

Construction of Business Incubation Bases under Situation of Innovation and Entrepreneurship Education Reform

Taking Zhuhai College of Jilin University as an Example

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Abstract—Incubators has been actively promoted all over the country, the Ministry of Education and Ministry of Science and Technology have approved and established the first 15 national university student incubators in 2001, the Ministry of human and society has approved the first 15 national incubators demonstration base in 2012. University students make the entrepreneurial practice or incubator is an important practice platform for universities to carry out innovation and entrepreneurship education and promote student to start their own business.

Keywords—*innovation and entrepreneurship education; business incubation bases*

I. INTRODUCTION

During the Several guidance countries on innovation and entrepreneurship education reform issued by the country, they explicitly require to put innovation and entrepreneurship practice as an important extension of innovation and entrepreneurship education. Students' spirit of innovation and entrepreneurship will be enhanced and their innovation and entrepreneurship knowledge and experience will be enriched through the organization of competitions, lectures, forums, simulation practice, etc. A famous educator Mr. Tao Xingzhi claimed and practiced the teaching principle of "teaching, learning and doing in one". Doing for teachers is teach, doing for student is learn, which shows teaching and learning can not be separated from practice. Innovation and entrepreneurship education needs to be covered in the whole process of college education and from the terms of the operational level, and it is a new proposition for the majority of colleges and universities. Innovation and entrepreneurship education emphasis more on

practical ability, on paper can not solve the real problem, they have to learn from the experience of advanced countries and regions and with their own reality, explore a road of reform and innovation and entrepreneurship education from practice.

The high-risk of Innovation and entrepreneurship practice makes entrepreneurs need to seek a harbor for shelter, government and universities also need a platform to guide the practice of innovation and entrepreneurship, the establishment of incubators to support entrepreneurship becomes the inevitable choice. Through the construction of incubators, providing basic conditions and services for start-ups is an important measure to optimize entrepreneurial environment.

II. THE FUNCTIONAL ORIENTATION AND CLASSIFICATION OF INCUBATORS

The main purpose of incubators is to create a business atmosphere, optimize business environment, and foster innovative enterprises. It can be divided into three categories: government guide, universities establish, business and industry categories set up. From functional aspect, it can be summarized as follows: First it is to provide a venue for entrepreneurs to practice; second it is to provide business guidance and training system for entrepreneurs and build up guidance teams with practical skills and theoretical guidance level to provide better guidance and services for start-ups; the third is the dock and develop the new projects; Fourth is to implement the national policy to support innovation and entrepreneurship, if conditions are good, they can also introduce industry and commerce, taxation, banking, human social units and other departments, into the incubators to provide "one-stop" service for entrepreneurs. Help

entrepreneurs to apply for venture capital, interest-free funds to support loans, simplifying approval procedures, improve efficiency, allow entrepreneurs to fully experience the care of the government to enhance the business environment; Fifth is to carry out innovation and entrepreneurship research; Sixth is to integrate the resources to enhance entrepreneurial Success rate.

A. Government-led Incubator

Government-led incubators are sponsored by the government or entrusted non-profit organization, whose main purpose is to create more jobs and promote regional industrial diversification. At present, China's government-led incubators generally divided into provincial, municipal, district (county) three levels. Take the largest incubator for college graduates in Shahekou District, Dalian founded in April 25, 2009 as an example, the incubator covers an area of over 10,000 square meters which can accommodate more than 100 companies. The incubator has preferential supporting policies, a good business environment and comprehensive business services, in addition to providing training, funding, venue and loans, business tax and other one-stop service for free, the incubator offers and select the biotechnology, internet, advertising, decoration, marketing planning, language translation and such projects with high technology which fit for the students characteristics.

