December 2015

The East Heads West: Prospects of Chinese Entrepreneurship Education in the Near Future

Himanshu Sahay
Worcester Polytechnic Institute

Jonathan Samuel Friedman
Worcester Polytechnic Institute

Rachael May Putnam
Worcester Polytechnic Institute

Yesugey Batu Sipka
Worcester Polytechnic Institute

The East Heads West:
Prospects of Chinese Entrepreneurship Education in the Near Future

An Interactive Qualifying Project Report
submitted to the Faculty of the

WORCESTER POLYTECHNIC INSTITUTE

in partial fulfillment of the requirements for the
Degree of Bachelor of Science

by

Jonathan S. Friedman

Himanshu Sahay

Rachael M. Putnam

Y. Batu Sipka

submitted to

Professor Esther F. Boucher-Yip
Co-Advisor

Professor Zhikun Hou
Co-Advisor

on 17 December, 2015

Sponsored by:
Hangzhou Bster Sci&Tech Co. Ltd.

Abstract

Entrepreneurship has led the charge for worldwide economic growth in the late 20th century onwards. This research study investigates the prospects of entrepreneurship education in China and to provide our sponsor company, Hangzhou Bster Sci&Tech Co. Ltd., a provider of business simulations, a projection of entrepreneurship education trends in China. Through data collected from interviews, surveys, and journal databases, we found that China will fully integrate "western" teaching methods into their entrepreneurship education system.

Keywords: Chinese entrepreneurship education, US entrepreneurship education, business simulations, entrepreneurship teaching methods, future Chinese entrepreneurship education,

Acknowledgements

We would like to thank our project advisors, Professors Zhikun Hou and Esther Boucher-Yip, for providing us the support and feedback to make our project what it is today.

We would like to thank our HDU Student Volunteers, 高于芯 (Ida), 叶佳莹 (Leaf), 孙乔宣 (Sophia), and 吕奕骅 (Derek). The help they provided our team with translation, communication, and general cultural aspects throughout the project was immensely useful. They helped alleviate one of our largest project constraints: the language barrier.

We would like to thank our sponsor company, Hangzhou Bster Sci&Tech Co. Ltd., for the support they provided throughout the project, providing us with valuable information and opinions on their expert field.

We would also like to thank Ari Goodman, Jacob Wennersten, and Alex Corben for helping us collect surveys on the HDU campus on November 6th.

Executive Summary

Introduction

Climbing unemployment rates coupled with a steadily increasing flow of job-seeking college graduates has led China to prioritize employment for college graduates and to seek solutions to avoid a potential job market collapse. To this end, the Chinese government believes that entrepreneurship will alleviate its unemployment concerns and bring about economic prosperity. The government considers entrepreneurship education as the medium to drive growth in Chinese entrepreneurship and is proactively cultivating entrepreneurship education programs at universities. Since China has a relatively short history of entrepreneurship education that is yet to mature, it looks to already successful programs in other countries as models to emulate.

The stakeholders of this report include our sponsor, Hangzhou Bster Sci&Tech Co. Ltd (Bster), Chinese entrepreneurship educators. Bster produces business simulations, computer programs that imitate real-world experiences from the business world. Bster was particularly interested in understanding the entrepreneurship education model in the United States (US) and in trends that the Chinese entrepreneurship education system could follow in the next three to five years. Bster will use this information to assess its current product line and future product roadmaps.

In this report, we compared and contrasted the histories and current states of entrepreneurship education in the US and China. We further drew on our extensive research and gathered data to generate findings about the current state of entrepreneurship education in China and its implications for the future of Chinese entrepreneurship education. Backed by our analysis of our research and data, we made predictions for Chinese entrepreneurship education in the next three to five years and recommended various strategies for our stakeholders.

Then and Now: Entrepreneurship Education in China and the US

The formal idea of entrepreneurs and entrepreneurship began in the US with Francis Walker's 1876 publication, The Wages Question (Katz, 2003). Another major milestone in US entrepreneurship education was in 1968, when Babson University offered the world’s first undergraduate concentration in entrepreneurship. By 1993, the number of higher education schools that offered entrepreneurship courses grew to over 370 (Vesper, 1993).

The official start of China's entrepreneurship education was in 1997 when Tsinghua University organized the first open student entrepreneurship competition (Zhou & Xu, 2012). The next major marker for Chinese entrepreneurship education came in 2002 when the Ministry of Education (MoE) announced the National Entrepreneurship Education Pilot Program (NEEPP), which selected nine Chinese universities to test out three different entrepreneurship education schemes. On May 4th, 2010, the MoE published a new policy endorsing entrepreneurship education as the new future of China. This policy is arguably the most important move China has made during their short history of entrepreneurship education.

Due to the US's comparatively long history of entrepreneurship education, the "current" era of entrepreneurship education in the US spans over the past decade. Four significant factors that positively contribute to a program's success in the US are: (1) the age of an institution's Technology Transfer Office, (2) the amount of research and development funding received from industry, (3) the institution's geographic proximity to large sources of venture capital, and (4) the quality of teaching faculty (Powers & McDougall, 2005). External, or "outside-the-classroom," resources are another defining factor of the US entrepreneurship education model. The most popular of these resources are incubators and private foundations.

The "current" era of Chinese entrepreneurship education only spans about one to two years. Evidenced by the May 2015 update to its 2010 entrepreneurship education plan, the MoE looks to integrate more "hands-on" teaching styles like class discussions, participatory teaching, small classes, practical experiences, international examples, focusing on creative and critical thinking, problem solving and analysis instead of rote memorization, and more qualitative rather than quantitative instruction.

Methods

The goal of this project was to produce a comparative study of entrepreneurship education between the US and China to predict trends in Chinese entrepreneurship education for the coming three to five years. The project's objectives were (1) understanding entrepreneurship education in the US and China, (2) comparing the similarities and differences in US and Chinese entrepreneurship education development, and (3) predicting possible near future trends in entrepreneurship education in China.

To understand major aspects of entrepreneurship education we examined the sub-topics described below. We conducted intensive research, delivered a survey to students around China, and interviewed the experts from the field to answer the questions raised in these sub-topics.

1. History of Entrepreneurship Education
2. Course Provisions of Entrepreneurship Education
3. Application of Modern Teaching Practices in Universities
4. Resources for Entrepreneurship and its Education
5. Evaluation of the Effectiveness of Entrepreneurship Education

Findings and Analysis

Historical Differences

We found that entrepreneurship education in the US is more mature than that in China. China did not advocate the need for entrepreneurship education until the mid-1990s (Zhou & Xu, 2012). All the top schools that we researched in the US had numerous faculty with entrepreneurial experience and training and several supporting resources for student entrepreneurs, while China's top entrepreneurship universities have limited entrepreneurship classes and resources.

China can learn from the history of entrepreneurship education in the US and adopt major developments into its system of entrepreneurship education. In fact, China has already begun to emulate past US developments and continuing this trend will take Chinese entrepreneurship education to the level of the US's.

Differences in Resource Providers

We found that there are many non-government resources available to entrepreneurs in the US, but the government is the main resource in China, having already invested over 3 billion CNY ($500 million USD) in select emerging industry ventures (Xie, 2015). Non-government resources in the US include incubators like Y Combinator and MassChallange, and private foundations like the Kauffmann and Coleman foundations. The difference in the driving forces behind entrepreneurship education evolution in the US and China helps explain the major disparities in the time required for each to reach certain metrics in entrepreneurship education. Thus, rapid growth in Chinese entrepreneurship education in the near future would not come as a surprise.

Differences in Teaching Styles

The "western" teaching style provides the necessary theory by using traditional styles while using modern tools to provide the crucial experiential component. The historical difference in learning preferences of students stems from cultural differences between the two countries. Our survey results indicate that twice as many Chinese students prefer learning by doing group or individual projects rather than lectures, which prove that the Chinese students prefer learning via modern tools. In fact, China has already started to integrate the "western" style of teaching into their entrepreneurship education system. By reforming their methods of teaching to use more modern tools, educators will play a major role in cultivating the Chinese entrepreneurship education system.

Effectiveness of Entrepreneurship Education

According to Professor Hansong Pu, educators can teach some of the skills, some of the mindset, and some of the concepts in entrepreneurship. All our interviewees had a single consensus: entrepreneurship can be taught, but only to a certain degree. This unanimous agreement among experts in the field shows that the idea behind entrepreneurship education is feasible, yet, the entrepreneurial mindset is a trait not as teachable as entrepreneurship theory.

In the 2015 policy update, the Chinese government discussed how the entrepreneurship education had not developed enough since the original 2010 policy. Through our interview with Jeff Huang, we discovered that China is at a stage where it would not be prudent to evaluate the effectiveness of its entrepreneurship education programs. He also explained that one of the reasons for this lack of effectiveness could be that the concept of entrepreneurship education in China is so new that universities have not had enough time to mature their entrepreneurship programs.

Prospects of Chinese Entrepreneurship Education

China will fully adopt "western" teaching styles in entrepreneurship education

With the evolution of China's entrepreneurship education system, China will fully adopt "western" teaching styles in the field of entrepreneurship education. In the May 2015 update, the MoE clearly outlined teaching methods that involve experiential learning that it would like Chinese universities to include in their programs, seeking to fully implement such programs by 2020. We recommend that the MoE follows up the 2015 update of its entrepreneurship education with a

structured plan that explicitly outlines the usage of modern teaching tools in universities across China. For our project sponsor, Bster, we recommend that they continue to develop business simulations in a variety of entrepreneurial topics.

Entrepreneurship education will continue to be government driven in the next three to five years

The Chinese government will lead the charge in entrepreneurship education, and non-government resources will not come to the forefront within the next three to five years. The Chinese government has poured significant capital and efforts into the establishment and growth of resources such as university incubators, entrepreneurship competitions, mentorship and guidance for entrepreneurs, and loans and investment for startups. We recommend that the government supports non-government resources through financial incentives such as funding and tax cuts.

China's entrepreneurship education will continue catching up to the US's entrepreneurship education

The growth of Chinese entrepreneurship education in the next three to five years will be much faster than the growth of entrepreneurship education in the US. With this rapid growth of entrepreneurship education programs in China, there will likely be suboptimal results concerning efficiency and success in the adoption of these programs. Seeing this prospective mismatch in the speed between resource allocation and uptake in Chinese entrepreneurship education, we recommend that the government accompanies its resource offerings with appropriate instruction for faculty.

Implications for Major Stakeholders

Our findings and conclusions have given confidence to Hangzhou Bster Sci&Tech Co. Ltd. by affirming its plans for the future. In addition, we recommend that Bster diversifies its product line to include other practical teaching tools such as software to facilitate group projects. We also recommend that Bster tests versions of its products for primary and secondary schooling.

Limitations and Suggestion for Future Work

Our largest constraints were the seven-week and the language barrier of speaking Chinese. As entrepreneurship education rapidly evolves in China, a follow-up study, three to five years from now, could be conducted on the effectiveness of entrepreneurship education in China.

Authorship Notes

Jonathan Friedman, Rachael Putnam, Himanshu Sahay, and Yesugey Batu Sipka all contributed to the research and writing of this document. This chapter outlines each group member's contribution to the document. Primary and Secondary authors are listed here in order of contribution.

Abstract

Primary Author: Jonathan

The first draft of the abstract was written by Jonathan, and revisions were made by all members of the team.

Executive Summary

Primary Author: Batu

The first draft was written by Batu. Revisions were completed by all team members.

Introduction

Primary Author: Rachael
Secondary Author: Jonathan

A first draft of the chapter was generated by Rachael, which was then revised by Himanshu. Jonathan then made major revisions to the chapter for a final draft, which was then revised by all team members.

Background

Primary Author: Jonathan

The first draft of this section was written by Jonathan. Rachael then did revisions to the chapter, and Jonathan created a second draft. The chapter was then revised by Rachael, Batu, and Jonathan.

Methods

Primary Author: Rachael
Secondary Author: Jonathan

The initial draft was created by Rachael, with sections of the draft written by Jonathan. The draft was revised by all members. Several revisions were made by Rachael throughout the development of the project. The final draft was revised by Rachael, Jonathan, and Batu.

Findings

Primary Author: Batu
Secondary Author: Rachael
Tertiary Author: Jonathan
Quaternary Author: Himanshu

The first draft of this section was made by Batu, with revisions by Rachael. After the completion of this draft, the chapter was reviewed by all team members to ensure accuracy, and the requisite changes were made by Batu. The chapter was then repeatedly restructured by Batu and Rachael, then reviewed by all team members. The final draft was revised by Rachael, Batu, and Jonathan.

Conclusions & Recommendations

Primary Author: Himanshu
Secondary Author: Jonathan
Tertiary Author: Rachael
Quaternary Author: Batu

All team members contributed to an outline of this section before a first draft was generated by Himanshu. The chapter was then revised to a second draft by Himanshu, and revised by the rest of the team. The final draft was revised by Rachael and Batu.

Appendices

Primary Author: Himanshu
Secondary Author: Jonathan
Tertiary Author: Batu
Quaternary Author: Rachael

The information in this Appendix was compiled by all members of the team in the order listed above. The Appendix was then compiled and assembled by Himanshu and Rachael.

Table of Contents

List of Figures

1 Introduction

Entrepreneurship has led the charge for worldwide economic growth from the late 20th century onwards. According to “The Effect of Entrepreneurial Activity on National Economic Growth” (2005), an article from the *Small Business Economics Journal*, Total Entrepreneurial Activity (TEA) positively correlates with national economic growth in well-developed countries. This positive effect has led higher-education institutes to increasingly attempt to teach entrepreneurship to individuals who might have the means to create new innovative businesses. The article “Advancing Business Planning: From Planning to Entrepreneurial Learning” (2008) by Peter van der Sijde et. al. describes interviews with several experts in the field who believe that while it may be possible to teach opportunity evaluation, it is rather difficult, if not impossible to teach opportunity recognition. Universities and companies around the world are focusing efforts on creating curricula and tools for the effective teaching of these concepts to arm students with the knowledge to be able to follow their entrepreneurial drives.

With climbing unemployment rates and a steadily increasing population of college graduates seeking jobs, China is actively seeking solutions to avoid a potential job market collapse (Yao, 2015). China's Minister of Human Resources and Social Security, Yin Weimin, stated at a press conference in March, 2015 that ensuring employment for college graduates will be a top priority for the government. The Chinese government believes that entrepreneurship is the answer to staving off economic downturns and unemployment. With this desire for nationwide entrepreneurship, comes the need for comprehensive and accessible entrepreneurship education. China has a short and unproven history of entrepreneurship education, and they are now in pursuit of rapid cultivation of their existing structure. To do so, they look to other countries with successful entrepreneurship education systems already in place.

Due to the recent rise of entrepreneurship education, new sources in our subject area are continuously emerging. The paper “Exploring innovative new ventures in China and the United States” (Cowden, Tang, Yang, & Zhang, 2015) investigates the innovative tendencies that are exhibited by Chinese entrepreneurs, comparing them to that of US entrepreneurs. The article "美国创业教育体系构成和支撑分析及其对我国的启示" (Contemplating the Future of Entrepreneurship Education in China from American Experience) written in Chinese by Wang et. al., (2013) recommends China assume a progressive outlook to improve their entrepreneurship

education. Each of these sources begins to discuss China's search of entrepreneurship education excellence, and some even use the US as an archetype to emulate.

The histories of entrepreneurship in the US and China follow very similar paths, though at different points in time; both nations have developed a notable demand for entrepreneurs. There are also, however, many divergences in the two nation's economic and educational cultures. According to the Global Entrepreneurship Monitor (GEM) 2014 Report (Singer, Amoró, & Moska, 2015), China has an "efficiency-driven" economy, while the US has an "innovation-driven" economy. Due to these differences in economy type, the future of Chinese entrepreneurship education could potentially progress in many directions. Most recent publications ignore this crucial dynamic, perhaps obsoleting any predictions made thus far.

Our sponsor, Hangzhou Bster Sci&Tech Co. Ltd., produces business simulations, computer programs that imitate real-world entrepreneurship experiences. According to the CEO of Bster, Jeff Huang, their products have reached over 600 universities in China, making them a major stakeholder in entrepreneurship education with a vested interest in its future (J. Huang, personal communication, 2015). Our sponsor company requested a forecast of Chinese entrepreneurship educational trends for the next three to five years so that they could better assess their current and future marketing opportunities. To complete this goal, we researched and compared the following sub-topics in the US and China:

1. History of Entrepreneurship Education
2. Course Provisions of Entrepreneurship Education
3. Application of Modern Teaching Practices in Universities
4. Resources for Entrepreneurship and its Education
5. Evaluation of Effectiveness of Entrepreneurship Education

After research, compilation, and analysis, of the above sub-topics through database searches, interviews, and survey questionnaire, we formulated findings, posed conclusions, and finally suggested future trends in Chinese entrepreneurship education. Our sponsor could utilize our recommendations to begin developing their products and services to match the latest entrepreneurship education market in China.

2 Background

The purpose of our project was to produce a comparative study of entrepreneurship education between the US and China to make recommendations to further develop entrepreneurship education in China. In this chapter, we discuss entrepreneurship education in the US and China: specifically their histories, and how their curricula developed. This discussion serves to show that the US has a longer, and more developed history of entrepreneurship education and that China is quickly catching up with the US in this field. From this discussion, we can better understand entrepreneurship education evolution in China and make comparisons.

According to Chad Brooks, an American writer for *Business News Daily*, in his article "What Is Entrepreneurship?" (2015), entrepreneurship is the process of developing an idea into something profitable, whether it be a product or service. The National Content Standards for Entrepreneurship Education defines entrepreneurship education as a lifelong process, beginning in elementary school and progressing through all levels of education. For the purpose of our study, we shall only consider entrepreneurship education at the higher education level.

2.1 History of Entrepreneurship Education in the US

To understand the current shape of entrepreneurship education in the US, it is of paramount importance to understand the history and development of entrepreneurship education throughout its relatively long history in the US.

According to Jerome A. Katz in his article "The chronology and intellectual trajectory of American entrepreneurship education" (2003), the formal idea of entrepreneurs and entrepreneurship began in the US with Francis Walker's 1876 publication *The Wages Question*. Walker's publication was the first work by an American academic to consider the practice of starting a business to be a process to be studied. Later in 1887, the US government passed the Hatch Act of 1887 (not to be confused with the unrelated Hatch Act of 1939), which created agricultural experimentation stations – federally funded research centers for the development of agriculture related innovations. These experimentation centers are widely regarded as the predecessors to modern day business incubators.

Fast forward to the 1920's, the number of agricultural experimentation stations had multiplied, and many additional legislations were passed to aid in the distribution of farming innovations. Frank William Taussig's book, *Principles of Economics* published in 1915, was an

important step in shaping the US definition of an “entrepreneur.” Taussig argued that an entrepreneur’s role in the larger economy is not simply just innovation, but also the creation of wealth. In 1921, the Ph.D dissertation *Risk, Uncertainty and Profit* was published by Frank Knight and provided the first completely definite model for the process of entrepreneurship in the US.

The government sponsored projects of the late 1800s and the academic publications of the early 1900s set the stage for the first entrepreneurship course, "Management of New Enterprises", which began at Harvard University in 1947. During World War II, the US government hired/funded many university professors and researchers to develop new defensive technologies (Powers & McDougall, 2005). Technological development is the main driving force behind US entrepreneurship, so this defense-driven strategy was incredibly successful and marks the beginning of university-centric entrepreneurship. In 1951, the Coleman Foundation was founded; the Coleman Foundation is a Chicago-based organization that runs entrepreneurship education related programs (Appendix C).

The mid-1950s saw a large expansion in the offerings of entrepreneurship courses at US universities with new entrepreneurship courses at New York University (NYU), University of Illinois, Stanford University, University of South Dakota, State Colleges of New York, and Massachusetts Institute of Technology (MIT). The next major milestone in US entrepreneurship education was in 1968, when the present-day entrepreneurship education giant, Babson University, offered the world’s first undergraduate concentration in entrepreneurship (Appendix A).

The decade surrounding the 1970's saw a massive explosion of growth in the field of entrepreneurship education, going from a reported sixteen schools offering entrepreneurship courses in 1970 to over 100, five years later, in 1975. By the end of the decade, the number of reported schools with entrepreneurship courses rose to almost 200 (Vesper, 1993).

The 1980's showcased the formation of collegiate entrepreneurial networks, and entrepreneurship competitions on college campuses such as Babson and University of Texas-Austin (UT-Austin), in 1984. The Association of Collegiate Entrepreneurs, Collegiate Entrepreneurs of Illinois Conference, and others were established around this time. By 1986, the number of higher education schools that offered entrepreneurship courses grew to over 250.

The teaching methods of entrepreneurship education in the US came under inspection in a special issue of the publication *Entrepreneurship: Theory and Practice*, in 1991. Also in 1991, a publication by Robinson and Haynes, reported 57 undergraduate and 22 MBA programs with

entrepreneurship concentrations in the US. One year later, in 1992, the Center for Entrepreneurial Leadership was created at the Ewing Marion Kauffman Foundation (Appendix C). The Kauffman Foundations "Who We Are" page lists them as one of the largest private foundations in the US, with over two billion USD in assets. By 1993, 370 schools were reported to have entrepreneurship courses.

Over the past 100 years, the evolution of entrepreneurship education in the US has gone through many waves, each one bringing with it new sets of features. University courses, student networks, competitions, academic publications, and degree offerings are all facets that have developed over time in the US.

To better understand how China's entrepreneurship education system came to be where it is today and to appreciate the progress it has made in such a short time, we must next take a look at China's entrepreneurship education history.

2.2 History of Entrepreneurship Education in China

Chinese entrepreneurship education is extremely new, having started within the last twenty years. According to an article published by Mansheng Zhou and Haixia Xu, from the National Center for Education Development Research a part of the Ministry of Education (MoE), (2012) the official start of China's entrepreneurship education was in 1997 when Tsinghua University organized the first open student entrepreneurship competition. Unlike the US, where the first entrepreneurship class came approximately 30 years before the first open competition (Katz, 2003), China organized competitions before any entrepreneurship classes.

During the late 1990's, the Chinese government began making a push for widespread entrepreneurship participation. On March 15th, 1999, the 9th People's Congress passed legislature that protected private property rights, for the first time since the founding of the new Chinese in 1949 (Li, Zhang, & Matlay, 2003). Several Chinese universities during this same period had individual entrepreneurship offerings; integrating entrepreneurial teachings into their classes, offering financial investments to student entrepreneurs, and a course on creativity in business and innovation. The first entrepreneurship course at a Chinese university was also taught during this period, at East China Normal University.

The next major marker for Chinese entrepreneurship education came in 2002 when the MoE announced the National Entrepreneurship Education Pilot Program (NEEPP), which selected

nine Chinese universities to test out three different entrepreneurship education schemes. The nine schools selected for NEEPP were Tsinghua University, Beijing University of Aeronautics and Astronautics, Renmin University of China, Heilongjiang University, Shanghai Jiaotong University, Nanjing University of Finance and Economics, Wuhan University, Xi'an Jiaotong University, and Northwestern Polytechnic University. The adoption of the NEEPP was incredibly effective in the development of Chinese entrepreneurship education because in the Chinese-style of governance, orders come from the top-down and the MoE maintains a high ranking within the Chinese government. Thus, the NEEPP was able to reach far and wide across China.

The three different education schemes implemented by the NEEPP were: classroom-based model, practice-oriented model, and the hybrid model. The classroom-based model was comprised almost entirely of classroom teaching and lectures, a heavy emphasis on the "theory" of entrepreneurship. The practice-oriented model utilized resources external to classroom teachings to support students learning of entrepreneurship such as venture parks, capital investments, consulting services, and incubators for student ventures. The hybrid model synthesized both of the previous models, and employed lecture style in-class learning, with the external to classroom resources. This model required the most overall resources of the three different models, but also held the best chances for producing successful entrepreneurs due to its all-inclusive education.

The Know About Business (KAB), an entrepreneurship education program developed by the UNESCO labor organization that promoted entrepreneurship education through collaboration between higher education institutions and education organizations. China saw the introduction of this program in 2005 with six participating schools, and by 2009, it had spread entrepreneurship courses to 100 universities in China.

On May 4th, 2010, the MoE published a new policy endorsing entrepreneurship education as the new future of China. The Ministry outlined, in great detail, a full-fledged plan to permeate entrepreneurship education to every corner of the country. The plan, known in China as "教育部关于大力推进高等学校创新创业教育和大学生自主创业工作的意见" (Opinions of the Ministry of Education on robustly promote innovation and entrepreneurship education colleges and college students start their own businesses work), had four main components: (1) vigorously promoting innovation and the teaching of entrepreneurship in higher education institutions, (2) development of support for entrepreneurial ventures in the business environment, (3) incubation of student ventures with financial and governmental support, and (4) the growth of leadership

amongst students. This policy is arguably the most important move China has made during their short history of entrepreneurship education.

Now that we have examined how the two countries developed their respective entrepreneurship educations, we turn our focus to where they stand today. Observing the transition from where the two countries have been to where they are now will help us in creating a trajectory for developing China's near future of entrepreneurship education.

2.3 Current US Entrepreneurship Education

Due to the US's comparatively long history of entrepreneurship education, the "current" era of entrepreneurship education in the US spans over the past decade. The role of the modern entrepreneur in the US is innovation driven job creation and wealth creation. The exact details of the current model of entrepreneurship education in the US vary by institution, but they all have clear focuses on experiential learning and hands-on experiences. In an interview with Gina Betti (Appendix F), Associate Director of Collaborative for Entrepreneurship & Innovation at Worcester Polytechnic Institute (WPI), she says that experiential learning is hyper-critical to one's learning and practicing of entrepreneurship; nothing can replace the experience gained from a real-world interaction with someone. This heavy focus on experiential learning does not discount the virtues of theoretical approaches however. Many professors such as Richard Dasher of Stanford University, Bill Aulet of MIT, Francis Hoy of WPI, and Raymond Liu of the University of Massachusetts (UMass) Boston agreed in our interviews that proper instruction or entrepreneurship requires a balance between the two sides of teaching.

At the time of this writing, there are several US institutions that consistently rank among the top universities for entrepreneurship education. We include an in-depth summary, including detailed course descriptions, of five of these top institutions (Babson University, Stanford University, MIT, Harvard University, and the University of Pennsylvania) in Appendix A. In this project we use these schools as representative examples for US entrepreneurship education.

In their 2005 publication "University start-up formation and technology licensing with firms that go public: a resource-based view of academic entrepreneurship," Joshua Powers and Patricia McDougall conducted a statistical analysis of distinct, quantifiable factors that contribute to successful entrepreneurship programs in US higher education institutions. Powers and McDougall found four significant factors that positively contribute to a program's success (in

descending order of significance): (1) the age of the institution's Technology Transfer Office (also frequently known as an Intellectual Property Office), (2) the amount of research and development (R&D) funding received from industry, (3) the institution's geographic proximity to large sources of venture capital, and (4) the quality of teaching faculty (by number of citations during a three-year period). These factors explain that many top entrepreneurship institutions are located neam New England and Silicon Valley since these areas have a high concentration of innovation-driven industries.

External or "outside-the-classroom" resources are another defining factor of the US entrepreneurship education model. The most popular of these resources are incubators and private foundations. Incubators are a resource that provide guidance, physical work space, and access to networking for seed entrepreneurial ventures. According to Johan Bruneel, Tiago Ratinho, Bart Clarysse, and Aard Groen in their publication "The Evolution of Business Incubators: Comparing demand and supply of business incubation services across different incubator generations" (2011), incubators were first established in the US in the 1950's, shortly after the first entrepreneurship course offerings began. The popularity of incubators drastically increased in the 1980's, ushering in the first of three "generations" of incubators in the US. The current (third) "generation" of incubators intensely concentrate on high-technology and innovation businesses. In the US, these incubators, such as Y Combinator and MassChallenge, receive their funding from private investors and investing conglomerates as described in Appendix C. Many US universities also have incubators and accelerator funds for the sole purpose of providing assistance to student-led business ventures.

2.4 Current Chinese Entrepreneurship Education

Compared to the US, China's history of entrepreneurship education so far is incredibly short. The "now" era of Chinese entrepreneurship education only spans about one to two years. According to the CEO of Hangzhou Bster Sci&Tech, Jeff Huang, in the Chinese model of entrepreneurship, the role of the entrepreneur is seen primarily as a tool for job creation with less of a focus on wealth creation (Appendix F).

