# Entrepreneurship education in China. How entrepreneurial are universities?

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**Abstract**

This study is based on 16 Chinese universities and aims to understand entrepreneurship education in China by exploring the extent of entrepreneurship in Chinese universities. This paper uses a questionnaire method for data collection, referring to the self-test questions involving the questionnaire on the official HEInnovate website, and comparing the data from Chinese universities with all the data on that website for analysis. Due to the limited data collected, an additional in-depth interview with relevant experts was set up for this experiment, with the aim of analyzing the findings in depth as well as their external causes. The results of the study show that the level of entrepreneurship in Chinese universities leaves much to be desired, although there is no shortage of parts of it that are doing relatively well. Among these, the strong Chinese government is influential as an external factor, and this deserves further in-depth study.

**Key words:** entrepreneurship education; entrepreneurial learning; Chinese universities;

# 1. Introduction

Entrepreneurial education arms people who want to successfully start a venture company with essential motivation, knowledge, and skills (Cho, 1998). In recent years, the growth and development of courses and programs dedicated to entrepreneurship and the creation of new businesses in the world's leading universities has been significant. The number of colleges and universities offering entrepreneurship-related programs has grown from a handful in the 1970s to over 1,600 in 2005 (Kuratko, 2005). Universities can promote entrepreneurship both indirectly and directly: indirectly through education, or directly through commercialization research or industrial incubation. The flow of qualified "future innovators" constitutes huge potential and a responsibility for universities to meet the demand for a more entrepreneurial workforce and the need for highly qualified competencies in this field (Rasmussen & Sørheim, 2006). The number of those resources devoted to entrepreneurship education programs in universities, and the educational institutions associated with them, is growing rapidly (Katz, 2003; Vesper & Gartner, 1997).

It is important to note the fact that entrepreneurship education is currently mostly implemented and promoted in Western countries (Kuratko, 2005). The situation in the United States, for instance, is quite enhanced. Entrepreneurship education was introduced by the United States in the 1940s. Consequently, it has one of the most mature entrepreneurship education systems in terms of curriculum development, faculty, funding and research collaborations, etc. (Wilson, 2008). High school students are already quite familiar with this kind of education. According to Wilson (2008), the implementation of entrepreneurship education in Europe dates back to as early as the 1990s. The number of entrepreneurship faculties at institutions across Europe has since been increasing overtime. In the United Kingdom, entrepreneurship education became "fashionable" between 1995-2004, when government provided universities with more available funding, leading to an increase of this type of courses (Matlay & Carey, 2007). In Japan, the Tokyo Metropolitan Government officially announced the inclusion of entrepreneurship education in the secondary school curriculum as early as January 2001.

In less-developed countries or regions, such as the Middle East, Africa, China and South East Asia, the whole entrepreneurial ecosystem has only come into the limelight in the last decade. Their entrepreneurial ecosystem, however, is still very much in its infancy. For example, in Sub-Saharan African countries, most institutions are now offering entrepreneurship courses, but the focus is mostly on an overview of the basic business environment and more internship opportunities, while the educational practice remains to be enhanced (Kabongo & Okpara, 2010). In East-Asian countries, such as China, the government has stated that it encourages young people to be active in innovation and entrepreneurship. There even is a stated attitude to set up relevant courses in universities, nevertheless, it is not widely implemented (Dou et al. 2019). Although a few Chinese universities have developed a curriculum for entrepreneurship education, there is also a lack of market research knowledge, very limited contact time, a shortage of business plan models and difficulties in managing the associated teamwork (Millman et al. 2008). Weiming et al. (2016) also found that the weaknesses of entrepreneurship education in Chinese universities are mainly reflected in four areas: inadequate curriculum design, lack of qualified teachers for entrepreneurship education, monotonous mode of entrepreneurship education, and inadequate supporting mechanisms for entrepreneurship education.

Academic research in this area is also limited in those countries or regions, let alone an assessment of how entrepreneurial those universities are. This research therefore seeks to take China as a case study to examine specifically what it is doing in terms of entrepreneurship education and how entrepreneurial their universities are, given the current policy or funding support. The main research question of this study is therefore as follows:

*"Entrepreneurship education in China. How entrepreneurial are universities?"*

In the next chapters, I will first delineate the definitions of relevant terms in the literature review and organize the existing literature on the development of entrepreneurship education in Western countries as well as in China, and will also include a small number of other developing countries. In the next parts, the Theoretical Framework and Methodology, I will distill the relevant information from the theoretical source of this study, the official website of HEInnovate, and introduce my sample selection, data collection and analysis methods. In the

Findings section, I will present the processed data in graphical form and provide corresponding textual descriptions. In the Discussion section, I will implement visual data representations into phenomena to answer my research questions based on the theoretical framework, and explain the reasons behind these phenomena based on the literature review. Finally, I will make a summary and point out the shortcomings of this study and possible future directions for more in-depth research.

## 2. Literature Review

In this research context, in order to clarify the definition of entrepreneurship in this study, it is necessary to briefly distinguish the types of entrepreneurships. This is also true for entrepreneurship education. The existing literature has also been summarized and organized based on different geographical contexts of division, with the United States, Europe, and the United Kingdom as representatives of developed entrepreneurship education. It is the existing literature on the development of entrepreneurship education in China that has been reviewed carefully as well since China is a vast and complex country, it is needed to clarify advanced models of entrepreneurship education in other countries and be familiar with the current situation in China in order to have a comprehensive academic foundation to support the conclusions of this study when exploring the extent of entrepreneurship in its universities.

### 2.1. Entrepreneurship and Entrepreneurs

Throughout academic history, entrepreneurship has had a lot of different meanings according to different people (Sharma & Chrisman, 1999). As early as in 1934, Schumpeter (1934) gave a definition to entrepreneurs as people creating new combinations, including new products, processes, markets, forms of organization and sources of supply and entrepreneurship is therefore the process of conducting new combinations. To Gartner (1988), entrepreneurship is stated as the creation of organizations, focusing on the behavior of entrepreneurs, rather than who they are. Additionally, entrepreneurship can be also applied within existing organizations (Guth & Ginsberg, 1990) including renewal of key ideas and innovation of new commercial strategies. Consequently, it is possible to achieve entrepreneurship in all kinds of organizations,

including non-profit ones. Sharma and Chrisman (1999) drew the definitions of entrepreneurs as well, which are "individuals or groups of individuals, acting independently or as part of a corporate system, who create new organizations, or instigate renewal or innovation within an existing organization", which is consistent with what has been discuss about entrepreneurship above. In terms of personality and background, entrepreneurs are nourished by unique culture, economy, society, politics and education from the environment throughout their growth (Gartner, 1985), and thus their motivation, ability and reaction to risks is distinctive in every individual.

The kind of educational entrepreneurship discussed in this study is clear-it is one that contains the crystallized creative intelligence of the entrepreneur, and should not be a random bakery or grocery store private operation. Moreover, those entrepreneurs within this entrepreneurship context should be innovative people, creating and making usage of new combinations in to business in the market. As Lee and Peterson (2000) stated, great entrepreneurs are produced by an entrepreneurship-focused surroundings and cultures instead of growing into it on their own.

## 2.2. Entrepreneurship Education

It has been long discussed that whether entrepreneurship can be taught or not. First, it must be assumed that entrepreneurial talent is, for the most part, learned through acquisition, not innate, and therefore entrepreneurship education makes sense. (Cho, 1998; Drucker, 1985). Therefore, it is possible to develop "entrepreneurial perspective" in individuals (Kuratko, 2005). Basically, there are 2 sources of entrepreneurship education in one's life – one is growth background (McKelvy, 1982) which can be passed on by either parents and social, cultural and educational environment or even inspirations from past working experience (Lee et al. 2005); and the other one is systematic education provided by universities or other institutes in forms of programs or courses.

This study focuses on the second source of entrepreneurship education, which is programs and courses created by universities in different majors in the field of business (Duval-Couetil, 2013). Basing on an extensive literature review, Fayolle (2013) sorted out more specific elements in entrepreneurship education at a didactical level by doing some literature review: (1) Audience

which are mainly pupils and students; (2) Objectives which for entrepreneurial courses are at both educational and socio-economic levels; (3) Contents which are dominantly about methods of how to plan a business and functional knowledge supportive to the creating process of new venture companies (Honig, 2004); (4) Methods which are as a few articles call the importance of 'active', 'experiential', 'learning by doing' and 'real-world practice' pedagogies; (5) Evaluation which stands for the assessment and evaluation of entrepreneurship education programs and courses to figure out the outcomes of entrepreneurship education in terms of both human capital assets (knowledge, skills, positive perceptions of entrepreneurship and intention to be an entrepreneur) and entrepreneurship (the creation and performance of new ventures).

## 2.3. Entrepreneurship education and regional context

It is widely considered that The U.S. has the longest history of entrepreneurship education. Though the first relevant course could date back to as early as 1947 in Harvard University, entrepreneurship education was formally a powerful part in business schools. In fact, the first Master of Business Administration (MBA) was launched in The University of Southern California in 1971 and then an undergraduate version in 1972 (Kuratko, 2005). Since then, the number of universities reporting entrepreneurship courses began to increase strongly. In the 1980s, there were more than 300 and in the 1990s, it reached the level of 1050 (Solomon et al. 1991). By the early 2000s, this number exceeded 1500 together with more than 100 active entrepreneurship centers based on universities (Charney & Libecap, 2000).

