, M., & Stam, E. (2022). Measure twice, cut once: Entrepreneurial ecosystem metrics. *Research Policy*, 51(9), 104336. <https://doi.org/10.1016/j.respol.2021.104336>
- Li, S., Tang, H., Song, Y., Li, C., Cui, H., & Sun, K. (2019). Impression on Participating in the Practice of College Students' Innovation and Entrepreneurship Education. In *2019 International Conference on Advanced Education Research and Modern Teaching (AERMT 2019)* (pp. 266-268). Atlantis Press. <https://doi.org/10.2991/aermt-19.2019.67>
- Liu, T., Walley, K., Pugh, G., & Adkins, P. (2020). Entrepreneurship education in China: Evidence from a preliminary scoping study of enterprising tendency in Chinese university students. *Journal of Entrepreneurship in Emerging Economies*, 12(2), 305-326. <https://doi.org/10.1108/JEEE-01-2019-0006>
- Mei, W., & Symaco, L. (2022). University-wide entrepreneurship education in China's higher education institutions: Issues and challenges. *Studies in Higher Education*, 47(1), 177-193. <https://doi.org/10.1080/03075079.2020.1735330>
- Ouellette, P. (2021, January 30). *The failure rate exceeds 98%, why continue to encourage college students to start their own businesses? Only by understanding the essence can we know the rare opportunities.* <http://www.cetorg.org/index.php?m=content&c=index&a=show&catid=21&id=890>
- Wang, Z. R. (2015). The overall conception of innovation and entrepreneurship education concept reform in colleges and universities. *Higher Education*, (7), 75-78. <https://doi.org/10.16298/j.cnki.1004-3667.2015.07.019>
- Xie, L. L., & Yang, K. Z. (2022). Research hotspots and development trends of innovation and entrepreneurship education. *Employment of Chinese College Student*, (02), 42-49. <https://doi.org/10.20017/j.cnki.1009-0576.2022.02.006>
- Xie, W. (2020). Research and Exploration on the Practice Mode of University Innovation and Entrepreneurship

- Education. *Youth*, 71(35), 190-191. <https://doi.org/10.12295/j.issn.1002-6835.2020.35.092>
- Zhang, W. (2021). Analysis of hotspots and frontiers of innovation and entrepreneurship education in China. *Innovation and Entrepreneurship Education*, 12(04), 1-7. <https://doi.org/10.3969/j.issn.1674-893X.2021.04.002>
- Zhang, Y. Y. (2016). A Summary of Research on Innovation and Entrepreneurship Education in Colleges and Universities. *Technology Entrepreneurship Monthly*, 29(16), 62-64. <https://doi.org/10.3969/j.issn.1665-2272.2016.16.027>
- Zhiyi, R., Abdul Aziz, N., & Rahim, M. H. (2023). Implementing Entrepreneurship Education in Chinese Higher Education Institutions: A Review. In M. N. H. Yusoff (Ed.), *Industry Forward and Technology Transformation in Business and Entrepreneurship* (pp. 719-730). Springer Nature Singapore. [https://doi.org/10.1007/978-981-99-2337-3\\_61](https://doi.org/10.1007/978-981-99-2337-3_61)
- Zhou, J. (2022). Safety management of karst construction in railway tunnels and tunnel farming as compared to traditional farming. *Journal of Commercial Biotechnology*, 27(2). doi:<https://doi.org/10.5912/jcb1042>