

Enlightenment of Entrepreneurship Education in Cambridge University

Yong-hua ZHOU*, Qi-yun CUI, Jian AN and Qiao-qiao LI

Northwest Minority Research Center, Xinjiang University, Urumqi, Xinjiang, China

*Corresponding author

Keywords: Cambridge University; Entrepreneurship Education; Enlightenment.

Abstract. Cambridge University is one of the earliest and the most successful schools to carry out entrepreneurship education. With a good sense of entrepreneurship, multi-party financial support, systematic entrepreneurial courses and a wealth of extracurricular entrepreneurial practice, Cambridge entrepreneurship education has achieved great success. In China entrepreneurship education started late, and there are many deficiencies. By referring to the successful experience of entrepreneurship education in Cambridge University, we can improve the entrepreneurial quality and entrepreneurial ability of Chinese college students, and then enhance the level of innovation and entrepreneurship in China.

1. Introduction

It has been the focus of governments to improve the level of innovation, entrepreneurship, and foster a more competitive economy. Especially in the developed countries, it is more important to improve their innovation and entrepreneurship level, the United Kingdom is no exception. From the beginning of the establishment of Cambridge University, it began to pay great attention to the development of entrepreneurial potential, focusing on the development of students' entrepreneurial skills and knowledge level. Through the transfer of skills, students have made remarkable achievements in innovating entrepreneurial teams. Compared with Cambridge University, this kind of teaching idea and entrepreneurial practical experience are more valuable for China's higher education.

2. The Model of Entrepreneurship Education in Cambridge University

Entrepreneurship in Cambridge University is essentially through students' learning entrepreneurial skills and knowledge, enhance their self-confidence and self-efficacy, and in the concept of entrepreneurial idea to cultivate the entrepreneurial personal qualities, abilities, and entrepreneurship spirit; entrepreneurship practice focuses on behavioral performance, through the entrepreneurial practice of extracurricular activities students can obtain entrepreneurial knowledge and experience. Although significant achievements have been made, Cambridge University entrepreneurship education continues to explore ways and means to enhance the scope and depth of entrepreneurship education on an interactive basis to meet the growing needs of students and faculty in UK universities around the world.

2.1 The overall learning model of the entrepreneurship center

The teaching project of the Entrepreneur Learning Center of Cambridge University includes three parts of motivation, information and practice, which is supported by the theory of self-efficacy, and constitute the whole learning model. The first part tries to motivate the trainees to realize their own entrepreneurial abilities. It draws on the Moore model to view entrepreneurial learning as a linear and one-way development process, focusing on the importance of individual traits and capabilities, and pay attention to the importance of the macro environment; the second part provides information on how to implement ideas. It draws on the Timmons model, which views entrepreneurship as a system of interaction and interconnection between opportunities, entrepreneurs or entrepreneurial teams and resources. The third part provides guidance, resources, and other forms of practical support to help in the realization of their ideas. It draws on the Revans model, which focuses on the

new generation of entrepreneurs who need to think deeply about their own problems and ideas they use to overcome obstacles, reduce risk, and increase the likelihood of success. Self-efficacy in entrepreneurial education strongly supports the overall learning model of the Entrepreneurship Center at Cambridge University, which helps to explain the importance of developing entrepreneurial potential and entrepreneurial skills. The level of self-efficacy in the entrepreneurial process will seriously affect the individual's own ability to cognition. In order to improve the level of entrepreneurial skills and the level of motivation for success, we must develop specific skills and competencies through the teaching content to improve students' self-efficacy and self-confidence.

2.2 The multi-interactive entrepreneurial courses

Generally the development of entrepreneurial education programs in UK universities is not carried out by a single university, but to build a network of curriculum development, establish a network of value-added relationships between national public programs, regional organizations, universities and private institutions, to achieve complementary advantages, resource sharing and effective evaluation. Cambridge University benefited from the development of such courses model, and its entrepreneurial curriculum forms a multi-faceted interactive system in which entrepreneurial curriculum development, entrepreneurship research, teaching methods, teaching faculty and extracurricular entrepreneurial activities are effectively integrated.

