GUIDELINE FOR DEVELOPING ON CULTIVATION OF INNOVATIVE AND ENTREPRENEURIAL TALENTS IN CHINESE HIGHER EDUCATION

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A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy Program in Educational Administration
Academic Year 2023

Thesis Title Developing on the System about Cultivation of Innovation and Entrepreneurial Talents in Higher Education

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Thesis: **Guideline for Developing on Cultivation of Innovative and Entrepreneurial Talents in Chinese Higher Education**
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ABSTRACT

The objectives of this research were: 1) To study the current situation for the various factors that affect the cultivation of innovative and entrepreneurial talents; 2) to find the balance between education policy formulation and implementation; 3) to guideline for developing on cultivation of innovative and entrepreneurial talents in Chinese higher education; 4) to evaluate the adaptability and feasibility of guidelines for developing on cultivation suitable for innovation and entrepreneurship. The sample were 186 lecturers and 385 students from 7 different level universities for questionnaire, 14 management cadres, 21 professors, 35 associate professors and 39 enterprises related in innovation and entrepreneurship education for interview and 7 high-level experts for evaluate. Research instruments include: questionnaire, structured interview, and evaluation form. Data analysis by using percentage, mean, standard deviation, correlation analysis and content analysis.

The results were found that, the current situation of cultivation the talents in total was at high level, there are balance between policies, guideline for talent cultivation should develop in four aspects, including 6 guidelines in conscious thinking, 6 guidelines in social influence, 11 guidelines in personal qualities and 5 guidelines in knowledge and practice, and the result of evaluate the adaptability and feasibility of guidelines was at highest level.

Keywords: Innovative and Entrepreneurial Talents, Talent Cultivation, Chinese Higher Education

ชื่อเรื่อง: **แนวทางการพัฒนาบุคลากรดีเด่นด้านนวัตกรรมและผู้ประกอบการในระดับอุดมศึกษาในสาธารณรัฐประชาชนจีน**
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บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์ 1) เพื่อศึกษาสถานการณ์ปัจจุบันของการบ่มเพาะความสามารถด้านนวัตกรรมและการเป็นผู้ประกอบการในการศึกษาระดับอุดมศึกษาของจีน 2) เพื่อค้นหาการกำหนดและการดำเนินนโยบายการศึกษาที่สมดุล 3) เพื่อเสนอแนะแนวทางการทางการพัฒนาการบ่มเพาะความสามารถด้านนวัตกรรมและการเป็นผู้ประกอบการในการศึกษาระดับอุดมศึกษาของจีน และ 4) เพื่อประเมินความสามารถในการปรับตัวและความเป็นไปได้ของแนวทางการพัฒนาการบ่มเพาะความสามารถด้านนวัตกรรมและการเป็นผู้ประกอบการในการศึกษาระดับอุดมศึกษาของจีน กลุ่มตัวอย่างที่ใช้ในการวิจัยครั้งนี้ ได้แก่ ครู 186 คนและนักเรียน 385 คนสำหรับแบบสอบถาม ผู้บริหาร 14 คน ศาสตราจารย์ 21 คน รองศาสตราจารย์ 35 คน และบริษัท 39 แห่งสำหรับการสัมภาษณ์ เครื่องมือที่ใช้ในการวิจัย ได้แก่ แบบสอบถาม แบบสัมภาษณ์ และแบบประเมิน สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ค่าร้อยละ ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตราฐาน การวิเคราะห์ความสัมพันธ์และการวิเคราะห์เนื้อหา

ผลการวิจัยพบว่า สถานการณ์ปัจจุบันของการฝึกฝนความสามารถโดยรวมอยู่ในระดับสูง มีความสมดุลระหว่างนโยบาย แนวทางการพัฒนาการบ่มเพาะความสามารถควรพัฒนาใน 4 ด้าน ประกอบด้วย แนวทางการคิดอย่างมีสติ 6 แนวทาง แนวทางอิทธิพลทางสังคม 6 แนวทาง แนวทางเกี่ยวกับคุณสมบัติส่วนบุคคล 11 แนวทาง และ แนวทางความรู้และการปฏิบัติ 5 แนวทาง และมีผลการประเมินความสามารถในการปรับตัวและความเป็นไปได้ของแนวปฏิบัติอยู่ในระดับสูงสุด

คำสำคัญ: นวัตกรรมและความสามารถของผู้ประกอบการ การปลูกฝังบุคลากร การศึกษาระดับอุดมศึกษาของจีน

Acknowledgements

Thanks to life, thanks to fate.

