

Research on Establishment of College Students' Entrepreneurial Bases

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ABSTRACT: Establishment of college students' entrepreneurial bases and development of entrepreneurial education and entrepreneurial practices can promote college students' entrepreneurial awareness, ability and experience, and serve as an effective way to solve the problem of college students' low employment at present. Establishment of college students' entrepreneurial bases should take the training of college students as the fundamental purpose, become integrated with professional education, make effective use of external resources, as well as develop the open management mechanism and sound incentive mechanism. Through developing the course system of entrepreneurial education, carrying out case teaching method, building the bridge between innovative training plan and entrepreneurial training plan, expanding the function and organizational structure of Students' Association of Science and Technology, establishing relationships with all kinds of Scientific and Technological Innovation and Entrepreneurial Parks, and strengthening the establishment of hardware conditions, School of Energy Science and Engineering in Harbin Institute of Technology has established "Entrepreneurial Education and Practice Base for college students who major in Energy and Power" and realized the integration of scientific research and entrepreneurial practice.

KEYWORD: Entrepreneurial Bases; Entrepreneurial Education; Entrepreneurial Practice; Colleges

1 INTRODUCTION

In 2012, Ministry of Education of PRC issued *Fundamental Requirements on Entrepreneurial Education and Teaching of General Undergraduate Colleges*, and pointed out that "Developing entrepreneurial education in general colleges is a strategic measure to speed up the change of national economic growth mode and to establish a country rich in both innovative spirit and human resources; a very important method to deepen the teaching reform of Higher Education, improve the quality of personnel training, and promote the comprehensive development of college students; as well as an important measurement to achieve employment through entrepreneurship and promote the full employment of college graduates." In order to implement spirit of the document, Harbin Institute of Technology has established several entrepreneurial bases of school-level for college students. Combined with its own subject features, School of Energy Science and Engineering has established "entrepreneurial education and practice bases for college students majoring in energy and power" and has achieved good results.

2 NECESSITY TO ESTABLISH ENTREPRENEURIAL BASES FOR COLLEGE STUDENTS

Entrepreneurship can not only promote the development of social productivity and innovation of science and technology, but also play an indispensable role in the economic and social development, as well as in employment. Currently, the employment situation of college students is really critical, and it has become the focus of governments of all levels, colleges, society, parents and graduate students. It will also be an urgent social problem for a certain period in the future in our country. Thus, encouraging and supporting the entrepreneurship of college students has become one of the most effective ways to solve the problem of low employment. Entrepreneurial education is the foundation of college students' entrepreneurship. In addition, it can also serve as the basis of increasing the entrepreneurial awareness of college students, fostering their entrepreneurial spirit, training their entrepreneurial ability, improving their comprehensive quality, and promoting their entrepreneurship. Through practice, college students can improve their practical ability, accumulate

practical experience, and apply the knowledge they have learned to the practice, so that they can promote the cognitive level of their scientific and technological knowledge, as well as improve their own knowledge system. This can not only enrich college students' life at school, but also create a new mode for colleges to make real contributions to the development of our society. If college students have accumulated the knowledge and experience necessary for them to enter the society, they can achieve perfect integration between applied talents and knowledge-oriented talents, and to a certain extent, this will lay a solid foundation for their future entrepreneurship. Like an incubator, entrepreneurial bases in college can provide incubation condition for students who want to establish a business. They can also provide guidance and service in the whole process, reduce the risks of their entrepreneurship as far as possible, serve as their strong backing, help the newly-started companies grow continuously, and increase the success rates of students' entrepreneurship. Entrepreneurial bases in colleges can provide many chances and conditions for college students to simulate the process of entrepreneurship, and help them learn the process of entrepreneurship and accumulate the experience of entrepreneurship, so that college students can move from simulation to real entrepreneurship.