On May 4th, 2015, exactly five years after the release of their 2010 policy, the MoE issued an update on the progress of entrepreneurship education improvement in China titled "国务院办公厅关于深化高等学校创新创业教育改革的实施意见" (State Council on Deepening the

Higher Education Opinions Innovation and Entrepreneurship Education Reform). In this update, the MoE explained that the 2010 policy was successful in its initial efforts to spread entrepreneurship education wide. However, the update centered on the need to cultivate depth in all of the established entrepreneurship education programs. The central government said that while there has been positive growth in the country's entrepreneurship education programs since the launch of the 2010 policy, some outstanding areas require correction. The update stated that the MoE is now looking to attract high quality foreign educational resources for entrepreneurship and innovation, that they are willing to attempt alternative education delivery methods like online classes, and most importantly they seek to completely reform entrepreneurship teaching methods. In this reform, the MoE looks to integrate more "hands-on" teaching methods like class discussions, participatory teaching, small classes, practical experiences, international examples. These teaching methods focus on creative and critical thinking, problem solving and analysis instead of rote memorization, and qualitative rather than quantitative instruction.

During our interview with Professor Hansong Pu, a Professor of Entrepreneurship and Finance at Hangzhou Dianzi University School of Management (Appendix B), he best summarized the current shape of China's entrepreneurship education model by saying, "the change of mindset in China is occurring now, but it faces problems like lack of experienced professors" (H. Pu,, personal communication, 2015). In sum, entrepreneurship education has become of particular importance to the Chinese government in recent years. China's entrepreneurship education system has come a very long way in a short period, as shown in Figure 1, encountering both growth and challenges.

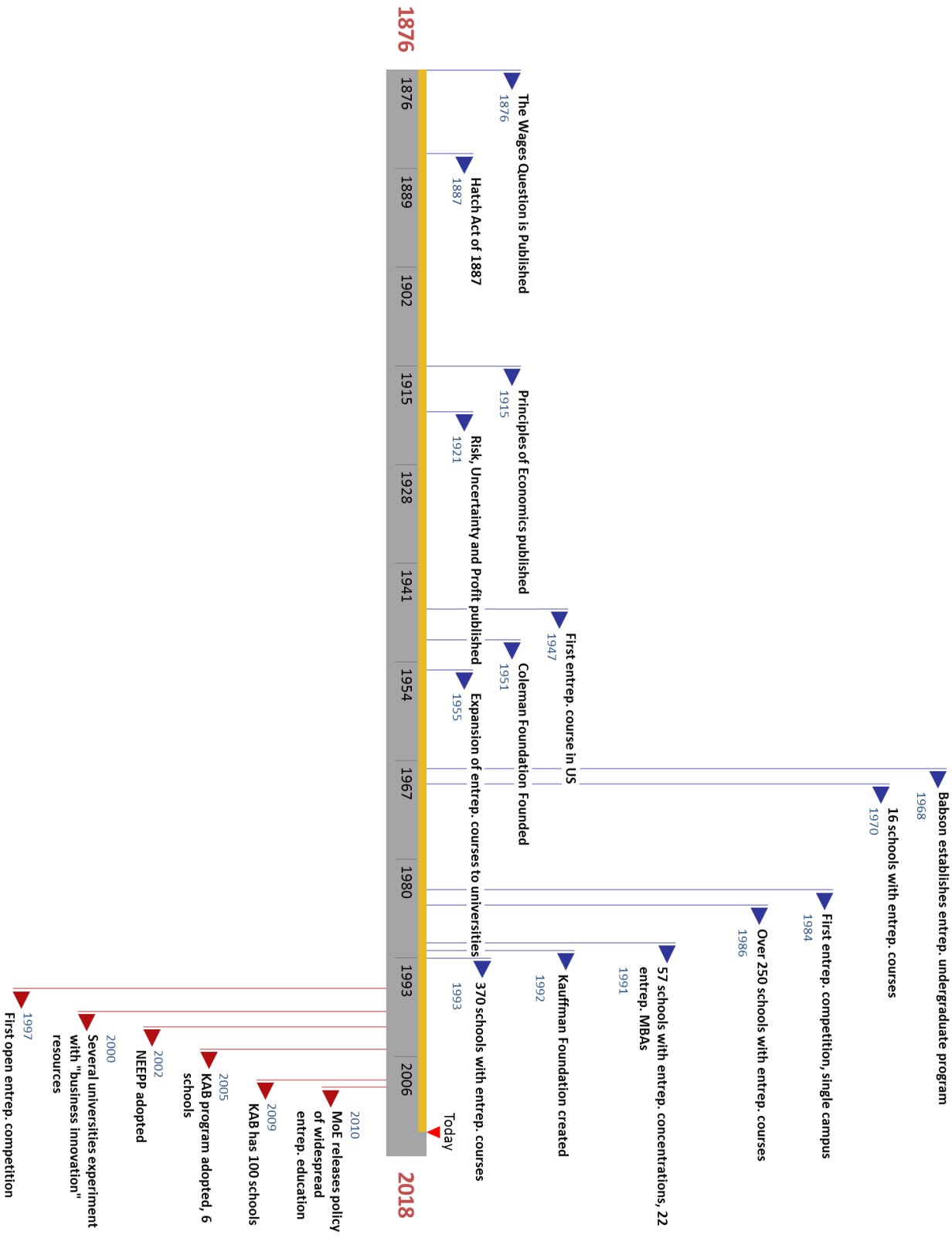

Figure 1: Timeline of Entrepreneurship Education in the US and China

3 Methods

The goal of this project was to produce a comparative study of entrepreneurship education between the US and China to predict trends in Chinese entrepreneurship education for the coming three to five years. The project's objectives were (1) researching entrepreneurship education in the US and China separately, (2) comparing the similarities and differences in US and Chinese entrepreneurship education development, and finally (3) predicting possible near future trends in entrepreneurship education in China. The first objective gave us an understanding of the past and current states of entrepreneurship education in each country separately. The second objective helped us understand how the future of entrepreneurship in China might be different than in the US to make our prediction of future trends in China more accurate. We followed the third objective to generate our findings and results accurately. These objectives were followed in order, as pictured in Figure 2, below.

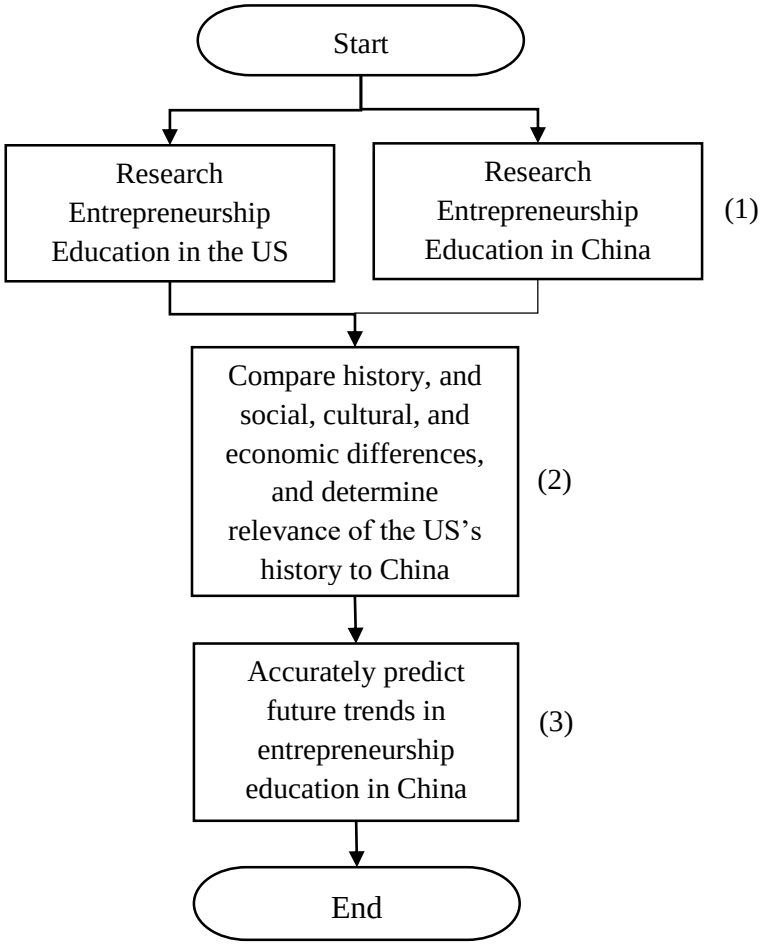

Figure 2: Method for Project Objective Completion

3.1 Researching Entrepreneurship Education in the US and China

To understand major aspects of entrepreneurship education we examined the sub-topics described below. For each sub-topic we examined the current literature and interviewed authorities on the subject in both countries using the process shown in Figure 3.

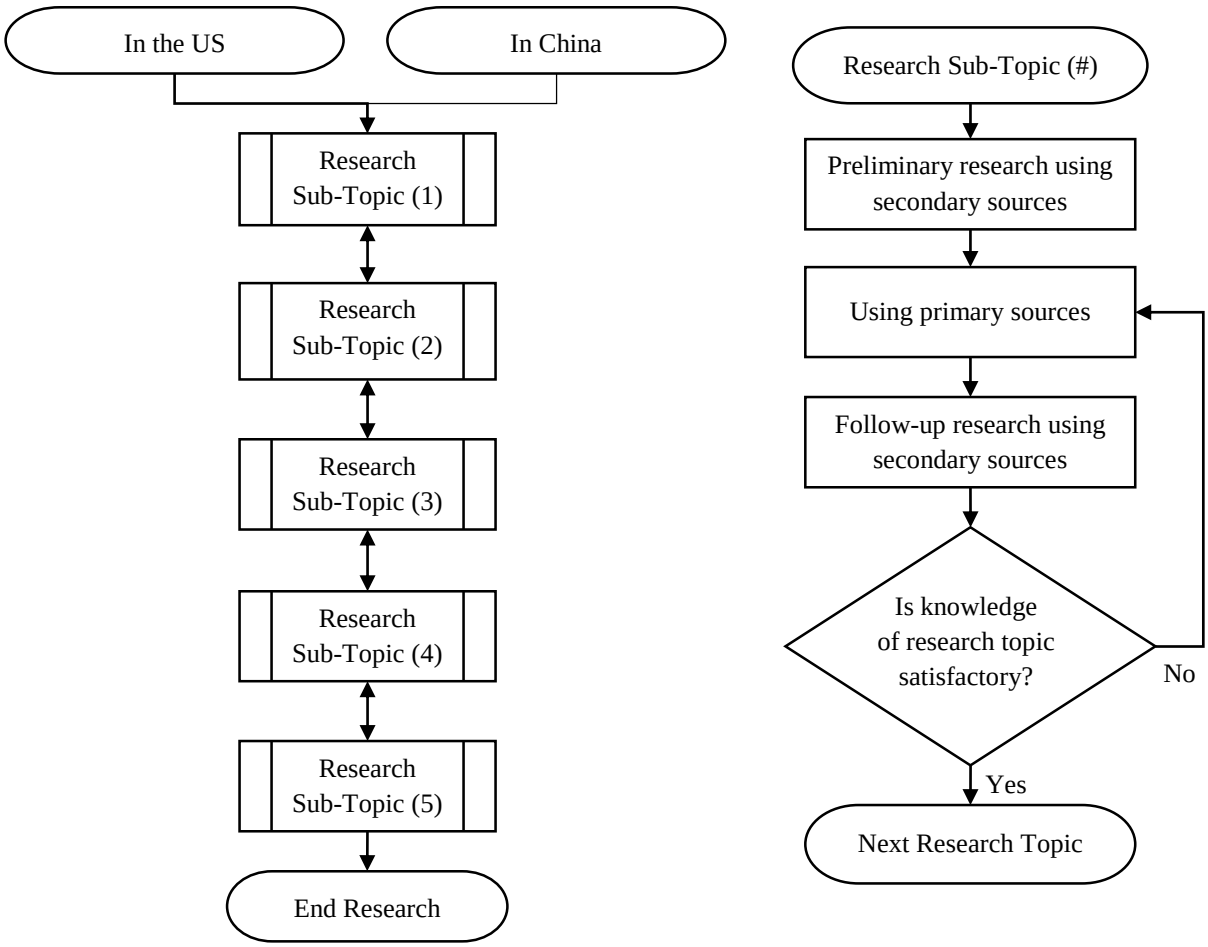

Figure 3: Method for Compilation of Research

1. **History of Entrepreneurship Education** - The history and development of each country's establishment of entrepreneurship education.
2. **Course Provisions of Entrepreneurship Education** - The representative universities for entrepreneurship education, their curricular systems, and entrepreneurial offerings.
3. **Application of Modern Teaching Practices in Universities** – The past, present, and future teaching practices, including things like business simulation products, case studies, lectures, etc.

4. **Resources for Entrepreneurship and its Education** – Practices for providing support for entrepreneurship education and new ventures.
5. **Evaluation of the Effectiveness of Entrepreneurship Education** - Criteria for evaluation of entrepreneurship education in universities.

Given the social, cultural, and economic differences between the US and China, having the opportunity to conduct research in both nations benefitted the quality and diversity of our research tremendously. Our research first utilized secondary sources (previous publications and literature) which helped us assemble background information, and used primary resources (interviews, personal communications, and a survey) to verify our secondary resources to achieve our project goals.

History of Entrepreneurship Education

Understanding the history of entrepreneurship education in the US and China helped us realize our second objective by identifying the differences and similarities between entrepreneurship and its education between the US and China. We examined the literature to answer the following research questions.

- What are the major events in entrepreneurship education in each country?
- What are the similarities between the developments of entrepreneurship education in the US and China?
- How do these similarities and differences affect the prospective trajectories of entrepreneurship education in China?

We searched through online US databases using key phrases such as “development of entrepreneurship education in the US,” “history of entrepreneurship education in China,” and “policies on entrepreneurship in China” to look at the histories, developments, policies, and resources surrounding entrepreneurship and its education in both nations. Since this sub-topic is extremely factual, we mainly used secondary sources to gather data. However, very few secondary sources on the current state of entrepreneurship or its education are available in either country. This limitation forced us to use personal contacts with Jeff Huang as our chief sources for recent conditions of entrepreneurship. We chose these individuals because they have vested interests in the past and future of entrepreneurship education, and are very knowledgeable on the subject. They

also provided us with additional secondary sources to consult further. Transcripts of the interviews are included in Appendix F.

Course Provisions of Entrepreneurship Education

Universities play a major role in entrepreneurship education. This sub-topic focuses on the curriculums used in universities throughout the US and China. Understanding the curricula of universities in different tiers of entrepreneurship education for both countries not only created a gauge for what makes a good program but also improved our understanding of the current state of entrepreneurship education. By examining the relevant literature, we sought to answer the following research questions:

- What are the top universities in the US and China for entrepreneurship?
- What are some average US and Chinese universities for entrepreneurship?
- What are these universities' curriculum systems?
- Are they more rooted in theoretical or practical teaching?

We gathered rankings and listings by first searching through reputable university ranking lists in the US and China in the field of entrepreneurship. From these listings, we produced a list of universities that are generally regarded as "top universities in entrepreneurship" in each country. (listed below) At the suggestion of our sponsor, we also researched WPI and HDU to represent average US and Chinese entrepreneurship programs.

Top 5 US Universities in Entrepreneurship

1. Babson College
2. Massachusetts Institute of Technology (MIT)
3. Stanford University
4. Harvard University
5. University of Pennsylvania (UPenn)

Top 3 Chinese Universities in Entrepreneurship

1. Tsinghua University (清华大学)
2. Zhejiang University (浙江大学)
3. Fudan (复旦大学)

We then found information regarding each school's teaching methods, class styles, and course structure by using key phrases such as "Babson entrepreneurship curriculum," or "MIT entrepreneurship courses." This method enabled us to identify individuals from the schools, such as WPI Professor Karla Mendoza-Abarca, WPI entrepreneurship educator Gina Betti, WPI/HDU Professor Hansong Pu, HDU Professor Yunhong Shen, UMass Boston Professor Raymond Liu, MIT Professor Bill Aulet, and Stanford Professor Richard Dasher, whom we asked the questions listed in Appendix E.

One challenge encountered while gathering data using this method was that most of the available materials in this sub-topic, particularly for Chinese universities were in the Chinese language. As a result, we limit our search to four Chinese schools (as opposed to the six we researched for the US), and also limited our personal contacts to those who could speak English or be easily translated.

Application of Modern Teaching Practices in Universities

The invention of modern teaching methods is what stands between the current state of education (entrepreneurial or otherwise), and the future. To bridge the gap between the present and future trends, we needed to understand all aspects of the most effective teaching methods and their differences from both the less effective traditional and modern teaching methods. The research questions below gave us a direction as to what to research in this area.

- What are the modern and classical methods used by educators in teaching entrepreneurship?
- How are modern teaching methods applied in the US compared to in China?

This sub-topic originally focused specifically on business simulations since they are highly regarded as one of the "most modern" methods for teaching entrepreneurs, and they are our sponsor's main product. In our research on business simulations, however, we realized the broad scope of modern teaching methods and expanded this topic to include all modern and classic methods. We continued our more extensive research by searching databases using the key-phrases "modern entrepreneurship teaching practices" and "modern business teaching methods."

Our research on business simulations and other modern teaching methods led us to discover some accessible individuals with knowledge of the modern entrepreneurship education domain in the US, and then in China. To gather as many opinions as possible, we conducted interviews with

WPI Professors Francis Hoy, Karla Mendoza-Abarca, and Gina Betti, UMass Professor Raymond Liu, WPI/HDU Professor Hansong Pu, MIT Professor Bill Aulet, HDU Professors Yunhong Shen, and Stanford Professor Richard Dasher where we asked the questions listed in Appendix E. The main focus of these questions was to discover the use of not only modern teaching tools and methods, but also the more traditional teaching methods.

With the limited time and scope of this project, we only focused on the use of modern tools like business simulations, case studies, business plan writing and analysis, group projects, individual projects, guest lecturers, and real-world projects in entrepreneurship education. There may have been new educational tools on the market by the time this report was completed, but they could be topics for future research.

Resources for Entrepreneurship and its Education

Higher entrepreneurship education applies not only to individuals who are not yet entrepreneurs, but also to budding entrepreneurs, and current new business owners as well. There are many resources available (incubators, accelerators, and other institutions) that help new and old entrepreneurs succeed. It was important to understand these resources so that we could obtain a better understanding of not only early entrepreneurship education (college level), but also late and continuing education for entrepreneurs, after the graduate. The research questions below helped us gather information on all levels of entrepreneurship education.

- What are some methods in the US and China for providing support to entrepreneurs?
- What are some methods in the US and China for providing support to entrepreneurship education?
- How do these methods apply in the US and China? How do their applications differ?

Our method for gathering data on this sub-topic included mainly journal articles, library databases, and interviews. By searching the databases using the key-phrases “entrepreneurship incubation,” “academic incubators,” “private accelerators,” and “government entrepreneurship education resources” we found basic information regarding incubators, accelerators, and other resources available to entrepreneurs in the US and China. Once we had gained enough information to form opinions of our own, we were able to ask interviewees, WPI Professor Francis Hoy, HDU/WPI Professor Hansong Pu, MIT Professor Bill Aulet, and Stanford Professor Richard

Dasher about incubation, acceleration, and other resources, using the questions outlined in Appendix E.

Evaluation of the Effectiveness of Entrepreneurship Education

Both China and the US aim to improve entrepreneurship education. To predict future trends in entrepreneurship education, we needed to know what constitutes a "successful entrepreneur," so that we could better predict where China might improve. In the same research objective, we learned more about the current state of entrepreneurship education, which contributes to our second project objective. The questions posed below facilitated our research into the effectiveness of entrepreneurship education.

- What are key indicators of entrepreneurial success?
- How much of entrepreneurship can be taught?
- What are the economic effects of entrepreneurship education?
- How effective have the efforts in entrepreneurship education been?

After doing basic research online about these topics, we learned that US universities do not record data of this type. For this reason, we had to do other research to formulate traits of a "good entrepreneur." We researched online using the key-phrases "traits of entrepreneurs" and "success of startup companies." We also asked HDU Professor Hansong Pu, Bster CEO Jeff Huang, WPI Professor Francis Hoy, WPI entrepreneurship educator Gina Betti, UMass Boston Professor Raymond Liu, MIT Professor Bill Aulet, and Stanford Professor Richard Dasher the questions listed in Appendix F under this topic. The survey discussed in the next section also gave us insight into the effectiveness of entrepreneurship education in China.

Some limitations in in our information gathering process include having a limited sample of qualified individuals to interview, and the fact that the US and China have very different economic and educational styles.

3.2 Relevance of US's History to China by Comparison to the US

In this objective, we investigated the differences between the two countries, both culturally and economically so that we could increase the accuracy of our predictions. In this investigation, we used data gathered from secondary sources to look at each country's policies, cultural expectations, and education styles, and economic differences, as well as entrepreneurship education as a whole. Through this method, we were able to gather information about the

differences and similarities between the countries. We also distributed a survey to gather primary information regarding the opinions of Chinese university students on "western style entrepreneurship education. We compared and contrasted the development of entrepreneurship education to better understand how to apply our US research and findings to China.

In the research described above, we attempted to use very similar methods to collect research in the US and China. For example, we found articles discussing similar topics, and asked the same questions to individuals in the US and China. We did this with the purpose of gathering similar data on the US and China to facilitate an easier comparison. An accurate comparison of the two countries should lead to a more accurate prediction of trends.

Moreover, we paid special attention to gathering information in comparing the education styles and cultural aspects in each country. Some of the individuals that we interviewed are experts in entrepreneurship education in both of the two countries; Professor Hansong Pu, Professor Yunhong Shen, and Frank Hoy. These individuals provided us with great insight on comparing the two cultures economically, educationally, and politically.

Lastly, as a primary source, we designed a questionnaire (Appendix G) to gather data on Chinese students' opinions of Western teaching styles specifically for entrepreneurship education. Although the main purpose of the survey was to gather Chinese students' opinions of "western" teaching styles specifically for entrepreneurship education, the survey also posed other questions regarding several of the above research sub-topics. The survey also had a sub-section of questions for recent graduates. This questionnaire was an incredible way to determine how Western entrepreneurship education is relevant to China's, from the direct end-affecters of this comparative study: China's university students and recent graduates.

We released the survey on Monday, November 2nd 2015, to Chinese university students and recent university graduates, with the intent to complete surveys on Monday, November 9th 2015 (at an even one week). We used our experience with Chinese culture to create a novel survey distribution method:

Tencent's WeChat messaging application is almost ubiquitous throughout modern China, with over 500 million active monthly users in China (Tencent Holdings Limited, 2015). The WeChat application has many features including a QR code scanner; QR codes are small images that can redirect users to a website when scanned (see Figure 4). QR codes are almost as ubiquitous

in China as WeChat, likely because of the commonality of WeChat. We chose to use this novel way of distributing our questionnaires to increase student participation in a short time.

Figure 4: QR Code Redirecting to Survey on Chinese Students' Opinions of "western" Style Entrepreneurship Education

The best way to distribute our survey was via a QR code that redirects to the survey. In this way, we adapted to the local culture of using WeChat and QR codes to help further our data collection. We initially asked our volunteer helpers from HDU to distribute the QR code to the survey amongst their peers via WeChat, and within the first 24 hours, we had over 150 responses to the survey. After the first 24 hours, however, the amount of responses began to stagnate, and given the limited period allotted for response collection, we made the decision to distribute the QR code in person. On Friday, November 6th, 2015 (denoted by the section green in Figure 6) we stood on the campus of HDU near highly trafficked areas for several hours distributing the survey QR code. To attract more attention, we exploited cultural curiosity by having a few members dressed up in brightly colored animal costumes and, dancing to music. The team also offered to take pictures with any individuals who filled out the survey, as taking pictures with foreigners is popular among the younger generation in modern China. Figure 5 and Appendix G show the team distributing QR code on HDU campus, interacting with Chinese students.

This method of collecting survey responses was wildly successful, having collected over 300 responses in under five hours. Figure 6 shows the survey responses over time, ending on November 9th 2015 with over 500 collected responses to the survey.

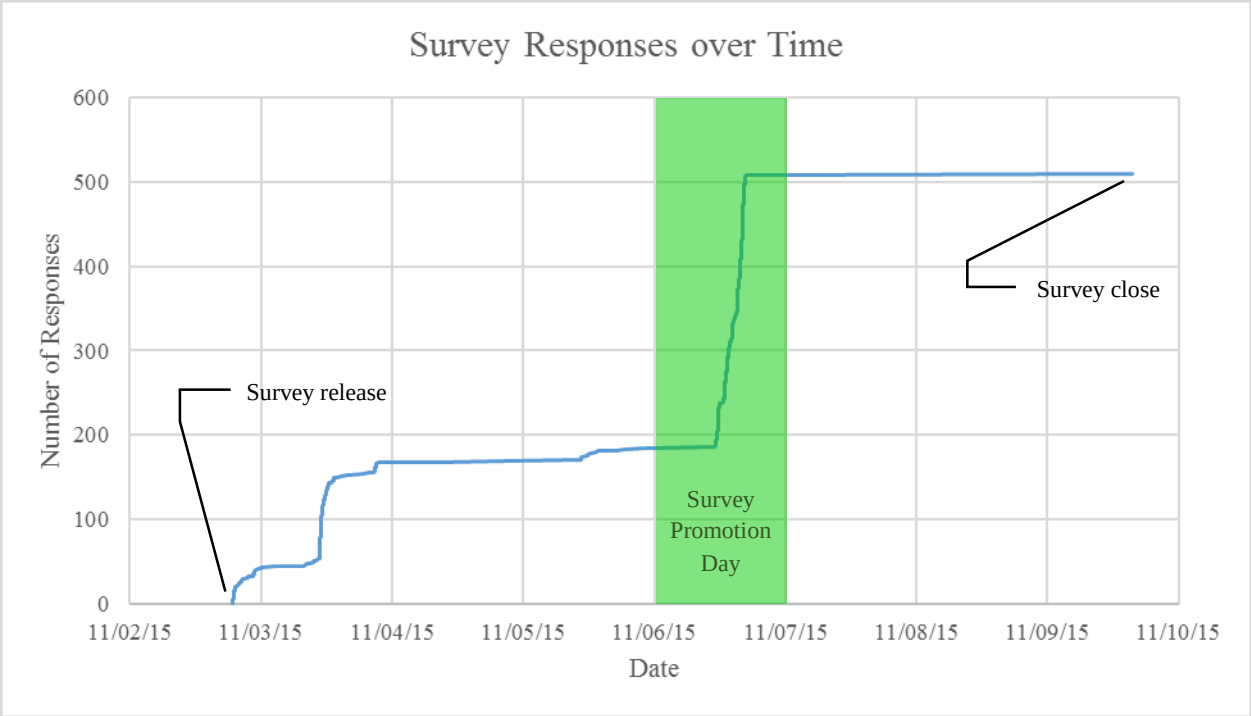

Figure 6: Questionnaire Responses over Time Showing Distribution Rates

Figure 5: Project Team Distributing Survey on Chinese Students' Opinions on Western Education Entrepreneurship Styles

3.3 Predicting Trends in Chinese Entrepreneurship Education

While answering our research questions "what are the future trends for Chinese entrepreneurship education?" we analyze information from our primary and secondary sources.

We used the following data to achieve this third project objective:

- Research done to compare the US and China
- Interviews with experts in entrepreneurship education
- The survey conducted on gathering data about Western entrepreneurship education styles used in China

By using the above data we answered the following questions:

- Regarding cultural aspects, how do the differences between the US and China affects the growth in entrepreneurship education in China? How similar is US's history in entrepreneurship education to China's?
- How can we apply the history of entrepreneurship education in the US to the present and future state of entrepreneurship education in China?
- What major trends from the history of entrepreneurship education in the US will likely appear in China?
- How might the teaching styles in Chinese universities change leading from US's history of entrepreneurship education?

Our findings and suggestions to our sponsor company, Bster, can change the impacts of the company in the entrepreneurship education industry. By using our recommendations, Bster can adjust their products and services to be one step ahead from other companies. With the right advertisement and marketing strategies, we hope that our predictions for near future trends in Chinese entrepreneurship education, Bster could be more competitive in the industry.