Whenever I recall the people and things I once had in the years like a song, I can't help feeling grateful from the bottom of my heart: I am so lucky.

I am so lucky to be a Ph.D. student at Bansomdejchaopraya Rajabhat University, thanks to Dr. Niran Suthiniran, Dr. Buranajit Kaewsrimol and Dr. Pachara Dechhome. I was also lucky to meet my advisor Dr. Niran Suthiniran, who assigned me a thesis tutor in his busy schedule. Many thanks to Dr. Buranajit Kaewsrimol and Dr. Pachara Dechhome for giving me guidance on the structure of paper writing. It is an enjoyment of wisdom and grace to listen to his class and feel his behavior.

I would like to thank Dr. Linda Gainma that the president of university and Dr. Kannakorn Sawangcharoen that dean of Graduate School, for their support and encouragement in various aspects, which encouraged me to continue my doctoral studies. I would like to express my gratitude to all the teachers, colleagues and former classmates and friends, who have enabled me to acquire unlimited valuable knowledge and wealth in a limited time.

Thanks to my parents. It is they who give the greatest emotional and time support.

I am lucky to be able to complete my thesis writing with the help and guidance of all lecturers. Thanks for your advice and encouragement, which has broadened my thinking and facilitated my writing. I would like to express my gratitude to all lecturers and classmates who have put forward their valuable opinions on the paper in the pre-defense stage, and urged me to improve and complete my paper.

Once again, I would like to thank all lecturers and former colleagues, classmates, and friends. Thank you.

Mu Aiwei

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Chapter 1
Introduction

Rationale

With the rapid economic development in the modern society, in order to gain a foothold in the international position, developing countries need to reform the traditional copy-and-copy training, so that innovation is the focus of development. The core of innovation lies in the cultivation of talents. A strong country is a strong source with talents, and the talent pool needs higher education to developing cultivate talents (Liu Z, Tang X, 2019). However, for the problem of talent cultivation, China has always used cramming teaching or rote memorization, which is biased towards theory. The students who are educated by the traditional way of education are often too rigid and do not know how to be flexible.

The education of universities is not only related to the country and the people, but the more important core is about the future development direction of universities and the question of whether they can continue to survive in this society (Wang MJ, Zheng YS, 2006). Universities teaching needs to actively understand the trend of social development, have a sense of urgency, and cannot be safe on the status quo.

The "cultivation of innovative and entrepreneurial talents" concept was first proposed in Chinese higher education in 1983 to reform the talent training of higher engineering education. After that, some universities and practitioners continued to discuss the training factors and reform of various talents in medicine and economics. However, their connotations were vaguely grasped. Due to the needs of higher education practice, theoretical workers have also begun to gradually pay attention to this issue and try to define its connotation. In 1993, the definition of the concept was clarified for the first time, and it was proposed that the talent training factors refers to the education and teaching style selected or conceived to achieve specific educational goals under certain school-running conditions. (Zhang XP, 2006).

Chinese universities' talent cultivation has yet to adapt to social development. It is challenging to cultivate innovative and entrepreneurial talents, and urgent reform is needed. However, the reform process faces many constraints, and difficulties.

Talent training system is the embodiment of educational thought. Only under the guidance of specific educational ideas the talent training factors is meaningful, and it can even be said there is a talent cultivation. Otherwise, it can only be a random patchwork of some educational elements.