3 IDEAS ON ESTABLISHMENT OF COLLEGE STUDENTS' ENTREPRENEURIAL BASES

3.1 *Training of college students should be taken as the fundamental purpose*

Establishment of college students' entrepreneurial bases should take the cultivating of talents as the starting point and objective; take students as the center; and take the cultivating of college students' ability of innovation and entrepreneurship, ability of linking theory with practice; and ability of independent thinking as the goal. Establishment of college students' entrepreneurial bases should meet the demands of entrepreneurial education; conform to modern education ideas, satisfy the needs of cultivating college students' innovative spirit, entrepreneurial quality and practical ability, and thus make entrepreneurial bases become the extension of classroom teaching. It should provide the real entrepreneurial environment for the students and thus, help them learn to apply different kinds of knowledge to reality, handle various kinds of relationships flexibly, get to know and get accustomed to the change of market, and learn how to operate and manage the business. It should also exert influence on students' entrepreneurial awareness; shape their entrepreneurial spirit; cultivate their professional ethics and manipulative skills; develop their team spirit, entrepreneurial

ability and working adaptability; improve their entrepreneurial quality and ability; and cultivate their psychological endurance for entrepreneurship.

3.2 *Establishment of college students' entrepreneurial bases should be combined with professional education*

The goals of entrepreneurial education and professional education are the same and they both aim to cultivate talents. Professional education is the basis of entrepreneurial education and entrepreneurship needs the support of profession, while entrepreneurship can strengthen and promote the development of professional education, help students to associate theory with the reality, and arouse their interest in professional study. Entrepreneurial bases should combine entrepreneurial practice and professional ability closely, and develop students' professional thinking through encouraging students to hold entrepreneurial activities and entrepreneurial design campaign activities based on their majors. By integrating the cultural atmosphere of colleges and the advantages of professional labs, entrepreneurial bases have become the practice bases which can help students apply what they have learned to reality and combine their knowledge with experience, as well as become the platform for students to apply their learned knowledge and ability to entrepreneurship.

3.3 *External resources should be effectively utilized*

The smooth operations of students' entrepreneurial bases are inseparable from the cooperation and coordination of schools, government, companies, etc. It needs the support of schools in terms of space, personnel, funding; the cooperation and policy support of government authorities, such as commerce, taxation, finance, labor and social security departments, as well as the department in charge of graduates' employment in college; the support, guidance, or even participation of companies. Only through cooperation can we enhance the vitality and vigor of entrepreneurial bases. However, in the process of cooperation, it is really necessary to consider the interests of both sides and achieve a kind of win-win cooperation.

3.4 *A kind of open management system and perfect incentive mechanism should be established*

Management of students' innovative and entrepreneurial bases is mainly about the management of hardware, software and other facilities in the bases, and the formulation and implementation of evaluation policies and incentive policies of various activities. It directly aims to form an innovative and open management system, so that

it can truly achieve the sharing, as well as the autonomous and flexible usage of equipment and facilities in the bases. In the process of establishing entrepreneurial bases, an atmosphere of entrepreneurship and innovation for college students should be actively created. In addition, the complete competition system and application system for students' entrepreneurial project should also be built. Through the establishment of credit incentives and commendation to outstanding students in entrepreneurial projects, the entrepreneurial bases will encourage more students to participate in activities in the entrepreneurial bases, and thus stimulate their enthusiasm.

4 PRACTICE OF COLLEGE STUDENTS' ENTREPRENEURIAL BASES' ESTABLISHMENT IN SCHOOL OF ENERGY SCIENCE AND ENGINEERING OF HARBIN INSTITUTE OF TECHNOLOGY

4.1 *The Entrepreneurial education curriculum system is established*

Currently, there are three teachers who have already participated in teacher training programs for entrepreneurship in our school and they have already got the teaching qualification. According to SIYB curriculum system, the course "Start Your Business" has been established. Its contents mainly include the meaning and significance of entrepreneurship, entrepreneurial spirit and entrepreneurial qualities, the basic factors in the success of entrepreneurship, entrepreneurial preparation and general entrepreneurial process, common problems which should be paid attention to during the entrepreneurial process and their solutions, as well as policies and regulations related to students' entrepreneurship. The teaching time of this course is about 36 hours. In the past year, the curriculum system has trained 150 students. In the next step, we will carry out in-depth discussions and increase more featured contents according to characteristics and entrepreneurial needs of the energy and power industry, so that we can give better instructions to students in their entrepreneurship practice.

4.2 *Innovation and entrepreneurship forum should be opened, and case studies and case teaching should also be implemented*

In the process of entrepreneurial education and training, case teaching is of extremely significance, and for college students, the outstanding figures and independent entrepreneurs in the same field are undoubtedly the best case teaching models. Therefore, we have collected many cases of independent entrepreneurs in the field of energy and power, particularly the cases of our distinguished

alumni who have started their own business, and tried to establish links with them. In parallel with case teaching, we also encourage students to contact and visit companies by themselves, and try to get chances of internship. In addition, we also actively invite our alumni to return to school to introduce their entrepreneurial experience, so that more students can get benefits from it.