4 Findings and Analysis

In this chapter, we discuss our findings and analyze the data we gathered. Our primary purpose for this project was to predict the next three to five years in Chinese entrepreneurship education. We aimed to make this prediction more accurate by comparing the developments in entrepreneurship education in the US and China. Here we provide an in-depth analysis of the history of entrepreneurship education and its implementation in the US and China. By doing intensive background research, conducting a survey, doing several interviews with the experts in the field of entrepreneurship education, we gathered the following data, analyzed it, and now, present the following findings.

4.1 Historical Differences

The US has a longer history of entrepreneurship education than China

We examined journal articles, information published on university websites, and government publications to compare the histories of entrepreneurship education in the US and China. From our data, we found that entrepreneurship education in the US is more mature than that in China.

China did not advocate the need for entrepreneurship education until the mid-1990s (Zhou & Xu, 2012). The US, however, showed interest in the concept of entrepreneurship as early as 1876. Top entrepreneurship schools in the US have well-developed programs in entrepreneurship, supporting the argument that there is a difference in the maturity level of the entrepreneurship education programs between the two countries. Babson College (Appendix A) is the only US school that offers a full undergraduate degree in entrepreneurship, all the other top schools that we researched in the US had a significant number of entrepreneurship classes, numerous faculty with entrepreneurial experience and training, and several supporting resources for student entrepreneurs. On the other hand, one of the pioneers of entrepreneurship education in China, Tsinghua University (Appendix B), only has one entrepreneurship class listed in their current undergraduate course schedule, and the entrepreneurship education is less integrated into the school's program than in the US. In our interview with Professor Richard Dasher (Appendix F), the Director of the US-Asia Technology Management Center at Stanford University, he said that most top US universities prefer entrepreneurship as a component of a broader major field of study – a teachable skill – rather than as a standalone undergraduate degree. His opinion implies that to improve

entrepreneurship education, a university should increase not only the number of classes in entrepreneurship but also the integration of the entrepreneurial mindset. By conducting deep research on university course catalogs (Appendix A) from schools like Stanford University, Harvard University, UPenn, and MIT, we found that they have already inculcated their programs with an entrepreneurial mindset. This observation provides further indication that the US has a comparatively mature entrepreneurship education system than China.

China can learn from the history of entrepreneurship education in the US and adopt major developments into its system of entrepreneurship education. In the 2015 policy update that the Chinese MoE published, it stated that Chinese educators need to follow a more hands-on model in the classroom. We discussed in our literature review that the US has assumed this model of teaching for many years now. This policy development indicates that China has already begun to emulate past US developments, and continuing this trend will take Chinese entrepreneurship education to the level of the US's.

4.2 Differences in Resource Providers

Non-government resources are more popular in the US than in China

By doing intensive research and conducted several interviews with the experts in the field, we found answers to the questions posed in the Methodology chapter seeking information about the resources for entrepreneurship and its education.

We found that there are many non-government resources available to entrepreneurs in the US, but the government is the main resource in China. The central government of China has already invested over 3 billion CNY (500 million USD) in select emerging industry ventures, with a planned fund totaling over 40 billion CNY (6.5 billion USD) (Xie, 2015). This investment shows that the government is devoted to promoting entrepreneurship in general. Moreover, the 2010 policy, waiving some registration fees for student ventures, shows that they have been specifically targeting financial incentives towards student entrepreneurs (Chinese Ministry of Education, 2010). Other than government resources, China's resources for entrepreneurship education are comparatively limited. Almost all non-government resources that exist, operate as a supplement the government rather than as competition to it.

Reviewing information on several startups and inspecting university websites, we found that government resources in the US are scarce compared to the non-government resources. The

Small Business Association (Appendix C) is the US's most prominent government resource, but there are not many others. The incubation in the US mostly comes from private organizations like Y Combinator and MassChallenge, institutions such as the Kaufmann and Coleman Foundations (Appendix C), or one of the over 1400 private business incubators (Knopp. 2007). Also, top schools in the US provide incubation for student entrepreneurs in the form of workspaces, mentorship, and networking opportunities.

The distinction of the resources in both countries stems from their differences in government types and policies. The US government is not the primary resource for entrepreneurship or its education, allowing other resources to support entrepreneurs; in China, only a few private organizations currently provide support for entrepreneurial projects. The benefit of having a centralized resource for entrepreneurs is the convenience of a single source of assistance; the benefit of having several resources is the freedom to choose the assistance that meet the entrepreneur's specific needs. We found that the convenience of one resource makes the field conducive to a faster growth rate.

Furthermore, China's fast-paced growth in entrepreneurship education stems from the government's focus on entrepreneurship. In Premier Li Keqiang's March 2015 government work report, he states that the number of college graduates is reaching a record high in 2015 and the best way to fulfill the requirement for jobs is to increase the entrepreneurial activity in China (Li, 2015). The government saw increasing difficulty faced by college graduates in finding jobs and recognized the potential for entrepreneurship to create jobs. Most of China's milestones in entrepreneurship education come in the form of the government introducing new programs to schools and universities, rather than having the programs form naturally as a developmental by-product as it was in the US. The policy released in 2010 by the MoE illustrates in great detail the government's encouragement of entrepreneurship education in the country.

The aforementioned difference in the driving forces behind entrepreneurship education evolution in the US and China helps explain the major disparities in the time by each to attain certain metrics in entrepreneurship education. For instance, the development seen over decades in the US took place in only 15 years in China, proving that the time required for change is different in both countries. Therefore, seeing the rapid changes and quick leaps in China would not be surprising in the future.

4.3 Differences in Teaching Styles

US universities currently use "western" teaching practices more than Chinese universities

Our aim in this project was to distinguish between different teaching styles used and examine which methods were most beneficial to students. Understanding the differences in the two main teaching styles discussed in this finding will bridge the gap between present and future trends.

Modern teaching tools in entrepreneurship education aid in practical, experiential learning and include case studies, business plan writing and evaluation, simulations, group projects, guest lectures, and real-world projects. Educators use traditional tools to teach theory and basic skills through lectures.

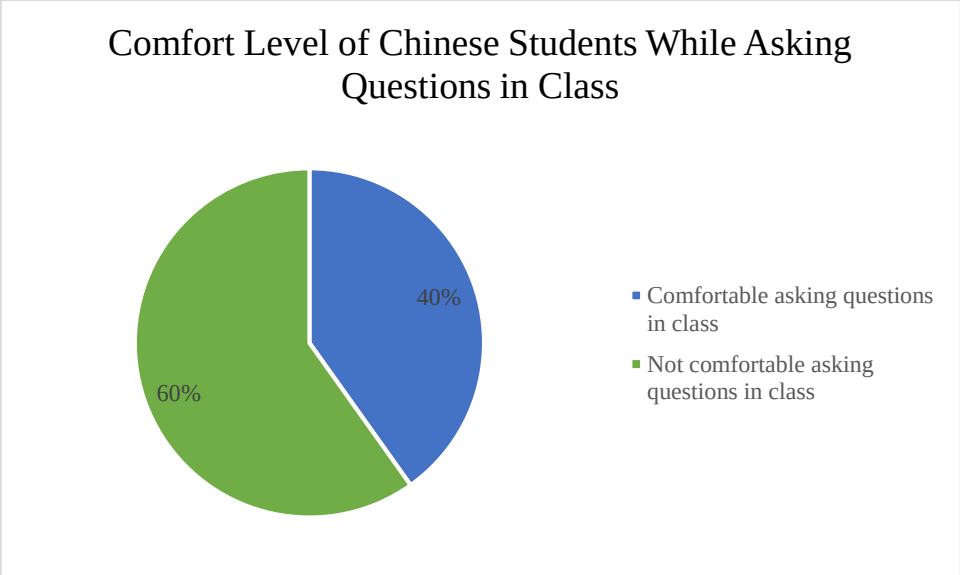

Figure 7: Comfort Level of Chinese Students While Asking Questions in Class

In our interview with Professor Richard Dasher, he stated that "…entrepreneurship education must involve an experiential component... However, I think that some lecture content is important in order to contextualize and understand the kinds of experiences that students bring to the class." The "western" teaching style provides the necessary theory by using traditional styles while using modern tools to provide the crucial experiential component. In our interview with Bill Aulet (Appendix F), professors in the US favor practical and more interactive teaching styles. In contrast, with our survey, we found that 60% of the Chinese students that answered our survey are not comfortable asking questions in the classroom (Figure 7), showing that the classroom environment in Chinese education is not conducive to the more interactive modern teaching tools.

Furthermore Professors Francis Hoy and Yunhong Shen, who have taught both in the US and in China, label Chinese entrepreneurship education as “lecture oriented” (Appendix F). However, there are exceptions such as Professor Shen himself, who uses business simulations to teach entrepreneurship and aims for student interaction between himself and other students, because he believes that using purely theoretical methods is inadequate in the teaching of entrepreneurship.

The difference in teaching preferences stems from cultural differences between the two countries. The data from our survey shown in Figure 7 supports that the traditional teacher-student hierarchy is an important part of Chinese culture. On the other hand, in the US, teacher-student interactions are much more casual. In our interview with Professor Hansong Pu (Appendix F), he contrasted students in the US to students in China as being more “proactive and energetic;” a key difference in the student learning culture in the US and China.

One major consensus from our interviews is that in entrepreneurship, experience and practice are critical. For the Chinese entrepreneurship education system to develop, interactive teaching methods need to be integrated into the classroom.

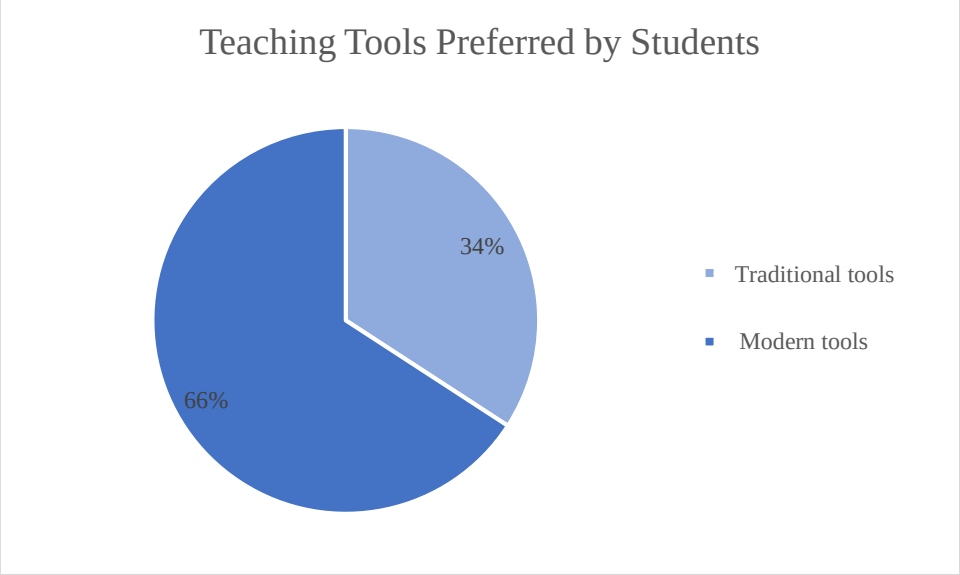

Figure 8: Teaching Styles Preferred by Chinese Students

Chinese students want to learn with the “western” teaching style

Previously discussed interviews revealed that educators in China prefer teaching with traditional methods in entrepreneurship education. Figure 8 shows that almost twice as many Chinese students prefer learning by doing group or individual projects rather than lectures which proves that the Chinese students prefer learning via modern tools. This result of our survey shows

that lectures might not be the most suitable way to teach entrepreneurship to Chinese students. Figure 9 shows that a significant number of Chinese students and recent graduates have already been exposed to a classroom environment that uses modern teaching tools. While most of our interviewees recognized that entrepreneurship courses in China are taught through lectures, 48% of survey takers that have taken an entrepreneurship class have also learned by using business simulations. This statistic indicates the shift of Chinese students' learning preferences towards a more "western" style of teaching.

To sum up, some Chinese students have already taken classes that use more interactive teaching methods which shows that China has already started to integrate the "western" style of teaching into its entrepreneurship education system. Chinese faculty have the onus to teach with hands-on teaching methods via modern tools, since Chinese students prefer learning through them. Students' opinions, however, are not enough to develop a country's entrepreneurship education system; faculty have a bigger impact on the system since they are the educators. By reforming their methods of teaching to use more modern tools, educators will play a major role in cultivating the Chinese entrepreneurship education system.

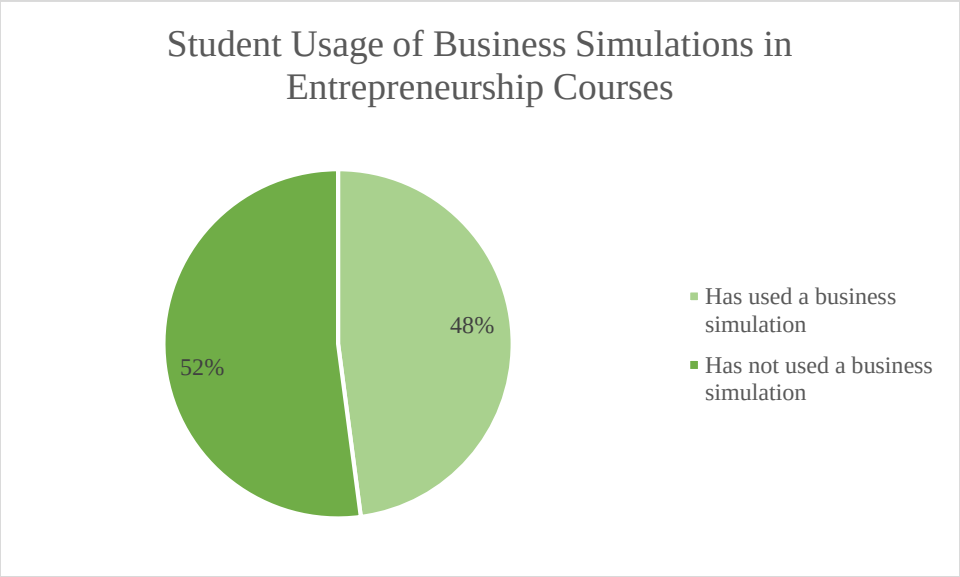

Figure 9: Teaching Styles Used by Chinese Students in Entrepreneurship Courses

4.4 Effectiveness of Entrepreneurship Education

While entrepreneurial skills can be taught, the entrepreneurial mindset is a trait that cannot be taught

Our objective in finding out whether or not the entrepreneurial mindset can be taught was to better understand the effectiveness of entrepreneurship education. We asked most of our interviewees to answer the question "Do you think entrepreneurship education can be taught? Why or why not?"

According to Professor Hansong Pu, educators can teach some of the skills, some of the mindset, and some of the concepts in entrepreneurship. Similarly when asked the same question, Professor Richard Dasher answered, "Everyone can benefit from the experience of study and entrepreneurship education can help people who are gifted to become even better (or even truly great) at making their activities successful." His statement shows that even an innately entrepreneurial person benefits greatly from entrepreneurship education by learning the requisite skills to succeed as an entrepreneur. Jeff Huang, a successful entrepreneur, said during his interview with us that entrepreneurs need not only an entrepreneurial mindset but also to learn more skills to be effective. Professor Hansong Pu extended his answer by explaining that the real-world experience is what makes an entrepreneur successful.

All our interviewees had a single consensus: entrepreneurship can be taught, but only to a certain degree. This unanimous agreement among experts in the field shows that the idea behind entrepreneurship education is feasible, yet, the entrepreneurial mindset is a trait not as teachable as entrepreneurship theory. This finding explains the reason behind the discussion on the difference in teaching styles.

Ultimately, these limitations on the value of classroom education, create a constraint to entrepreneurship education itself. This constraint illustrates that there cannot be an institution or program that teaches the entrepreneurial mindset, so there cannot be a perfect entrepreneurship education system.

Entrepreneurship education in China needs to develop further

Moving on from the challenge of entrepreneurship education itself, our aim for this section was to investigate the effectiveness of entrepreneurship education in China.

Conducting a survey and asking the experts in the field about the effectiveness of the entrepreneurship education, we found that the outcomes did not reflect the amount of effort put in.

According to Figure 10, we found that almost half of our survey takers that have intents to start a business have not taken an entrepreneurship course, showing that taking an entrepreneurship course has a negligible effect on intent to start a business in China.

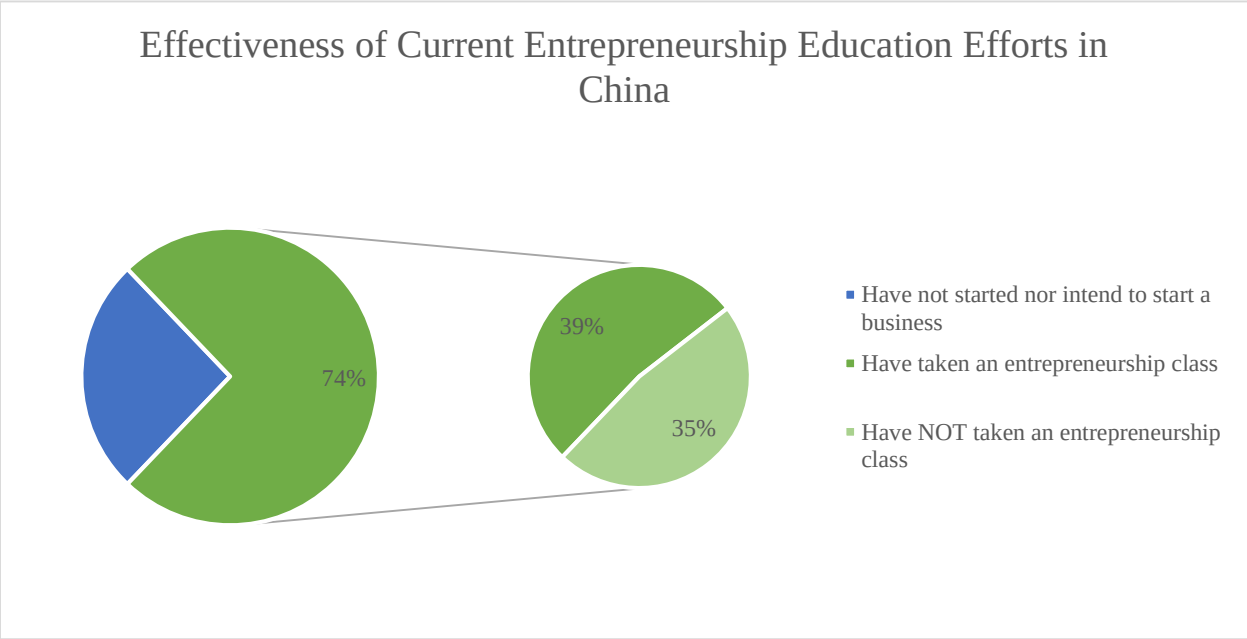

Figure 10: Effectiveness of Current Chinese Entrepreneurship Education Efforts

In the 2015 entrepreneurship education update from MoE, the Chinese government discussed how entrepreneurship education had not developed enough since the original 2010 policy. This update indicates that the government realized the lack of effectiveness of the current Chinese entrepreneurship education system and is systematically adopting new policies aimed at improving the system.

Through our interview with Jeff Huang, we discovered that China is at a stage where it would not be prudent to evaluate the effectiveness of its entrepreneurship education programs. The reason for this is that a lot of changes have occurred in the last three years, and universities have only just started to get serious about their entrepreneurship education programs. He also explained that one of the reasons for this lack of effectiveness could be that the concept of entrepreneurship education in China is so new that universities have not had enough time to mature their entrepreneurship programs.

The current situation of Chinese entrepreneurship education is not an indication of future failure. In fact, China being aware of this situation and acting quickly by enacting other policies shows that the future of entrepreneurship education in China is bright. Integrating entrepreneurship

into schools' curricula, by creating new classes and working the mindset into existing classes will improve Chinese entrepreneurship education.

In this chapter, we discussed our findings from the data we collected by doing intensive background research, distributing a survey, and conducting several interviews with experts in the field of entrepreneurship education. We also discussed the implications for the current state of entrepreneurship education in China. In the upcoming chapter, we summarize our key findings and discuss our suggestions for developing entrepreneurship education in China.

5 Conclusions and Recommendations

In this chapter, we conclude our report by suggesting how entrepreneurship education in China can move forward in the next three to five years. We conducted literature research, survey, and several interviews with important individuals in the field of entrepreneurship education in the US and China. We compared the histories and current states of entrepreneurship education in the two countries through the information we gathered. Based on this comparison, we analyzed our data and drew the following conclusions that we strongly believe will be seen in the field of entrepreneurship education in China over the next three to five years. This section is crucial in our report because it serves as a tangible deliverable of our work and provides major stakeholders with actionable information about future directions in Chinese entrepreneurship education.

5.1 Prospects of Chinese Entrepreneurship Education in the Next Three to Five Years

China will fully adopt "western" teaching styles in entrepreneurship education

With the evolution of China's entrepreneurship education system and the growing needs of Chinese students, China will fully adopt "western" teaching styles in the field of entrepreneurship education**.** Specifically, it will grow to include modern, hands-on tools such as business simulations, class discussions on case studies, business plan writing and evaluation, group and individual projects, and other components of experiential learning as a staple of its entrepreneurship education offerings at universities. This inclusion of modern teaching tools will supplement the use of traditional tools that aim to teach theory, resulting in what we call the "western" teaching style.

The "western" teaching style seeks to provide experiential learning through a combination of traditional and modern teaching tools and has been shown to work best in China. During China's National Entrepreneurship Education Pilot Program (NEEPP), which began in 2002, a similar hybrid model proved to be the most successful teaching model employed at universities. This success of the hybrid model proves that the "western" teaching style is the most effective in the realm of entrepreneurship education.

Now, with the Chinese government proactively encouraging entrepreneurship education more than ever, and providing ample funding therein, we see universities throughout China

adopting this style. In the May 2015 update to its 2010 entrepreneurship education plan, the Ministry of Education (MoE) clearly outlined teaching methods that involve experiential learning that it would like Chinese universities to include in their programs, seeking to fully implement such programs by 2020. Specifically, this update involved; (1) improving teaching standards using modern teaching tools, (2) establishing incubators, (3) learning from foreign universities and organizations, (4) increasing the availability of mentorship and guidance to student entrepreneurs, and (5) improving financial and policy support for university entrepreneurship programs.

Our survey results showed that nearly twice as many Chinese university students prefer learning by using modern teaching methods than using traditional teaching methods such as lectures that are more commonly used in China. This finding is a clear indication of student demand for the "western" teaching style. Our survey results also showed that 62% of the Chinese students and recent graduates that we surveyed have been exposed to modern teaching methods in entrepreneurship education, the kind often employed in the "western" teaching style. This exposure exists because China has already started integrating the "western" teaching style into its course offerings. In addition, our survey also shows that 66% of the survey takers prefer learning by modern tools rather than traditional. Now, the pressure is on the educators of entrepreneurship in China to implement the policy changes and provide more of the "western" teaching style to the students.

China has historically had an efficiency-driven economy with activities such as outsourced manufacturing and assembly at its heart. In our interview with Jeff Huang (J. Huang, personal communication, 2015), he explained that with Chinese labor getting increasingly more expensive, these activities have moved to other countries, leaving China with gaps to fill in the job market. In order to grow a self-sustaining economy, the Chinese government realizes that people need to innovate and drive the economy in new ways. Lately, the government has greatly supported the cause of entrepreneurship education, to create more entrepreneurs in the country, with even President Xi Jinping proclaiming that everyone in China should be an entrepreneur (J. Huang, personal communication, 2015). We see innovation playing a great role in evolving the existing state of the Chinese economy. This innovation will be brought about through entrepreneurship education, fueled by the adoption of the "western" teaching style. This boost will employ experiential learning that will create students ready to tackle the world of entrepreneurship.

We recommend that the MoE follows up the 2015 update of its entrepreneurship education with a structured plan that explicitly outlines the usage of modern teaching tools in universities across China. We suggest that a plan like this should include tangible incentives for universities to implement it, as this would make its implementation happen more quickly. According to our conversations with Professor Bill Aulet (B. Aulet, personal communication, 2015) and Jeff Huang (J. Huang, personal communication, 2015), Tsinghua University and Zhejiang University have already implemented such plans with support from the US universities Massachusetts Institute of Technology (MIT) and Stanford University respectively. MIT and Stanford University have been successfully employing experiential, hands-on learning for several years now (Appendix A). We recommend that universities in China also take help from the Western universities which already operate under such a teaching model. Looking at the rapid development of China's entrepreneurship education system, widespread implementation of such programs is achievable in the next three to five years.

For our project sponsor, Bster, we recommend that they continue to develop business simulations in a variety of entrepreneurial topics. Since business simulations employ experiential learning through real-world like experiences, we strongly believe that demand for such software will sharply rise in the near future, with the rapid growth of entrepreneurship education.

Entrepreneurship education will continue to be government driven in the next three to five years

The Chinese government will lead the charge in entrepreneurship education, and non-government resources will not come to the forefront within the next three to five years. Ever since the inception of entrepreneurship education programs and resources in China, the Chinese government has been the driving force behind them. It has poured significant capital and efforts into the establishment and growth of resources such as university incubators, entrepreneurship competitions, mentorship and guidance for entrepreneurs, and loans and investment for startups. As a high-ranking government department, the MoE wields significant influence to get its programs up and running very quickly and has used this position of power to provide significant entrepreneurship related resources to Chinese students and entrepreneurs. Non-government resources exist for entrepreneurship as a whole but are scarce for entrepreneurship education specifically. These private institutions operate on a much smaller scale than the government and

are unable to provide resources at that scale. They usually exist to supplement government efforts through mentorship and small amounts of funding. An exception to this trend is the ChinaStars incubator program run by the Chinese venture capital firm Trilogy VC, which is successfully run at several universities in Eastern China (Fuclo, 2013). Based on our project findings, we do not see the unequal dynamic between government and non-government resources changing in the near future of three to five years.

We recommend that the government supports non-government resources through financial incentives such as funding and tax cuts. This support will be beneficial to both student entrepreneurs and the government since most non-government resources serve to supplement the government's efforts in entrepreneurship education through mentorship and financing.

China's entrepreneurship education will continue catching up to the US's entrepreneurship education

Chinese entrepreneurship education will continue to grow rapidly in the next three to five years. This growth will be much faster than the growth of entrepreneurship education in the US, and China will get up to speed with the US in its entrepreneurship education offerings. In entrepreneurship education, China sees an opportunity to emulate a system that is successful and adapt its existing model of education to this system. In China, there is tremendous government support and vast student demand for entrepreneurship education, and a great need for job creation to fuel the economy. With the MoE's plan to make university entrepreneurship programs effective by 2020, we foresee the "western" teaching style becoming increasingly common in the country and an increasing number of universities offering high-quality programs by employing such teaching methods. The MoE has also, in its May 2015 update, linked university rankings with the quality of their entrepreneurship education programs, thus placing the impetus on schools to rapidly grow their entrepreneurship education programs in both size and quality.

With this rapid growth of entrepreneurship education programs in China, there will likely be suboptimal results concerning efficiency and success in the adoption of these programs. We see entrepreneurial programs and resources quickly growing and becoming widespread in the country as evidenced by the strong government push for such programs. However, we see uptake from these programs being slow, which will also hurt their effectiveness during the course of the uptake.

Students and faculty need to be given time to adapt to such spanning changes in the education system.

Seeing this prospective mismatch in the speed between resource allocation and uptake in Chinese entrepreneurship education, we recommend that the government accompanies its resource offerings with appropriate instruction for faculty. Such instructions would greatly ease the process of faculty uptake from the rapidly evolving system of entrepreneurship education in China.

5.2 Implications for Major Stakeholders

This report serves as a benchmark for the future of entrepreneurship education in China, for our sponsor company, Hangzhou Bster Sci&Tech Co. Ltd. We understand that if Bster utilizes these recommendations, the project will play a major role in Bster's product roadmap in the coming years.

Our findings and conclusions have given confidence to Bster by affirming its plans for the future. The currently high demand for modern teaching tools in entrepreneurship education will continue to skyrocket. Our recommendation is that Bster continues to focus on creating business simulations in a variety of entrepreneurial topics, causing it to lead the market in this domain.