Historically in the United States, one of the key drivers of economic growth has been entrepreneurship (Wilson, 2008). The culture and educational emphasis on entrepreneurship education in the U.S. have been a major support in the creation of many international enterprises, for instance, Dell, Microsoft and Wal-Mart (Timmons, 1999). As Zahra (1999) pointed out, those venture companies are so successful that they have helped adding national wealth and competitive advantages by innovatively creating new products and services. However, interestingly, few new articles from the past decade are found doing research on the recent situation of entrepreneurship education in the U.S.

Compared to the U.S., Europe is a little late to the party in terms of entrepreneurship education. The benefit is that it had the opportunity to learn from the experiences of the U.S. and to choose only the models that are applicable to its own realities to set up (Wilson, 2008). The upside is that European entrepreneurship education is based on information that is more effective and applicable to their own ecosystem. They have also derived an evaluation mechanism to understand the rationale behind what works in terms of the rules. In other words, the creation of a European entrepreneurship education system is not as simple as just setting up the infrastructure and implementing and enforcing it. Accordingly, there are downsides. Unlike the US, where most of the top 100 companies were founded in the 1970s-1980s (which, as mentioned earlier, was also a period of high growth for entrepreneurship education in the US), in Europe most of the companies that occupy leading positions in the market have been around for over a hundred years. As a result of the American experience, European entrepreneurship education has also focused on SMEs, but in fact growth entrepreneurship or corporate entrepreneurship is the more important focus in Europe, as a way of stimulating competitiveness and creating new jobs to reinvigorate old industries (Wilson, 2008).

Notably, in the UK, a study conducted by Matley and Carey (2007) spanning 10 years (1995-2004) revealed that entrepreneurship education programs offered by all 40 universities in the sample were increasing, but some institutions were growing significantly slower than others due to what they perceived to be a lack of demand for entrepreneurship education programs among university students and staff. However, after all schools had been formally launched as a result of the 'wave' of entrepreneurship education, more detailed considerations emerged - the difference in emphasis between undergraduate and postgraduate provision. Postgraduate students are required to write a master's thesis on entrepreneurship in addition to their textbook studies. However, there has been a heated debate in the UK academic community, among policy makers and among some stakeholders as to whether entrepreneurship education is sufficiently effective or not.

## 2.4. Entrepreneurship education in China

To better understand the current state of entrepreneurship education in China, it is important to have a general understanding of the current entrepreneurial ecosystem in China. This is quite

different from that of developed Western countries and determines the uniqueness of entrepreneurship education in China. In their study of the entrepreneurial ecosystem in China, Yang & Zhang (2021) point out that there are some failed entrepreneurial activities, such as starting a business in order to get government subsidies. The initial intention of the entrepreneur is to get more money rather than to succeed in the business, so when they get government subsidies under the guise of starting a business, they stop the business. These negative entrepreneurial activities suggest that the entrepreneurial ecosystem in China may not have the capacity to identify quality entrepreneurial activities. In other words, there are deficiencies in elements such as 'leadership' and 'knowledge'.

Although there have been advances and even innovations in entrepreneurship education in China, the history of entrepreneurship education in China is very short and is still at the beginning of its development (Zhou & Xu, 2012). In terms of the progress part, Zhou and Xu (2012) called it an evolution and according to their findings, there were 4 "milestones": (1) In 1997, Student Entrepreneurship Competition was held by Tsinghua University which is known as the birth of Chinese entrepreneurship education; (2) In 2002, the National Entrepreneurship Education Pilot Program (NEEPP) was taken the lead by the Ministry of Education in 9 selected institutions, making entrepreneurship education an individual institutional practice; (3) In 2005, the Know about Business (KAB) program designed for undergraduates was built up in 6 top universities to practically provide training opportunities for teachers as well as promote entrepreneurial behavior among young people; (4) In 2008, The pilot project on entrepreneurship education began at the national level in nine universities, with government leadership and support, and the following year; a national advisory committee was established to provide advice and guidance to universities on entrepreneurship education. These milestones may seem impressive, but key words such as 'pilot' and 'individual course' (rather than a separate major or undergraduate/graduate program) still reveal the weaknesses of entrepreneurship education in China, which is still very limited and unevenly distributed. Especially when compared to the US, China is still a long way off (Kirk & Simpson, 2007). China's achievements are also not encouraging in terms of the outcomes of entrepreneurship education. In two national surveys, it was found that less than one per cent of university graduates actually set up their own businesses after graduation (compared to 20-30 per cent in

developed countries). Instead, they are more likely to be academics or to have a stable and secure job in a state company. This shows that entrepreneurship education in China is far from adequate in terms of fostering entrepreneurship and risk acceptance.

In recent years, in terms of policy, the government's 2014 slogan "Mass Entrepreneurship, Mass Innovation" has highlighted how important entrepreneurship is in China's development (Mei & Symaco, 2020). In addition, artificial intelligence (AI) has been supported by Chinese policy, reflecting the fact that China's innovation technology is already very advanced (see State Council 2015, 2016, 2017), which in turn spreads the social climate to increase students' sense of social responsibility and entrepreneurship. In terms of teaching practice, entrepreneurship education programs have also received a dual focus on the social orientation of technical skills, which the Ministry of Education has conceptualized as a 'breakthrough' to improve the overall quality of teaching in higher education institutions (Wang, 2016).

From the above overview of entrepreneurship education in representative developed countries around the world and in China, it is easy to see that in general, entrepreneurship education is very well developed in developed Western countries, both at the practical level and at the level of the academic field. In China, however, the implementation of entrepreneurship education in the first place is far below the level of developed countries. Secondly, in terms of academic research, I found that the latest studies on entrepreneurship education in China basically emphasize the results, for example, that entrepreneurship education in China does promote entrepreneurial motivation and entrepreneurial skills among graduates, which does make sense. But there are very few papers on exactly how entrepreneurship education is currently being implemented in Chinese universities and exploring just how entrepreneurial Chinese universities are. What this study does is fill this academic gap by conducting research at the level of concrete implementation.

## 3. Theoretical Framework

The theoretical framework for this study is referenced and adapted from the Guidance notes section of the official HEInnovate website resources. HEInnovate, as a self-reflection tool, is

designed for higher education institutions wishing to explore their potential for innovation. It guides higher education institutions in eight key areas, including Leadership and Governance, Organizational Capacity, Entrepreneurial Teaching and Learning, Preparing and Supporting Entrepreneurs, Digital Transformation and Capability, Knowledge Exchange and Collaboration, Internationalization and Measuring Impact, to assess whether they are entrepreneurial and well prepared for the challenges of the future. In this way, higher education institutions can identify and prioritize these eight dimensions and plan for action.

Since the target of this study is universities in China and not all high educational institutions, I have adapted, adjusted and streamlined the Guidance notes to make the use of the data more efficient. Each of these eight key areas and their criteria will be described in the following parts.

3.1. Leadership and Governance

Strong leadership and good governance at a university are critical to developing a culture of entrepreneurship and innovation on its campus. This section highlights some important factors that universities may consider to strengthen their entrepreneurship agenda.

First, the university should see itself as an entrepreneurial organization and environment, supported by a shared vision, values and mission. The entrepreneurial aspirations and agenda will be reflected in this university's strategy, for example, a mission statement and written strategy that sets an entrepreneurial vision for the future of the institution, articulates a clear implementation plan to achieve its strategy and vision, with clear goals and key performance indicators.

Second, universities that adopt an open, flexible and decentralized approach are more likely to engage in innovative activities and speed up decision-making. It is the responsibility of the university to provide an environment that encourages the creation of ideas and the emergence of new activities and initiatives, for example, by allowing faculties or units within the institution to assume full responsibility and ownership for the development of new structures and centers, supporting faculties or units through a range of incentives and rewards linked to the demonstration of entrepreneurial and innovative results.

Finally, a university has a number of roles to play in its community and in the broader ecosystem. One of its key functions is to support and contribute to regional, social and community development, for example, by actively participating in the development and implementation of local, regional and/or national innovation and entrepreneurship strategies, by providing general access to the institution's facilities to others in the wider community and by supporting start-ups and/or established companies in the region to enhance innovation and growth.

## 3.2. Organizational Capacity: Funding, People and Incentives

The organizational capacity of a university drives its ability to achieve its strategy. If a university is committed to entrepreneurial activities that support its strategic goals, then key resources such as investment, staff, expertise and knowledge, and incentive systems need to be in place to sustain and enhance its entrepreneurial capacity.

First of all, for a university to become entrepreneurial, it needs a gradual, long-term process of organizational development, so it needs a sustainable and diversified financial base with access to key resources and investments. To achieve this, universities can ensure a close link between their long-term commitment to invest in entrepreneurial and innovative activities and their financial strategy or continuously engage with funders and investors to secure the financial resources to achieve their goals.