4.3 *Bridges between innovative training programs and entrepreneurial training programs should be built*

School of Energy Science and Engineering has already developed the project-based learning, and the coverage of low-grade students has exceeded 90%. With the in-depth implementation of the project-based learning, innovative training will greatly broaden the students' professional horizons and produce some meaningful innovative results. This will stimulate students' impulse to transform achievements and achieve entrepreneurship. The accomplishment of current entrepreneurial programs in School of Energy Science and Engineering is based on the former innovative results of students. Currently, our school has regularly released some good, meaningful innovative results, and tried to recruit partners in entrepreneurial training within our college, which makes the implementation of the entrepreneurship practice obtain a solid organizational guarantee. Entrepreneurial bases have provided regular communicating opportunities for school students who major in different subjects, and built bridges between innovative training programs and entrepreneurial training programs, so that the implementation level of college students' entrepreneurial plan can be promoted.

4.4 *Functions and organizational structures of Student Association of Science and Technology should be extended*

So that it can provide a platform and organizational guarantee for the implementation of entrepreneurial plans. The existing cultural activities carried out by Technology Student Association mainly aim to meet the students' demands to participate in innovative practice and academic competitions, and they lack organizational and functional supports to the entrepreneurial training programs. Our school has expanded the functions and organizational structures of Student Association of Science and Technology; established organization department which give services to entrepreneurial education and entrepreneurial training programs; and developed work from many aspects, such as member recruitment, team organization, interest cultivation and publicity. Our school has also organized students to participate in innovation and

entrepreneurship forums held by our college and society, helped them understand the trends and directions of development of industries and fields, helped them to learn the cutting-edge industry knowledge and management concepts, and provided exchange and external exchange platforms for students who participate in entrepreneurial training programs.

4.5 *Contact with all kinds of scientific technological innovation and entrepreneurial parks or incubators should be established*

We should establish and strengthen contact with relevant innovation and entrepreneurial parks / incubators, and maintain long-term relationship with them, so that we can provide environmental and policy supports for students to carry out further entrepreneurial practice. Our school has hired entrepreneurs who have practical management experience in companies as the assistant classroom teachers in entrepreneurship courses, and they can give special reports to the students and give them instructions in entrepreneurship and entrepreneurial practice. Through this, we can compensate the insufficient entrepreneurial experience and practice ability of college teachers to a great extent.

4.6 *Hardware conditions in entrepreneurial base should also be considered*

On the basis of existing hardware conditions in our school, we should establish entrepreneurial training library, as well as purchase and collect related graphic information. We should also purchase visual teaching aids which can support the entrepreneurial education and training, including color cards, posters, simulated coins, and models used in

commercial games, so that we can optimize our entrepreneurial education in the future.

5 SUMMARY

Establishment of college students' entrepreneurial bases has broken the traditional mode of teaching practice, provided a comprehensive platform for students to apply their knowledge, and tapped the potential of students' entrepreneurial awareness to the greatest extent. Establishment of entrepreneurial bases is not only beneficial to the cultivation of college students' creative spirits, but also beneficial to the increase of students' practice ability and accumulation of entrepreneurial experience, to the industrialization of research results, as well as to the combination of scientific research and real entrepreneurial practice.

REFERENCES

- [1] Dobre, E. Entrepreneurial activity of higher education institutions in the context of the knowledge based society. *Quality Management in Higher Education*: 2010(1):555-558.
- [2] Zhang, Y. The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International Entrepreneurship and Management Journal*: 2014(3):623-641.
- [3] Shi, J.J. Students' Entrepreneurial Transition in Enterprise Education: A UK/China Comparison. *Proceedings of the 11th European Conference on Research Methods*: 2012:368-379.
- [4] Raposo, M. Entrepreneurship education: Relationship between education and entrepreneurial activity. *Psicothema*: 2011(3):453-457.
- [5] Raposo, M. Special issue: entrepreneurship and education-links between education and entrepreneurial activity. *International Entrepreneurship and Management Journal*: 2011(2): 143-144.