We also recommend that Bster diversifies its product line to include other practical teaching tools such as software to facilitate group projects. As evidenced by our findings, these hands-on teaching tools will be in high demand in China in the near future. Ultimately, the concepts of entrepreneurship education could be extended to lower levels of education such as primary and secondary schooling and we recommend that Bster tests versions of its products for these demographics as well. Bster could create more game-like software that teach young students entrepreneurship, thereby not only creating a new market in China but also having the competitive advantage of being the first mover in such a market.

Besides serving as a future guideline for Bster, this report will also prove useful to administrators and educators at Chinese universities. Educators looking to improve their teaching styles and provide the best teaching methods to their students could take our recommendations and become relatively early adopters of modern teaching tools. Administrators could lead the charge for a larger scale implementation of interactive, experiential learning programs in entrepreneurship in their universities.

5.3 Limitations and Suggestions for Future Work

There were a few limitations to our project work, particularly during our time in China. Our largest constraint was our seven-week timeframe. We would have benefitted from taking part in a Chinese entrepreneurship course ourselves, to have a first-hand experience with Chinese teaching styles in entrepreneurship. Additionally, visiting entrepreneurial resources such as incubators at top universities in China would have provided greater insight into the project. The limited time restricted our research methods. Given more time, we would have liked to interview top Chinese entrepreneurship educators at universities around the country. We would also have surveyed more students at more universities in China to increase the diversity and size of our data sample. We would have conducted surveys at universities in Hangzhou (Zhejiang University), Beijing (Tsinghua University) and Shanghai (Fudan University).

The language barrier also limited us because we do not speak Chinese well enough to communicate the terminology of entrepreneurship education. Occasionally, some major ideas and details were lost in translation. We primarily experienced this limitation during our conversations with our sponsor company and while translating documents from Chinese to English.

As entrepreneurship education rapidly evolves in China, a follow-up study, three to five years from now, could be conducted on the effectiveness of entrepreneurship education in China. This study would be insightful because it will confirm or contest the predictions outlined in this chapter, and provide further, more updated insight. There could also be research studies on the most effective methods for experiential learning, which would help direct entrepreneurship educators to the most useful tools for their students. Further, to aid the creation of new product lines for Bster, as recommended earlier, Bster could sponsor another Interactive Qualifying Project (IQP) with Worcester Polytechnic Institute (WPI) students to research the effectiveness of such products and make relevant recommendations for their development and use.

References

About.com. (2015). *College Profiles*. Retrieved from http://collegeapps.about.com/od/collegeprofiles/p/babson-college.htm

Babson College (2013). *Babson Undergraduate Curriculum.* Retrieved from http://www.babson.edu/Academics/undergraduate/Documents/undergraduate-curriculum-sample-course-guide.pdf

Babson College. (2015). *Course Catalog.* Retrieved from http://www.babson.edu/Academics/undergraduate/Pages/course-catalog.aspx?Division=Entrepreneurship

Babson College. (2015). *Foundations of Management and Entrepreneurship*. Retrieved from http://www.babson.edu/Academics/undergraduate/academic-programs/fme/Pages/default.aspx

Brooks, C. (2015). *What is Entrepreneurship?.* Retrieved from http://www.businessnewsdaily.com/2642-entrepreneurship.html

Bruneel, J., Ratinho, T., Clarysse, B., & Groen, A. (2011). The Evolution of Business Incubators: Comparing demand and supply of business incubation services across different incubator generations. *Technovation.*

Chinese Ministry of Education. (2010). *教育部关于大力推进高等学校创新创业教育和大学生自主创业工作的意见 (translated: Opinions of the Ministry of Education on robustly promote innovation and entrepreneurship education colleges and college students start their own businesses work).* Retrieved from http://fagui.eol.cn/html/201008/3754.shtml

Chinese Ministry of Education. (2015). *国务院办公厅关于深化高等学校创新创业教育改革的实施意见 (translated: State Council on Deepening the Higher Education Opinions Innovation and Entrepreneurship Education Reform)* Retrieved from http://www.gov.cn/zhengce/content/2015-05/13/content_9740.htm

Chmura, M. (2015). U.S. *News Ranks Babson No. 1 for Entrepreneurship For The 19th Consecutive Time.* Retrieved from http://www.babson.edu/news-events/babson-news/Pages/us-news-and-world-report-ranks-babson-no-1-for-entrepreneurship.aspx

The Coleman Foundation, Inc. (2015). *Entrepreneurship Education.* Retrieved from http://www.colemanfoundation.org/what_we_fund/entrepreneurship/overview.html

College of LPS at The University of Pennsylvania. (2015). *Arts Entrepreneurship.* Retrieved from http://www.sas.upenn.edu/summer/courses/term/2012B/program/1176/course/MUSC499940

Cowden, B. J., Tang, J., Yang, J., & Zhang, Y. (2015). Exploring Innovative New Ventures In China And The United States. *Journal of Developmental Entrepreneurship*

CRIEnglish.com. (2015). *China's Employment in 2015 Arduous: Minister.* Retrieved from http://english.cri.cn/12394/2015/03/10/3521s869456.htm

Eesley, C. E. (2009). Entrepreneurship and China: History of Policy Reforms and Institutional Development

Entrepreneur Staff. (2015). *Business Incubator*. Retrieved from http://www.entrepreneur.com/encyclopedia/business-incubator

Etzkowitz, H. (2002). Incubation of incubators: innovation as a triple helix of university-industry-government networks. *Science and Public Policy, 29(2), 115-128.*

Ewing Marion Kauffman Foundation. (2015). *Ewing Marion Kauffman Foundation*. Retrieved from http://www.kauffman.org/

Ewing Marion Kauffman Foundation. (2015). *Who We Are*. Retrieved from http://www.kauffman.org/who-we-are

Fayolle, A. (2013). Personal views on the future of entrepreneurship education. *Entrepreneurship & Regional Development: An International Journal, 25(7-8), 692-701.*

Fudan University School of Management. (n.d.). *Centers and Institutes*. Retrieved from http://www.fdsm.fudan.edu.cn/EN/scires/yjs.aspx

Fudan University. (2014). *Industrialization*. Retrieved from http://www.fudan.edu.cn/en/channels/view/115/

Fulco, M. (2013). *Kickstarters: China's Innovation Incubators*. Retrieved from http://knowledge.ckgsb.edu.cn/2013/05/14/finance-and-investment/kickstarters-chinas-innovation-incubators/

Gibson, S. G. & Harris, M. L. (2008). A comparison of entrepreneurial attitudes in the U.S. and China.

Hall, B., Jaffe, A., & Trajtenberg, M. (2001). The NBER citations data file lessons insights and methodological tools. *The National Bureau of Economic Research.*

Harkless, G. (2015). *12 Entrepreneurs Explain If Entrepreneurship Can Be Taught*. Retrieved from http://teach.ceoblognation.com/2015/09/04/12-entrepreneurs-explain-if-you-can-learn-to-be-an-entrepreneur/

Harvard Business School Publishing. (2015). *Entrepreneurship Simulation: The Startup Game.* Retrieved from https://cb.hbsp.harvard.edu/cbmp/product/WH0001-HTM-ENG

Harvard Business School Publishing. (2015). *Teaching With Simulations.* Retrieved from https://cb.hbsp.harvard.edu/cbmp/pages/content/simulationsfeature

Harvard Business School Publishing. (2015). *Working Capital Simulation: Managing Growth V2.* Retrieved from https://cb.hbsp.harvard.edu/cbmp/product/7070-HTM-ENG

Harvard Business School. (2015). *Harvard Business School.* Retrieved from https://entrepreneurship.hbs.edu/Pages/default.aspx

Harvard John A. Paulson SEAS. (2015). *Harvard John A. Paulson SEAS.* Retrieved from https://www.seas.harvard.edu/

Huang, Y. (2010). *Entrepreneurship in China.* Retrieved from http://www.unleashingideas.org/global-entrepreneurship-library/global-resource/entrepreneurship-china

Katz, J. A. (2003). The chronology and intellectual trajectory of American entrepreneurship education. *Journal of Business Venturing, 18(2), 283-300.*

Knopp, L. (2007). State of the Business Incubation Industry

Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship theory and practice, 29(5), 577-598.*

Lahm Jr, R. J., & Rader, C. S. (2014). Technology and distance education entrepreneurship programs: an eight-point framework for best practice. *Journal of Entrepreneurship Education, 17(2), 101.*

Li, J., Zhang, Y., & Matlay, H. (2003). Entrepreneurship education in China. *Education + Training, 45(8/9), 495-505.*

Li, K. (2015). *Report On The Work Of The Government*. Retrieved from http://english.gov.cn/archive/publications/2015/03/05/content_281475066179954.htm

Liao, D., & Sohmen, P. (2001). The Development of Modern Entrepreneurship in China. *Stanford Journal of East Asian Affairs, 1(1).* Retrieved from http://web.stanford.edu/group/sjeaa/journal1/china2.pdf

Liu, D., Li, L., & Hong, W. (2008). A Comparative Study for Entrepreneurial Education in China-US Universities. *1st International Conference on Engineering and Business Education.*

Luo, W. (2015). *Free online Tsinghua education for budding entrepreneurs.* Retrieved from http://www.chinadaily.com.cn/china/2015-03/25/content_19906335.htm

Martin Trust Center for MIT Entrepreneurship. (2015). *Academics - Fall 2015*. Retrieved from https://entrepreneurship.mit.edu/academics-fall2015

Massachusetts Institute of Technology. (n.d.). *MIT Admissions.* Retrieved from http://ask.mitadmissions.org/customer/en/portal/articles/1881176-entrepreneurship

MassChallenge. (2015). *MassChallenge.* Retrieved from http://masschallenge.org/

National Content Standards for Entrepreneurship Education. (n.d.) *Importance of Entrepreneurship Education.* Retrieved from http://www.entre-ed.org/Standards_Toolkit/importance.htm

Ouyang, E. (2015). *Harvard Ventures*. Retrieved from http://www.harvardventures.org/

Penn Engineering. (2015). Program Overview. Retrieved from http://www.seas.upenn.edu/entrepreneurship/overview.php

Penn GSE. (2015). M.*S.Ed. in Education Entrepreneurship.* Retrieved from https://www.gse.upenn.edu/tll/ee

Powers, J. B., & McDougall, P. P. (2005). University start-up formation and technology licensing with firms that go public: a resource-based view of academic entrepreneurship. *Journal of Business Venturing, 20(3), 291-311.*

Shane, S. (2010). *If you want to see entrepreneurs, go to China*. Retrieved from http://www.businessweek.com/smallbiz/content/mar2010/sb20100311_996919.htm

Singer, S., Amoró, J., & Moska, D. (2015). *Global Entrepreneurship Monitor 2014 Global Report*. Retrieved from http://www.babson.edu/Academics/centers/blank-center/global-research/gem/Documents/GEM%202014%20Global%20Report.pdf

Stanford University. (n.d.). *Stanford Entrepreneur Network.* Retrieved from https://sen.stanford.edu/

Summer Schools in Europe.eu. (2015). *Innovation and Entrepreneurship in China.* Retrieved from http://www.summerschoolsineurope.eu/course/4275/innovation-and-entrepreneurship-in-europe-and-china

Tencent Holdings Limited. (2015). *Tencent Announces 2014 Fourth Quarter And Annual Results.* Retrieved from http://tencent.com/en-us/content/ir/news/2015/attachments/20150318.pdf

Tsinghua University School of Economics and Management. (2013). *Tsinghua x-lab Launched and 2013 Innovation and Entrepreneurship Forum Held at SEM*. Retrieved from http://www.sem.tsinghua.edu.cn/portalweb/appmanager/portal/semEN?_nfpb=true&_pageLabel=P14072446512678519785 59&u=News1/59759.htm

Tsinghua University School of Economics and Management. (n.d.). *General Information*. Retrieved from http://www.sem.tsinghua.edu.cn/portalweb/appmanager/portal/bspen

Tsinghua University School of Economics and Management. (n.d.). *Program Design and Delivery.* Retrieved from http://www.sem.tsinghua.edu.cn/portalweb/appmanager/portal/ugEN?_nfpb=true&_pageLabel=P140008631301647345531

Tsinghua University School of Economics and Management. (n.d.). *Research Centers*. Retrieved from http://www.sem.tsinghua.edu.cn/portalweb/appmanager/portal/semEN?_nfpb=true&_pageLabel=P140614465126785171 8537

U.S. Small Business Administration. (2015). *Small Business Administration*. Retrieved from https://www.sba.gov/

van der Sijde, P., Ridder, A., Blaauw, G., & Diensberg, C. (2008). Advancing Business Planning: From Planning to Entrepreneurial Learning Teaching Entrepreneurship: Cases for Entrepreneurship and Training

van Stel, A., Carree, M., & Thurik, R. (2005). The effect of entrepreneurial activity on national economic growth. *Small Business Economics, 24(3), 311-321.*

Vesper, K. H. (1993). Entrepreneurship Education

Wang, Q. H., Zhang, Y. P., Qin, F. M., Qiu, Y. H. (2013). 美国创业教育体系构成和支撑分析及其对我国的启示 (translated: Contemplating the Future of Entrepreneurship Education in China from American Experience).

The Wharton School, University of Pennsylvania. (2010). *About Wharton Entrepreneurship*. Retrieved from http://entrepreneurship.wharton.upenn.edu/aboutWe.html

Wong, P. K., Ho, Y. P., & Autio, E. (2005). Entrepreneurship, Innovation and Economic Growth: Evidence from GEM data. *Small Business Economics, 24(3), 335 - 350.*

Worcester Polytechnic Institute. (n.d.). *About WPI.* Retrieved from http://www.wpi.edu/about/index.html

Xie, T. (2015). *China, on its way to innovation*. Retrieved from http://english.gov.cn/policies/policy_watch/2015/05/08/content_281475103653822.htm

Y Combinator. (2015). *Y Combinator*. Retrieved from https://www.ycombinator.com/

Yao, K. (2015). *China says employment resilient despite slower economic growth*. Retrieved from http://www.reuters.com/article/us-china-economy-unemployment-idUSKBN0NF07520150424

Zhejiang School of Management. (2010). *GEP*. Retrieved from http://www.som.zju.edu.cn/en/programs.php?act=gep

Zhejiang University MBA Program Office. (2015). *Overview*. Retrieved from http://mba.zju.edu.cn/gep/about/overview

Zhou, M., & Xu, H. (2012). A review of entrepreneurship education for college students in China. *Administrative Sciences, 2(1), 82-98.*

Appendix A: US Universities in Entrepreneurship Education

Babson College

"Babson College is a private business school located near Wellesley College in the affluent Boston suburb of Wellesley, Massachusetts. All Babson students study business and work towards a Bachelor of Science in Business Administration. The curriculum emphasizes leadership and entrepreneurship skills, and all students receive extensive practical, hands-on training. The college has won numerous national awards for its innovative approach to business education.

First year students at Babson take a year-long course in which student teams develop, launch and liquidate a for-profit business of their own design." (About.com, 2015). Babson is consistently ranked as one of the top schools for entrepreneurship in the US; and is the only institution with a full degree program for entrepreneurship (Chmura, 2015).

The Babson entrepreneurship program is split into three "phases:" (1) the discover phase, (2) the explore phase, (3) and the focus phase.

The discover phase takes place during the first and second year of a student's time at Babson. The discover phase is meant to transition new students into both the environment of college, but also to lay down a strong business minded foundation. All students in the program are enrolled in the Foundations of Management and Entrepreneurship course, which is a yearlong course intended to introduce students to the world of entrepreneurship and business. During this course, the students in the class form teams of up to 10 members and are loaned $3,000 from the college to fund their start-up businesses, with any profits benefitting various charities (Foundations of Management and Entrepreneurship, 2015). Aside from this course, an average student might take: Introduction to Financial Accounting, Quantitative Methods for Business Analytics, Rhetoric, Managerial Accounting, Technology Operations Management, Microeconomics, Business Law, Information Technology, Principles of Marketing, and Principles of Finance. (Babson Undergraduate Curriculum, 2015)

The explore phase takes place during the latter part of second year and during the third year. The explore phase is meant to set a student up for the final phase, the focus phase. Since they now have a base of entrepreneurial and business knowledge, they can begin to pinpoint where within the field they would like to study more or specialize in. A student's schedule during the

explore phase is more open ended than during the discover phase; it includes open class slots for students to take advanced courses in topics they might find to be of interest, as well as more advanced versions of the classes they have been taking up until this phase like Macroeconomics, Strategic Problem Solving, and higher level liberal arts classes.

The final phase is the focus phase, which is generally the student's fourth and final year of school. At this point, the average student's schedule is entirely free for them to pursue high level courses that will help them focus on a specialization that they wish to make a career in.

Entrepreneurship Courses in Babson's Curriculum

Babson's entrepreneurship curriculum is known as one of the best in the nation. Here, we summarize a few of the relevant courses from Babson's entrepreneurship course catalog.

Entrepreneurship and new Ventures in China

The class "Entrepreneurship and New Ventures in China" is a part of Babson's Russia-China program. This course elaborates on China's political situation, culture and social-economic nature. Moreover, it introduces how to locate and shape entrepreneurial opportunities in China. The class examines the rapidly changing economy of China and influential factors on new venture creations. This course accomplishes these goals not only through discussions, readings, and case studies, but also through obtaining direct contact with Chinese entrepreneurs. Students maintain a journal reflecting their visits to entrepreneurial firms throughout the course and analyze their own entrepreneurial capacity in their final paper. Students also work in teams to write a feasibility plan for an entrepreneurial opportunity in China.

Babson Entrepreneurship Development Experience

The course "Babson Entrepreneurship Development Experience" is aimed at students who do not have a new business idea, or those who have an idea but do not have the knowledge necessary to apply the idea to a business. The class teaches students how to identify opportunities and evaluate them. Through lessons in corporate citizenship, the student finds out how their idea could be applied in real-world. Students learn with classroom discussions, meetings with business leaders, and meetings with Babson undergraduate and graduate student mentors.

21st Century Entrepreneurship

This class aims to teach students to analyze the changes in society because of the quickly growing technologies and how to create businesses throughout these changes. Students are

challenged by learning about creating sustainable ventures, and understanding the impact of business on society through case studies that are discussed in the classroom. The final project of the class is one of three things; (1) a presentation on a business plan for a business opportunity, (2) a recommendation of a way to improve the social impact of a company while discussing its advantages and disadvantages, or (3) benchmarking two industry competitors.

Crowdfunding

This class is a hands-on experience for students to plan a crowdfunding campaign. The students work either in groups or as individuals to produce and refine a pitch on opportunity shaping and stakeholder engagement. The class teaches the fundamentals of crowdfunding and ongoing developments in the industry.

Raising Money-VC and Private Equity

The course "Raising Money-VC and Private Equity" concentrates on asset classes available for startups and early stage ventures, and acquisition funding. These assets consist of angel investors, venture capital (VC) funds, family and friends, private equity, and loans. The class is taught from an entrepreneur's perspective, but it also touches on how VC funds are run. The teaching methods used in the class are; case studies, lectures, exercise, presentations and guest speakers to provide an insight on how entrepreneurs think, analyze and act.

Affordable Design and Entrepreneurship

This class can only be taken by juniors or seniors at Babson. Students in this course are required to work in a community that is "out of their comfort-zone." Teams of students travel to sites like India, Ghana, Massachusetts, Mississippi, and Zambia where they gain experience on the culture, map supply chains, perform entrepreneurial experiments and more. They are challenged with complex issues which solutions might change the student's life. Students create new products and social ventures with partners to expand education, improve health or increase income. The course aims give the student the knowledge for evaluating the opportunities regionally.

Venture Growth Strategies

This course concentrates on managing growth in entrepreneurial settings and opportunities. This course focuses more on the management aspect and develops concepts that students may have already learned in other classes at Babson. The methods used in this course are non-traditional, with experiential learning methods in addition to case studies. While students are sometimes expected to study cases involving growth issues, mostly they are expected to learn using an

international simulation exercise called “The Sigma Challenge.” In the Sigma Challenge students start with a “clean state” and program provides them with a dynamic experience. The simulation is played used the classroom during eight of the regular lecture times. While working in teams, students are expected to be able to manage the growth of a multi-product company. The decisions that students make in the simulation involves strategy, marketing, finance, production, technology, R&D, and other related topics. Guest speakers provide insight about management and the challenges in management to the students. (Babson College, 2015).

Massachusetts Institute of Technology (MIT)

“MIT's motto mens et manus (mind and hand) is an integral part of MIT's academic culture and our many entrepreneurship classes. These classes combine theory and practice to give students the opportunity to apply the skills they have learned within the curriculum.” (MIT Admissions, 2015). MIT’s strong footing in entrepreneurship is rooted in its founding. The Institute was founded with a focus on practical education, which emphasis “learning by doing”.

Over the course of the 2013 - 2014 academic year, MIT offered 48 entrepreneurship courses as well as accelerator programs, boot camps and incubators. As of 2006, MIT alumni were operating 25,800 companies, employing 3.3 million people and producing annual revenues of $2 trillion, equivalent to the 11th largest economy in the world.

MIT’s focus on entrepreneurship stems not from an entrepreneurship program, but from several entrepreneurship related resources available to students, which reinforce a culture of “learning by doing.” The Martin Trust Center for MIT Entrepreneurship supports students with an entrepreneurship curriculum, hands on training and guidance as well as with connections to the broader entrepreneurial community. The Technology Licensing Office assists MIT inventors in protecting their technologies and profiting from them. The Deshpande Center for Technological Innovation funds innovation research supports its commercialization. The Venture Mentoring System matches MIT-affiliated persons with talented mentors in relevant industries. The Media Lab entrepreneurship program provides a set of classes that help students leverage Media Lab technologies to create businesses. The Bernard M. Gordon-MIT Engineering Leadership Program helps undergraduate engineering with soft skills such as leadership and effective communication. In the realm of social entrepreneurship, the Legatum Center for Development and Entrepreneurship is a key resource for MIT students. Several other MIT-led organizations also

work actively in the entrepreneurship space, leading to MIT's wondrous results in entrepreneurship. There are also over 20 student led clubs and initiative involved in entrepreneurship and innovation at MIT These include the MIT $100K Entrepreneurship Competition and the MIT Clean Energy Prize business plan competitions and techX, which organizes one of the world's largest student "hackathons" HackMIT as well as the X Fair, which is a student led startup career fair. (MIT Admissions, 2015)

Entrepreneurship Courses in MIT's Curriculum

This section introduces some of the entrepreneurship related courses that MIT offers. They are divided into four categories; (1) Foundation Subjects, (2) Skill Sets, (3) Industry Focus, and (4) Additional Electives (Martin Trust Center for MIT Entrepreneurship, 2015).

Innovation Teams

Students in this course work in teams to develop strategies on how to commercialize their products generated in MIT Laboratories. This class aims to teach the benefits and challenges of technology transfer. Teaching styles used in this course include lectures, guest speakers, and extensive team coaching.

Business Model Innovation: Global Health in Frontier Markets

This class discusses the new approaches to operations, revenue, marketing, finance, and strategy on improving healthcare in Africa, Latin America, and Asia settings. The main course objective is to have the student analyze strategically, learn about design thinking, and system dynamics. Educational goals for the course are achieved by use of case-studies, videos, industry reports, research, and guest speaker.

Energy Ventures

This class provides a project-based approach on how the entrepreneurial concepts can be applied to real life ventures in energy related fields and markets. The lectures taught by the course instructors guide the students throughout their projects.

Seminar in Corporate Entrepreneurship

With the help of outside speakers and guest faculty lectures, this class provides students with knowledge on corporate entrepreneurship. The main topic of the course varies each academic period.

Patents, Copyrights, and the Law of Intellectual Property

This class provides an introduction on US laws related to patents and copyrights. Students are expected to understand patent application and the penalties and remedies for patent infringement.

Stanford University

Stanford University is one of the world's most entrepreneurially minded universities. It's location in the heart of Silicon Valley has put it at the center of the technological revolution. Stanford has a wide variety of entrepreneurial resources to offer. All these exist under an umbrella organization - Stanford Entrepreneurship Network. As such, this is a decentralized body that serves as a hub for all entrepreneurship related courses and organizations at the university.

These entrepreneurship resources lie in the Stanford Graduate School of Business, at the Entrepreneurship Center for Stanford Engineering and in several other university and student run organizations. One of the reasons for Stanford's success in producing entrepreneurial students is the focus on entrepreneurship throughout the school. Every educational department has a related entrepreneurship center or organization, and often more than one. The school offers the Stanford Innovation and Entrepreneurship Certificate, and an MBA in Entrepreneurship. The Stanford MBA in Entrepreneurship is the second ranked Entrepreneurship MBA program in the United States. It also offers countless entrepreneurship courses that emphasize practice, often having students start their own startups during semester and matching them with renowned Silicon Valley entrepreneurs for mentorship and guidance. The Stanford Technology Ventures program offers several such courses, with the foremost being Technology Entrepreneurship Engineering.

On the graduate level, besides the Stanford Innovation and Entrepreneurship Certificate, the Graduate School of Business supports the teaching of entrepreneurship and offers several courses. It offers the Startup Garage, which is an intensive hands-on, project-based course in which students apply the concepts of engineering, finance, business, and organizational skills to design and test real-world business concepts. It also offers a teaching incubator called Stanford Innovation Studio as well as several entrepreneurship case studies of successful companies in various fields.

On the student side, Stanford has twelve student run groups in entrepreneurship. These are largely decentralized and offer specific, unique services. These groups are: Asia-Pacific Student Entrepreneurship Society (ASES), Business Association of Stanford Entrepreneurial Students

(BASES), Graduate School of Business (GSB) Entrepreneur Club, GSB Energy Club, Society for Entrepreneurship in Latin America (SELA), Stanford Energy Club (SEC)

Stanford Law & Technology Association (SLATA), Stanford Social Entrepreneurial Students' Association (SENSA), Stanford Student Space Initiative (Stanford SSI), Stanford Venture Capital Club (SVCC), Stanford Women in Business (SWIB), Stanford Law School Entrepreneurship Club. (Stanford Entrepreneur Network, 2015)

Entrepreneurship Courses in Stanford's Curriculum

Here we discuss some of the entrepreneurship related courses listed in Stanford University's course catalog.

Creating New Ventures in Engineering and Science-based Industries

An entrepreneurship course aimed specifically at science and technology majors, especially those looking to possible create a startup in the chemical, energy, materials, bioengineering, environmental, clean-tech, pharmaceuticals, medical, and biotechnology fields. The course goes into detail about the intricacies of not only starting a business, but starting a business in engineering and technology; fields that are well known for requiring long development times, large investments, integration across many disciplines, intellectual property; all of which can be major hurdles to the uninitiated. Teaching methods includes lecture, case studies, guest speakers, and solo and team projects.

Entrepreneurship in Asian High-Tech Industries

This course looks into the distinctive patterns and challenges of startup business in Asia, with a focus on high technology fields. This course can be retaken as many times as the student wants as it is often updated to fit current market conditions.

Technology Entrepreneurship

An introductory entrepreneurship course. Topics include: how to create a successful startup, what does entrepreneurial leadership in a large firm mean, what makes a true opportunity and how is it different than just an idea, how to form a good team, and how to gather the necessary resources to pursue opportunities. The course focuses on a mentor-guided project, and also gives students the opportunity to network with many Silicon Valley entrepreneurs and venture capitalists.

Harvard University

Harvard University is one of the most entrepreneurial universities in US history. It has a long standing tradition of excellence in entrepreneurship and has produced some of the most influential world leaders and entrepreneurs. Entrepreneurship at Harvard is largely organization-centric at the undergraduate level and is more academic based on the graduate level.

At the undergraduate level, Harvard Ventures is the umbrella entrepreneurship organization for all entrepreneurial activity. Harvard Ventures runs under Harvard Innovation Lab and sponsors undergraduate venture accelerators, a pre-venture accelerator, fireside chats with alumni and entrepreneurs, as well as educational tech talks about the latest technologies used by startups. Harvard Ventures is entirely student run, but it sponsored by several startups and venture capital organizations (Ouyang, 2015). Also, the Technology and Entrepreneurship Center holds an innovation and entrepreneurship effort led by the John A. Paulson School of Engineering and Applied Sciences. The effort entails entrepreneurial elements in academic courses as well as several opportunities for networking, mentorship, and incubation for student entrepreneurs (Harvard John A. Paulson SEAS, 2015).