In institutions of higher learning, educational thought is expressed as "the idea of the university." The restriction of the university concept on the talent training factors are mainly manifested in three aspects. (Guan J, 2019).

For a long period before the reform and opening up, China gradually formed a higher education system that the government directly managed, closed, and centralized, which was compatible with the planned economy. In such a system, universities have no autonomy, and it is challenging to form their ideas in running schools to government regulations. Currently, universities in China already have considerable independence, and the system has changed, but their thinking still needs to show great inertia (Pan A, Zheng S, 2016). Some universities only pay attention to hardware construction and ignore software construction, and pay attention to scale expansion and ignore concept improvement. It did not explore and form his school-running philosophy, so people followed suit.

In modern society, a technological revolution is more rapid, globalization is more prominent, and information flows more rapidly. In such a society, universities must make corresponding changes and adjust the talent training model to highlight talents' international vision, information literacy, learning Ability, and overall quality. However, many universities have yet to change themselves, especially at the conceptual level. Higher education has yet to form the concepts of academic freedom, internationalization, and general education. The images of diversification, people-oriented, and lifelong learning have stayed in academia and have yet to be well implemented by universities. (Druzhinin VN, 2005, pp.101-109).

Due to the constraints and confusion of concepts, the talent situation of various universities have either shown convergence or have yet to be combined with their conditions and positioning. There is no dominant idea, and even the opinions are still in conflict. Such talent training factors can only be some suspended decoration and cannot be well implemented.

The reform of the talent about innovation and entrepreneurship is an essential educational affair that requires the active participation of teachers (Lu JN, 2006). However, the lack of intellectual power hinders teachers' initiative and enthusiasm. Without the active involvement of teachers, the reform and innovation of the talent training model can only be a mere formality.

The evaluation in innovation and entrepreneurship research needs to be more balanced. At present, the evaluation of universities in China is mainly based on the administrative review led by the government. In the organizational evaluation, the most influential is the base evaluation and the evaluation of the undergraduate level not in public and others. But it has little to do with improving the talent quality in the basics; the evaluation index for "real high education" is not specific and has limited impact on improving the internal teaching of universities. In addition, there is a tendency for simplification and quantification in evaluation, ignoring the assessment of educational characteristics and individualized education and other ability for talent.

The lack of academic background has weakened the motivation and ability of teachers to reform the talent system; the simplification of the talent system in universities makes it easy for universities to adopt a concurrent talent system, and the quantification of evaluation results in some experts generally attaching importance to scientific research, while ignoring the difficult to measure.

Although there are been vigorously promoting the reform of the talent system in recent years, universities have proposed how to improve the quality of talents in innovation and entrepreneurship. However, they often fall into superficiality, organization, or merely partial changes to elements of the training model rather than overall changes. This is related to the deviation of understanding

and awareness in related innovation and entrepreneurship, the constraints of the cultivation, and the social need for educational resources (Song H, Mu R, 2010).

Innovation can promote economic growth and even bring about industrial changes, making productivity grow by leaps and bounds. Entrepreneurship not only supports economic growth but also drives employment. The government, enterprises, universities and public know the importance of innovative and entrepreneurial talents.

For universities, promoting the combination of practice and education aligns with the call for national economic restructuring. It is also necessary to train students to adapt to the transformation of economic and social development. It is the obligation of and universities.

For enterprises, what is needed is applied talents who can use knowledge theory to practice, which requires exchanges and cooperation between enterprises and universities to achieve a combination of knowledge and action (Wang QD, Gao DQ, Department S, 2018).

For government, realizing the combination of industry and education and cultivating applied talents is the foundation of building an innovative country.

Judging from the current talent cultivation, it should correspond to the actual needs of technical positions. This demand has specific requirements for the assessment methods. The assessment for experts should be innovative, professional, and practical. To implement modern education and eliminate the shackles of tradition, the basic knowledge and skills required by the industry and the new knowledge and technologies at the forefront of the technological development should be included in the evaluation scope. Realistically, develop innovative and entrepreneurial thinking. To conduct an extended test and evaluate talents knowledge, quality, and innovative thinking. In addition, the content of talent quality also needs to ensure that abilities are fully utilized. The specific quality of talent process should focus on the grasp of the part from talent system. The understanding of knowledge and skills can be relatively weak (Terri Standish, Rice MP, 2002, pp.33-39).