Cambridge University entrepreneurship education courses are compulsory, elective courses and training programs and other forms, for example, there are entrepreneurs to enhance the entrepreneurial spirit, entrepreneurs' summer schools and other forms are developing in the school. Entrepreneurship courses mainly focus on entrepreneurship thinking, comprehensive ability, global vision, new management issues of enterprises, focusing on cultivating the spirit of innovation and the awareness and quality of grasping entrepreneurial opportunities, emphasizing on improving students' practical ability and comprehensive ability, attaching importance to cultivating students' entrepreneurship vision of globalization. The basic theory course is the required course of entrepreneurship education, which makes students master the basic knowledge of entrepreneurship education. Students can choose elective courses according to their interests and specialties, so they can accept different areas of entrepreneurial knowledge. The training programs are mainly funded by the UK Entrepreneurship Center, the National Undergraduate Pioneering Committee, the University Entrepreneurship Skills Program and Teaching and Learning Excellence Program of the Higher Education Fund Committee's to transform the university's culture and philosophy into the mainstream of university education.

2.3 Multi-funded to support entrepreneurship

Most of the entrepreneurship programs funds at Cambridge University originate from institutions such as the Higher Education Funding Council, higher education institutions themselves, regional development boards, local governments, learning and skills committees, and the National College Committee, of which nearly 80% of the funding comes from public resources (state and European Union), 50% comes from the Higher Education Innovation Fund and the of the core funds. For example, in 1999, the UK Department of Science and Technology invested £25 million to fund 12 scientific enterprise centers and established a joint project between Cambridge and the Massachusetts Institute of Technology, which received £64 million in funding. At the same time, Cambridge also encouraged access to finance through business activities, intellectual property development and industry contacts. In 2000, Microsoft invested \$338 million in Cambridge, and Marconi invested \$64 million to set up research institute in Cambridge University. Li Ka-shing, a entrepreneur, donated to establish a medical research center and established the Li Ka-shing Foundation Cambridge University.

3. Major Achievements of Entrepreneurship Education in Cambridge University

It is self-evident that the development of entrepreneurship education is important to the individual and the society. Compared with the United States Silicon Valley, the "Cambridge

Phenomenon" is a concrete manifestation of the effectiveness of entrepreneurship education in Cambridge University.

3.1 The number of entrepreneurship courses and educated students

The number of courses on entrepreneurship education has grown since the establishment of the Cambridge University Entrepreneurship Center. The courses offered by the University of Cambridge include MELS (Masters Entrepreneurship Lecture Series), Virtual Learning Network, New Training Camp, Master's Class, and Entrepreneurship Program, and courses to equip students with entrepreneurial skills, such as 26 courses, which mainly build entrepreneur Tuesday, entrepreneurs, summer schools and several other courses. According to the British scholar on entrepreneurial education curriculum research results show that the number of students participate in entrepreneurship education accounts for 7% of the total number of students, take credit courses account for 34% of the total number of students enrolled in entrepreneurship education, the total number of students taking part in extracurricular activities accounted for 66% of the total number of students enrolled in entrepreneurship education. Since the start of entrepreneurship education in Cambridge University, the number of entrepreneurship courses and students who choose entrepreneurship education has increased, laying a solid foundation for the entrepreneurial activities of Cambridge University.

3.2 Entrepreneurial ability

By participating in entrepreneurship education, not only enriched the students' entrepreneurial knowledge, but also improve their entrepreneurial awareness. Diversified extracurricular activities and real entrepreneurial practices improve students' learning ability, working ability and teamwork ability. At the same time, students discover new market opportunities from entrepreneurial practices, understand the entrepreneurial process and how to prepare to cope with difficulties and overcome the difficulties in the process of entrepreneurship. As a result, entrepreneurship education can not only cultivate students' perfect personality, but also enable students to acquire knowledge and ability, which is benefit to the all-round development and enhance social competitiveness of students.

3.3 Social employment pressure

According to the results of a study by a UK scholar, students who participated in entrepreneurship education and entrepreneurship projects raised their subjective norms and self-awareness, improved their entrepreneurial attitudes and entrepreneurial intentions, gained inspiration, improved subjective norms of self-employment, the full-time employment rate of students participating in entrepreneurship education is higher than that of those who did not attend it. In the past decade, the number of self-employed persons with a bachelor's degree, self-employed persons who have obtained vocational qualification, and self-employed with a graduate degree have increased significantly, with an obviously higher rate of graduate entrepreneurship than non-college graduates.