On the graduate level, Harvard supports entrepreneurship through faculty in the field of entrepreneurial management, an Entrepreneurship MBA, and an Entrepreneurship Club. The Harvard Entrepreneurship MBA has been ranked as the top Entrepreneurship MBA program in the United States. The Harvard Entrepreneurial Management Unit is the academic umbrella organization for these initiatives and it believes in studying entrepreneurship from multiple lenses. The three used here are:

- The process of entrepreneurship - Understanding the processes of entrepreneurial activity in startups and established firms by examining the antecedents and consequences of various forms of entrepreneurial activity by individuals, organizations, and industries.
- The finance of entrepreneurship - Understanding the financing of entrepreneurial ventures by studying the antecedents and consequences of entrepreneurial funding decisions both in the US and abroad.
- The context of entrepreneurship - Understanding the ways in which entrepreneurs both interact with the environment in which they operate, by examining the history of entrepreneurship and the legal and cultural contexts for managerial action.

Finally, the Arthur Rock Center for Entrepreneurship at Harvard Business School facilitates an entrepreneurship MBA. This MBA focuses on building “entrepreneurial managers”, which it defines as people who “transform opportunities into companies and institutions that make a difference in the world” (Harvard Business School, 2015).

Entrepreneurship Courses in Harvard’s Curriculum

This section discusses some of the entrepreneurship related courses in Harvard University and the content of the courses.

Entrepreneurship related courses offered in Harvard Business School but not mentioned here are Big Data and Critical Thinking, Building Life Science Businesses, Business Marketing & Sales, The Coming of Managerial Capitalism: The United States, Entrepreneurial Finance, Entrepreneurship and Global Capitalism, Field Course: Entrepreneurial Sales and Marketing, Field Course: Entrepreneurship through Acquisition, Field Course: i-Lab Design Thinking Projects, Field Course: Product Management 101, Field Course: Product Management 102, Financial Management of Smaller Firms, Founders' Dilemmas, Law, Management and Entrepreneurship, The Online Economy: Strategy and Entrepreneurship, Public Entrepreneurship, and Venture Capital and Private Equity

Entrepreneurial Finance

This course is aimed at students who are eager to get involved with a new venture as a founder, investor, or employee; however, students who are interested in learning about financing early ventures, venture capitals, and finance also take the class. The goal of this class to teach students how to make financial decisions in an entrepreneurial environment. The class is split into five modules, and the teaching in the class is based mainly on case studies.

Entrepreneurship in healthcare IT and Services

This course is for students who wants a career in healthcare IT and services. The educational goals for this class is to teach the healthcare IT and services market to the students, examining numbers of business models in this market and discuss how entrepreneurs make strategic decisions, and to evaluate the funding avenues to new ventures in this market, seeing what resources are available for founders. Class is organized into six modules.

Field Course: Entrepreneurship Laboratory (E-Lab)

This course is a project-based course which is 2.5 hours each week. In this class, students work in groups on a project for a local start-up firm. The purpose of the course is to give students a feel for working in a realistic entrepreneurial environment. Students are expected to know about analyzing target markets, product requirements, and market entry strategy. This class makes the student apply the theoretical knowledge in an entrepreneurial setting.

Launching Technology Ventures

This course is for students who plan to join startups, start their own business, or work in established firms in information technology market. The "Launching Technology Ventures" class emphasizes the strategy issues in information technology market and explores challenges that startup companies might encounter along their way to product delivery into the market. The course aims to teach students by using case studies and panel discussions.

University of Pennsylvania (UPenn)

Entrepreneurship education is adopted seamlessly into UPenn's curriculum. UPenn professors in the liberal arts, engineering and business, seek to involve elements of experiential entrepreneurship education in their courses, providing students with real-world learning outcomes that form an entrepreneurial mindset.

UPenn has a rather structured entrepreneurship education program. While there is no set entrepreneurship major, there are several university initiatives to include entrepreneurial learning in the classroom. On the engineering side, UPenn's School of Engineering and Applied Sciences has the Engineering Entrepreneurship Program. This program is designed specifically for engineers and scientists with a passion for technological innovation and features courses that focus on the roles of inventors and founders in successful high-tech startups. It is intended for students with an interest in technology, as opposed to business management. This ultimately results in an undergraduate Minor in Engineering Entrepreneurship or a graduate Certificate in the same. Each course in this program features a mix of classroom and experiential learning, with the use of classroom lectures, guest speakers, case study discussions and stepwise preparation of high-tech business plans. (Penn Engineering, 2015)

On the business side, UPenn's Wharton School of Business offers an undergraduate specialization in Entrepreneurship and Innovation within the discipline of Management and a more

extensive entrepreneurially focused graduate MBA. At the graduate level, Wharton Entrepreneurship is widely considered one the most influential centers of entrepreneurship in the world. Wharton was the first to develop a fully integrated curriculum of entrepreneurial studies in 1973. Today the Goergen Entrepreneurial Management Program, offering more than 20 courses to some 2,000 students and entrepreneurs, is one of the largest entrepreneurial teaching programs in the world. Other entrepreneurship initiatives include the Sol C. Snider Entrepreneurial Research Center, the world renowned Wharton Business Plan Competition, the Venture Initiative Program, the Wharton Small Business Development Center, and the Entrepreneur in Residence program. (About Wharton Entrepreneurship, 2015)

On the liberal arts side, UPenn's School of Arts and Sciences offers a twelve-week summer course in Arts Entrepreneurship, focused on helping students develop an entrepreneurial mindset with regards to idea generation and implementation using creative thinking, strategic and business planning, financial analysis and raising money (Arts Entrepreneurship, 2015). Further, UPenn's Graduate School of Education has, in 2014, started offering a Master of Science in Education Entrepreneurship degree. This is the first such degree program in the United States and sits at the intersection of education, business and entrepreneurship. It is a thirteen-month program designed for working professionals to help them gain the knowledge and skills necessary to create, fund, and manage innovations in entrepreneurship. (Penn GSE, 2015)

Entrepreneurship Courses in UPenn's Curriculum

At UPenn, through the Wharton School of Business, undergraduate students can specialize in Entrepreneurship & Innovation by taking 4 credit units of courses. This involves one credit course of a Management core course, one credit unit of a foundation course in Entrepreneurship & Innovation, as well as two credit units of elective entrepreneurship courses.

Here we give an overview of some of the courses offered as part of the entrepreneurship curriculum at UPenn.

Entrepreneurship

The purpose of this course is to explore the many dimensions of creating and growing a new venture. It aims to foster innovation and the formation of new businesses. The course addresses the theoretical aspect of starting a new venture as well as the application of writing an actual business plan. This course is very hands on - students develop a comprehensive business

development plan for a particular existing startup. The class is taught via lectures, class discussions and sometimes by guest lecturers as well.

Entrepreneurial Venture Initiation

Students are only allowed to take this course if they already have a well thought out business plan or model that they wish to pursue as a career path. This is the advanced course in entrepreneurship, which builds upon the student's existing business plan and focuses on its implementation as a startup. The class is taught through readings, discussion, and student development of an implementation plan for a real venture.

Venture Capital and Entrepreneurial Management

This course focuses on venture capital management issues in high-growth startup companies. It is motivated by rapid increases in the supply of and demand for private equity over the past two decades. The course addresses issues that relate to the demand for private equity and venture capital from the entrepreneur's perspective on the one hand, and issues that relate to the supply of capital from the investor's perspective on the other. The course also addresses management issues stemming from the VC and the entrepreneur working together once an investment has been made. The course is taught via case studies, class discussions, lectures and guest speakers.

Fundamentals of High-Tech Ventures

This course investigates key entrepreneurial areas of intellectual property, evaluating the market viability of new high-tech ideas, shaping such ideas into the right products or services for the right markets, developing strategies for positioning high-tech products, marketing and operations, acquiring the resources needed to start a new venture, and leadership roles for the founders of high-tech ventures.

High-tech business planning

This course investigates the key elements of planning an entrepreneurial high-tech venture. These include: defining the venture's industry and market, developing strategies for high-tech product positioning, marketing, distribution, sales, operations, management and development, and preparing a financial plan. The course emphasizes effective written and verbal presentation skills.

Worcester Polytechnic Institute (WPI)

Worcester Polytechnic Institute (WPI) is one of the top ranked engineering schools in the United States; it is located in Worcester, Massachusetts. "WPI was founded in 1865 to create and convey the latest science and engineering knowledge in ways that are most beneficial to society. WPI's founding motto of "Theory and Practice" continues to underlie our academic programs. WPI graduates emerge ready to take on critical challenges in science and technology, knowing how their work can impact society and improve the quality of life" (About WPI, 2015). Despite being a technologically geared school, WPI maintains an offering of business and entrepreneurship courses for its undergraduate students, with 5 classes offered in entrepreneurship.

An article on Bloomberg Business online, published in 2013, as part of a series ranking the "Best Undergraduate [Business] B-Schools" in the US which ranks Worcester Polytechnic Institute (WPI) as the number 1 school in the sub-section of Entrepreneurship. The scoring system for the ranking was based on student responses asking them to rank their schools program in each of the sub-categories, from A to F (with A being the best and F being the worst). The average score from the 124 business schools for the Entrepreneurship sub-category polled was a 1.5, and WPI topped this list with a winning score of 1.03. The article highlights WPI's entrepreneurial spirit; the schools mission statement is "Developing innovative and entrepreneurial leaders for a global technological world."

WPI's motto, "Lehr und kundst", which translates from German as "Theory and practice", fits the US's entrepreneurial education mindset. At WPI, there is a focus on combining lectures (theory) with real-world interactions and group projects (practice).

The school also has several resources aside from classes to offer budding entrepreneurs like an Accelerator Fund, Collaborative for Entrepreneurship & Innovation, an Entrepreneur-In-Residence, I&E Advisory Councils, Tech Advisors Network, and Tech Entrepreneurs.

Entrepreneurship Courses in WPI's Curriculum

Here, we summarize two of the relevant courses from WPI's five courses dedicated specifically to entrepreneurship.

Engineering Innovation and Entrepreneurship

An introductory course in the study of entrepreneurship, this course seeks to improve students' skills in "innovation & entrepreneurship (I&E)". This course develops a foundation in

business aspects of engineering disciplines, as well as establishing innovative thinking practices. The course also discusses specific cases where I&E has led to new product innovations and new enterprise development.

Planning and Launching New Ventures

A third year course focusing on moving startup businesses past the planning stage. Students use a previously developed feasibility analysis, and further develop it into a full-fledged business plan. The course also teaches students about seed capital, venture funding, and other means of financing their new business ventures. This course is arguably one of the most important entrepreneurship courses one can take if he/she intends to start a business.

Summary of Entrepreneurship Education at US Universities

Due to vast differences in the entrepreneurship education programs in the five universities introduced above, it is impractical to do a direct comparison of the programs at these schools. Of the five universities, Babson College is the only school that offers an undergraduate degree in entrepreneurship. All other schools offer resources, minors, certificate programs and concentrations in entrepreneurship. Keeping this in mind, we provide a summary of the key factors that lead to the success of each program, in Table 1 below.

Name of University	**Key Factors of Success**
Babson College	• Only undergraduate entrepreneurship major in the United States • Program split into three phases in increasing order of specialization • Students form real startups with $3000 funding from the university; profits go to charity
Massachusetts Institute of Technology (MIT)	• Martin Trust Center for MIT Entrepreneurship offers 48 entrepreneurship courses • Emphasis on learning by doing; results apparent with alumni running 25,800 companies generating $2 trillion in annual revenue • Stellar Technology Transfer Office
Stanford University	• Stanford Entrepreneur Network offers courses, networking, internship and an incubator • Stanford Graduate School of Business runs #2 MBA in Entrepreneurship in the world

	• Entrepreneurship courses/organizations in every educational department
Harvard University	• Arthur Rock Center for Entrepreneurship at Harvard Business School runs #1 MBA in Entrepreneurship in the United States • Philosophy hinges on understanding the process, finance and context of entrepreneurship; focus is to create entrepreneurial managers\ • Entrepreneurship courses/organizations in every educational department
University of Pennsylvania (UPenn)	• Entrepreneurial and experiential elements seamlessly integrated into curriculum • Wharton School of Business at UPenn runs the largest entrepreneurial teaching program in the world • Structured entrepreneurship tracks in engineering, liberal arts and business majors
Worcester Polytechnic Institute (WPI)	• Focus is on developing entrepreneurial leaders in technology • Ranked as "Best Undergraduate B-School" in Entrepreneurship by Bloomberg Business online in 2013

Table 1: Summary of entrepreneurship education programs at US Universities

Appendix B: Chinese Universities in Entrepreneurship Education

Tsinghua University

At Tsinghua University, the School of Economics and Management handles entrepreneurship education, specifically through the Department of Innovation, Entrepreneurship, and Strategy. (Tsinghua University School of Economics and Management, n.d.).

While there is no entrepreneurship major within the School of Economics and Management, students have the option of studying; (1) economics and finance, (2) accounting, (3) information management and information systems. Tsinghua's undergraduate curriculum has two classes that teach entrepreneurship; (1) entrepreneurial management, and (2) elite student's project for entrepreneurship. (Program Design and Delivery, n.d.).

Tsinghua also operates an entrepreneurship channel with a free online entrepreneurship course. The first series of courses includes design ideas, business model innovation and starting up new enterprises, as well as adaptations of a course from the Massachusetts Institute of Technology's Entrepreneurship 101: Who are your clients. Further, in 2014, the Ministry of Education set up its xuetangX.com online education center at Tsinghua University, which has 1.17 million registered users to date. (Luo, 2015)

According to Professor Bill Aulet, the Managing Director of the Martin Trust Center for MIT Entrepreneurship, with MIT's help, Tsinghua is actively adopting MIT's entrepreneurship model. Therein, it is adapting practical, hands-on learning in classrooms, increasing exposure to entrepreneurs and has launched an incubator, x-Lab. The Tsinghua Entrepreneur & Executive Club (TEEC) is a student-run entrepreneurship club at the university. (Tsinghua x-lab Launched and 2013 Innovation and Entrepreneurship Forum Held at SEM, 2015). Tsinghua also holds an Innovation and Entrepreneurship Forum, which is a forum for discussion on advancing entrepreneurship in China.

Entrepreneurship research at Tsinghua is an active field, under the Research Center for Technological Innovation and the National Entrepreneurship Research Center. The latter is a privately funded center that studies practical issues in Chinese policy from a global perspective. (Research Centers, n.d.)

Zhejiang University

Zhejiang University in Hangzhou, China is one of the best schools for entrepreneurship in China. At the undergraduate level, it does not operate an entrepreneurship major, instead offering a management major. At the graduate level, it offers an MBA under the Global Entrepreneurship Program (GEP).

The GEP is a unique program offered on three continents, run by Zhejiang University's School of Management and its partner institutions, Purdue University Krannert School of Management in the US, and EMLYON Business School in Lyon, France. It combines theoretical and practical aspects of entrepreneurial management in a global environment, with students from all over the world. The teaching methods employed are a mixture of case studies, lectures, coaching sessions, group projects, and cultural events. (GEP, 2010) The program's alumni have founded over 15 startups since its founding in 2010 (Zhejiang University MBA Program Office, 2015).

According to a presentation prepared by Zheng Gang, a professor of entrepreneurship at Zhejiang University, showed to us by our sponsor company Bster, **en**trepreneurship is weaved into the school's curriculum. Small class sizes of fourteen to twenty students combined with vast facilities facilitate an environment of experiential learning through real-world like experiences. Guest speakers are plentiful, and the school also runs a Venture Lab modeled after the pre-venture accelerator at Stanford University.

Fudan University

Fudan University is one of the first recipients of funds from the Shanghai Technology Entrepreneurship Foundation for Graduates. The school established the Fudan University Student Entrepreneurship Center, which provides student entrepreneurs who win the relevant scholarship, with office space and equipment, human resources, secretarial services, entrepreneurial guidance and consultation, help with paperwork, and information about related finance and tax policies. The Entrepreneurship Center also helps startups attend various forums and exhibitions and sponsors the popular "Jujin Cup" entrepreneurship competition (Industrialization, 2014). The university also runs the Fudan University Center for Entrepreneurship & Venture Capital Research (Fudan University School of Management, n.d.). According to our sponsor company, Bster, Fudan University also runs the University Students Venture Park incubator that helps student entrepreneurs develop and grow their ventures.

Fudan University teaches a course called, “Innovation and Entrepreneurship in Europe and China.” This course is part of the China Europe International Summer School (CEISS), which is a collaboration between Fudan University (China), Utrecht University (Netherlands), Freie Universität Berlin (Germany), LUISS School of Business (Italy), Università Cattolica del Sacro Cuore (Italy), University of Copenhagen (Denmark) and Edvance Education International (China). It consists of the courses, Politics, Government and Social Change in China, and Law and Economics: Competition and Market Regulation in Europe and China (Summer Schools in Europe.eu, 2015).

Hangzhou Dianzi University

According to Professor Yunhong Shen, a professor of entrepreneurship at Hangzhou Dianzi University (HDU), there are several business majors at HD. They are: Marketing, Business Administration, Human Resources, E-Commerce, Management in Science and Technology, Logistics, Industrial Engineering, Sino-German Industrial Engineering, and International Trade. There is no entrepreneurship major, but there are undergraduate entrepreneurship classes, an MBA class in entrepreneurship, and an entrepreneurship class for foreign students. The undergraduate entrepreneurship classes use business simulations, case study discussions and the teaching of entrepreneurship theory. The MBA class and the class for foreign students employ business plan and case study discussions.

Summary of Entrepreneurship Education at Chinese Universities

Due to vast differences in the entrepreneurship education programs in the five universities introduced above, it is impractical to do a direct comparison of the programs at these schools. Of the five universities, Babson College is the only school that offers an undergraduate degree in entrepreneurship. All other schools offer resources, minors, certificate programs and concentrations in entrepreneurship. Keeping this in mind, we provide a summary of the key factors that lead to the success of each program, in Table 2 below.

Name of University	Key Factors of Success
Tsinghua University	• Adopting MIT's entrepreneurship model • Department of Innovation, Entrepreneurship and Strategy • Two entrepreneurship courses: (1) entrepreneurial management, and (2) elite student's project for entrepreneurship. • Incubator – x-Lab
Zhejiang University	• Undergraduate level: management major with entrepreneurship classes • Graduate level: MBA as part of the Global Entrepreneurship Program • Focus on experiential learning • Small class sizes, entrepreneurship weaved into general curriculum • Venture Lab modeled after pre-venture accelerator at Stanford University
Fudan University	• Incubators - Fudan University Student Entrepreneurship Center, University Students Venture Park • Fudan University Center for Entrepreneurship & Venture Capital Research • Entrepreneurship course taught with other universities - Innovation and Entrepreneurship in Europe and China
Hangzhou Dianzi University	• Undergraduate entrepreneurship classes • Teaching methods include business simulations, case study and business plan discussions, and teaching of entrepreneurship theory, at various class levels.

Table 2: Summary of entrepreneurship education programs at Chinese Universities

Appendix C: Non-University Resources in the US

A business incubator is a support system for a project or a startup. There are several organizations that conduct business incubation services in so-called business incubators or accelerators. They provide support such as physical space (which is a big issue for early ventures), capital, coaching, common services and networking opportunities (Entrepreneur Staff, 2015). These are resources that all good businesses need. We concentrate on two foundations, Ewing Marion Kauffman Foundation and The Coleman Foundation as well as the resources, Y Combinator, MassChallenge, and US Small Business Administration (SBA).

Ewing Marion Kauffman Foundation

Ewing Marion Kauffman created his eponymous foundation in the mid-1960s in Kansas City, Missouri. It is one of the largest private foundation in the US with $2 billion assets. Ewing Marion Kauffman said, “All of the money in the world cannot solve problems unless we work together. And if we work together, there is no problem in the world that can stop us, as we seek to develop people to their highest potential.” This statement directly reflects the mindset and the goals of the foundation. Kauffman Foundation serves not only as a business incubator, but also organizes business competitions, and hosts talks and educational programs. The foundation operates three signature entrepreneurship education programs: Kauffman Founders School, Kauffman FasTrac, and 1 Million Cups. Kauffman Founders School is an online entrepreneurship education platform. Kauffman FasTrac is a global provider of entrepreneurship education skills, resources and networks crucial to starting and growing successful business ventures. It operates as a community of peers directed by experiences, dedicated mentors. Classmates support and encourage each other to purse their startups or strategic business ideas. 1 Million Cups is a global, weekly program aimed at engaging entrepreneurs in their local communities. Each week, the program offers two local entrepreneurs the opportunity to present their startups in a six-minute educational pitch to a diverse audience of mentors, advisors and entrepreneurs. The group then engages in twenty minutes of feedback aimed at helping the entrepreneurs advance their businesses. The foundation also sponsors a plethora of other events aimed at advancing entrepreneurship, such as a pitch competition and the Ernst & Young Entrepreneur of the Year award. (Ewing Marion Kauffman Foundation, 2015)

The Coleman Foundation

The Coleman Foundation is a private foundation that was founded in 1981. They implemented programs on cancer care, developmental disabilities and entrepreneurship education. From the start, the foundation has focused on questions such as job creation and accessibility. As a proponent of self-employment, the foundation supports the awareness and promotion of entrepreneurship. Initially, the foundation established a series of Coleman Chairs and Professorships in Entrepreneurship at various colleges and universities, in order to promote and further develop and legitimize entrepreneurship as an academic subject. The foundation soon grew to fostering entrepreneurial activity and experiential teaching with an aim of providing nascent entrepreneurship with the relevant skills and experience needed to succeed. In 2015, the Coleman Foundation awarded grants to various organizations relevant to entrepreneurship education. These included the higher education institutions California State University – Fresno, DePaul University and North Central College, and the foundations Chicago Artists' Coalition, District 214 Education Foundation, and the Township High School District 211 Foundation in Palantine, Illinois. (The Coleman Foundation, 2015)

Y Combinator

Y Combinator is arguably the world's most successful startup accelerator. Based in Mountain View, CA, Y Combinator provides seed money, advice, and connections to startups in exchange for 7% equity in the startups. It also maintains an extensive "Startup Library" of resources for startups. Twice a year, startups apply to Y Combinator's three month sessions and move to Mountain View, CA for those three-months. As of the winter of 2015, Y Combinator has invested in 940 companies which a combined market capitalization of over $65 billion, including such success as Reddit, Dropbox, Stripe, Weebly and Instacart. Y Combinator is often called a "boot camp for startups" and is often touted by founders as the most hands-on educational experience of their lives. It is also widely recognized as "the most prestigious program for budding digital entrepreneurs."

The program consists of weekly dinners and office hours where founders meet with Y Combinator partners for advice and guidance. The focus of the program is for founders to work intensively on further developing their product, team, and market, refining their product/market fit, and scaling their startup into a high growth business. At the end of the three month incubation

period, startups present their business to a select audience as part of Demo Day (Y Combinator, 2015).

MassChallenge

MassChallenge is the world's largest startup accelerator (by number of startups incubated) and is the first to support high-impact, early stage startups without taking any equity. It aims to promote innovation, collaboration and commercialization of ideas as well as to empower novice entrepreneurs through educational opportunities relevant to entrepreneurship.

MassChallenge operates as a non-profit and selects 128 startups annually, for its four-month accelerator program. The program provides founders with access to mentors, marketing and media resources, funding opportunities, and free office space in its location on the Boston Harbor. At the end of the four-month period, MassChallenge awards $1 million grants to the program's top companies. MassChallenge's 617 alumni have collectively raised over $943 million in outside funding, generated $495 million in revenue and created 5,105 jobs, which speaks to the widespread impact of the program. Some of the most successful MassChallenge alumni include Ministry of Supply, Moneythink, Her Campus, RelayRides and RallyPoint (MassChallenge, 2015).

US Small Business Administration (SBA)

The Small Business Administration (SBA) is a United States government agency that provides support to entrepreneurs and small business owners. The agency summarizes these activities as the "3 Cs" of capital, contracts, and counseling.

In terms of capital, the SBA partners with banks, credit unions, and other lenders to provide loans. The SBA helps lead the federal government's efforts to deliver 23 percent of prime federal contracts to small businesses. Furthermore, the agency provides grants to support counseling partners including approximately 900 Small Business Development Centers, 110 Women's Business Centers, and 350 chapters of SCORE, a volunteer mentor corps of retired and experiences business leaders. These counseling centers provide services to over 1 million entrepreneurs and small business owners annually. On its website, the SBA also maintains an extensive resource repository for entrepreneurs, related to all aspects of starting, growing and sustaining a business (Small Business Administration, 2015).

The SBA thus supports the creation of thousands of jobs in the country and helps budding entrepreneurs succeed. In recognition of the SBA's efforts, President Obama, in January 2012, announced that he would elevate the agency to the Cabinet of the US.

Appendix D: Business Simulations

Business simulations are used for business training, education or analysis. They can be scenario-based or numeric-based and are usually in the form of interactive single or multi-player games. Most business simulations are used to train people in business thinking, finance, and entrepreneurship. Some of the objectives of using business simulations are strategic thinking, decision making, idea generation, problem solving, financial analysis, market analysis, operations, teamwork, and leadership.

Business simulations are most often preferred by entrepreneurship educators in the US because they provide real-world problem solving skills through a fun and engaging learning experience. They provide a taste of the real world while not exposing students to the many risks that exist. Figure 2 shows the flow of actions in most common business simulations.

The most common aggregator for business simulations is the Harvard Business Publishing for Educators website. This website is the seminal resource for anyone looking to use a business simulation as it provides a list of top rated business simulations often created by business educators, and sorted by rating. The website provides simulations sorted by category. The categories are Entrepreneurship, Finance, Marketing, Operations Management, Negotiation, Organizational Behavior, and Strategy. There are several companies that make business simulation software today, and most of them are small startups such as Cesim and Celemi.

Professors have their opinions on using business simulations in their classes. While some professors espouse the practicality of business simulations, some others stay away from such software as they do not believe in the simulations' ability to emulate the real world in the fields they service. There are largely two types of business simulation software, one-time simulations that last an hour or two, or longer semester long simulations that are more complex but tend to get confusing. Professors increasingly tend to prefer the shorter one-time simulations as they provide students with instant feedback and insight and are an appropriate aid to the fast paced curriculums that many schools adopt today.

US Business Simulations

Entrepreneurship Education: The Startup Game

The Startup Game made by The Wharton School, University of Pennsylvania, is a highly popular simulation of startup companies, used in several schools around the country. In the simulation, students have a variety of roles, some of the students are cast as founders, investors, and employees. Every student has a realistic goal that they aim to achieve during the game; for example, if their role is described as "employee, good at marketing," that students should seek a founder who is looking to fill marketing roles. Founders need to concentrate on the others' professional goals or others' salary requirements when hiring them, while investors need to spend their money wisely to become successful.

"The Startup Game" aims for a chaotic environment that accurately mirrors the real world. Students are encouraged to create their strategies to achieve success. Moreover, this simulation is a competitive one; students get ranked on how they do in the game. It gets determined by different measures. (Entrepreneurship Simulation: The Startup Game, 2015)

Working Capital Simulation: Managing Growth V2

The Working Capital Simulation was created by Professor Sandeep Dahiya of Georgetown University and is one of the top entrepreneurship related simulations on the Harvard Business Publishing website. This is a more traditional finance related simulation as compared to "The Startup Game" but is just as useful in entrepreneurship education due to its learning outcomes of understanding cash-flow needs and strategic growth opportunities in a venture.

This simulation has a single user that acts as the CEO of a small company working in three phases over ten simulated years, deciding on growth and investment opportunities in each phase. These opportunities include taking on new customers, moving inventory quicker, capitalizing on supplied discounts and such. Students must evaluate the impact of each decision as it will determine the outcome of the game. Students learn to analyze traditional accounting sheets such as the income statement, balance sheet, and statement of cash flows. Each of these is interconnected and has effects on the firm's financial position. The company operates much like real world new ventures, with a thin margin, and limited cash-flow and credit. The course aims to teach students about growth and cash scarcity in a new firm while seeking opportunities to maximize the firm's growth opportunities. (Working Capital Simulation: Managing Growth V2, 2015)

Chinese Business Simulations

Bster Business Simulations

Our sponsor company, Hangzhou Bster Sci & Tech Co. Ltd., which makes the Bster line of business simulations, is one of China's leading producers of business simulation software. According to the company, Bster simulations are used in over 600 universities and are offered in a variety of topics such as business management, accounting, finance, marketing and entrepreneurship. They are all in the form of games and the gameplay is similar to that of the American business simulation, the Startup Game. The simulations are multiplayer, group based games where groups are formed with three to five students who band together to assume roles in an organization or department. As evidenced by our interview with Professor Yunhong Shen at Hangzhou Dianzi University, Bster's simulations are much better than those of the competition and are continuously updated to include new developments in the business world (Shen, Y., personal communication, 2015).