Secondly, universities can build a culture of entrepreneurship by engaging seniors with strong entrepreneurial backgrounds and experience, such as alumni who have graduated years ago. These individuals can bring different perspectives, knowledge and expertise that are not available internally. To achieve this, universities can demonstrate the importance they place on bringing in people from diverse backgrounds, giving status and recognition to those who contribute to the institution's entrepreneurial agenda and recruiting people with strong entrepreneurial backgrounds from outside the private, public or voluntary sectors and academia.

Additionally, academic and administrative staff are critical and necessary resources needed to achieve all elements of a university's entrepreneurial agenda, including providing entrepreneurship education, providing support for business start-ups, etc. The University can

achieve this by developing a formal professional development policy that links all employees to the implementation of the institution's entrepreneurial strategy and vision and by setting individual goals and performance targets for all employees who support the implementation of the entrepreneurial agenda.

Finally, encouraging and rewarding entrepreneurial behavior by all staff members strengthens the potential of a university to develop into an innovative institution. This includes students or staff members who actively seek new opportunities to develop in line with the institution's strategic goals. The system of incentives and rewards should be in place from the individual level to the faculty level and go beyond the traditional career development model.

3.3. Entrepreneurial Teaching and Learning

Teaching and learning about entrepreneurship involve exploring innovative teaching methods and finding ways to stimulate an entrepreneurial mindset. It is not just about learning about entrepreneurship, but also about gaining entrepreneurial experience and acquiring skills and competencies to develop an entrepreneurial mindset.

First, an entrepreneurial university will offer a range of learning opportunities, both formal and informal, to promote innovative teaching and learning across all faculties. Such a university should encourage innovation and diversity in pedagogy across all faculties, and foster an entrepreneurial mindset and skills across all courses. For example, support curriculum reform to stimulate and develop entrepreneurial mindsets and skills through new pedagogies, student-centered, interdisciplinary, and practice-based learning (e.g., living labs, use of case studies, games, and simulations).

Moreover, the content of entrepreneurship education needs to be constantly reviewed and updated in order to keep the curriculum relevant and up to date. Therefore, universities should incorporate the results of entrepreneurship research into their teaching. For example, encourage educators to review the latest research in entrepreneurship education, provide a forum where educators can exchange new knowledge and ideas, and incorporate the latest research.

3.4. Preparing and Supporting Entrepreneurs

Universities have a degree of responsibility to help students, graduates and staff to consider entrepreneurship as a career option. In the early stages, it is particularly important to help individuals think about business, social, environmental or lifestyle goals related to their entrepreneurial aspirations and intentions. And for those who have already decided to start a business or other type of venture, targeted help can be provided to generate, evaluate and implement ideas, to develop the skills they need to succeed in business, and to find relevant team members to collaborate with and access appropriate funding and effective networks.

First, universities raise their own awareness of entrepreneurship in order to help people make informed decisions about their careers, including the choice of whether to start a business. For example, universities can provide favorable framework conditions for entrepreneurship, such as allowing employees to own shares, work part-time, take sabbaticals, and the possibility for students to extend their study courses to support the creation of new businesses during their studies, or provide opportunities for students to participate in research projects that lead to entrepreneurial opportunities and internships with entrepreneurs.

Furthermore, entrepreneurship training should impart relevant knowledge and skills on a wide range of topics, such as financing, legal and regulatory issues, dealing with people and building relationships, managing the innovation process, dealing with success, stress and risk, and how to restructure or exit. Emotional preparation is just as important as the technical aspects. To achieve the above, universities can offer tailored entrepreneurship courses in all subject areas and levels of study, actively recruit students and staff to training activities, and monitor the level of engagement or involve entrepreneurs and key players in the entrepreneurial ecosystem.

In addition, external financing can be effective in helping new ventures succeed. Based on this, universities can organize networking and financing events for aspiring entrepreneurs, present their ideas to investors and get feedback, offer micro-financing tools such as grants, prizes, loans and equity or leverage their network of potential investors for crowdfunding.

Finally, business incubators typically offer a range of services, such as free or subsidized space, access to labs and research facilities, and prototyping support. They also provide entrepreneurs with a visible and tangible location for mentoring and a shared platform. Universities should

therefore host their own incubators and ensure that their incubators offer comprehensive soft support (networking, mentoring, etc.) as well as physical infrastructure, extensive promotion of the incubator on campus, and events to attract potential entrepreneurs and integrate the incubation facility with the research and education infrastructure of the higher education institution to enhance synergies.

## 3.5. Digital Transformation and Capability

Most universities in China are already deploying digital technologies, but the uptake and integration varies among and within individuals. Universities should take full advantage of the opportunities presented by digital transformation and see digital technology as a key enabler and as a catalyst for becoming entrepreneurial institutions.

An innovative university will use digital technology for innovative curriculum design and implementation. The aim is to improve the quality and equity of education and to promote the development of digital competencies and skills of faculty, staff and students that are essential to all aspects of life today. Universities can provide coaching and regular training for all staff, embed digital competencies and skills in the curriculum and its intended learning outcomes across all disciplines, adopt a lifelong learning perspective, monitor, evaluate and improve the use of digital technologies in teaching, learning and assessment, and ensure that good practice is shared in other areas of the university.

## 3.6. Knowledge Exchange and Collaboration

For a university, the exchange of knowledge is essential for the development of innovation, teaching and research. It should be an ongoing process that contributes to the social, cultural and economic development of the region in which the university is located. When a university enhances collaboration and knowledge exchange, it is also creating value for society.

First, universities can ensure that knowledge exchange and collaboration is a high priority in educational delivery and compliments the entrepreneurship agenda. Encourage faculty, staff and students to engage in such activities, including support mechanisms to coordinate and share relationships across higher education institutions.

In addition, because the structure around a university is knowledge intensive, this provides opportunities for the flow of knowledge and ideas, including incubators, science parks, etc. An innovative university should have systems in place that support the exchange of knowledge and ideas on and off campus. For example, universities can encourage the sharing of facilities, two-way incentives for mobile staff and testing of the frequency and quality of connections and cross-fertilization activities taking place on and off campus.

Finally, entrepreneurial universities also reach out to the external environment through innovative activities. These activities can be non-relaxed and casual, such as billiard clubs and offline educational events, or more formal and serious, such as workshops, internships, collaborative research, and entrepreneurial projects.

3.7.  Internationalization

Internationalization is not an end in itself, but a tool to achieve change and absorb advanced knowledge. It integrates international and global knowledge sharing and the mobility of people into the process of education and research. Internationalization is characterized by pushing boundaries, incorporating new ideas, and questioning traditional approaches, which is why it is inextricably linked to entrepreneurship. A university cannot achieve the establishment of an enterprise if it is not internationalized.

First, international mobility provides opportunities for cross-cultural exchange and long-term international partnerships. In addition to attracting international staff and students, entrepreneurial universities actively encourage and support the international mobility of their own staff and students. For example, universities can promote international mobility in the form of exchange programs, scholarships, fellowships and internship opportunities.

Second, those who can inspire new approaches to teaching and research within an international mindset are the greatest determinants of a university's degree of internationalization, as this can leverage worldwide reputation and connections to benefit the university within its international network. To achieve this, universities can make it a point to attract international staff or internationally minded staff who meet the needs of their entrepreneurship education programs, set up special international recruitment campaigns, etc.

Finally, the new pedagogical concepts acquired by the university in the process of internationalization can improve its ability to compete in the international market. Therefore, an innovative university should constantly adapt and improve its teaching and learning environment to make it look tailored to a more global audience. For example, universities can do things such as funding to support internationally oriented programs and ensure that the curriculum contributes to students' professional and social performance in international and multicultural contexts, creating platforms that support international networks of partners to add value to teaching entrepreneurship, increasing the number of joint/dual degrees, etc.

## 3.8. Measuring Impact

Universities need to understand the impact of the changes they make as they move towards their innovative entrepreneurial processes. The concept of entrepreneurial/innovative universities combines self-perception, external reflection, and evidence-based approaches. Current self-measures typically focus on the number of by-products, the quantity and quality of new intellectual property and research revenue, rather than entrepreneurial spirit, talent retention, contribution to local economic development, or broader impact of graduates. So entrepreneurial universities should be proactive and pioneering in designing methods that truly measure their impact.

First, a university's entrepreneurial process has a broad impact on its internal systems, which involves its research, delivery and even leadership and governance. A university has a higher probability of achieving its own desired outcomes only if it verifies that it is achieving its goals, such as setting clear desired outcomes/impacts related to its entrepreneurial agenda, collecting evidence on the outcomes/impacts of its entrepreneurial agenda, etc.

Moreover, universities need to systematically assess entrepreneurial teaching and learning on a faculty-by-faculty basis so that it can reach its full potential. An entrepreneurial university should regularly monitor and evaluate its entrepreneurship program and feed the results into curriculum renewal and staff development programs. For example, measure the impact of entrepreneurial teaching at different stages of implementation (beginning, end, and subsequent points in time) to get an accurate picture of changes.