3.4 Economic efficiency of enterprises

Entrepreneurial education and entrepreneurial practice greatly meet the requirements of the enterprise, even more than the expected results of the enterprise. The students who have participated in the course of entrepreneurship not only bring a new way of working for the enterprise, but also point out the problems and defects in the management of the enterprise, and bring significant economic benefits to the enterprise. First, the graduates involved in entrepreneurial education greatly meet the needs of employers: students not only provide a new way of working, but also pointed out that problems and shortcomings in business management, students' new ideas and unique skills provide new ways to solve existing problems; the students who participate in education can bring the economic benefits to enterprises: students involved in entrepreneurial education have a more positive attitude towards entrepreneurship, and can bring more benefits to the enterprise in the aspects of information technology, computer data or computer system, new marketing strategy, new product or service, information resources, etc.

As early as the 70s of last century, when the global high-tech industry was developing rapidly, entrepreneurship in Cambridge University has become a trend. In 1970, Cambridge University established the UK's first Science Park, Cambridge Science Park. With the scientific research capability and talent advantage of Cambridge University, science and technology park development rapidly. Over the years, Cambridge University researchers used their own research results have established more than 1,000 high-tech enterprises. Over the past 40 years, Cambridge Science Park, adds tens of thousands of jobs every year on average, GDP growth rate is 6.3% per year in the park, becoming the engine of development in eastern England, the development of Cambridge Science Park has created the "Cambridge Phenomenon", which can be compared with the US Silicon Valley.

4. The Status Quo of Entrepreneurship Education in China's Universities and Colleges

China's entrepreneurship education course is still at a very immature stage, problems and shortcomings at present are mainly concentrated on the following areas:

4.1 There is no systematic entrepreneurship education curriculum

At present, the curriculum of entrepreneurial education in our country is not like the entrepreneurial curriculum of Cambridge University as a multi-interactive system. There is no integration between entrepreneurship curriculum development, entrepreneurship research, teaching methods, teaching staff and extracurricular entrepreneurial activities. First of all, the development of entrepreneurial courses in China's colleges and universities basically develops in dependently without forming a network structure, and there is no model for the development of College Alliance. And the development of the curriculum is not much, and there is no effective link between general education curricula, professional education curricula and entrepreneurship education curricula. In addition, innovation and entrepreneurship education in many colleges and universities don't have credit management professional entrepreneurship degree courses. Second, China's entrepreneurial research, drawing on the experience of developed countries, but not suitable for practical, such as the introduction of KAB, SIYB and other international entrepreneurship courses, is limited to the introduction and don't have localization of the adjustment. Third, teaching methods focus on explaining entrepreneurial theory and lacking of entrepreneurship activities, which to some extent affected the development of entrepreneurship education. At last, the structure of teaching staff in entrepreneurship education curriculum is unreasonable, and there are few "dual-teacher" teachers with the combination of entrepreneurship theory and entrepreneurship practice.

4.2 Lack of practical communication platform

In the entrepreneurial practice communication platform, entrepreneurs can communicate with each other about the problems encountered in business. Cambridge University Science Park makes full use of the role of practical exchange to provide entrepreneurship platform for their entrepreneurship schools and help entrepreneurship at Cambridge University. At present, in China the theoretical knowledge of entrepreneurship education is basically popularized, and the entrepreneurial awareness of trainees has been improved. However, many colleges and universities lack a platform for entrepreneurship practice, which limits students' next entrepreneurial activities. Entrepreneurial practice activities only stay in the entrepreneurship association activities, entrepreneurship lectures, and entrepreneurial design competition, lack of further entrepreneurial practice. And individual colleges even lack entrepreneurial simulation training links, micro-entrepreneurial activities are relatively rare; in addition to the lack of entrepreneurial practice in the internal and external training base for innovation and training, there is a lack of a collection of entrepreneurial policies, entrepreneurial expert library, business case database, venture capital project library and other professional network platform for Internet business community.

4.3 Insufficient support for venture capital

The shortage of venture capital shortage is a major problem in college students, which makes college students lost in the starting line at the beginning of the business. Cambridge University

enters venture capital through diversified financing to support college students' entrepreneurship. Although there are many venture capital policies in China to support college students' entrepreneurship, entrepreneurs in the actual application of the loan will still encounter security difficulties, less loan amount, complex process and other issues. The way of entrepreneurship financing is still relatively small. All kinds of fund organizations have strict requirements for college students to apply for business start-ups, and because of lack of innovation and investment projects, venture capital companies are also invest less. At present, the insurance companies do not provide certain types of insurance for entrepreneurs to escort for entrepreneurs. In short, entrepreneurs cannot get enough financing investment support, limiting their entrepreneurial activities.