No matter what kind of talent cultivation, lecturers and students are the core. Under the background of innovation and entrepreneurship, the cultivation of applied

talents has higher and higher requirements for stakeholder in related. It not only requires specialization in a particular specialty but also requires more cross-field abilities for students.

Base on the innovation and entrepreneurship education is a new educational concept for cultivating high-level talents, and it is an educational system that is being vigorously promoted in Chinese higher education. Presently, the needs of social development for skills have prompted universities to carry out innovation and entrepreneurship education actively. At the same time, this is also an important strategy and method for China to implement science and education to rejuvenate the country.

To sum up, high education should inherit not only the existing formed knowledge but also innovative knowledge and skills. As the system base for high-quality talents, universities in China have a unshirkable responsibility for the output of national and local high-quality and innovative skills. Education at the high education level is essential for cultivating high-quality talents. But in fact, many colleges and universities are still exploring how to cultivate talent under the current situation.

Research Questions

1. What is the various factors from the current situation that affect the cultivation of innovative and entrepreneurial talents in China?

2. How to find a balance between education policy formulation and implementation?

3. What are the guidelines for improving the quality of talents in innovation and entrepreneurship education?

4. What is the result of evaluation about the adaptability and feasibility of guidelines for a suitable talent system in innovation and entrepreneurship education?

Objectives

1. To study the current situation for the various factors that affect the cultivation of innovative and entrepreneurial talents in China.

2. To find the balance between education policy formulation and implementation.

3. To guideline for developing on cultivation of innovative and entrepreneurial talents in Chinese higher education.

4. To evaluate the adaptability and feasibility of guidelines for talent system suitable for innovation and entrepreneurship.

Scope of the Research

Population

The population of the study were 28 management cadres, 34 professors, 107 associate professors, 362 lecturers and 9673 students related innovation and entrepreneurship from 7 universities and 68 enterprises in the Yangtze River Delta G60 Science and Technology Corridor in Shanghai, China.

The Sample Group

1. Questionnaire object

According to Taro Yamane: Sample Size Table, the sample group of this study was 186 lecturers and 385 students from 7 different level universities for questionnaire.

2. Interview object

By systematic random sampling and sample random sampling, sample group was also picked up 14 management cadres, 21 professors, 35 associate professors and 39 enterprises related in innovation and entrepreneurship education for interview.

Form the interviewees' answers, there are 2 aspects in awareness of innovation and entrepreneurship, like entrepreneurial awareness cultivation and innovation awareness; there are 3 aspects in social development needs, like resource integration and utilization, technical support and talent support; there are 3 aspects

in Chinese innovative and entrepreneurial education, like teacher structure system, teacher structure of knowledge and university practice simulation; and there are 8 aspects in cultivation of innovative and entrepreneurial talents and the open answers, like innovation and entrepreneurship learning, innovation and entrepreneurship project, professional knowledge and literacy, university support policy, technology protection policy and cultivation system.

3. Evaluation of guideline adaptability and feasibility

The evaluation of this study was 7 high-level experts from population university. The qualifications of assessment are as follows. 1) at least 10 years of work experience in related innovation and entrepreneurship education; 2) have extensive experience in guideline for talent system to improve the quality of innovative and entrepreneurial talents; 3) graduated with doctoral degree.

The Variable

Independent Variable

According to the analyzed of related theories and researches, the independent variables in this research are as follows.

1. Basic information variables of students, such as age, gender, place of origin, etc., teachers' educational background, teaching methods, campus facilities and so on.

2. The awareness of education, including education input, resource supply and consumption of innovation and entrepreneurship in Chinese colleges and universities.