Last but not least, one of the key characteristics of an entrepreneurial university is an international perspective and outlook. A good internationalization strategy should be able to support the development of an entrepreneurial agenda across all faculties, so an innovative university should regularly test and evaluate whether this is being achieved. For example, the university could regularly map its internationalization activities in teaching and research to prioritize and further develop its entrepreneurial activities, using the successes as a tool to reflect and review its internationalization.

## 4. Methodology

Having the academic findings of predecessors and the theoretical framework of this study, in order to answer the research question, data is collected on the extent of entrepreneurship in Chinese universities in the form of a questionnaire and processed it for analysis to draw conclusions. In the following chapters, data collection, sample selection, and data analysis of this study would be elaborated.

### 4.1. Data Collection

To arrive at the desired findings, the questionnaire designed by the author was adapted from the self-assessment questions in the website www.heinnovate.eu/en/self-assessment, with adjustments made to streamline, modify the presentation, and revise the order of the questions, mainly based on the actual situation of university education in China. The questionnaire examines the degree of entrepreneurship in your university through eight areas, with 3-4 relevant statements attached under each area. The eight areas are leadership and governance, organizational capacity, teaching entrepreneurship, preparing and supporting entrepreneurs, digital transformation and capacity, knowledge exchange and collaboration, internationalization, and measuring impact. In completing the questionnaire, respondents were asked to rate the extent to which the university they are/were attending or working at met the given statements (1-5). Survey respondents have been repeatedly reminded to fill out the survey based on their own feelings, experiences, or reasonable speculations to ensure that the results

are true and reasonable. The explanation of the 8 relevant dimensions mentioned above (please see Appendix 1 for details of the original questionnaire) is as follows.

4.2.  Sample Selection

In the actual questionnaire collection process, a total of 67 questionnaires have been collected from 16 universities in China. These 16 universities are not all those originally selected for this study. Based on State Council's (2016) statement that all new educational ideas would be implemented in the 'first-class' universities as a priority, it was planned to distribute the questionnaire to as many 'first-class' universities in China as possible during the design phase of the study. In total, over 20 universities were distributed and students from 16 universities responded to the questionnaires. The names of the 16 universities and the number of participants in each university who completed the questionnaire, 64 in total, are shown in Table 1.

| Name of university | Participants |
|---|---|
| Beijing University | 2 |
| Tsinghua University | 3 |
| Shanghai Jiao Tong University | 2 |
| Central University of Finance and Economics | 16 |
| University of International Business and Economics | 1 |
| Tongji University | 2 |
| Nanjing University of Technology | 5 |
| East China University of Science and Technology | 9 |
| Anhui University | 2 |
| Southwest University | 4 |
| Beijing Forestry University | 7 |

| | |
|---|---|
| Anhui University of Finance and Economics | 1 |
| Fujian Agriculture and Forestry University | 3 |
| Hebei Agricultural University | 2 |
| Shanghai University of Engineering and Technology | 6 |
| Chongqing University of Technology and Commerce | 2 |
| **Total** | **67** |

**Table1.** *Each university and their numbers of participants*

4.3. Data Analysis

Regarding the processing and analysis of the data, this study also follows the methodology used in HEInnovate's self-assessment tool for higher education institutions. I took the scores (1-5) given by the subjects for the different statements corresponding to those eight key areas and averaged them over eight. These 8 averages will then be compared to the average results of all subjects who have already participated. As seen in the User Stories section of the HEInnovate website resources, the group that has already participated in the self-test is mainly from European countries such as Lithuania, Belgium and Finland. The comparison will be in the form of a bar chart.

## 5. Findings

The data results and their comparison with the results of all submissions are shown in both table 2 and chart 1. A t-test of the two data sets, Chinese universities and all HEI submissions, yielded $p=0.025<0.05$, indicating that the two data sets are significantly different and can be compared for analysis.

| Key area | Average | |
|---|---|---|
| | **Chinese universities** | **HEI submissions** |

| | | |
|---|---|---|
| Leadership and Governance | 3.03 | 3.50 |
| Organizational Capacity | 3.08 | 3.30 |
| Entrepreneurial Teaching and Learning | 3.24 | 3.40 |
| Preparing and Supporting Entrepreneurs | 2.99 | 3.40 |
| Digital Transformation and Capability | 3.43 | 3.40 |
| Knowledge Exchange and Collaboration | 3.47 | 3.60 |
| Internationalization | 3.49 | 3.60 |
| Measuring Impact | 3.00 | 3.30 |
| **Average** | 3.22 | 3.44 |

**Table 2.** *Comparing test results against all self-assessments*
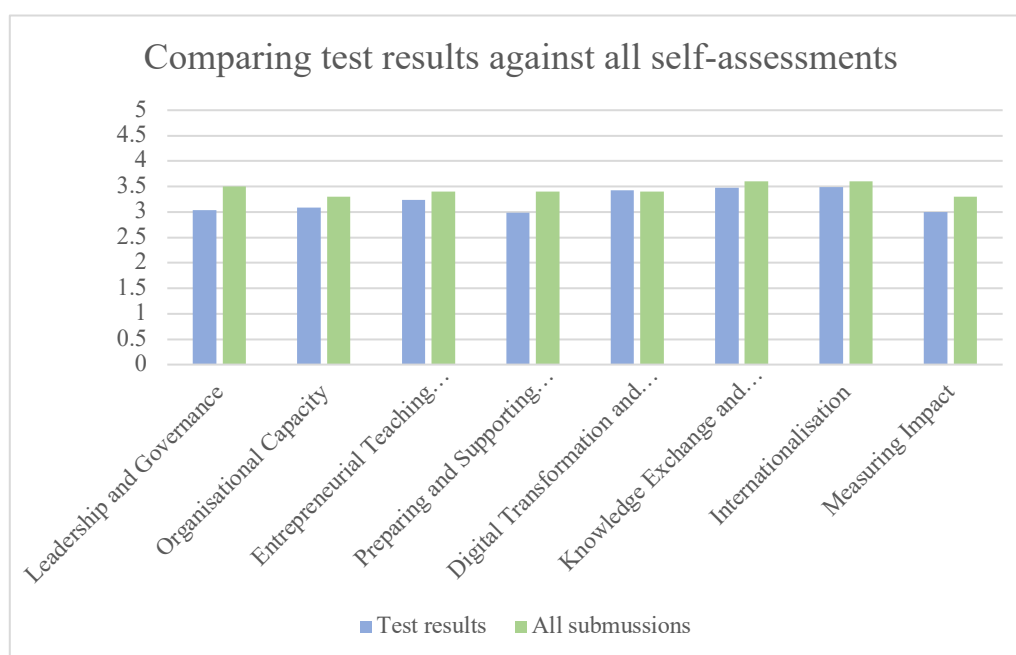


**Chart 1.** *Comparing test results against all self-assessments*

In terms of longitudinal comparisons, it is easy to see from table 2 that if 60% of the total score (3) is set as a passing mark, then Chinese universities are passing in most areas of entrepreneurship. The only section with less than 3 points is Preparing and Supporting

Entrepreneurs, which scores 2.99, the lowest score, but still very close to a pass. Other than that, the Leadership and Governance, Organizational Capacity and Measuring Impact sections are just above the pass mark for Chinese universities, with scores of 3.03, 3.08 and 3 respectively. In addition, the internalization section scored 3.49, the highest of all scores, indicating that, overall, Chinese universities are doing the best job of internationalization within the entrepreneurship education program agenda.

Compared to the results of all other respondents, the entrepreneurship level of Chinese universities is slightly lower. In both charts, Chinese universities score 3.43 with a 0.03-point advantage over the overall figure of 3.40, except for the Digital Transformation and Capability section, where Chinese universities score below the average of the other subjects in every dimension, with an average difference of about 0.22. Leadership and Governance in particular, with a difference of 0.47 points, accounting for 9.4% of the total score, is the largest difference of all. In addition, the difference in the area of Preparing and Supporting Entrepreneurs is also 0.41, accounting for 8.2% of the total score, which is the second largest difference. This is also the area where Chinese universities have the lowest scores themselves. It is worthwhile to note that China itself did the best internationalization, still scoring 0.11 points lower than the other subjects.

## 6. Discussion

Having obtained the processed data, it is logical that this study should be able to answer the research question at this point, which is how innovative and entrepreneurial Chinese universities really are. In the following pages, I will provide an in-depth interpretation of the data and the reasons behind the analysis, based on the theoretical framework and the literature review, according to eight dimensions.

### 5.1. Leadership and Governance

The score for Chinese universities in this dimension is 3.03/5, which is a passing result. It is 0.47 points lower than the average of other subjects in this dimension, which is the largest difference of any dimension. Under "Entrepreneurship is a major part of your college strategy."

this narrative, 47.76% of the respondents gave a score of 1 or 2. community development.", 35.82% of the respondents gave a score of 3 or less. This indicates that entrepreneurship-related leadership and governance in Chinese universities is still at a preliminary and superficial level. The poor performance of leadership and governance is evident in the results of Chinese universities in reflecting the entrepreneurial process in their strategies, encouraging and supporting innovative ideas and activities, and contributing to the development of their regions and communities. Either each of these is shallow, or only a little or two of them have been accomplished, and in any case, there is huge room for improvement.