Appendix E: Interview Questions by Topic

Interviewee	Title/Qualification	Interview Date	Team Members Present
Francis Hoy	WPI Robert A Foisie School of Business, Director of Collaborative for Entrepreneurship & Innovation, Paul R. Beswick Professor of Innovation and Entrepreneurship	2015 Sep 23rd	All
Karla Mendoza-Abarca	WPI Robert A. Foisie School of Business, Assistant Professor	2015 Sep 30th	All
Gina Betti	WPI Robert A. Foisie School of Business, Associate Director of Collaborative for Entrepreneurship & Innovation	2015 Oct 8th	Jonathan
Raymond Liu	University of Massachusetts Boston College of Management, Professor of Marketing, runs the "Entrepreneurship in the U.S. and China" Program	2015 Oct 8th (via Email)	---
Hansong Pu	Hangzhou Dianzi University School of Management, Professor of Entrepeneurship and Finance, WPI Foisie School of Business Professor of Finance	2015 Oct 12th	All
Bill Aulet	Managing Director, Martin Trust Center for MIT Entrepreneurship, MIT Sloan School of Management	2015 Oct 20th (via Email)	---
Yunhong Shen	Professor of Management and Entrepreneurship, Hangzhou Dianzi University	2015 Oct 28th	Rachael Himanshu Batu
Richard Dasher	Consulting Professor of Technology Management and Japanese Business, Director – US-Asia Technology Management Center	2015 Nov 12th (via Email)	---
Jeff Huang	Founder and CEO – Hangzhou Bster Sci&Tech Co. Ltd.	2015 Nov 18th	Batu Himanshu Jonny

Table 3: Interview Information

Course provisions of entrepreneurship education

1. Do you prefer more lecture/theory based entrepreneurship education? Or do you prefer more hands on/practical based entrepreneurship education?
    a. Karla Mendoza-Abarca
    b. Gina Betti

    c. Raymond Liu
    d. Hansong Pu
    e. Bill Aulet
    f. Yunhong Shen
    g. Richard Dasher
2. How do you think entrepreneurship education differs between the US and China?
    a. Francis Hoy
    b. Gina Betti
    c. Raymond Liu
    d. Hansong Pu
    e. Bill Aulet
    f. Yunhong Shen
    g. Richard Dasher
    h. Jeff Huang
3. Can you tell us a bit about the entrepreneurship education programs and courses specific to HDU and in China as a whole?
    a. Hansong Pu
    b. Yunhong Shen

Application of Modern Teaching Tools

1. What is your opinion on using a business simulation in entrepreneurship courses? Do you use one?
    a. Francis Hoy
    b. Karla Mendoza-Abarca
    c. Gina Betti
    d. Raymond Liu
    e. Hansong Pu
    f. Bill Aulet
    g. Yunhong Shen
    h. Richard Dasher
2. Can you explain to us what a business simulation is and how it works?
    a. Karla Mendoza-Abarca
3. How did you decide to use a business simulation?
    a. Karla Mendoza-Abarca
4. What business simulation(s) do you teach with, and how did you decide which to use? Why?
    a. Karla Mendoza-Abarca
    b. Yunhong Shen

Incubation of student entrepreneur projects

1. What do you think of the effectiveness of incubators in the US and in China?
    a. Francis Hoy
    b. Hansong Pu
    c. Bill Aulet
    d. Richard Dasher

Evaluation of Effectiveness of Entrepreneurship Education

1. What do you think of the effectiveness of entrepreneurship education; economic and otherwise?
    a. Hansong Pu
    b. Jeff Huang
2. Do you think Entrepreneurship can be taught? Why/why not?
    a. Francis Hoy
    b. Gina Betti
    c. Raymond Liu
    d. Hansong Pu
    e. Bill Aulet
    f. Yunhong Shen
    g. Richard Dasher
    h. Jeff Huang
3. Where do you think the future of entrepreneurship education lies in the US and in China?
    a. Raymond Liu
    b. Hansong Pu
    c. Yunhong Shen
    d. Richard Dasher
    e. Jeff Huang

Appendix F: Interview Questions and Answers by Interviewee

Francis Hoy

Disclaimer: *This is not an exact transcript of the conducted interview. These responses were written up, after the fact, by the authors of this paper. The responses are, to the best of the authors' knowledge, accurate to the intent of the interview subject. The responses for this interview have been recorded in the third person.*

Q: Do you prefer more lecture/theory based entrepreneurship education? Or do you prefer more hands on/practical based entrepreneurship education?

A: Lectures are good, they are the backbone of modern education, but hands on experience is very important and useful. In class exercises, involving students in discussions on case studies, etc.

Q: How do you think entrepreneurship education differs between the US and China?

A: There are many similarities; most of the textbooks they use are translation from the English original copies. Very lecture oriented, no projects, no hands on experience, and no questions being asked (by students or professors). Stated that there was a study done that lecturing is the least effective form of teaching the US.

Q: What is your opinion on using a business simulation in entrepreneurship courses? Do you use one?

A: No, doesn't currently use one because he tried them back when they were new and he felt they were clearly a "game" rather than a situation and that students weren't really gaining anything from it, especially since they were rather expensive. Even though he does not currently use business simulations in his class, he is willing to consider trying them out again.

Q: What do you think of the effectiveness of incubators in the US and in China?

A: There are different forms, like a true incubator versus what is known as an accelerator. Believes that they do good work, offering many great resources like guidance and advice, as well as work space and in some cases startup money. Doesn't know much about the situation of incubators in China.

Q: Do you think entrepreneurship can be taught? Why/why not?

A: Yes and no. There are certainly people who are born to become talented entrepreneurs, while other people can definitely learn the necessary things to become a successful entrepreneurship. Peter Drucker wrote the seminal work for the teaching of entrepreneurship, set the precedent for education in the field. He says that you don't have to make every mistake for yourself if it had been made before and you can learn from it. Regardless of if you are born "talented" or not, Professor Hoy believes that everyone needs to find a source of knowledge and experience at some point whether it be formal like a professor, or informally like a mentor.

Karla Mendoza-Abarca

Disclaimer: *This is not an exact transcript of the conducted interview. These responses were written up, after the fact, by the authors of this paper. The responses are, to the best of the authors' knowledge, accurate to the intent of the interview subject. The responses for this interview have been recorded in the third person.*

Q: Do you prefer more lecture/theory based entrepreneurship education? Or do you prefer more hands on/practical based entrepreneurship education?

A: She dislikes the "long lecture" style teaching and likes to break it up as much as possible with more interesting activities. She thinks that students lose interest and remember less when only given lectures as compared to other hands-on activities. She previously taught at Keene State University and their business program has a very "real" experience feel, which she loved.

Q: Can you explain to us what a business simulation is and how it works?

A: She said there are a few different types, not just entrepreneurial. There are a few different size/time business simulations as well; she uses a one-time-use simulation, but others can be longer (up to a semester long). She was also rather adamant that the free simulations were not as good or accurate as the paid ones.

Q: What is your opinion on using a business simulation in entrepreneurship courses? Do you use one?

A: She thinks they are great, especially for schools (or individuals) without a lot of money and resources to put into their entrepreneurship program. The entrepreneurship simulation she uses does a great job of breaking up the "long lectures," and motivates students with its competition aspect to learn/gain the entrepreneurial mindset.

Q: How did you decide to use a business simulation?

A: She was reading on the Harvard Business School Press and stumbled onto the Simulations page, which lists some great simulations. She had used/seen business simulations used before, but was less familiar with using them to teach entrepreneurship. After doing further research she decided that the simulation would be worth trying, and soon adopted it entirely.

Q: What business simulation(s) do you teach with, and how did you decide which to use? Why?

A: Looking at the two simulations listed on the Harvard Business School Press, Simulations page, she decided to use the one called "The Startup Game." She prefers using this simulation because it is simple and short (an hour or so), which goes well with WPI's course schedule and is very flexible.

Gina Betti

Disclaimer: *This is not an exact transcript of the conducted interview. These responses were written up, after the fact, by the authors of this paper. The responses are, to the best of the authors' knowledge, accurate to the intent of the interview subject.*

Q: Do you prefer more lecture/theory based entrepreneurship education? Or do you prefer more hands on/practical based entrepreneurship education?

A: Pure lecturing is simply not enough for entrepreneurship education. Experiential learning is hyper-critical to one's learning and practicing of entrepreneurship. Nothing can replace the experience gained from a real-world interaction with someone.

Q: What is your opinion on using a business simulation in entrepreneurship courses? Do you use one?

A: They are okay for training purposes, but they don't really offer as much engagement as a live interaction. Interviewing customers and competitors is a much better usage of time and resources. Business simulations can be used as a substitute for these interactions when they are not available, but nothing can replace real-world interactions. Simulations are essentially an extension of book learning, more of a "dynamic" book, but at the end of the day it is still a "static" teaching method

because there are limitations built into the programming. No real randomness in the simulations, not good for stimulating creativity.

Q: How do you think entrepreneurship education differs between the US and China?

A: It's all based on cultural differences. In the US, it is okay within society for people to fail. For people to try out a business idea and have it not work out without their whole life being ruined - failure is almost expected in American culture. This isn't so much the case in China. There is a massive fear of failure, with people who fail being shunned. The government is killing innovation in China. They control the media, which is what sets/controls societies standards and ideas, which is what is feeding this fear-averse society. China, as a whole, is very resistant to change; and if they want to produce better entrepreneurs, they need to adopt a new attitude about failure.

Q: Do you think entrepreneurship can be taught? Why/why not?

A: Entrepreneurship is a behavioral trait, and it doesn't necessarily matter how you get around to learning that behavior; if you're born with it, or if you learn it. Regardless, gaining experience and practice is the most important thing you can do.

Raymond Liu

Disclaimer: *These questions were asked briefly over email, and these are the exact answers that the interview subject gave us in a return email. The responses are, to the best of the authors' knowledge, accurate to the intent of the interview subject.*

Q: How do you think entrepreneurship education differs between the US and China?

A: Yes. Most of the theories in entrepreneurship education are the same, the differences mainly come from the cultures, government policies, and the business environment.

Q: Do you prefer more lecture/theory based entrepreneurship education or more hands on/practical based entrepreneurship education?

A: Both of them are needed.

Q: What are your opinions on using business simulations to teach entrepreneurship? Have you/do you use them in your classes?

A: It might be useful to try it. I have never used it and did not see any good ones out there.

Q: What do you think of the effectiveness of entrepreneurship education in Chinese universities?

A: Some Chinese universities provide very good programs, such as Zhejiang University in Hangzhou.

Q: Do you think entrepreneurship can be taught? Why/why not and to what extent?

A: Yes, it is the same as business in general. Although people can learn it by doing, it is helpful and more efficient to learn from schools. However, no matter how much you understand the theory, it is up to how you implement the theory in your practice.

Q: Where do you think the future of entrepreneurship education lies (in the US and in China)?

A:

1) Entrepreneurship education is a comprehensive area with many different disciplines.
2) In the future, entrepreneurship education will embrace many disciplines in business education as well as in other areas.
3) Entrepreneurship education will embrace business practice as an important component (since implementation is a key for it).
4) Entrepreneurship education will add more and more digital technology (i.e., Internet technology, social media, etc.) in it.
5) Entrepreneurship education will become more global oriented.

Hansong Pu

Disclaimer: *These questions were asked briefly over email, and these are the exact answers that the interview subject gave us in a return email. The responses are, to the best of the authors' knowledge, accurate to the intent of the interview subject.*

Q: How do you think entrepreneurship education differs between the US and China?

A: In everything in China, the government plays a big role. In the US non-governmental orgs have a lot of pull, especially in business. MassChallenge, the Venture Forum and other such entrepreneurially focused organization are not under the government and are initiated by students, professionals, and entrepreneurs. In China, many activities and organizations are either directly part of government or a government department. Central and local governments play much bigger roles in entrepreneurship in China.

Q: Do you prefer more lecture/theory based entrepreneurship education or more hands on/practical based entrepreneurship education?

A: I teach small business management at HDU, using Frank Hoy's textbook. I teach international students from Europe, Central Asia and Africa, using case studies and team discussions. American students are more used to this form of teaching but foreign students are not. American students are more proactive and energetic, and need hands on learning. Students in China not as selective or proactive.

The level of discussion and self-study at HDU is not as high as at WPI. I also teach a MBA class in corporate finance. I face a similar problem there because I teach working professionals and have to teach the entire course in two weekends. So, students have no time to meet during the week and do assignments. In such a case, team work actually slows down the pace of the class so I don't do it very much.

Q: What are your opinions on using business simulations to teach entrepreneurship? Have you/do you use them in your classes?

I have not used them. Professor Shen from HDU has used them though. I don't use them because I teach international students in English while simulations in China are in Mandarin.

Q: What do you think of the effectiveness of entrepreneurship education in Chinese universities?

A; I think entrepreneurship education is always beneficial, even when using a more traditional approach, as in China It is very useful to learn about entrepreneurship, even to hear about. Entrepreneurship has a bright future in China and I believe it is better than a salaried job. In China, there is still mindset that a salaried job at a big company is better than being an entrepreneur or working at a small company like a startup. HDU actually publishes a list of students who get jobs at large corporations. But people working at startups are not shown this reverence. There is inherently a bias against them in Chinese society. So when professors teach the importance of startups and small businesses, it very important as it helps students change their mindset towards entrepreneurship.

Q: What are your thoughts on HDU being called "The Cradle of Entrepreneurs"?

A: Jack Ma worked as an English professor at HDU before starting Alibaba. I don't know a lot of actual students who have become successful student entrepreneurs. However, Hangzhou is in Zhejiang province, which is the home province of Chinese entrepreneurs. Of the top 500 privately owned businesses, many are in Zhejiang province. Most of these entrepreneurs in their 50s and 60s. They were not educated in universities and were farmers, villagers and laborers before they started their own businesses. In the past 20 years, the economy has been driven by small and family owned businesses, in Zhejiang province, unlike Shanghai, where the economy is driven by international and state owned companies as well as financial firms. Entrepreneurship is very important for the Zhejiang province economy but whether college education system has something to do with it is not known at this point. A lot of these business were preliminary businesses for the development of the region. For example, someone I know started a seat belt manufacturing company.

Q: Do you think Entrepreneurship can be taught? Why/why not and to what extent?

A: Yes, I believe it can. I believe we can teach some of the skills, some of the concepts, and some of the mindset. In China, it is important to change the mindset from getting a salaried job to starting your own business. This is the biggest impact of entrepreneurship education, in my opinion, especially in China. However, I'm not sure if teaching entrepreneurship makes very successful entrepreneurs. To be a successful entrepreneur, you have to learn a lot from the real-world and from your experiences.

Q: Where do you think the future of entrepreneurship education lies (in the US and in China)?

A: I believe in small businesses and entrepreneurship as the best part of an economy. Everyone is motivated and energized to a common goal. I don't like bureaucracy in large businesses and the political games that come with it. I wish small businesses play greater role in the economy in the future. Widespread entrepreneurship will create a new generation with a new mindset, which will create a positive feedback loop resulting in more entrepreneurs. Education will stimulate this growth of entrepreneurship. Twenty years ago, entrepreneurship education was largely ignored in the US but today, everyone is teaching it. In HDU, it started 2 years ago, and it started 5 to 6 years

ago at the earlier, in Greater China. The change of mindset in China is occurring now, but it faces problems like lack of experienced professors.

Q: How effective are incubators in the US and in China (in the short term and in the long term)?

A: Incubators in China are largely government supported. The city government gives land to some department of the government and that department uses it to build an office building, and then gives startups office space. These "so called incubators" are very different from the ones in the US where they are private. I am suspicious of government sponsored incubators. Fundamentally, entrepreneurship is a very capitalist thing, emphasizes individual's motivation, curiosity, persistence, innovation and teamwork skills. Entrepreneurship is not something the government picks up. For example, when you go to Hangzhou, talk to students about startup competitions. Those teams are organized just for the competition. They are not inventors or founders, but are more like presenters. I'm worried that in China, entrepreneurship in universities is not real, and is very often fake. This is not something like the Venture Forum where a startup is pitching because it has a project or product. In China, college entrepreneurship is usually not real, and only for the competition and for resume building. Real entrepreneurship in China is seen in the small businesses building and selling products.

Q: Can you tell us a bit about the entrepreneurship education programs and courses specific to HDU and in China as a whole?

A: The entrepreneurship program at HDU was started one year ago by Professor Shen. Entrepreneurship has two parts at HDU. The first is the entrepreneurship course taught by Professor Shen and the second are the startup and innovation competitions, not only within HDU, but also at provincial, national, and international levels. Some professors at HDU mentor and advise teams for such competitions.

Many colleges in China offer entrepreneurship courses. Some of them started 5 or 6 years ago, but most started 1 or 2 years ago, and have rapidly expanded. More college graduates are now starting businesses out of college instead of finding salaried jobs. This is still a small number, but now we can hear and see them, which was not the case earlier.

Bill Aulet

Disclaimer: *These questions were asked briefly over email, and these are the exact answers that the interview subject gave us in a return email. The responses are, to the best of the authors' knowledge, accurate to the intent of the interview subject.*

Q: Do you prefer more lecture/theory based entrepreneurship education or a more hands on/practical approach?

A: The key is balance. There should be some of both. That being said, in the balance, I prefer more of the hands on/practical approach than the theory.

Q: How do you think entrepreneurship education differs between the US and China?

A: Very difficult question to answer as the education varies wildly in both countries. In general, I would say that US entrepreneurship education is more interactive and more practically focused. But what gap there is, is closing as I saw last week when I spoke with the dean from Tsinghua University and they are copying much of the MIT methodology.

Q: Have you ever used a business simulation in your teaching? Why/why not?

A: I have not but would like to. I have not found a good one to use yet but hope to find one soon.

Q: Do you think entrepreneurship can be taught? Why/why not?

A: Yes. The data shows the more times you are an entrepreneur (e.g., serial entrepreneurs), the higher your odds of success. So the question is not whether entrepreneurship can be learned (i.e., taught), it is rather how to teach entrepreneurship.

Q: What do you think are the effects of incubators in the US and in China?

A: Incubators have positive aspects and negative aspects. These should be recognized and they should be part of a broad ecosystem design. See my article in TechCrunch "Avoid Stagnation: How Acceleration Trumps Incubation" by Bill Aulet for more detail.

Yunhong Shen

Disclaimer: *This is not an exact transcript of the conducted interview. These responses were written up, after the fact, by the authors of this paper. The responses are, to the best of the authors' knowledge, accurate to the intent of the interview subject. The responses for this interview have been recorded in the third person.*

Q: What are the majors at Hangzhou Dianzi University? Is there an Entrepreneurship major?

A: There are several business majors here, they are: Marketing, Business Administration, Human Resources, E-Commerce, Management in Science and Technology, Logistics, Industrial Engineering, Sino-German Industrial Engineering, and International Trade. There is no Entrepreneurship major. There are undergraduate entrepreneurship classes, an MBA class in entrepreneurship, and a class for foreigners that I teach.

Q: Do you prefer more lecture/theory based entrepreneurship education? Or do you prefer more hands on/practical based entrepreneurship education? What is your opinion on using a business simulation in entrepreneurship courses? Do you use one?

A: I teach working, part-time MBA students on weekends. For them, cases studies are the most important. Business simulations can only be used in a lab and they don't have access to that. Moreover, they have limited time and want to grasp as much theory and information as they can. They are already working and have a lot of the real-world experience that business simulations try to replicate.

For the foreign students of entrepreneurial management that I teach, business plans are the most important. This is a practical way of learning. Students are divided into groups and the group self-chooses ideas from team input. They do a feasibility study, marketing, strategy, human resources and other relevant aspects of this business plan.

For the undergraduates that I teach, business simulations are necessary. This is a marketing course. There are other business and entrepreneurship professors that use business simulations as the core of their course. They use a business simulation by Bster.

Q: Can you tell us a bit about the Entrepreneurship Education programs and courses specific to HDU and in China as a whole?

A: Entrepreneurship education is not as popular in China as it is in the US. Northwest Industrial University started the first course in 2000. Then the government began a pilot scheme with nine

universities in 2001. In 2013, the Educational Bureau mandated that all universities are required to have their own entrepreneurship courses.

Q: Do you think Entrepreneurship can be taught? Why/why not?

A: There are different kinds of universities in China. There are top level "universities", second level "colleges", and finally, vocational schools. A lot of these vocational schools are good, and I believe entrepreneurship can really be taught at these, because theory is not as important and practice is most important. Educators from around China go to these vocational schools to learn how to teach entrepreneurship. The creators of the Taobao website came from a vocational school, and I believe such vocational schools produce real entrepreneurs. It is important to teach students how to innovate in practice.

Q: Can someone without an entrepreneurial mindset learn entrepreneurship through entrepreneurship education and be a successful entrepreneur?

A: Textbooks say that yes, this can happen. I don't believe so.

The failure rate of startups is very high. Over 60% of SMEs fail within 6 years, so there are lots of requirements for students to actually start a business and be successful. Premier Li says that everyone should be an entrepreneur. Entrepreneurship is very popular in Zhejiang and Guagdong provinces, our TEA (Total Entrepreneurship Activity) Index is very high. But I think the entrepreneurial mindset is required to be a successful entrepreneur.

Q: Where do you think the future of entrepreneurship education lies in the US and in China?

A: The Chinese economy has been growing slowly in the last few years. Traditional industries face difficulty. Entrepreneurship and innovation are ways to stimulate the economy and give people a bright future with more jobs. The government also needs people to innovate more and universities will launch more entrepreneurship education programs to supply this need.

Q: What business simulation(s) do you teach with, and how did you decide which to use? Why?

A: I recently moved from Top Boss to Bster, because of better updates in software by Bster. I have not seen a simulation like the American "Startup Game" in China.

Top Boss is a role playing software with 3 to 5 people to form a business. They make decisions on a computer and there is a competition with other teams when you submit your results for computation. Bster is a little different from this.

Q: How do you think entrepreneurship education differs between the US and China?

A: American students are more active in communication with the professor. In China, there is more theory. Even when I try to facilitate a discussion, there is lesser communication. Most of my students are part-time MBA students but the student I saw at WPI were very skilled and experienced in their fields and in entrepreneurship. Earlier, universities did not like students to open startups while in university because they took away from courses. Now, there is no such problem but students don't tell the school about startups they start. In China, there is lots of government help through venture capital and help to student startups.

I think the US education style as a whole is similar to China's and its practices are applicable in China.

Richard Dasher

Disclaimer: *These questions were asked briefly over email, and these are the exact answers that the interview subject gave us in a return email. The responses are, to the best of the authors' knowledge, accurate to the intent of the interview subject.*

Q: Do you prefer more lecture/theory based entrepreneurship education? Or do you prefer more hands on/practical based entrepreneurship education?

A: I think that entrepreneurship education must involve an experiential component, so I suppose that this kind of activity is probably more important than theory. However, I think that some lecture content is important in order to contextualize and understand the kinds of experiences that students bring to the class.

Q: How do you think entrepreneurship education differs between the US and China?

A: I can't answer this one, because I have not really been surveying the teaching of entrepreneurship in China -- only the patterns of actual entrepreneurial activity. I do know quite a few teachers and programs, but I haven't examined the content enough to comment.

Q: What is your opinion on using a business simulation in entrepreneurship courses? Do you use one?

A: Yes, I do. I think that role-play simulations are a valuable tool, although one has to caution students that the real-world does not always work out in the same way.

Q: What do you think of the effectiveness of incubators in the US and in China?

A: It depends on the incubator. Those which place effort into programs and mentoring do better. This fits in both countries.

Q: Do you think entrepreneurship can be taught? Why/why not?

A: Yes: entrepreneurship is a combination of knowledge, skills that must be practiced, and natural ability -- very similar to sports or music performance. Everyone can benefit from the experience of study, and entrepreneurship education can help people who are gifted to become even better (or even truly great) at making their activities successful.

Q: Where do you think the future of entrepreneurship education lies in the US and in China?

A: I think that entrepreneurship education will remain a secondary concentration for students who have other academic majors. At the undergraduate level, you'll find entrepreneurship content (and possibly certification or minor programs) primarily in business and industrial engineering departments. I personally do not see value in an MBA program that focuses exclusively on entrepreneurship, because big company management is usually in the future for successful entrepreneurs.

Q: Can you tell us more about your course Entrepreneurship in Asian High-Tech Industries? We noticed that it can be taken multiple times by a student for credit, do you often change the content of the course?

A: This particular course is a "seminar" with guest speakers from industry. The primary objective is to provide Stanford students (who are in the middle of Silicon Valley) with the most up-to-date information about the status and dynamics of the entrepreneurship ecosystems of major Asian economies. Consequently, we have different content (and different speakers) every year. This is one course among many related to entrepreneurship at Stanford, and so I don't have to cover the

full range of knowledge or skills that entrepreneurship requires. I teach a separate regular course on Japanese business systems that includes an entrepreneurship component, in which we do a business simulation (developing plans and pitches for taking a U.S. startup company into the Japan market).

Jeff Huang

Disclaimer: *This is not an exact transcript of the conducted interview. These responses were written up, after the fact, by the authors of this paper. The responses are, to the best of the authors' knowledge, accurate to the intent of the interview subject. The responses for this interview have been recorded in the third person.*

Q: How did you get started as an entrepreneur, and founded Bster?

A: At first, focused only on business management training, not on colleges. Earlier, they thought students always listened to teachers, not about the class. So they thought they should let students learn through practice, which could be achieved through computer software (aka simulations). They found that schools had a strong demand for such software because students could practice in real life. They introduced this to business administration students, who could practice this by themselves.

Q: Why did you think there was a need for practical learning?

A: They thought that practical learning would help students learn better, by themselves, rather than by studying from books. To get better at anything, you must practice. Practicing skills from this software would help them get better.

Q: Even before entrepreneurship education, there were a lot of entrepreneurs in China. Do you think entrepreneurship education will further boost the number of entrepreneurs?

A: Don't have specific numbers. Most important factor is that government is pushing entrepreneurship education and is giving away free investments/money, etc. They want everyone to be entrepreneurial.

Q: Did you go to university? If yes, what was your major and did you take any entrepreneurship classes?

A: Didn't take entrepreneurship classes. Only few schools had it, HDU didn't. Entrepreneurship education has gotten popular in the last 3-5 years. I went to Hangzhou Dianzi University as a Computer Science major, and then got a Master's degree in management at Zhejiang University.

Q: Do you plan to offer more products than business simulations and competitions, in the future? If so, what are they and why do you plan to offer them?

A: Have other business simulation software, will use new knowledge to create other software. Products are focused on business administration systems.

Q: How do you think entrepreneurship education differs between the US and China?

A: In China, the government is most important – pushes students, colleges and companies. In America, private companies use marketing ways. In China, it is more utilitarian. Focus on data is more in China, how many student initiate companies, etc. We pay more attention to short term effects, not long term effects.

Q: Do you think the American model of practical hands-on teaching can be effectively applied in China?

A: America has entrepreneurial elements at all levels of education. China needs to change its system, will use elements from American system, with adjustments to fit China.

Q: **What do you feel is the effectiveness of entrepreneurship education; economic and otherwise? If entrepreneurship education is better, it will create better entrepreneurs. Will this have a positive impact on the economy?**

A: Hard to say. Many years ago, China was always manufacturing because it had a cheap labor force. Now, labor is more expensive here, more manufacturing has moved to South East Asia, so government wants products to be from Chinese companies (not just manufactured in China for foreign companies). Don't just create more businesses, create more innovative businesses. Premier Xi Jinping said that everyone should be an entrepreneur. There are job problems, we need more

employment opportunities for people. New businesses created involve overall economic transformation.

Q: Where do you think the future of entrepreneurship education lies in the US and in China?

A: Final outcome will be the same. People will take entrepreneurship more seriously – will pervade everyone's life. Right now it more of a fancy term in society. Hope it becomes a customary thing. Will get ingrained in the education system. People won't consider entrepreneurship separately. For example, only some people used computers when they first came out, but now everyone uses them. Entrepreneurship education in China is still very young and it is not advisable to evaluate it just yet, as I think it will grow and mature to be more effective and successful in coming years.