4.4 Entrepreneurial environment is not perfect

There is no sound business environment, to a certain extent, will affect the development of entrepreneurial activities. Firstly, lack of integration and implementation of policy resources. At present, although there are many policies were introduced to support college students to entrepreneurship, but it's very scattered, showing a fragmented state, and did not play the actual synergies. Secondly, the cultural atmosphere of innovation and entrepreneurship is not strong, and there is no good atmosphere of respecting entrepreneurship, encouraging entrepreneurship and tolerant failure. The government should give more opportunities for trial and error and establish failure compensation mechanism to enable college students to enjoy business ventures. Thirdly, faced with the problem of college students leaving school to entrepreneurship, although the state introduced the "views" allow students to leave school business, there is no uniform set of rules and regulations to enable students to deal with the relationship between learning and entrepreneurship to relieve their worries about entrepreneurship.

5. The Enlightenment of the Entrepreneurship Education in Cambridge University

5.1 Improve the entrepreneurial curriculum system to enhance the level of entrepreneurship education

Systematic entrepreneurial courses and complete entrepreneurial curriculum courses has made Cambridge University a remarkable achievement. In contrast to the construction of entrepreneurial courses in China, many colleges and universities don't have professional entrepreneurial courses, not to mention the entrepreneurial curriculum system. Therefore, first of all, in colleges and universities, innovation and entrepreneurship education should penetrate into the whole process of college students in school and penetrate into personnel training system gradually. Implement credit management, and gradually realize the scientific, institutionalized and standardized innovation and entrepreneurship education in colleges and universities. Continue to explore the establishment of practical innovation and entrepreneurship degree training for undergraduate, specialist and postgraduate students to enhance the level of innovation and entrepreneurship education. It is necessary to combine the teaching and scientific research with the actual needs of college students, and actively explore flexible, practical and innovative entrepreneurship education model, adjust and improve existing entrepreneurship education curriculum, innovate the content of entrepreneurship education, increase business practice and practice hours, enrich the entrepreneurial practice, improve the pertinence and effectiveness of entrepreneurship education. Second, we must introduce the actual experience of entrepreneurship mentor to cultivate students' entrepreneurial spirit. Through the introduction of outside entrepreneurship mentor with their own successful experience as a case of entrepreneurship, personal guidance as a catalyst for entrepreneurs to help entrepreneurs to enhance the quality of entrepreneurship, entrepreneurial role models become the most suitable mentor entrepreneurs in the process. Third, learn from KAB, SIYB and Cambridge University entrepreneurial experience, and combined with our own reality to explore entrepreneurial training system which suitable for China's colleges and universities.

5.2 Build a business platform to expand the practice of space

Successful development of entrepreneurship education cannot be separated from the support of entrepreneurship platform, “Cambridge platform”- Cambridge Science Park provides strong support for the development of entrepreneurship education. At present, the platform of entrepreneurship in China's universities is still relatively small, cannot effectively meet the needs of students' entrepreneurial practice. Therefore, first, we should establish the internal and external co-venture incubator platform: on the one hand, to establish entrepreneurial base in the campus, providing incubation training base for college students entrepreneurship; on the other hand, to establish the entrepreneurship practice base outside the school, so that students can have a more in-depth understanding of the enterprise, and master the entrepreneurial skills effectively by listening to explanation, seeing the process, hands-on practice. Second, we should establish a collection of entrepreneurial policies, entrepreneurial expert library, business case database, venture capital project library and other professional network platform for Internet business community, open up the last mile of entrepreneurship, promote entrepreneurial information symmetry, experience sharing and guide students entrepreneurship. Finally, we should strengthen the business simulation training practice, universities can set up innovation and entrepreneurship laboratory, through the use of the characteristics of hardware and software resources and the design of the simulation environment to provide students with entrepreneurial simulation, adapt to the entrepreneurial environment under simulated scenarios, increase similar entrepreneurial experience, enhance entrepreneurial ability.