In a side-by-side comparison, other subjects around the world with an entrepreneurship education agenda scored 3.5 in this area, significantly higher than Chinese universities. It is particularly important to note that this is only the average of the world levels, and there are a large number of schools that score higher than this, that is, schools that are good leaders and governors in entrepreneurship. This suggests that Chinese universities are still lagging behind in the ranks of educational institutions with entrepreneurship education programs.

The reason for this is that, on the one hand, as Yang and Zhang (2021) say, the way the government supports young people's entrepreneurship is mainly in the form of simple financial support, rather than really caring whether the educational programs for entrepreneurship are implemented and have a certain degree of impact. University administrative offices are influenced by the national and local governments, and the top down. On the other hand, entrepreneurship education in universities is unevenly distributed and, due to policy influences, is still almost exclusively "pilot" and "individual course" offerings. Although these individual initiatives reflect to some extent the importance that the government and universities attach to entrepreneurship education and their willingness to make experimental investments, they also reflect the fact that entrepreneurship education is not universally applicable in China and that university administrative offices treat it only as an isolated, experimental effort (Zhou & Xu, 2012).
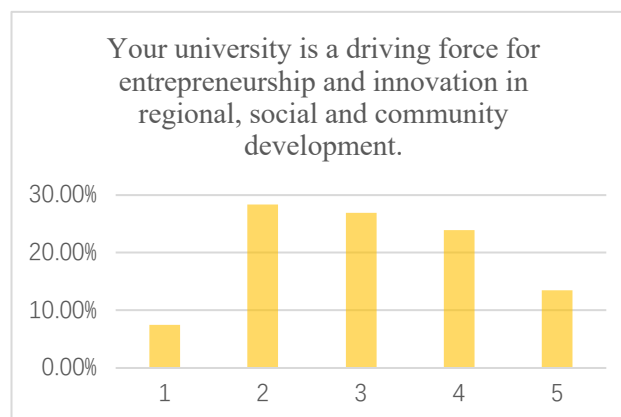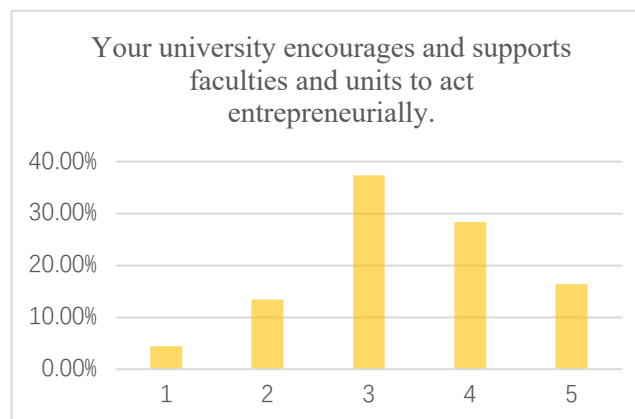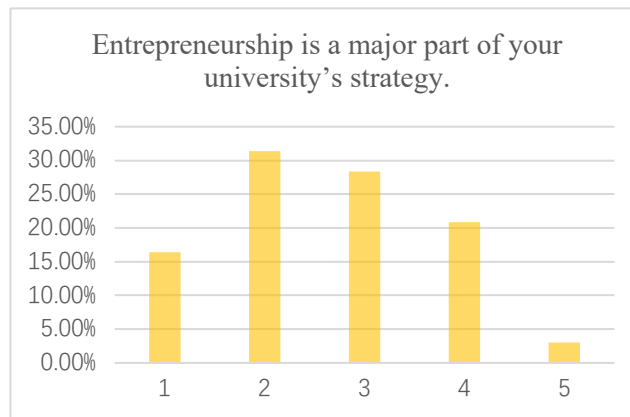
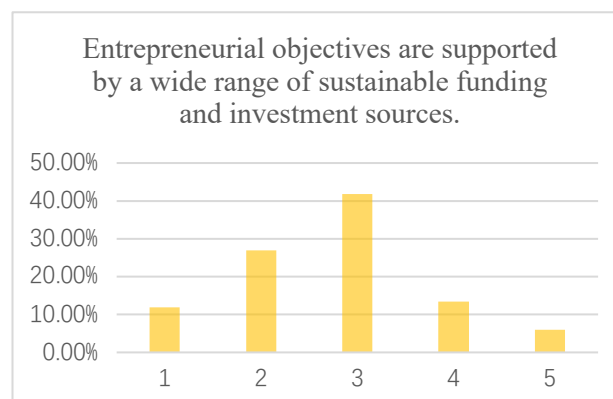**Chart 2-4.** *Percentage of people scoring 1-5 based on each statement in the Leadership section*
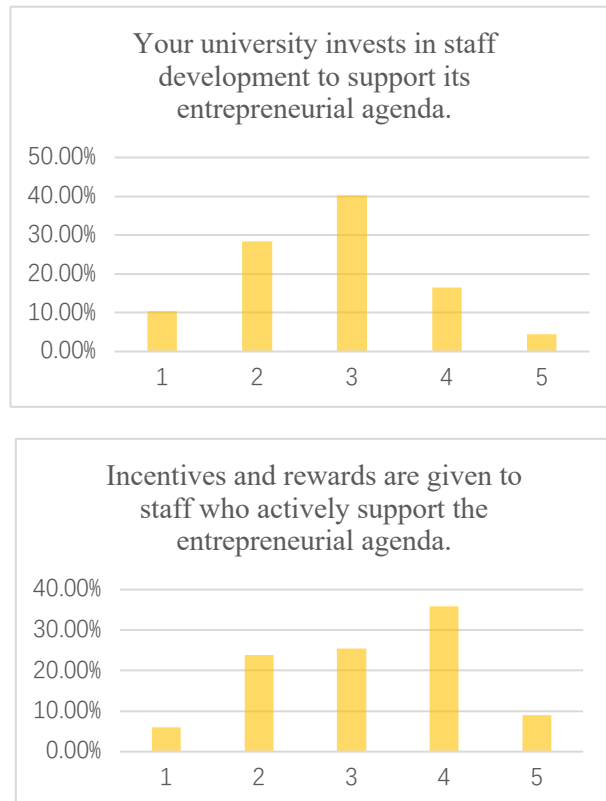
## 5.2. Organizational Capacity

Chinese universities score 3.03/5 on this dimension, also a level just above the passing mark. Even so, it is worth noting that in "Your university is open to engaging and recruiting individuals with entrepreneurial attitudes, behavior and experience." 62.69% of participants gave scores of 4 and above to this description. Similarly, 44.78% of the participants gave the above high scores under the description "Incentives and rewards are given to staff who actively support the entrepreneurial agenda. This indicates that there is a trend of polarization of

different competencies in entrepreneurship-related organizational skills in Chinese universities. Since entrepreneurship education in China is still in the early stages of development (Zhou & Xu, 2012), the process of organizational development of entrepreneurship education in Chinese universities is still in a short-term phase and has not yet developed a progressive and sustainable foundation. In addition, the shortage or inadequate support of academic and administrative staff shares the same attribution as the area of inadequate leadership and governance. On the bright side, Chinese universities value alumni culture and almost every school has established an alumni association as an organization (Wang, 2016), so it makes sense that universities would be supported by people with strong entrepreneurial backgrounds and experiences. On top of that, Chinese universities are supported by the Ministry of Education and have various scholarships, including "innovation and entrepreneurship scholarships", such as the Central University of Finance and Economics, where I received my undergraduate education. So there are rewards for entrepreneurs.

In a side-by-side comparison, Chinese universities scored 0.22 points lower than the rest of the world's subjects, indicating a lagging level.



Entrepreneurial objectives are supported by a wide range of sustainable funding and investment sources.



Your university is open to engaging and recruiting individuals with entrepreneurial attitudes, behavior and experience.

**Chart 5-8.** *Percentage of people scoring 1-5 based on each statement in the Organizational Capacity section*

## 5.3. Entrepreneurial Teaching and Learning

Chinese universities scored 3.24/5 in this area, a mediocre score and a modest difference of 0.16 points from the world. Specifically, under each of the 3 statements encapsulated in this dimension, the most scores scored by subjects were 3. Among them, the statement "Your university provides diverse formal learning opportunities to develop entrepreneurial mindsets and skills." For this statement, 40.3% of the subjects gave a score of 3 or more. Under the statement "Results of entrepreneurship research are integrated into the entrepreneurial education offer.", 38.81% of the respondents gave a score of 3 or higher. This suggests that Chinese universities provide more than adequate formal entrepreneurial learning opportunities, i.e., course schedules, research, lectures, etc. At the same time informal learning opportunities, such as workshops, club activities, skills practice, etc., need to be improved. Chinese universities also do a better job of incorporating the outcomes of entrepreneurship education into their teaching.