Sponsored or led by the government incubators has huge investment and with a strong public welfare, which can provide a venue, policy, security, business projects, information, assistance and related public service for the entrepreneurs. Often it can gather popularity and commercial atmosphere quickly, and help the leader of entrepreneurs to build up micro-enterprises with various forms, and diversified economy. Some local governments with good conditions apply gradient incubation and industrial production to make horizontal and vertical integration for all levels of incubators, so that enterprises get a good development from their start-up, growing, mature gradually until it completely go into the market.

Some areas have attached great importance to support start-up enterprises, they build perfect three-level incubators, and they are capable of binding the country to conduct unified planning, administrative resources to fully mobilize cities, districts and other grass-roots level, to play a role at all levels of the existing incubators, combining the advantages of the country resources in order to form industry cluster effect, helping start-ups and sharing the complementary resources and improve the viability of enterprises.

B. Incubators Establishment by Universities

More and more incubators are self-built by universities, one reason is because most universities have laboratories, innovative practice bases and other venues with ancillary services in general molding, establish business incubators increase investment in smaller, but also more complete service system, it is easy to meet the requirements for establishment of incubators. The procedure to use school site is relatively simple, "hard conditions" for the incubator can be met with just a little consolidation; The other reason is there are many

industry experts and elites during intermediate university experts and scholars, they are not only excellent on professional skills, but also have high sensitivity on the development of the industry Status and trends. At the same time, most universities set up a complete system of innovation and entrepreneurship courses, some colleges and universities also have entrepreneurial simulation training courses so their "soft conditions" for incubators is also mature; in addition, college students are the most entrepreneurial intention and potential people, and they all are high-end talent through the college entrance examination after screening so they are stronger in intelligence than community youth which makes the required entrepreneurs reserve endless.

C. The Connection and Difference between Government-led and University Incubators

Government-led incubators and university incubators are both belong to the public welfare incubators, but there are some differences between the two: the university incubator bear more part of the entrepreneurship education and training functions, colleges and universities through entrepreneurship training and practice to make college students feel the entrepreneurial atmosphere themselves, feel the entrepreneurial heroic deeds around them, so as to awaken the heart of entrepreneurial passion and inspire their entrepreneurial potential. That is why university incubators normally be built up into an integrated incubator with education, training, incubation and other functions; Government-led incubators does not have strict limit for hatching enterprises, as long as the applicant's venture with market prospects, then it can apply for hatching. And colleges and universities will set up their different incubating conditions based on professional attributes, such as science and engineering colleges, liberal arts colleges, teacher colleges, medical colleges, art schools, etc., and when students selecting venture projects, they will mostly choose their related profession industries entrepreneurship; government-led incubators have higher operating costs, University incubators are generally established within the campus so their cost is less than government on space use, property management, product development, business simulation training, entrepreneurship training, business competition, the selection of projects and other parts; government-led incubators often support incubated enterprises relying on high-quality resources the government controlled, and the incubating companies are more market-oriented than university incubator companies, most college students ventures have limit market, they develop more internal or perimeter of the campus market-oriented so their market-oriented is low.

In actual operation, the cooperation between Government-led and University Incubators is very close "Fig. 1", both of which dovetail with each other, go hand in hand, work together to create and stimulate the innovation and entrepreneurship awareness to youth groups. They build an incubation platform with culture of innovation and entrepreneurship and implement the entrepreneurship policy.

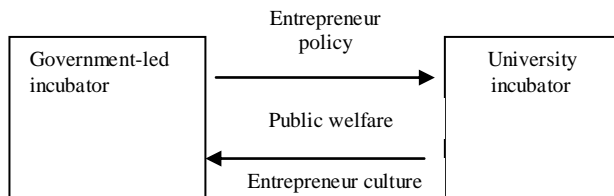


Fig. 1. The cooperation between Government-led and University Incubators

Universities continue to transport the team and the entrepreneurial venture projects for government-led business incubators while enjoying the government policies, to achieve the gradient incubation for start-ups, but also constantly innovative entrepreneurial talent for the society, university incubators is an important means of promoting full employment of citizens and maintaining social stability, it is an important source of strength to activate the city's entrepreneurial energy.