Q: Do you think entrepreneurship can be taught? Why/why not?

A: It can't be taught completely. Have to practice to improve your chances of success. Opinion of a Canadian professor: people have talent, but not everyone can be an entrepreneur. Want to help mitigate risks and help them get more successful. Entrepreneurial mindset is needed, but more skills are needed to be taught and practiced.

Appendix G: Survey on Chinese Students' Opinions of Western Teaching Styles

Survey Questions in English

1. Are you a college/university student?
   a. Yes
      1.a.1. Which college? _____
      1.a.2. What is your major? _____
      1.a.3. What class year are you? _____
   b. No
      1.b.1 Have you graduated in the past 5 years?
         a. Yes
         b. No
2. Do you know what entrepreneurship is?
   a. Yes
   b. No
3. Have you ever started your own business?
   a. Yes
   b. No
      3.b.1. Do you intend to start a business at some point in your life?
         a. Yes
         b. No
4. Have you ever taken an entrepreneurship class or are currently taking one?
   a. Yes
   b. No
5. Have you ever used a business simulation software before?
   a. Yes
      5.a.1. Was the business simulation used for teaching entrepreneurship?
         a. Yes
         b. No
   b. No
6. Do you feel comfortable asking your professor a question during class?
   a. Yes
   b. No
7. Do you like working in groups?
   a. Yes
   b. No
8. Which ways do you like to learn? (Select all that apply)?
   a. Lecture
   b. Self-Study

c. Group Project
d. Individual Project
e. Software/Simulation
f. Case Study

Survey Questions in Chinese

1. 您是大学生吗？
   a. 是
      1.a.1. 您所在的高校名称是 。
      1.a.2. 您所学专业是
      1.a.3. 所在年级是 。
   b. 不是
      1.b.1. 您在过去 5 年中从大学毕业了吗？
         a. 是
         b. 不是

2. 您知道“创业”是什么吗？
   a. 是
   b. 不是

3. 您有没有开始自己的事业？
   a. 有
   b. 没有
      3.b.1. 您打算在今后的生活中从事商业活动吗？
         a. 是
         b. 不是
4. 您是否接触或学习过与创业相关的课程？
   a. 是
   b. 不是
5. 您以前曾经用过某款模拟经营类软件吗？
   a. 是
      5.a.1 这款软件是关于创业教育类型的吗？
         a. 是
         b. 不是
   b. 不是
6. 您会在课上自如地向教授、老师提问题吗？
   a. 会

b. 不会

7. 平常做事您更倾向于团队合作吗？
   a. 是
   b. 不是
8. 您更偏向于哪种学习方式？（从右侧给出的方式中选择）
   a. 讲座报告式学习
   b. 自我教育式学习
   c. 团队合作式学习
   d. 自我研究式学习
   e. 模拟软件式学习
   f. 个案研究式学习

Appendix H: Raw Survey Data

1	1.1	1.2	1.3	1.4	2	3	3.1	4	5	5.1	6	7	8.1	8.2	8.3	8.4	8.5	8.6
1	杭电	电子商务	大四		1	2	1	1	1	2	1	1	0	0	1	0	1	1
1	大连民族大学	国际经济与贸易	14		1	2	1	2	2		2	1	0	1	0	1	0	0
2				2	1	2	2	2	2		2	1	0	0	0	1	0	0
1	杭州电子科技大学	电子商务	大一		1	2	1	2	2		2	2	1	1	1	1	1	1
1	杭州电子科技大学	信息管理与信息系统	大一		1	2	1	1	2		1	1	1	1	1	0	1	0
1	杭州电子科技大学	工商管理类	大一		1	2	1	1	1	2	2	2	0	1	1	1	0	0
1	杭州电子科技大学	市场营销	大三		1	2	1	1	1	2	2	1	0	0	1	1	0	0
1	杭州电子科技大学	英语	大二		2	2	1	2	2		1	1	0	1	1	1	1	1
1	杭州电子科技大学	人力资源管理	大二		1	2	1	1	1	1	2	2	1	1	1	1	1	1
1	防灾科技学院	信息管理与信息系统	2		1	2	1	1	2		1	1	0	1	0	0	1	0
1	杭电	通信	大二		1	2	2	2	2		2	2	0	1	0	1	0	1
1	杭州电子科技大学	会计	大二		1	2	1	2	1	2	2	1	0	1	1	0	0	0
1	杭州电子科技大学	市场营销	2014		1	2	1	1	2		2	1	0	0	1	0	0	1
1	杭州电子科技大学	电子商务	大三		1	2	1	2	1	2	2	1	0	1	1	1	0	0
1	杭州电子科技大学	信息管理与信息系统	二年级		1	2	1	2	1	2	1	1	0	1	1	0	1	0
1	沈阳工学院	工商管理类	大一		1	2	1	1	2		1	1	0	0	1	0	0	0
1	重庆大学	建筑环境与能源应用工程	大二		1	2	1	2	2		1	1	0	0	1	1	1	1
2				1	1	1		1	1	2	2	1	1	0	1	0	0	1
2				2	2	2	2	2	2		2	2	1	1	1	1	1	1
1	杭州电子科技大学	信息管理与信息系统	大二		1	2	2	1	1	1	2	2	0	1	0	1	0	0
1	杭电	保密	大三		1	2	2	2	1	1	2	2	0	1	1	1	0	0
1	杭州电子科技大学	电子商务	大三		1	2	1	1	2		2	1	0	1	0	1	1	1
1	杭州电子科技大学	工商管理类	大一		1	2	1	1	2		2	1	0	0	0	1	0	0
2				1	1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	工商管理	大三		1	2	1	2	2		1	2	0	1	0	1	0	1
2				2	2	2	2	1	1	1	1	1	0	1	0	0	0	0
1	杭州电子科技大学	国际经济与贸易	大三		1	2	1	2	2		2	2	0	0	0	1	1	1
1	杭州电子科技大学	国贸	2 班		1	2	1	1	1	2	1	1	0	0	1	0	0	0
2				2	1	1		2	2		2	2	0	1	0	0	0	0

1	杭州电子科技大学	保密管理	大二		1	2	1	2	2		2	1	0	0	0	1	1	1
1	杭州电子科技大学	金融	大三		1	2	1	2	1	2	2	1	0	0	0	0	0	1
2				2	1	2	1	1	2		1	1	0	0	1	0	0	0
2				2	1	2	1	2	2		2	2	0	0	1	1	0	0
1	杭州电子科技大学	计算机	大三		1	2	2	2	2		2	2	0	0	0	1	0	0
2				1	1	2	2	1	2		1	1	0	1	1	0	0	1
2				1	1	2	1	1	2		1	1	0	0	1	0	0	0
1	东财	金融	大二		1	2	2	2	2		2	1	0	1	0	0	0	0
1	北京邮电大学	信息工程	大二		1	2	1	2	2		2	1	0	0	0	1	0	0
1	鲁迅美术学院	新媒体创意设计	大二		1	2	1	1	1	1	1	1	0	1	1	0	0	0
1	杭州电子科技大学	国贸	大三		1	2	1	1	2		2	2	1	1	0	1	0	1
1	杭电	英语	大二		1	2	1	1	1	1	1	2	0	1	1	1	0	0
2				1	1	2	1	2	1	1	1	1	0	0	1	0	0	0
1	杭州电子科技大学	信息安全	大二		2	2	1	2	2		2	2	0	0	1	0	0	1
1	杭州电子科技大学	物联网工程	大二		1	2	2	1	2		1	1	0	0	1	1	1	0
1	辽宁何氏医学院	公共事业管理	2014 级		1	2	1	1	1		2	2	0	1	1	0	0	0
1	北京化工大学	法学	2014		1	2	1	2	2		2	1	0	0	1	0	0	0
2				2	1	1		1	2		1	1	0	0	1	0	0	0
1	河南大学	运动人体科学	2014 级		1	1		2	2		1	2	0	1	0	1	0	0
1	杭电	国贸	大三		1	2	1	1	2		2	1	0	1	0	0	0	0
1	浙江工业大学	药物制剂	三年级		1	2	1	2	2		2	1	0	1	1	1	0	0
1	浙科院	经济学	3		1	2	1	1	2		2	1	1	0	1	1	0	1
1	杭州电子科技大学	信管	大三		1	2	2	1	1	1	1	2	1	0	0	1	1	1
1	杭电	国贸	大三		1	2	1	1	1	2	2	1	0	1	0	1	1	1
1	杭州电子科技大学	英语	大三		1	2	2	2	2		2	2	0	0	0	0	1	0
1	杭州电子科技大学	信息管理与信息系统	大三		1	2	2	1	1	2	2	1	0	0	1	0	0	0
1	中国地质大学（北京）	材料科学与工程	大三		1	2	1	1	2		2	2	0	1	0	1	0	0
1	应技大	材料	大三		1	2	1	2	2		2	1	0	1	0	1	0	0
1	杭州电子科技大学	统计学	想干嘛呢		1	2	1	1	1	2	2	1	0	0	0	1	0	1
1	杭州电子科技大学	财务管理	大二		1	2	1	2	2		2	1	0	0	1	0	1	0
1	中北大学	机械电子工程	三年级		1	2	1	2	1	2	1	1	0	0	1	0	0	0
1	杭电	信管	13 级		1	2	1	1	1	2	2	1	0	0	0	0	0	1
1	浙江大学城市学院	广告学	13		1	1		2	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	物流管理	2013		1	2	1	2	1	2	2	1	0	0	1	0	0	0
1	杭电	信管	大三		1	2	1	1	1		2	1	0	0	0	1	1	0

1	杭州电子科技大学	通信工程	大三		1	2	1	2	2		1	1	0	0	0	1	0	0
1	皖南医学院	临床医学	大三		1	2	2	2	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	信息管理与信息系统	大四		1	2	1	1	1	2	1	1	0	1	0	1	0	0
2				1	1	1		1	1	1	2	1	1	0	1	0	1	0
1	杭州电子科技大学	信息管理	13 级		1	2	1	2	1	1	2	1	0	1	1	1	1	0
1	浙江海洋大学	轮机工程	大二		1	1		1	2		1	1	1	1	1	0	0	1
1	杭州电子科技大学	市场营销	大三		1	2	1	1	1	2	1	1	0	1	1	1	1	0
1	杭州电子科技大学	信息管理	3		1	1		2	1	1	2	2	1	0	0	1	1	1
1	杭电	产品设计	3		1	2	1	2	2		1	2	0	0	1	1	0	0
1	杭州电子科技大学	国际经济与贸易	2013 级		1	2	1	1	2		2	1	0	0	1	0	0	0
1	安农经	经济学	大三		1	2	2	2	2		1	1	0	0	1	1	1	0
1	杭州电子科技大学	信管	大三		1	2	1	2	1	1	2	1	0	1	1	1	0	0
1	杭电	工业	大三		1	2	1	2	2		2	1	0	0	0	0	1	0
1	安庆师范学院	物流管理	2013		1	2	2	1	2		2	2	0	0	0	1	0	1
2				1	1	1		2	2		1	1	0	0	1	0	0	0
1	安徽科技学院	动物科学	大三		1	2	1	1	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	工商管理	大三		1	2	1	1	1	2	2	2	1	0	0	0	0	0
1	浙江大学城市学院	信管	大三		1	2	1	1	1	2	1	1	1	0	0	0	0	0
2				2	1	1		2	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学	信息管理与信息系统	2013		1	2	1	1	1	2	1	1	0	0	1	1	0	0
1	广东海洋大学	大气科学	大三		1	2	1	1	2		2	1	0	0	0	1	0	0
1	杭州电子科技大学	信息管理与信息系统	2013		1	2	1	1	1	1	1	1	1	1	1	1	1	1
1	南京理工大学	通信	大三		1	2	1	1	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	信息管理与信息系统	大三		1	2	1	1	1	2	1	1	1	0	1	1	1	0
1	杭州电子科技大学	信息管理与信息系统	大三		1	2	1	2	1	1	1	1	0	1	1	0	1	1
1	杭州电子科技大学	电子信息工程	大三		1	2	2	2	2		2	1	0	0	1	0	0	0
1	杭电	信管	大三		1	2	1	1	1	2	2	1	0	0	0	0	0	1
1	中国矿业大学	电子商务	三年级		1	2	1	1	1	1	2	1	0	1	1	1	1	1
2				2	1	2	1	1	2		1	1	0	0	1	0	0	0
2				1	1	1		1	1	2	1	1	1	1	0	0	0	0
1	杭州电子科技大学	信息管理与信息系统	大三		1	2	1	2	1	2	1	1	1	0	1	1	1	1

2				2	1	1		2	2		2	1	0	0	0	1	0	0
1	杭州电子科技大学	信管	3		1	2	2	2	1	1	2	1	0	0	1	1	0	0
1	哈尔滨医科大学	基础医学	大三		1	2	2	2	1	2	2	1	0	0	0	1	0	0
1	西安电子科技大学	通信工程	3		1	2	1	1	1	2	2	2	1	1	1	1	1	1
2				1	1	2	1	2	1	2	2	1	1	1	0	0	0	0
1	安徽医科大学	临床医学	三年级		1	2	2	2	2		2	2	0	0	0	1	0	0
1	北师	教育	三		1	2	2	2	2		1	1	1	0	1	1	0	0
1	杭州电子科技大学	信息管理与信息系统	大三		1	1		2	1	2	2	1	0	1	1	0	1	0
1	杭州电子科技大学	工业工程	大四		1	1		1	1	2	1	1	0	0	1	0	1	1
1	杭电	工管	大三		1	2	1	2	1	2	2	1	0	0	1	0	0	0
1	杭电	信管	大三		1	2	1	1	1	1	2	2	0	0	1	0	0	0
1	杭州电子科技大学	信息管理与信息系统	大三		1	2	1	1	1	1	1	1	1	0	1	1	0	0
2				1	1	1		2	2		2	1	0	0	1	0	0	0
1	西安电子科技大学	电子科学与技术	大二		1	1		1	2		2	1	0	0	0	1	0	0
1	南京林业大学	农林经济管理	大三		1	2	1	1	2		1	2	0	1	0	0	0	0
1	啊	啊	啊		1	2	2	2	1	2	1	1	0	1	1	1	0	0
1	北京印刷学院	编辑出版学	大三		1	2	1	2	1	2	2	2	0	0	0	1	1	1
2				2	1	2	2	2	1	1	1	1	0	1	1	1	0	0
1	浙江工业大学	广告	大三		1	2	2	2	2		2	2	0	1	0	1	0	1
1	清华	电气	3		1	1		1	1	1	1	1	0	1	1	1	0	0
1	安徽财经大学	电子信息工程	13 级		1	2	2	1	1	2	2	1	1	1	0	1	0	0
1	大高校	机电	13 级		1	2	2	2	2		2	2	0	1	0	1	0	0
1	浙江传媒	播音	大二		1	2	2	2	2		1	1	1	1	1	1	0	0
1	西南民族大学	化学	大二		1	2	1	1	1	2	1	1	0	0	1	0	0	0
2				1	1	2	2	1	2		2	1	0	1	0	0	0	0
2				1	1	1		1	1	2	2	1	0	0	1	0	0	0
1	上海金融学院	金融	大三		1	2	1	1	1	1	2	1	0	1	0	0	0	0
1	浙江理工大学	测控技术与仪器	13		1	2	2	2	1	1	1	1	0	1	0	0	0	0
1	杭电	工业工程中德	大三		1	2	1	2	2		2	1	0	1	0	0	0	0
1	上海海洋大学	计科	三		1	2	2	1	1	2	1	1	0	0	1	1	0	0
1	辽宁工程技术大学	智能电网信息工程	大三		1	2	2	2	2		2	2	1	0	0	1	1	1
1	安徽工业大学	英语	13 级		1	2	2	2	2		2	2	0	0	0	1	0	0
1	北京科技大学	冶金工程	2013		1	2	2	1	2		2	2	0	1	0	1	0	0
1	杭州电子科技大学	工商管理	大四		1	2	1	1	1	2	2	1	0	0	0	1	0	1
1	杭州电子科技大学	计算机科学与技术	大三		1	2	2	2	2		2	1	0	0	1	1	0	0

1	安徽建筑大学	道路桥梁	13 级		1	2	2	2	2		2	1	0	1	0	0	0	0
1	杭电	信管	大三		1	2	2	2	1	1	2	1	0	0	1	1	1	0
1	杭电	信息管理与信息系统	大三		1	2	1	1	2		2	1	0	1	1	1	1	0
1	盐城工学院	机械电子工程	三年级		1	2	1	2	2		1	1	0	0	1	1	0	0
1	杭州电子科技大学	会计	大三		1	2	1	2	2		2	1	0	0	1	0	0	0
2				1	1	2		1	2		2	2	0	1	0	1	0	1
1	杭州电子科技大学	工商管理	大二		1	2	1	1	1	1	1	1	1	0	1	0	0	1
1	杭州电子科技大学	电气自动化	2014		1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	工商管理	大二		1	2	1	2	1	2	2	2	1	1	0	0	1	0
1	杭州电子科技大学	电气	3		1	2	1	1	1	2	1	1	1	1	1	0	0	0
2				2	2	2	2	2	2		2	2	0	0	0	0	0	1
1	上外贤达	会展经济与管理	2013		1	2	1	1	2		1	1	0	0	1	0	0	0
2				1	1	1		1	2		1	1	0	0	1	0	0	0
2				1	1	2	1	2	2		1	2	0	0	1	0	0	0
2				2	1	1		2	1	2	2	1	1	0	0	1	0	0
1	杭州电子科技大学	信息管理与信息系统	大三		1	2	1	1	2		1	1	0	0	1	0	0	0
1	fmmu	临床医学	大三		1	2	2	2	2		1	1	1	1	1	0	0	1
2				1	1	2	2	1	1	1	2	2	1	1	0	1	0	1
1	杭州电子科技大学	信息管理与信息系统	大三		1	2	2	2	1	2	2	1	0	1	1	0	0	0
1	辽宁大学	财政学	大学二年级		1	2	2	2	2		2	2	1	1	1	0	0	0
1	杭州电子科技大学	信管	2013 级		1	2	1	2	1	1	2	1	0	1	1	1	0	0
1	杭州电子科技大学	信管	2		1	2	2	2	1	2	2	1	0	0	1	0	0	0
1	中国矿业大学	材料	大三		1	2	2	1	1	2	1	1	0	0	0	0	0	1
2				1	1	2	2	1	1	2	2	1	0	1	0	1	0	0
1	安徽财经大学	金融学	大三		1	2	2	1	2		1	1	0	1	1	0	0	0
1	江苏大学	食品机械	大三		1	2	1	1	1	2	2	1	0	1	1	0	0	0
1	杭州电子科技大学	包装工程	一		1	2	1	2	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学	工商管理类	大一		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	会计	大二		1	2	1	1	1	1	2	1	0	1	1	1	0	0
1	杭州电子科技大学	电子信息工程	一年级		1	2	1	1	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	计算机科学与技术	大一		1	2	1	1	2		2	1	1	0	0	0	0	0
1	杭州电子科技大学	管理	大一		2	2	1	2	2		2	1	1	1	1	1	0	0
1	杭州电子科技大学	电气工程及其自动化	大一		1	2	2	2	2		2	1	0	0	1	0	0	0

1	杭州电子科技大学	机械设计制造及其自动化	大一		1	1		1	2		1	1	0	0	1	0	0	0
1	杭电	工业设计	大一		2	2	1	1	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	材料科学与工程	一		1	2	2	2	2		1	1	0	0	1	0	0	0
1	温州大学瓯江学院	市场营销	2012 级		1	1		2	1	2	2	1	0	1	0	1	1	0
2				1	1	2	2	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	信息对抗	大二		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	工商管理	大一		1	2	2	2	2		2	2	1	1	0	1	0	0
1	黑龙江大学	法学	大二		1	2	1	2	1	2	1	2	1	1	0	1	0	0
2				1	1	1		1	1	2	1	1	0	1	0	1	0	1
1	杭州电子科技大学	自动化	2		1	1		2	2		2	1	1	1	1	0	0	0
1	杭电	国贸	大二		1	2	1	1	1	1	1	1	0	1	1	1	0	0
1	黑龙江大学	电子科学与技术	2013 级		1	1		2	2		1	1	0	0	1	0	1	1
1	黑龙江大学	法学	大一		1	2	2	2	2		2	1	0	0	0	1	0	0
1	浙江师范大学	学前教育	大一		1	2	2	2	1	2	1	2	0	1	0	1	1	1
2				2	1	1		1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学信息工程学院	电气	大三		1	2	1	1	1	1	1	1	0	1	1	0	0	0
1	辽宁职业学院	汽车	14 级		1	2	1	1	1	1	1	1	1	1	1	1	1	1
1	大连工业大学	计算机科学与技术	二年级		1	2	2	1	2		1	2	0	0	0	1	1	0
2				1	2	2	2	1	2		2	2	0	0	1	1	0	0
2				1	1	2	2	2	2		2	1	1	1	1	0	0	0
1	杭州电子科技大学	英语	大三		1	2	1	1	2		1	1	0	1	0	0	0	0
1	黑龙江大学	法学	大二		1	2	2	1	2		1	1	0	1	1	0	0	0
1	杭州电子科技大学	金融	大二		1	2	1	2	2		2	2	0	1	0	1	0	0
1	杭州电子科技大学	自动化	大四		1	2	2	1	2		2	1	0	0	1	0	0	0
2				1	2	1		2	2		1	1	0	0	0	1	0	0
1	杭州电子科技大学	会计 acca	大三		1	2	1	1	1	2	1	1	0	0	1	0	0	0
2				1	1	1		1	1	1	1	1	1	1	0	1	0	0
2				1	1	1		1	1	1	1	1	1	0	0	0	0	0
1	杭州电子科技大学	财管	大二		1	2	1	2	2		1	1	0	1	0	0	0	0
1	杭州电子科技大学	ACCA	大三		1	2	1	2	1	2	2	1	1	0	0	1	0	0
1	杭电	工商	15 工商		1	2	1	1	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	财务管理	大三		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	财务管理	大三		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	软件工程。	大三		1	2	1	1	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	软件工程	大三		1	2	1	1	1	2	2	1	0	0	1	0	1	0

1	杭电	集成电路	研二	1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	金融	大三	1	2	1	1	1	2	1	1	1	1	1	0	0	0
1	杭州电子科技大学	电子信息学院	集成电路	1	2	1	2	2		1	1	1	0	1	1	0	0
1	杭州电子科技大学	电路与系统	研三	1	2	1	2	2		1	1	1	1	0	0	0	0
1	杭州电子科技大学	会计学	大四	1	2	1	1	1	2	2	1	0	1	1	1	0	0
1	杭州电子科技大学	会计学	大四	1	2	1	2	2		1	1	0	1	1	1	0	0
1	杭州电子科技大学	通信工程	大一	1	2	2	2	2		2	1	0	1	0	0	0	0
1	杭电	通信	1	2	2	1	2	2		1	1	1	1	1	0	0	0
1	杭州电子科技大学	通信	大一	1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	会计	大二	1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	包装设计	大四	1	2	1	1	2		1	1	1	1	1	0	0	1
1	杭电	英语	大三	1	1		1	1	2	1	1	0	0	1	1	0	0
1	杭州电子科技大学	计算机科学与技术	研二	1	2	2	2	1	2	2	1	0	0	0	1	0	0
1	杭州电子科技大学	英语	大三	1	2	2	2	2		1	2	1	1	0	1	0	0
1	杭州电子科技大学	传播学	大二	1	2	1	2	2		2	2	1	1	1	1	1	1
1	杭州电子科技大学	电子信息工程	大一	1	2	2	2	1	2	1	1	0	1	1	1	0	0
1	杭州电子科技大学	传播学	大二	1	2	1	1	1	2	2	1	0	0	1	0	0	0
1	杭电	物流管理	大二	1	2	1	1	2		2	1	1	0	0	0	0	0
1	杭电	物流管理	大二	1	2	1	1	1	1	1	1	0	0	0	0	0	1
1	杭州电子科技大学	英语	大三	1	2	1	1	2		1	1	0	0	1	1	0	0
1	杭州电子科技大学	英语专业	大三	1	2	1	2	2		1	2	0	1	0	1	0	0
1	杭州电子科技大学	物流管理	大二	1	2	1	2	1	2	2	1	1	1	1	0	0	0
1	杭州电子科技大学	电子信息工程类	大一	1	2	1	2	2		2	1	0	0	0	1	0	1
1	杭州电子科技大学	数字媒体技术	大三	1	2	1	2	2		2	2	0	0	1	1	1	0
1	杭州电子科技大学	国际经济与贸易	大三	1	1		1	2		2	1	1	0	1	0	1	1
1	杭州电子科技大学	ACCA	大二	1	2	2	1	2		1	2	0	0	0	1	0	1
1	杭电	传播学	14227011	1	2	1	2	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	集成电路设计与集成系统	大二	1	2	2	2	2		2	1	0	1	1	1	0	0
1	杭电	外国语	大一	1	2	1	2	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	英语	2	1	2	1	2	2		1	1	0	0	0	0	0	1
1	杭州电子科技大学	光电	二	1	2	2	1	1	2	1	1	0	0	0	1	0	0
1	杭州电子科技大学	英语	大二	1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	电子信息工程类	大一	2	2	1	2	1	2	2	1	0	0	1	0	0	1
1	杭州电子科技大学信息工程学院	英语	2014 级	1	2	1	2	2		1	1	0	0	1	0	1	0

1	杭州电子科技大学	技术经济及管理	研二		1	2	1	1	1	2	1	1	0	0	1	0	0	0
1	杭州电子科技大学	软件工程	大四		1	2	1	1	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	软件工程	大四		1	2	1	2	2		1	1	0	0	1	1	0	0
1	杭州电子科技大学	英语	一班		1	2	1	2	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	国际贸易	2		1	1		2	1	2	2	2	1	0	1	1	0	0
1	杭电	外国语	英语		1	2	1	2	2		2	2	0	1	0	1	1	1
1	杭电	数媒	大三		1	2	1	1	2		2	1	0	1	1	1	0	1
1	杭州电子科技大学	信息管理与信息系统	大一		1	2	1	1	2		1	1	0	1	1	0	1	1
1	杭州电子科技大学	信息工程	大三		1	2	1	1	2		2	2	1	1	1	0	0	0
1	杭州电子科技大学	医学信息工程	大一		2	2	2	2	2		1	1	1	1	0	1	0	0
1	杭州电子科技大学	电子科学与技术	大三		1	1		2	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	审计	大二		1	2	1	2	2		2	1	0	0	1	0	1	1
1	杭州电子科技大学	会计专业	大一		1	2	1	1	1	2	1	1	0	1	0	0	0	0
1	杭州电子科技大学	测控技术与仪器	大一		1	2	1	2	1	2	1	2	0	1	0	0	0	0
1	杭电	人力资源	大二		1	2	1	2	2		2	1	0	0	1	1	0	1
1	杭州电子科技大学	信息管理与信息系统	大三		1	2	2	2	1	1	2	1	0	1	1	1	1	0
1	杭州电子科技大学	信息管理与信息系统	大三		1	2	2	1	1	2	1	1	0	0	1	0	0	0
1	杭电	信管	大三		1	2	1	1	1	2	2	2	0	0	0	0	1	0
1	杭州电子科技大学	环境工程	大三		1	2	1	1	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学	电子信息工程	大一		2	2		2	2		2	1	0	1	0	0	1	1
1	杭电~	海洋	一		2	2	1	2	2		1	1	0	1	1	1	0	0
2				1	1	1		2	2		1	2	0	0	0	0	0	1
1	杭州电子科技大学	计算机	大二		1	2	1	1	2		1	1	0	1	0	1	0	0
1	杭州电子科技大学	电子信息工程	大二		1	2	2	2	2		1	1	0	0	1	0	1	0
1	杭州电子科技大学	环境工程	大三		1	2	1	2	2		1	2	0	0	0	1	0	0
1	杭州电子科技大学	英语	大三		2	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	会计学	大一		1	2	1	1	1	2	1	2	1	0	1	1	1	0
1	杭州电子科技大学	会计学类	大一		2	2	1	2	2		1	2	1	0	0	0	0	0
1	杭州电子科技大学	国际经济与贸易	1		1	2	1	2	2		2	1	0	0	0	1	0	0
1	杭州电子科技大学	电子信息工程	15 级		1	2	2	2	2		2	1	0	0	0	0	1	0
1	杭州电子科技大学	社会学	大二		1	2	1	2	2		1	1	1	1	1	1	0	0
1	杭州电子科技大学	环境科学	大三		1	2	1	2	1	2	2	1	1	1	1	0	0	0
1	杭州电子科技大学	会计学	大一		1	2	1	2	2		1	1	0	1	1	0	1	1