This may be due to the fact that entrepreneurship education is still in its infancy (Zhou & Xu, 2012), so implementation at the university level is still in the traditional lecture aspect and has not yet taken into account the organization of after-school activities.
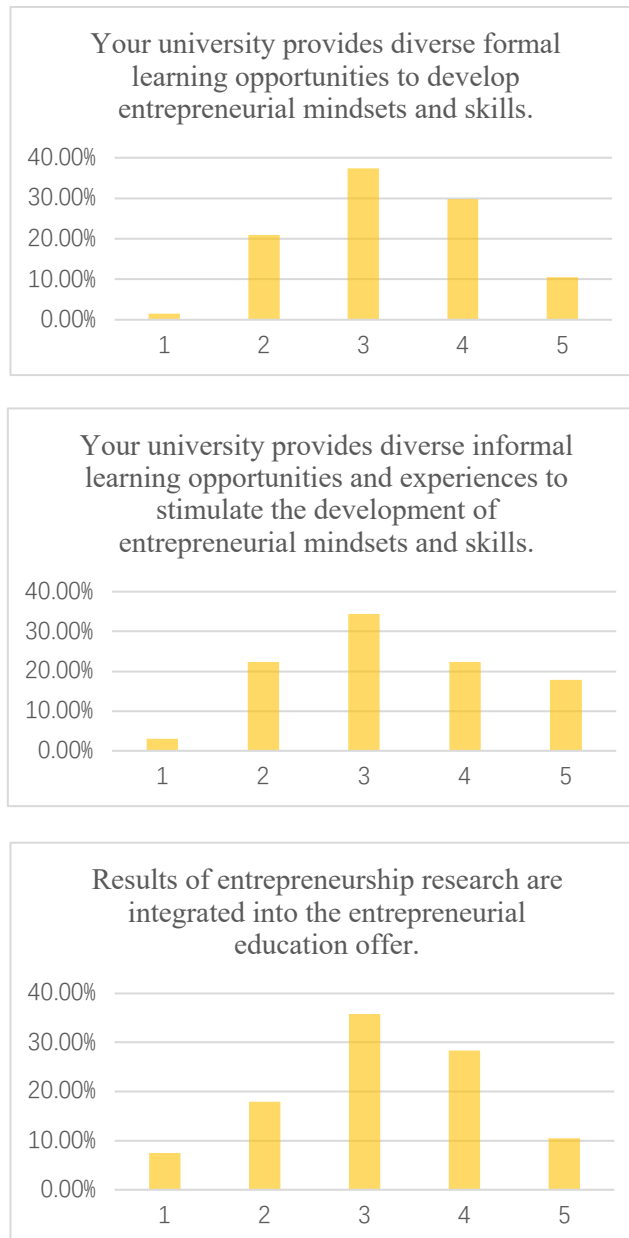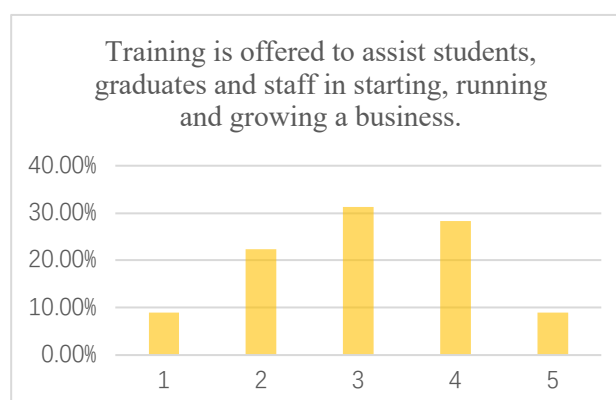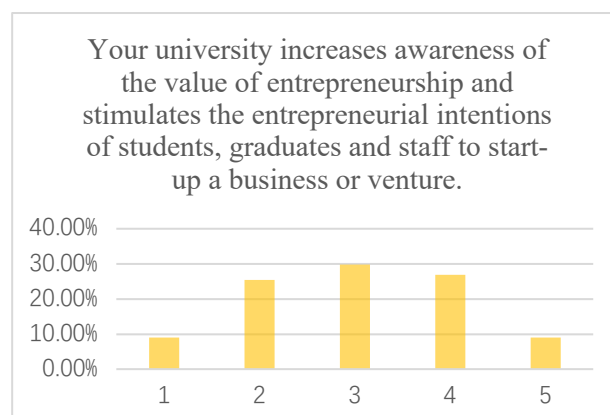






**Chart 9-11.** *Percentage of people scoring 1-5 based on each statement in the Entrepreneurial Teaching and Learning section*
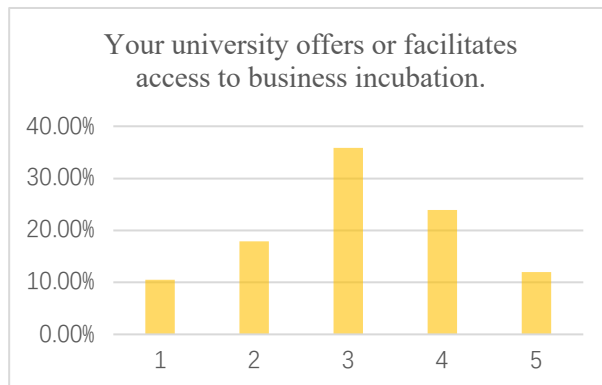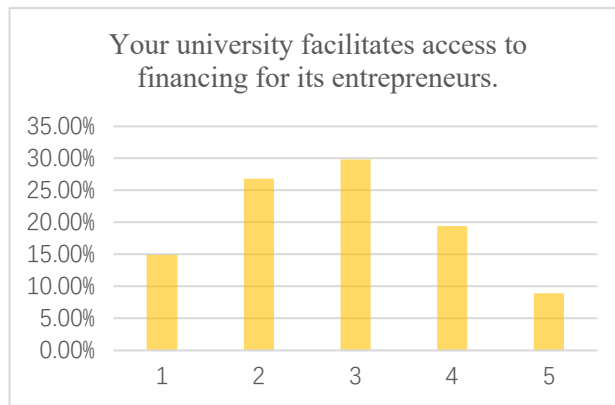
## 5.4. Preparing and Supporting Entrepreneurs

The score for Chinese universities in this area is 2.99/5, which is less than a passing level and the lowest score of the 8 scores. It is 0.41 points lower than the average score of all other subjects, which is a significant difference. This indicates that the preparation and support for

young entrepreneurs in Chinese universities is not yet well implemented. It is worth noting that in "Your university facilitates access to finance for its entrepreneurs." 41.8% of the respondents scored below 3 for this statement, and the individual mean score for this statement was as low as 2.81 (all other indicators scored above 3). This indicates that Chinese universities are not adequately prepared for young entrepreneurs, most notably in the area of financing, and that they do not provide their employees or students with adequate access to financing, opportunities to learn about financing methods, or effective events to help them start their own businesses. At the same time, Chinese universities have yet to strengthen their entrepreneurship guidance, entrepreneurship training, and business incubators.

The reason for this remains China's entrepreneurship education, which is in its infancy. The curriculum is not yet widespread, let alone further deeper aspects such as concept development and incubators.



Your university increases awareness of the value of entrepreneurship and stimulates the entrepreneurial intentions of students, graduates and staff to start-up a business or venture.



Training is offered to assist students, graduates and staff in starting, running and growing a business.

**Chart 12-15.** *Percentage of people scoring 1-5 based on each statement in the Preparing and Supporting Entrepreneurs section*

5.5. Digital Transformation and Capability

Chinese universities scored 3.43/5 in this area, the only one above the average for the other subjects. In terms of detail, except for statement "Your university makes full use of its digital capacity to promote sustainable and inclusive innovation and entrepreneurship. ", which scored 35.82% with a 3 or higher, the other two statements were both given a score of 4 or 5 by more than 50% of the subjects. This indicates that the deployment of digital technologies in Chinese universities is generally in place. In particular, the performance of Chinese universities is particularly satisfactory in the areas of active use of digital technology in teaching and learning and in the management and upgrading of digital technology equipment.

This may be due to the fact that innovative technologies such as artificial intelligence are well supported by universities in China. China has very advanced digital technologies (see State Council 2015, 2016, 2017). Entrepreneurship is a field that requires a spirit of innovation and