III. EXPLOIT THE CHARACTERISTICS AND ADVANTAGES OF UNIVERSITY INCUBATORS TO PROMOTE INNOVATION AND ENTREPRENEURSHIP EDUCATION REFORM

With the transformation and upgrading of industrial structure and the continuous adjustment of economic methods, China has gradually entered the deep water area of reform, the Government has raised the public entrepreneurship and innovation into the height of one of the "two engines" to protect China's economic restructuring and maintain growth. Colleges and universities adapt to the new trends of entrepreneurship and innovation in the Internet era, how to exploit the characteristics and advantages of University incubators to training and offering high-quality college students with both innovation spirit and entrepreneurship ability; how to incubating a number of innovative companies which can produce social benefits and promote regional industrial development is time's request and historical mission for University incubator under the new situation.

Throughout abroad, the British newspaper "Times" has added the evaluation factor contribution of industry into the Assessment of the university, social evaluation of the university system has changed, in addition to teaching and research, but also request the contribution to society, that means drive for innovation is becoming a "hard leveraged" and therefore foreign university incubators has played an irreplaceable role. Foreign university incubators mostly found and operated by University business school and their operation capital sources are from diverse institutions, for example with Stanford University, Stanford (Start X) comes from social groups and alumni funding not from government support, it dependent on a relatively low level of government, so that the incubator's operations more market-oriented, try to get rid of the existing administrative constraints outside the box. Analysis from the ultimate goal of the incubator, Stanford (Start X) got \$ 400K venture in July 2013 from Groupon, AT & T, Founders Fund, Cisco and other institutions, when Start X making project incubating selection, they insist people selection is more important than project selection. At least one of the principle team has to be a student, alumni or teacher

from Stanford University, start X incubator will provide free space resources, business guidance services, including instructor resources docking platform to assist entrepreneurs' road show, to help develop a network of resources and so on without in possession at the shares. Through the feedbacks of start X's founders and students, they think that the incubator is like a selfless teacher, they concerned most about what you learned and even they teach how to become a socially responsible business. As can be seen from the operating purposes and principles of the Start X, to make the project bigger and stronger is not the first meaning, if only focus on the project itself, and neglects the important people nature, it is likely to cause cart before the horse, the successful venture will only be short-lived, only to focus on the importance of the human and the team, then the vitality of innovation and entrepreneurship will be endless.

Summarizing domestic advanced experience. During the study and understand of the excellent incubator of Wuhan University of Technology incubator and Nanjing University of Posts and National University Science Park incubator, we summarized the characteristics and advantages for these incubators:

- First, exploit the role of resources integration in innovative incubator platform is a prerequisite, Wuhan University of Technology incubators established a set of seven public service platform include: basic, consulting, training, financing, brokerage, information, technology and others to provide comprehensive services for start-ups. It rely on professional management team, use market-oriented operation management, establish and improve organizational security, financial security, technical support, security management, system security, create the management policy, combine the service centers and full-time incubating personnel, hatch the school resources and social resources together carry out an obvious advantages, Full-time incubating management team can provide operational and management support for the incubator, service centers docking the advantages for school teaching and reaching to provide the technical and personnel support to the incubator.
- Second, we should build up innovation capacity, innovation projects, entrepreneurship, and other multilevel incubating system under the innovation and entrepreneurship education reform situation. Nanjing University of Posts and National University Science Park aims to bring innovative entrepreneurship training into personnel training program which included curriculum innovation culture awareness, stimulate student interest in entrepreneurship, enhance the entrepreneurial capacity of students to help students be familiar with the practice. In the meantime establishing various forms of entrepreneurship education associations or second classroom activities, relying on innovation and entrepreneurship associations, career development association to organize entrepreneurial salons and other activities, use new media tools to promote entrepreneurship and create a business environment. Furthermore, to encourage students to

engage in science and technology innovation, strengthening entrepreneurship teaching practice, and actively carry out entrepreneurship education and student entrepreneurial services practice, fully use the advantages of experimental platform and incubator to provide the necessary support for the entrepreneurial practice.