1	杭电	金融	大二	1	2	1	2	2		2	1	0	1	1	1	0	0
1	杭州电子科技大学	金融	大二	1	2	2	1	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学	物流管理	大三	1	2	1	1	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	材料工程与科学	大一	2	2	2	2	1	2	2	2	0	0	0	1	0	0
1	杭州电子科技大学	通信工程	大一	1	2	1	2	1	2	2	2	0	0	0	1	1	0
1	杭州电子科技大学	物流管理	大三	1	2	1	1	2		2	1	0	0	0	1	0	0
1	杭州电子科技大学	英语	大三	1	2	1	2	2		2	2	1	0	1	1	0	0
1	杭州电子科技大学	会计	大二	1	2	1	1	2		1	1	0	1	1	0	0	0
1	杭州电子科技大学	电气工程及其自动化	大二	1	2	2	1	1	1	2	1	0	1	0	0	0	0
1	杭州电子科技大学	国际经济与贸易	大二	1	2	2	1	2		2	2	0	1	0	0	0	0
1	杭州电子科技大学	信息对抗技术	大二	1	2	1	2	2		2	2	0	0	1	1	0	0
1	杭州电子科技大学	电子信息工程类	一	1	2	1	1	1	2	1	1	0	0	0	1	0	0
1	杭州电子科技大学	电子信息工程类	大一	1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	电子信息工程	1	1	2	1	1	2		1	1	0	0	0	1	0	0
1	杭州电子科技大学	会计	大二	2	2	2	1	1	2	2	1	1	0	1	0	0	0
1	杭电	计算机	大一	1	2	1	1	2		1	1	1	1	1	1	0	1
1	杭州电子科技大学	电气工程及其自动化	大二	1	2	1	2	2		2	1	0	1	1	1	0	0
1	杭州电子科技大学	会计	大二	1	2	1	2	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	产品设计	大二	1	2	2	2	2		2	2	0	1	1	1	0	0
1	杭州电子科技大学	金融数学	大一	1	2	1	1	1	1	1	1	0	0	1	0	0	0
1	杭州电子科技大学	计算机科学与技术	计科七班	1	2	1	1	2		2	1	0	1	0	1	0	0
1	杭州电子科技大学	工商管理	大三	1	2	1	1	1	1	2	1	0	0	1	0	1	0
1	杭州电子科技大学	英语	大三	1	2	1	1	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	HR	大三	1	2	1	1	1	2	1	1	0	0	1	1	0	0
1	杭电魔术社	自动化	13	1	2	2	1	1	2	1	1	1	0	0	0	0	0
1	杭州电子科技大学	计算机	大三	1	2	1	2	2		1	1	0	1	0	0	0	0
1	杭电	自动化	14	1	1		2	2		1	1	0	1	0	0	0	0
1	杭州电子科技大学	会计	大二	1	2	1	2	1	2	2	2	0	0	0	1	1	0
1	杭电	生物医学工程	大一	1	2	2	2	2		1	2	0	1	1	0	0	0
1	杭州电子科技大学	光电信息科学与工程	大二	1	2	1	1	2		2	1	0	1	0	1	0	0
1	杭州电子科技大学	环境工程	大四	2	2	1	2	2		2	1	0	1	0	0	0	1
1	杭州电子科技大学	传播学	大四	1	1		2	2		1	2	0	1	1	1	0	0
1	杭州电子科技大学	社会学	大四	1	2	1	2	2		2	1	0	0	1	0	0	0

1	杭州电子科技大学	市场营销	大三		1	2	1	2	1	2	2	1	0	1	1	0	1	0
1	杭州电子科技大学	车辆工程	大二		2	2	2	1	2		2	2	0	0	0	0	1	0
1	杭州电子科技大学	会计学	四		1	2	1	2	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学	法学	大二		1	2	1	2	1	2	2	1	1	0	1	0	1	1
1	杭州电子科技大学	信息管理与信息系统	大三		2	2	2	2	1	1	1	1	1	0	0	0	0	0
1	杭州电子科技大学	国际贸易	大三		1	2	1	1	1	1	1	1	0	1	1	0	0	1
1	杭州电子科技大学	国际经济与贸易	2013		1	2	1	1	2		2	1	0	1	1	1	0	1
1	杭电	自动化	大四		1	2	1	1	1	1	2	1	1	0	0	0	0	0
1	杭州电子科技大学	财务管理	大二		1	2	1	1	1	2	2	1	0	0	1	0	0	0
1	何聪玲	财务管理	大二		1	2	1	1	1	2	1	1	0	1	1	0	0	0
1	杭州电子科技大学	财务管理	大二		1	2	2	2	2		2	1	1	0	1	0	0	0
1	杭州电子科技大学	电子商务	3 年级		1	2	1	1	1	2	2	1	0	0	1	1	0	0
1	杭州电子科技大学	金融学	大四		1	2	1	1	2		2	1	0	1	1	0	0	0
1	杭州电子科技大学信息工程学院	金融学	大四		1	2	2	2	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	统计学	大四		1	2	1	2	1	2	2	2	0	1	0	1	0	1
1	杭州电子科技大学	ACCA	大三		1	2	1	1	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	应用统计学	大一		1	2	1	2	2		1	1	0	1	0	0	0	0
1	杭州电子科技大学	电子信息工程	2012		1	2	2	2	2		1	1	0	0	1	1	0	0
1	杭州电子科技大学	会计	大二		2	2	2	2	2		2	1	0	1	1	0	1	1
1	杭州电子科技大学	传播学	大四		1	2	1	2	2		2	1	0	1	1	0	0	0
1	杭州电子科技大学	市场营销	3		1	2	1	1	2		2	1	1	1	0	1	0	0
1	杭州电子科技大学	信息安全	12083611		1	2	1	2	2		2	1	0	0	0	1	0	0
1	杭州电子科技大学	数字媒体技术	四		1	2	1	2	2		1	1	0	1	0	1	0	0
1	杭电	会计	大二		1	2	2	1	1	1	1	1	0	0	1	0	0	0
1	杭州电子科技大学	会计	大二		1	2	1	1	1	1	2	1	0	0	0	1	0	0
1	杭州电子科技大学	会计	大二		1	1		2	2		1	1	0	0	1	0	0	0
2				1	1	2	1	2	1	2	1	1	0	0	1	0	0	0
2				1	1	2	1	1	1	2	1	1	1	1	1	0	0	0
1	杭州电子科技大学	会计学	2 年级		1	2	2	1	2		2	1	0	0	1	0	0	1
1	杭州电子科技大学	经管类实验班	大三		1	2	2	1	1	2	2	2	0	1	0	0	0	0
1	杭州电子科技大学	会计学院	大三		1	2	1	2	1	2	1	1	0	0	1	0	0	0
1	杭州电子科技大学	会计学	大三		1	2	1	1	2		2	1	0	0	1	0	1	0
1	杭州电子科技大学	生物医学工程	1		1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	金融学	大三		1	2	1	1	2		2	1	0	0	1	0	0	0

1	杭州电子科技大学	英语	大三		1	2	1	1	1	2	1	2	0	0	1	1	1	1
1	杭州师范大学	食品质量与安全	大三		1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	英语	大三		1	2	1	2	2		2	1	1	1	1	1	0	0
1	杭州电子科技大学	英语	大三		1	2	1	1	2		2	1	0	1	1	0	0	0
1	杭州电子科技大学	材料科学与工程	大一		2	2	1	2	2		2	1	1	0	1	0	1	0
1	杭州电子科技大学	材料科学工程	一班		1	2	1	2	2		2	2	0	0	0	1	0	0
1	杭州电子科技大学	产品设计	2014 届		1	2	1	2	1		1	1	0	0	1	0	0	0
1	杭州电子科技大学	产品设计	一年级		1	2	1	1	1	1	2	1	1	0	0	0	1	1
1	浙江理工大学	建环	大三		1	2	1	1	2		2	1	0	0	1	0	0	1
1	杭电	电子	大一		2	2	1	2	2		2	1	1	1	1	1	1	1
1	杭州电子科技大学	电子信息	大一		1	2	1	2	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	会计	大二		1	2	1	2	2		2	2	0	1	0	0	0	0
1	中国计量学院	信息与计算科学	大四		1	2	1	1	2		1	1	0	1	0	1	0	0
1	杭州电子科技大学	会计学	大四		1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	会计	②		1	2	1	2	2		2	2	0	0	0	1	0	0
2				1	1	2	1	1	1	1	1	2	1	0	1	1	1	0
1	杭州电子科技大学	自动化	大三		1	2	1	2	2		2	1	1	1	1	0	0	1
1	杭州电子科技大学	电子信息工程	大二		1	2	1	2	2		2	1	1	0	1	0	1	0
1	杭州电子科技大学	电子信息	大一		1	2	2	2	2		1	1	1	0	1	0	0	0
1	杭州电子科技大学	工商管理	大二		1	2	1	1	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	经济学	大二		1	1		2	1	1	1	1	0	0	1	0	0	0
1	杭州电子科技大学	会计二班	大二		1	2	1	2	1	1	2	1	0	1	1	0	0	0
1	杭州电子科技大学	经济学	2014 级		1	2	1	2	2		1	1	0	0	0	1	0	0
1	杭州电子科技大学	电子信息工程	大一		2	2	1	1	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	信息安全	大一		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	信息安全	大一		2	2	2	2	2		2	2	0	1	0	1	0	0
1	杭州电子科技大学	信息管理与信息系统	大一		1	2	1	1	2		1	1	0	1	1	1	1	0
1	杭州电子科技大学	信管	大一		2	2	1	1	1	2	1	2	1	0	1	0	1	1
1	杭州电子科技大学	信息管理与信息系统	大一		1	2	1	2	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	电子信息工程	大一		1	2	2	2	2		2	1	0	1	0	1	0	1
1	杭州电子科技大学	会计	大二		1	2	2	1	2		1	1	0	0	1	0	0	1
1	杭州电子科技大学	电子	1		1	2	2	2	2		2	1	0	1	1	1	0	0
1	杭州电子科技大学	信息管理与信息系统	大一		1	2	2	2	1	2	2	1	1	0	1	0	1	0

1	杭州电子科技大学	会计	大二		1	2	1	2	1	2	2	1	0	0	0	1	0	0
2				2	1	2	2	2	2		1	1	0	0	1	1	0	0
1	杭州电子科技大学	电子信息工程	大二		1	2	1	1	2		2	2	0	1	0	0	0	0
1	杭州电子科技大学	会计	大二		1	2	1	1	2		2	2	0	0	1	0	0	0
1	杭州电子科技大学	软件工程	大四		1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	数学与应用数学	大一		2	2	1	2	2		1	1	0	1	1	1	1	1
1	杭州电子科技大学	数学与应用数学	大一		2	2	1	1	2		1	1	0	0	1	1	0	0
1	杭州电子科技大学	会计	大二		1	2	1	2	2		2	2	1	1	1	0	0	0
1	杭州电子科技大学	数学与应用数学	大一		1	2	1	2	2		2	1	0	1	1	1	0	0
1	杭电	英语	大一		1	2	1	1	1		1	1	0	0	1	0	0	0
1	杭州电子科技大学	国际经济与贸易	大三		1	2	1	1	2		2	1	0	1	0	1	0	0
1	杭州电子科技大学	市场营销	4		1	2	1	1	1	1	2	1	0	1	0	0	0	1
1	杭州电子科技大学	生物医学工程	三年级		1	1		2	2		1	1	0	0	0	0	0	1
1	杭州电子科技大学	市场营销	大四		1	2	1	2	1	2	2	1	0	0	1	0	0	1
1	杭州电子科技大学	会计	大二		1	2	1	1	1	2	2	1	0	1	1	1	0	0
1	杭州电子科技大学	英语	大三		1	2	2	2	1	2	2	1	1	0	1	0	1	1
1	杭州电子科技大学	机械设计制造及其自动化#	大四		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	卓越学院	大一		1	2	2	2	2		1	1	0	1	1	1	0	0
1	杭州电子科技大学#	英语	大三		1	2	1	2	1	2	2	1	0	0	1	0	0	1
1	杭州电子科技大学	机械设计制造及其自动化	研究生一年级		1	2	1	2	2		1	1	1	0	0	1	0	0
1	杭州电子科技大学	英语	2013		1	2	1	1	1	2	1	1	0	1	1	0	0	0
1	杭州电子科技大学	国际经济与贸易	大二		1	2	1	1	2		2	2	0	0	0	1	0	0
1	杭州电子科技大学	电气信息	大四		2	2	1	2	2		2	1	0	0	1	0	0	0
1	杭电	信管	大三		1	2	1	1	1	1	2	1	0	0	1	0	0	0
1	杭州哦电子科技大学	信管	3		1	2	1	1	1	1	2	2	0	0	0	1	0	0
1	杭州电子科技大学	产品设计	3		1	2	1	1	2		2	2	0	1	0	1	0	0
1	杭州电子科技大学	财务管理	大四		1	2	1	2	1	2	2	1	1	0	1	0	1	0
1	杭州电子科技大学	国贸	大二		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭电	机械	12010112		1	2	2	2	1	2	1	1	0	1	0	1	0	0
1	杭电	机械	12 级		1	2	1	2	2		2	2	0	1	0	0	0	0
1	杭州电子科技大学信息工程学院	财务管理	大三		1	2	1	2	2		1	1	0	0	1	1	1	1

1	杭州电子科技大学信息工程学院	财务管理	大三		1	2	2	2	2		2	2	1	1	0	1	1	0
1	杭州电子科技大学	软件工程	大四		1	2	2	2	1	2	2	2	1	1	0	1	0	0
1	杭电	英语	1		1	2	1	2	1	2	2	1	1	1	1	1	1	1
1	杭州电子科技大学	英语复合	大一		1	2	1	2	1	2	2	1	0	1	1	0	1	0
1	杭州电子科技大学	自动化	13		1	2	2	2	2		1	1	0	1	0	0	0	0
1	杭州电子科技大学	电气工程及其自动化	大三		1	2	2	1	2		2	1	0	1	1	0	0	0
1	宁波工程学院	电子信息工程	2		1	2	1	2	2		1	1	0	0	1	0	0	0
1	中国计量学院	数学与应用数学	12 数学 1		1	2	1	1	2		1	1	0	1	0	1	0	1
1	中国计量学院	数学与应用数学	大四		1	1		2	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	电子信息工程	大二		1	2	2	1	2		1	1	0	0	1	0	0	0
2				2	1	1		1	2		1	1	0	1	0	1	0	0
1	杭州电子科技大学	自动化	大二		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	英语	二年级		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	英语	大二		1	1		1	1	1	1	1	0	0	1	0	0	0
1	杭州电子科技大学	电子商务	大三		1	2	1	1	1	1	2	1	0	0	1	1	1	0
1	杭州电子科技大学	电子商务	大三		1	2	1	1	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	电子商务	大三		1	2	1	1	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	电子商务	大三		1	2	2	1	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	电子商务	大三		1	2	1	1	1	1	2	2	0	0	0	1	0	0
1	杭州电子科技大学	电子商务	大三		1	2	2	1	2		2	1	1	0	1	0	0	0
1	杭州电子科技大学	电子商务	大三		1	2	1	1	2		2	1	0	1	1	0	0	0
1	杭州电子科技大学	自动化	大四		1	2	1	1	1	1	1	1	0	0	1	0	0	0
1	杭州电子科技大学	金融	14		2	2	1	2	2		2	2	0	0	1	1	1	0
1	杭州电子科技大学	财务管理	14 级		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	国际经济与贸易	大三		1	2	1	2	2		2	2	1	0	0	1	0	1
1	杭州电子科技大学	国际经济与贸易	大三		1	2	1	1	1	2	2	2	0	1	0	1	0	0
1	杭州电子科技大学	理工	大一		2	2	2	2	2		2	1	0	0	1	0	0	0
1	杭州电子放假大学	未定	一		1	2	2	2	1	2	1	1	0	0	1	1	0	0
2				2	2	2	1	2	2		1	1	0	1	1	0	0	0
1	杭州电子科技大学	国贸	三年级		1	2	1	1	2		1	1	0	0	1	0	0	0
1	HDU	金融学	大三		1	2	2	1	1	2	2	1	0	1	0	0	0	0
1	杭州电子科技大学	产品设计	大三		1	1		1	2		1	1	0	0	0	1	0	0
1	杭州电子科技大学	信管	大二		1	2	1	2	1	1	2	1	0	0	0	1	0	0
1	杭州电子科技大学	英语	大三		1	2	1	1	2		2	2	1	1	0	1	1	0

1	杭州电子科技大学	国贸	大三		1	2	1	1	2		2	2	0	1	0	0	0	0
1	杭州电子科技大学	产品设计	大三		1	2	2	1	1		1	1	0	0	1	0	0	0
1	杭州电子科技大学	产品设计	大三		1	2	2	2	2		2	2	0	0	1	0	0	0
1	杭州电子科技大学	环境科学与工程	大二		1	2	1	2	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	人力资源管理	大二		1	2	1	1	2		1	2	1	1	1	1	0	0
1	杭州电子科技大学	统计	大一		1	1		2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	统计	大一		1	2	2	2	1	1	2	1	0	0	1	0	1	0
1	杭州电子大学	产品设计	大三		1	2	2	2	2		2	2	0	0	0	1	1	1
1	北大	水利工程	大一		1	1		1	1	1	1	2	0	1	0	0	0	0
1	杭州电子科技大学	统计学类	大一		1	2	2	2	2		2	1	0	0	1	0	0	0
1	杭电	人力资源管理	大二		1	2	1	1	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	会计	大二		1	1		1	1	2	1	1	0	1	1	1	0	0
1	杭州电子科技大学	电子商务	大四		1	2	1	1	2		1	1	0	0	0	0	1	0
1	杭州电子科技大学	软件工程	大二		1	2	1	1	2		2	2	0	1	0	1	1	0
1	杭州电子科技大学	通信工程	大三		1	2	1	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	金融	三		1	2	1	1	1	2	1	2	1	1	1	1	1	1
1	杭电	机制	大一		1	2	1	2	2		1	1	1	0	0	0	0	0
1	杭州电子科技大学	人力资源	大二		1	2	1	1	1	2	1	1	1	0	1	0	0	1
1	杭州电子科技大学	机制	大一		1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	通信工程	大三		2	2	1	1	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	会计	大二		1	2	1	2	2		2	1	0	0	1	0	0	0
2				2	1	1		1	2		1	1	0	0	1	0	0	1
1	杭州电子科技大学	电子信息工程	大一		1	2	2	2	1	2	2	1	1	0	1	0	1	1
1	杭州电子科技大学	工业设计	三		1	2	2	1	1	2	2	1	0	0	0	0	1	0
1	杭州电子科技大学	统计	大一		1	2	1	2	2		1	1	0	0	1	1	0	0
1	杭州电子科技大学	智能电网信息工程	14 级		1	2	1	1	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	工业设计	大三		1	2	1	1	2		2	2	0	0	1	1	0	1
1	杭州电子科技大学	统计学	2		1	2	1	2	2		1	1	0	0	0	0	1	0
1	杭电	集成电路设计与集成系统	大三		1	2	1	1	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学	通信	大二		2	2	1	2	2		2	1	0	0	1	0	1	0
1	杭州电子科技大学	生物医学工程	研三		1	2	1	2	2		1	2	0	0	0	1	0	0
1	杭电	集成电路设计与集成系统	大三		1	2	2	2	2		1	1	0	0	1	1	0	1
1	杭州电子科技大学	生物医学工程	研三		1	2	1	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	会计学	大四		1	2	2	1	2		1	1	1	1	1	0	0	0

1	杭州电子科技大学	金融	一	2	2	1	1	2		2	1	0	0	0	1	0	0
1	杭州电子科技大学	会计	大一	1	2	1	2	2		2	1	0	0	1	0	1	0
1	杭州电子科技大学	会计	大一	1	2	2	2	2		1	1	1	0	1	0	0	0
1	杭州电子科技大学	会计	大二	1	2	1	1	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学#	会计学	2012 级	1	2	1	1	1	1	1	1	1	1	1	1	1	1
1	杭州电子科技大学	金融	大一	1	2	1	2	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学	会计学	大四	1	2	2	2	2		2	1	1	1	1	0	0	0
1	杭州电子科技大学	模式识别与智能系统	研三	2	1		2	2		1	1	0	1	0	0	0	1
1	杭州电子科技大学	数字媒体技术	大三	1	2	1	1	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	通信工程	大二	1	2	2	2	2		2	1	0	0	0	1	0	0
1	杭电	机制。	大一	1	2	1	1	1	2	1	1	0	1	1	0	0	0
1	杭电	电子	大三	1	2	1	1	2		1	1	0	1	0	1	0	1
1	杭电	机械设计制造及其自动化	大一	1	2	1	1	2		2	2	1	0	0	1	0	1
1	杭州电子科技大学	电子信息工程	3	2	2	2	2	2		2	1	0	1	1	0	1	0
1	杭州电子科技大学	国际经济与贸易	大三	1	2	1	2	2		2	1	0	1	0	1	0	1
1	杭州电子科技大学	国际经济与贸易	大三	1	2	1	1	2		2	1	0	1	1	0	0	1
1	杭州电子科技大学	会计学	大二	1	2	2	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	财务管理	大三	1	2	1	1	2		2	1	1	0	1	0	1	0
1	杭州电子科技大学	会计	大四	1	2	2	1	2		1	1	0	0	1	0	0	0
1	杭州电子科技大学	信息管理	大三	1	2	1	2	1	1	2	1	1	0	0	1	0	1
1	杭州电子科技大学	信管	大二	1	2	2	1	1	1	2	2	0	1	0	0	0	0
1	杭州电子科技大学	会计专业	大四	1	2	2	2	2		1	1	1	0	1	0	0	0
1	杭州电子科技大学	国贸	大二	1	2	1	1	2		1	2	0	0	1	0	0	0
1	杭州电子科技大学	测控技术与仪器	2015	2	2	1	2	2		2	1	1	1	1	0	1	0
1	杭州电子科技大学	经济统计学	大二	1	2	1	1	2		2	2	1	1	0	1	0	0
1	杭州电子科技大学	统计学	大二	1	2	2	2	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学	金融学	四	1	2	1	2	2		1	1	0	1	1	0	0	0
1	杭州电子科技大学	光电	1	2	2	2	2	2		2	2	0	1	0	0	0	0
1	杭州电子科技大学	会计学	大二	1	2	1	2	2		1	1	0	1	0	0	0	0
1	杭州电子科技大学	自动化	1	1	2	1	2	2		1	1	0	1	1	0	0	1
1	杭州电子科技大学	统计	大二	1	2	2	2	1	1	2	1	0	0	1	0	0	0
1	杭州电子科技大学	通信工程	一年级	1	2	1	1	1	2	1	2	0	1	0	1	0	0
1	杭州电子科技大学	应统	14	1	2	1	1	1	2	2	1	1	1	1	1	1	1
1	杭电	英语	大四#	1	2	1	2	2		2	1	0	0	0	1	0	0

1	杭州电子科技大学	会计	大二	1	2	2	2	2		2	2	1	1	0	1	0	0
1	杭州电子科技大学	财务管理	大三	1	2	1	1	2		2	1	1	1	0	0	0	0
1	杭州电子科技大学	财务管理	大三	1	2	1	1	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	财务管理	大三	1	2	2	1	2		2	1	0	0	1	1	0	0
1	杭州电子科技大学	材料科学与工程	大一	1	2	1	1	1	1	2	1	1	1	0	0	0	0
1	杭州电子科技大学	材料科学与工程	大一	1	2	2	2	2		2	1	0	0	1	0	0	0
1	杭州电子科技大学	电气工程及其自动化	大一	1	2	1	2	2		2	1	0	1	0	0	0	0
1	杭州电子科技大学	经济学	大三	1	2	1	2	1	2	2	1	0	0	1	0	0	0
1	杭州电子科技大学	软件工程	大二	1	1		2	2		1	1	0	0	1	0	0	1
1	杭州电子科技大学	通信工程专业	大三	1	2	1	1	1	2	2	1	0	0	1	0	1	1
1	杭州电子科技大学	信息工程	大二	1	2	2	1	1	2	2	1	0	0	1	1	0	1
1	厦门大学	金融学	博士二年级	1	2	2	2	2		1	1	0	0	1	0	0	0

Table 4: Raw Survey Data

Appendix I: Example of Task List

Task Name	Purpos	Relevence	Due Date	Completed	Who	Comments
Make a website to show statistics graphics	(1)QP	(2)TBA	Fri, 12/11/15		H	QR code in paper so that we can have interractive graphics
Findings 2nd draft	(1)QP	(2)TBA	Thu, 12/3/15		B	
Methods 3rd draft	(1)QP	(2)TBA	Thu, 12/3/15		R	
Outline for Conclusion	(1)QP	(2)TBA	Thu, 12/3/15		Team	
Bster Presentation for translation	(1)QP	(2)TBA	Fri, 12/4/15		R	
Background 2nd draft	(1)QP	(2)TBA	Sat, 12/5/15		J	
Introduction 1st draft	(1)QP	(2)TBA	Mon, 12/7/15		J	
Conclusion 1st draft	(1)QP	(2)TBA	Tue, 12/8/15		Team	
Exec Summary 1st draft	(1)QP	(2)TBA	Thu, 12/10/15		TBA	
Abstract 1st draft	(1)QP	(2)TBA	Thu, 12/10/15		TBA	
Appendices 1st draft (compilation)	(1)QP	(2)TBA	Fri, 12/11/15		Team	
Aknowledgements	(1)QP	(2)TBA	Tue, 12/15/15			
Authorship	(1)QP	(2)TBA	Tue, 12/15/15			
Final Presentation	(1)QP	(2)TBA	Mon, 12/14/15		Team	
Finish Collecting Survey Answers	(1)QP	(4)Done	Thu, 11/19/15	Thu, 11/19/15	Team	Analyze and make graphics
Figure out who to interview in China	(1)QP	(4)Done	Tue, 11/17/15	Tue, 11/17/15	Team	
Research traits of good entrepreneurs	(1)QP	(4)Done	Wed, 11/18/15	Wed, 11/18/15		
Entrepreneurship Competitions	(1)QP	(4)Done	Tue, 11/17/15	Tue, 11/17/15	H	Basic info in Background, attracting students in Findings
Add to/write up history of Ent Edu in the US and China	(2)Bster	(4)Done	Tue, 11/17/15	Tue, 11/17/15		
Transcribe Stanley Shen Interview	(1)QP	(4)Done	Mon, 11/16/15	Mon, 11/16/15	H	
Transcribe Bill Aulet Interview	(1)QP	(4)Done	Mon, 11/16/15	Mon, 11/16/15	H	
Transcribe Prof Dasher Interview	(1)QP	(4)Done	Mon, 11/16/15	Mon, 11/16/15	J	
Add soft resources for each top school & good ent. Mindsets	(1)QP	(4)Done	Mon, 11/16/15	Mon, 11/16/15		
Figure out how we want to present our data	(1)QP	(4)Done	Fri, 11/13/15	Fri, 11/13/15	Team	
Research Entrepreneurship Education in US and China	(1)QP	(4)Done	Thu, 11/12/15	Thu, 11/5/15	Team	Add to the background chapter 11/12
Agenda for Weekly Advsor Meeting	(1)QP	(4)Done	Thu, 11/12/15	Thu, 11/12/15	Team	
Weekly Update for Group Meeting	(1)QP	(4)Done	Thu, 11/12/15	Thu, 11/12/15	Team	
Revise the Methodology Chapter	(1)QP	(4)Done	Thu, 11/12/15	Thu, 11/12/15	R	Due at 8pm.
Research average schools in US and China	(2)Bster	(4)Done	Tue, 11/10/15	Mon, 11/9/15		If we can't find anything, make a survey (!!) to get data
Make update ppt for Bster	(2)Bster	(4)Done	Mon, 11/9/15	Mon, 11/9/15	J/R	JUST and update, not filled with data. Send to HDU buddies

Figure 1: Example of Task List