even more advanced technological support, so the advancement of Chinese technology has a positive impact on it.
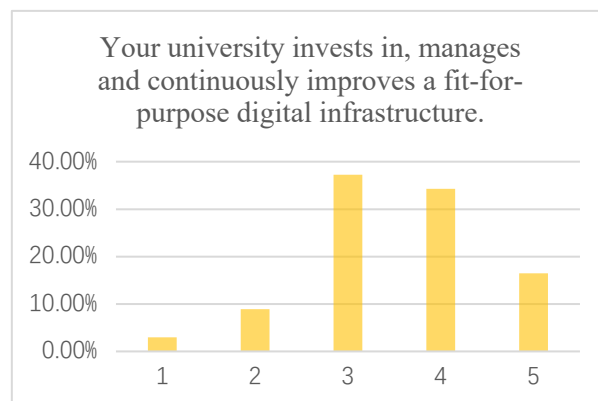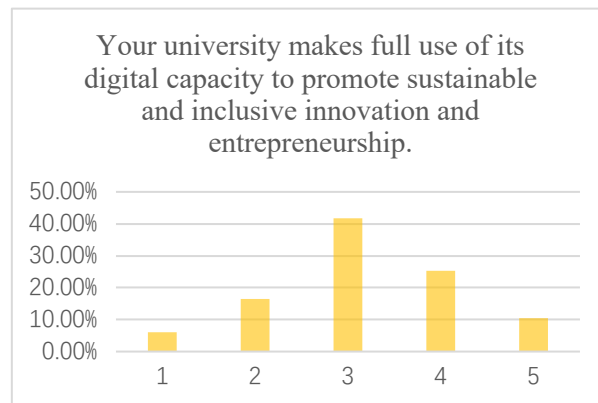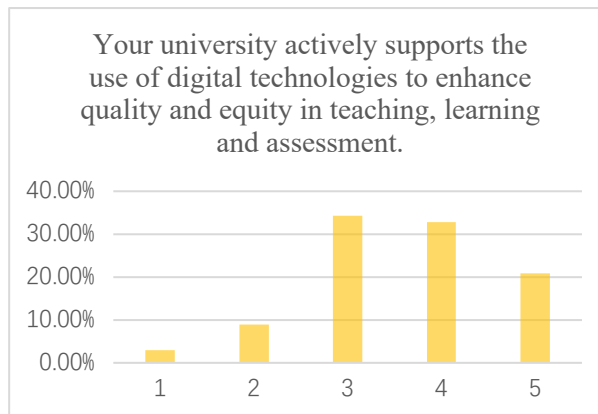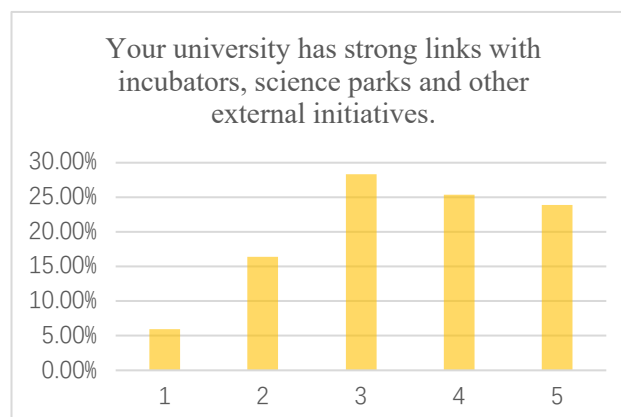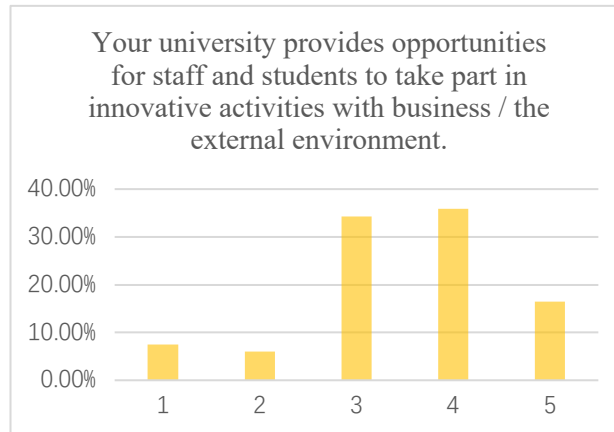






**Chart 16-18.** *Percentage of people scoring 1-5 based on each statement in the Data Transformation and Capability section*

## 5.6. Knowledge Exchange and Collaboration

China's score in this area is 3.47/5, the second highest score, and a small difference of 0.13 points lower than the average score of the rest of the world's subjects. Collectively, the subjects' scores for the three statements were mainly concentrated in the 3-4 range, with nearly 20% of

those scoring perfect. This indicates that overall, the subjects are basically satisfied with the knowledge exchange and cooperation in Chinese universities. Whether it is teaching, facilities, talent sharing or organizing knowledge exchange activities, Chinese universities are actively implementing these initiatives. The main reason for this is that Chinese universities have been committed to forming intra- and inter-regional networks for knowledge and information sharing purposes. As Ye et al. (2020) said, there are also frequent cross-university fellowships, group visits of faculty teams, and other activities that allow for active dynamics among universities.

Your university is committed to collaboration and knowledge exchange with industry, the public sector and society.

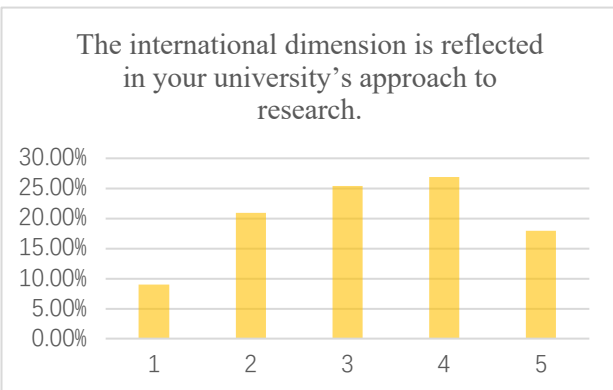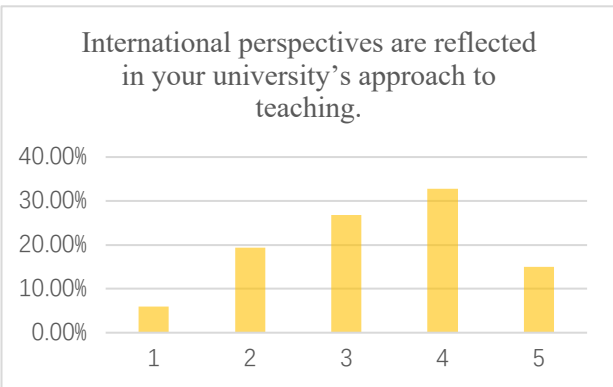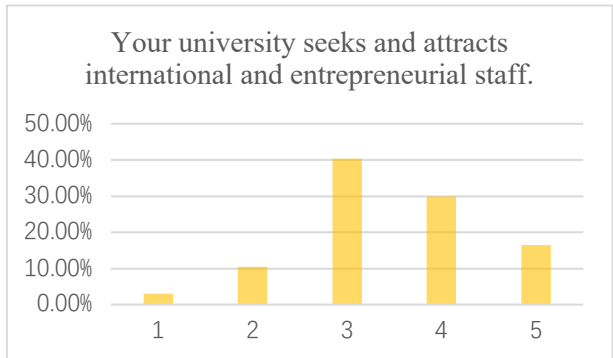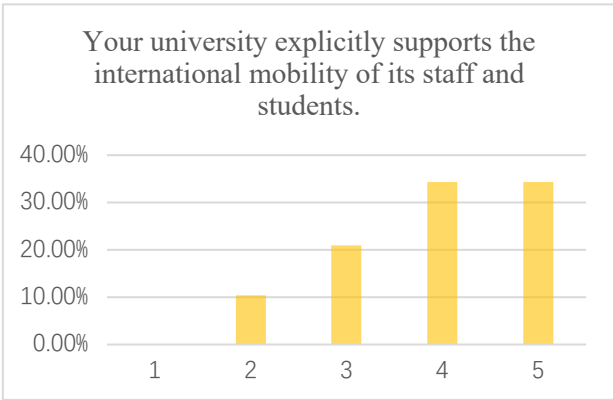Your university has strong links with incubators, science parks and other external initiatives.

**Chart 19-21.** *Percentage of people scoring 1-5 based on each statement in the Knowledge Exchange and Collaboration section*

5.7. Internationalization

China scored 3.49/5 in this area of internationalization, the highest score of all, and just 0.11 points lower than the rest of the world submission average. Notably, under the statement "Your university clearly supports the international mobility of its staff and students." For the other three statements, the percentage of respondents who gave a score of 3 or higher was also above 40%. This indicates that Chinese universities have a very positive and supportive attitude towards international exchange of staff and students. With a strong attitude, the implementation of actions is not too bad, so Chinese universities are also accomplishing a high level of internationalization in terms of including staff and students with international perspectives or from overseas countries, as well as integrating internationalization in teaching and research. The reason for this phenomenon may be due to the fact that Chinese higher education is pursuing to achieve internationalization as much as possible to enhance its competitiveness (Petruk, 2018), so the process of entrepreneurship education in Chinese universities is inevitably influenced by it.