- Third, we should fully exploit the resource advantages of University training base, collaborative innovation centers, science and technology industrial park and other platforms, to hatch their innovative projects based on incubating the ability to innovate and offer preferential policies for the incubation and innovation projects services to attract more outstanding projects. Focus on bring up talented person during the entrepreneurship, establish a database of personnel training, and timely track the progress of incubation, strengthen cooperation between the relevant departments of the universities, provide maximum strength for the co-incubation. With the deepening of entrepreneurship education reform, incubators need more disciplinary professional support, but also drive and guide the construction and development of the subject to further improve the level of discipline construction, so as to effectively improve the quality and level of personnel training. The formation of innovation incubator and disciplines interrelated and synergistic interaction will eventually forming the driving force of university fusion.

IV. THE PRACTICE AND EXPLORATION OF THE CONSTRUCTION FOR THE INCUBATOR OF ZHUHAI COLLEGE OF JILIN UNIVERSITY

Take the example of Zhuhai College of Jilin University incubator, the college has invested over 2 million yuan to build up a 1,000 square meters incubators, 23 enterprises have been settled, it brings internships and employment for 500 people, 5 of the enterprises are successful. These enterprises bring turnover of more than 1.5 million Yuan and net profit of more than 0.5 million Yuan. The incubator has got the support of the relevant departments of the provincial, city, district since 2014 when it is established, and it is identified by the Guangdong Provincial Department of Education as "Model school of innovation and entrepreneurship in Guangdong Province", it is approved by Zhuhai City Human Resources and Social Security Bureau as "College Students Incubation bases in Zhuhai City," also it is approved by the Jinwan District human resources and Social security Bureau as the "College Students Incubation bases in Jinwan District" and get the appropriate policy and financial support in order to get fully development at early time. There are a large number of college students with entrepreneurial passion who enjoy the government's preferential policies in time to help them realize their dreams are laid on a solid foundation, the incubator provide 15 projects and entrepreneurial teams only in the year of 2014-2015.

A. *Build up a Platform by Constructing Local, University, Teachers, Students, "Four In One" Guidance Service System, Building Quality Team with Competition and Other Forms and Improving Innovation and Entrepreneurship Service Environment*

Incubator organized entrepreneurship training courses to start entrepreneurship nursery program; it held nearly 30 entrepreneurs Salons with 2500 students participate in; it organized four road shows for investment and financing with 18 enterprises participated in. At the same time it creates salon brand called "The Three talk about entrepreneurship" which include "school leaders talk about entrepreneurship, outstanding entrepreneurs talk about entrepreneurship, outstanding entrepreneurial alumni talk about entrepreneurship", to enhance the confidence of entrepreneurs students, providing timely and effective intelligence support. Incubator was identified as the College Students Incubation bases in Jinwan District and College Students Incubation bases in Zhuhai City in December 2014 and May 2015, receive government construction supporting funds of 400,000 Yuan. And in December 2015 after the assessment by Guangdong Provincial Department of Education, it became the only Model School in Zhuhai City for Innovation Entrepreneurship Education.

B. *Pay Attention to Guidance, Increase Funding Efforts to Lay the Material Foundation for Innovation and Entrepreneurship Education, Innovation and Entrepreneurship Are Encouraged to Strive to Create A Campus Culture Environment*

Take the special funds of Institute innovation and entrepreneurship and special funds of Education Development Foundation as the main funds resource, integrate multi-channel of government and social funds to finance with the forms of one time capital found for start-up, incubator interest-free loans, public welfare entrepreneurship project support and others to support our students practice and improve efficiency in the use of funds to support, funding to a number of subject knowledge and innovation. In order to promote benefit for the supporting found, they support a batch of projects innovated by subject knowledge, promoted by scientific research, and fit the local industrial development requirements. They emphasis on build full-time faculty on innovation and entrepreneurship, establish scientific effective incentive mechanism; to fully mobilize the enthusiasm of teachers to teach and guide innovation and entrepreneurial activities.