5.3 Increase funding support, establish innovative and entrepreneurship fund at all levels

Venture capital shortage is a stumbling block in the process of entrepreneurship, through various investments and financing methods, Cambridge University obtained various types of venture capital support to avoid the venture capital problems effectively, which has great inspiration. China should set up college graduates employment and start-up countries special funds as soon as possible to support the work of colleges and universities to carry out employment and entrepreneurship; establishment national and provincial college graduates venture fund which mainly used to provide start-up funding support for college graduates. At the same time, encourage enterprises to actively participate in entrepreneurial activities, establish enterprise venture capital fund, through the establishment of alumni venture capital funds and other alumni foundations to support students' entrepreneurship. Entrepreneurial companies can also raise innovation through various modes of public entrepreneurship, thereby enhancing the level of innovation and entrepreneurship. Entrepreneurial companies can also enhance the level of innovation and entrepreneurship through Multi-funding mode. It is also possible to explore the establishment of the undergraduate entrepreneurship insurance system, which is guaranteed by the national mechanism, guided by the industry policy and participated by commercial insurance institutions, and according to the weak ability of anti-risk, providing traditional insurance based on the innovation of products and services for students.

5.4 Improve the innovation and entrepreneurial environment, stimulate students enthusiasm

Generally foreign countries encourage self-employment, which created a good entrepreneurial environment. The concept of self-employment of college students in China is not strong, entrepreneurial enthusiasm is not very high, they prefer civil servants, other state organs and state-owned enterprises. This requires continuous improvement of the entrepreneurial and innovation environment to stimulate students' enthusiasm for entrepreneurship. First of all, we should integrate and implement innovative entrepreneurship policy to provide business policy support. The full implementation of college students business incubator base rent relief, financial support, training and intermediary and other preferential policies to create "to help Foundation" and other college students business services brand. Allow independent entrepreneurship to register in the remote regions, enjoy the relevant tax incentives in the registration, administrative fees for relief,

small loans and discounts and other support policies. Second, we should create the culture of innovation and entrepreneurship. College students entrepreneurship should be given more opportunities for trial and error ,and establish failure compensation mechanism, so that students are willing and dare to venture, thus form a good atmosphere of respect for entrepreneurship, encourage entrepreneurship and tolerant failure. Finally, we should improve the relevant policies and university regulations. Colleges and universities should continue to explore more suitable entrepreneurship policy for college students, can implement the "entrepreneurial elasticity of membership" management system, and the main membership of entrepreneurial team on the basis of the school provisions can be extended to retain a certain time to lift the worries of students learning.

Entrepreneurship education in Cambridge University cultivate entrepreneurial spirit, increase self-efficacy, enhance the entrepreneurial skills and knowledge of students, and ultimately achieve the achievements of "Cambridge phenomenon", which can be compared to the Silicon Valley in the United States , so that Cambridge not only has become one of the most economically dynamic and talented areas in the UK, but also become one of the most dynamic regions for innovation and entrepreneurship in Europe. Cambridge University has achieved remarkable achievements, at the same time it still explore how to improve the scope and depth of entrepreneurial education on the basis of interaction, it is precisely because Cambridge University has been adhering to this concept that it has become a model for many universities. China's entrepreneurial education should learn from Cambridge University's advanced experience, combined with reality, explore more suitable entrepreneurship education model for China's colleges and universities, improve our entrepreneurial education curriculum system, increase venture capital support, create a public space to increase entrepreneurial practice, promote a new normal of public entrepreneurship and innovation, so that innovation and entrepreneurship can truly become the new engine of China's economic and social development.

Acknowledgements

This work was supported by “The embedded development research of multi-ethnic region in Xinjiang” (Ministry of Education of humanities and social sciences key research base of major projects 16JJD860012).

References

- [1] Higher Education Department of the Ministry of Education of the People's Republic of China. *The main countries in the world of entrepreneurship education* [M]. Beijing: Higher Education Press. 2012.
- [2] Niu Changsong. *Study on Entrepreneurship Education in British Universities* [M]. Shanghai: Xuelin Publishing House. 2009.
- [3] Tan Cheng. Enterprise entrepreneurship education experience and enlightenment [J]. *Education and Occupation*. 2011 (11): 99-100.
- [4] Donald F. Kuratko. The Emergence of Entrepreneurship Education: Development, Trends, and Challenges [J]. *Entrepreneurship Theory and Practice*. 2005 (5): 577-598.
- [5] Carol F. Moore. *Understanding Entrepreneurial Behavior: A Definition and Model* [M]. Academy of Management Proceedings. 1986.