**Your university explicitly supports the international mobility of its staff and students.**



**Your university seeks and attracts international and entrepreneurial staff.**



**International perspectives are reflected in your university's approach to teaching.**



**The international dimension is reflected in your university's approach to research.**



**Chart 22-25.** *Percentage of people scoring 1-5 based on each statement in the Internationalization section*

5.8. Measuring Impact

Chinese universities scored 3/5 on this dimension, a passing score and the second lowest of all scores, 0.3 points below the world average. Interestingly, the subjects' scores under each statement show a convex and almost symmetrical distribution, suggesting that mainstream Chinese universities are feeling poorly about implementing their own assessment of entrepreneurship education. The reason for this can probably be attributed to the fact that entrepreneurship education in China is still in its infancy (Zhou & Xu, 2012) and is not even fully implemented, let alone evaluated for its results and impact.
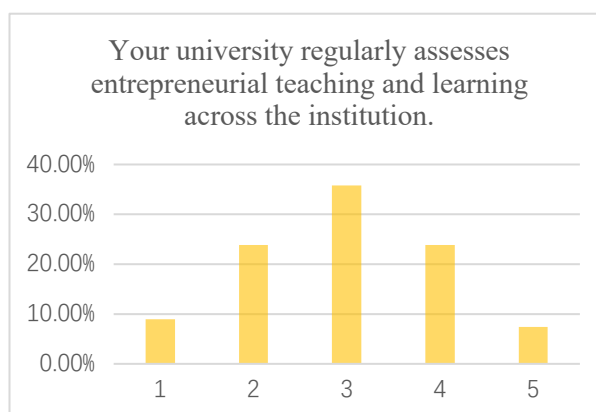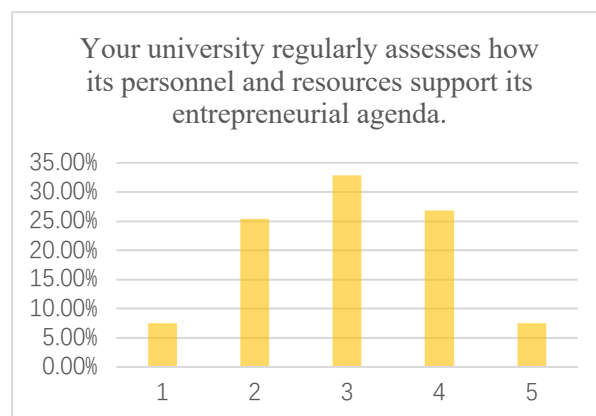






**Chart 26-28.** *Percentage of people scoring 1-5 based on each statement in the Measuring Impact section*

## 7. An Extra Interview

In order to make the findings more reliable, I contacted a professor of education at the School of Culture and Media of the Central University of Finance and Economics and conducted an in-depth interview with him after the data analysis. The purpose of this interview is to ask the professor to analyze the reasons deeply behind the results of this study. I avoided all leading language during the interview in order to allow the professor to be as objective as possible in his analysis.

After reading my research paper, the professor indicated that in general the research model was usable in China. This is because the eight dimensions mentioned above are highly universal and have value as a reference system not only for entrepreneurship education, but also for other areas of education, and even in general. One problem with the study, however, is that it only focuses on each university's own influences and performance, and does not address influences from higher-level environments outside the university. The most typical example of this, especially for Chinese universities, is the government. The professor says that everything within the university system, such as professional programs, educational objectives and administrative planning, is not actually decided by the university itself. Instead, universities are often waiting for instructions from the government and the Ministry of Education to approve their next plans. This is not surprising, as the government has always had a very dominant position in China, giving rise to the phenomenon of departments in various fields only doing what the government tells them to do, which is no exception when it comes to entrepreneurial education. Some of the topics covered in this study, such as leadership and governance, preparing and supporting entrepreneurs, are, to the best of this professor's knowledge, rarely covered in the directives given to universities by the government. He pointed out specifically that the expenditure of university funds is often regulated by the government as well. The government encourages more education funding to go to scientific research, especially in science and technology. There is little government support for spending in this area of entrepreneurship, so it makes sense that young entrepreneurs would not receive financial support. The professor suggested that if I am still interested after this study, I could

delve into the impact of the Chinese government in the area of entrepreneurship education. This is a sensitive topic within China, so few scholars are currently covering it.

## 8. Conclusion

Overall, there is still much room for improvement in entrepreneurship education in Chinese universities, or, to put it another way, the degree of entrepreneurship in Chinese universities still needs to be improved. Compared to themselves, the parts of entrepreneurship education that Chinese universities do better include internationalization, knowledge sharing, and use of digital technology, which benefits from Chinese universities encouraging staff and students to study abroad, promoting academic exchange, and advanced technology in China. Areas that are not doing well include preparing and supporting entrepreneurial talent, measuring impact, leadership and governance, and organizational skills. This is largely due to the short history of entrepreneurship education in China, so short that even entrepreneurship education has not yet become widespread. Therefore, some of those aforementioned long-term, late-stage, or more far-reaching efforts on entrepreneurship education will take time to implement.

It is worth mentioning and interesting to note that the government is a major influence on entrepreneurship education in China based on the country's particular social environment. The lack of freedom in the design of entrepreneurship education curricula in universities due to the overpowering position of the government is the reason why the degree of entrepreneurship in Chinese universities is not high enough.

Based on the above summary, the following suggestions have been made. Firstly, Chinese universities should move away from passively listening to orders from the national government and the Ministry of Education, and instead take the initiative to put the steering wheel of entrepreneurship education in their own hands and practice entrepreneurship education in a conscious and purposeful way. Secondly, Chinese universities should establish a comprehensive self-evaluation system for their own entrepreneurship programs, so that they can regularly monitor and learn from themselves and improve the quality of entrepreneurship education. Thirdly, Chinese universities should join forces with seniors and alumni who have

relevant experience to develop support and training programs for entrepreneurial talent, such as offering entrepreneurship training courses and assistance with financing.

## 9. Limitations and Further Research

Although this paper establishes a research model to analyze the specific degree of implementation of entrepreneurship education in China based on the current theoretical research, due to the limited time and the author's ability, this study still needs to be improved in terms of the number of samples, the collection of data and the coverage of the indicator system. Although the self-assessment test questions from the HEInnovate website were borrowed and rewritten according to the actual situation in China, the research model needs to be further refined to obtain a more reasonable indicator system, a more mature model, and more practical conclusions in order to better adapt to the special national conditions in China.

In addition to the presence of entrepreneurship education, the psychological factors of entrepreneurs may also be influenced by the social environment and cultural background, especially since China is a country with significant geographical and cultural differences. Therefore, there was no way to completely exclude these influences in this comparative study, other than to try to maintain the number of respondents and cover as many different grades and classes as possible.

Further research ideas for the future are twofold: first, we can explore the in-depth reasons for the results of this study; second, we can explore the research questions of this study in more detail by subdividing them according to the geographical location of Chinese universities, the subject areas they specialize in, the ratio of men to women, or whether they belong to the "985" and "211" projects.

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**Appendix1 - Original Questionnaire**

**Assess how entrepreneurial your university is**

Hello! Welcome to the questionnaire "How entrepreneurial is your university?". This questionnaire will examine entrepreneurial extent if your university through eight dimensions: Leadership and Governance, Organizational Capacity, Entrepreneurial Teaching and Learning, Preparing and Supporting Entrepreneurs, Digital Transformation and Capability, Knowledge Exchange and Collaboration, Internationalization and Measuring Impact. Please rate the extent to which your university meets the given statements (1-5). When completing the questionnaire, please base your answers on your own feelings and experiences. Thank you for participating!

**Leadership and Governance**

- Entrepreneurship is a major part of your university's strategy.

- Your university encourages and supports faculties and units to act entrepreneurially.

- Your university is a driving force for entrepreneurship and innovation in regional, social and community development.

**Organizational Capacity**

- Entrepreneurial objectives are supported by a wide range of sustainable funding and investment sources.

- Your university is open to engaging and recruiting individuals with entrepreneurial attitudes, behavior and experience.

- Your university invests in staff development to support its entrepreneurial agenda.

- Incentives and rewards are given to staff who actively support the entrepreneurial agenda.

**Entrepreneurial Teaching and Learning**

- Your university provides diverse formal learning opportunities to develop entrepreneurial mindsets and skills.

- Your university provides diverse informal learning opportunities and experiences to stimulate the development of entrepreneurial mindsets and skills.

- Results of entrepreneurship research are integrated into the entrepreneurial education offer.

## Preparing and Supporting Entrepreneurs

- Your university increases awareness of the value of entrepreneurship and stimulates the entrepreneurial intentions of students, graduates and staff to start-up a business or venture.

- Training is offered to assist students, graduates and staff in starting, running and growing a business.

- Your university facilitates access to financing for its entrepreneurs.

- Your university offers or facilitates access to business incubation.

## Digital Transformation and Capability

- Your university actively supports the use of digital technologies to enhance quality and equity in teaching, learning and assessment.

- Your university makes full use of its digital capacity to promote sustainable and inclusive innovation and entrepreneurship.

- Your university invests in, manages and continuously improves a fit-for-purpose digital infrastructure.

## Knowledge Exchange and Collaboration

- Your university is committed to collaboration and knowledge exchange with industry, the public sector and society.

- Your university has strong links with incubators, science parks and other external initiatives.

- Your university provides opportunities for staff and students to take part in innovative activities with business / the external environment.

**Internationalization**

- Your university explicitly supports the international mobility of its staff and students.

- Your university seeks and attracts international and entrepreneurial staff.

- International perspectives are reflected in your university's approach to teaching.

- The international dimension is reflected in your university's approach to research.

**Measuring Impact**

- Your university regularly assesses how its personnel and resources support its entrepreneurial agenda.

- Your university regularly assesses entrepreneurial teaching and learning across the institution.

- Your university regularly assesses the institution's international activities in relation to its entrepreneurial agenda.

**Note:** This questionnaire is adapted from the self-test questions in the Self-assessment on the website www.heinnovate.eu/en/self-assessment, with adjustments made to streamline, modify the presentation and revise the order of the questions, mainly based on the actual situation of university education in China.