C. *Multilateral Cooperation between the Government, University and Enterprises to Build up a Local, University, Teachers, Students "Four In One" Guidance Service System to Explore the "Government, Enterprise, Society, School" Joint Venture to Promote the New Mechanism*

Mainly it brings the service of Zhuhai administrative bureau for industry and commerce Jinwan Branch into campus to make one-stop enterprise register service normalization, it is able to meet the students' needs for entrepreneurial consulting and transact; The incubator build a service system together with the Zhuhai Municipal Government and Jinsha District

Government which include "project selection—project incubating—project supporting—project introduction" so that to implement ongoing assistance to start-up students, full procedure guidance, one-stop service, and gradually form a long-term mechanism for college students innovation and entrepreneurship education promoted by government, university and enterprise all together.

D. Competition for Training, Build Quality Entrepreneurial Team.

In preparation work for China's first "Internet +" Undergraduate Innovation and Entrepreneurship Competition race, it formed an effective working methods for such event. Leading by school innovation and entrepreneurship education reform leadership team, exploit intellectual support from teachers, scientifically analyze the target direction of innovation and entrepreneurship competition events, flexible adjustment of the strategies, innovative implementation of the "dual track" event organization model, through internal and external teacher supervise, interdisciplinary joint, multi-level promotion, joint departments to security race preparation, effective integration of guide resources, rich in team composition, improve project quality. During the 100 days preparation, it achieves school tournament selection, sprint training, provincial tournament gains, National Championship breakthrough the existing goal. Eventually the 2 teams from incubator won the Silver medal in Guangdong sub-Division and won the bronze medal in the national finals. It take the regional innovation and entrepreneurship events as an opportunity to fusion Entrepreneurship Competition, guest salon and innovation and entrepreneurship forums and other elements to create a regional innovation and entrepreneurship feast by hosting The Jinwan District Innovation and Entrepreneurship Competition, which attracted 10 colleges and universities from Pearl River region more than 200 teams, nearly 1,800 people involved in the competition. The competition promotes the thinking collision of innovation and entrepreneurial among students and teachers in the Pearl River area colleges and universities and forms a new focus on local area of innovation and entrepreneurship.

V. CONCLUSION

In summary, if we compared the incubator as a small tree, then the government support environment is its soil, trees take root only if the soil is good, and education and marketing (business) needs and social environment is essential nutrients for the growing trees, no matter what type of incubator requires all above elements combined synergistically, so incubator tree can grow into big trees to achieve the desired results. Incubator " first death case " hacker space start a collapse tide, this is a news caused enormous repercussions around the 2016 Chinese New Year, I believe that the case is only a blemish because the construction of the students' incubators has a certain scale and achieved some success already. However, incubator management is still in the immature stage. "first death case" knocked wake-up call to many of our incubator managers, incubators can not only incubating but with no further development, or only apply simply homogenization management, we must build a good

overall environment based on the actual situation after rational speculation. For example, the application project should be consistent with the national industrial and technological policies; technological innovation or business model innovation should be strong; small investment, quick profit, it should have good economic and social benefits; it should be no intellectual property disputes. Government, universities, business and social cooperation together, based on their own advantages, based on regional development and state-oriented, accurate force rational policy together for these young tree incubators to grow healthy. As the practice carrier and service platform for college students' innovation and entrepreneurship, incubator must held the guidance service concepts with large field of vision and practically down to earth to explore new ways of innovation and entrepreneurship education reform, to build its own characteristics concise brand of innovation and entrepreneurship, to guide students entering the incubator incorporated in the relevant professional guidance based on local needs, especially science and technology innovation and entrepreneurship good project, gathering all advantages and make full use of the role of incubators practice platform to promote innovation and entrepreneurship education reform results.

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