3. Social development needs, such as the education scale, and teaching model of innovation and entrepreneurship education.

4. The environment of Chinese innovation and entrepreneurship education, such as the external vertical structure, the internal structure of universities, investment in innovation and entrepreneurship education, social benefits, and standards for innovation and entrepreneurship.

Dependent Variable

According to the analyzed of related theories and researches, the dependent variables in this research is the system about cultivation of innovative and entrepreneurial talents in Chinese high education.

Advantages

For stakeholders

In the era of the knowledge economy, the strength of a country's independent innovation ability is directly related to its status and comprehensive strength in the international community, and the realization of independent innovation requires modern innovative talents, and it has become a trend to cultivate innovative talents.

The fundamental goal of Chinese higher education is to cultivate high-quality talents with all-around development of morality, intelligence, physique, beauty, and labor. Under the condition of the knowledge economy, cultivating talents with all-around development has become an urgent need to promote the all-around development of our country's economy and society. In essence, cultivating innovative and entrepreneurial talents is consistent with cultivating talents with all-around development. To achieve the fundamental goal of all-around development of talent training, it is necessary to cultivate innovative and entrepreneurial talents as soon as possible.

To improve the employment competitiveness of students through innovation and entrepreneurship education, drive employment through entrepreneurship, and improve the quality of employment are one of the important guidelines to solve the employment problem of college graduates under the current social background. The main reasons can be analyzed.

From the system point of view, while innovation and entrepreneurship education focus on the whole process of college students' learning, emphasizing innovation education in lower grades and entrepreneurship in higher grades. Education improves the comprehensive quality of entrepreneurship of college students.

From the perspective of training objectives, while innovation and entrepreneurship education is dedicated to comprehensively improving students' skills in all aspects and improving students' innovative and entrepreneurial qualities.

From the perspective of added value, innovation, and entrepreneurship education can also change the employment concept of students, so that college students are not only job seekers, but also job creators. Thereby promoting economic prosperity, promoting employment progress, and improving the quality of employment.

For Universities

Combined with the current specific situation of innovation and entrepreneurship education in universities in China, to truly carry out entrepreneurship education and cultivate innovative and entrepreneurial talents, we must get rid of the misunderstanding of entrepreneurship education.

First, innovation and entrepreneurship education is not a classroom all students could get innovation and entrepreneurship education outside of the current higher education, and there is a misunderstanding of the development of innovation and entrepreneurship education policies. Removing the misunderstanding and then innovation and entrepreneurship education are carried out as extracurricular education in current higher education, and innovation and entrepreneurship education are following into classroom education. In addition, it meets the lack of professional teaching staff. Many universities have launched many nutritious entrepreneurship competitions and entrepreneurship simulation competitions to cope with innovation and entrepreneurship education. The quality of the competitions held in guidelines is meet the needs of contemporary society in innovation and entrepreneurship. Since innovation and entrepreneurship education are following into classroom education, it is impossible for extracurricular education to operate with high quality. Therefore, only when universities guidelines their own innovation and entrepreneurship education system, a high-efficiency talent training system, and unswervingly implement national and local policies, it makes them achieve pragmatic results.

All in all, to cultivate innovative and entrepreneurial talents, we must start from four aspects about talent system: background, input, process and product. If there is a problem in any one aspect, innovative and entrepreneurial talents cannot be truly cultivated. The ultimate objective is to cultivate talents with all-around development.

Definition of Terms

Higher education refers to professional education and vocational education on the basis of completing secondary education, and is the main social activity for cultivating senior professional talents and professional personnel. Higher education is one of the important and interconnected components of the education system. It usually includes various educational institutions with high-level learning and training, education, research and social services as their main tasks and activities. The rapid growth of social demand for high-level specialized talents and the urgent need for individuals to receive higher education opportunities made higher education develop at an unprecedented speed. Elite education to mass education.

Innovative and entrepreneurial talents refer to those who have understanding of knowledge, personality and comprehensive ability. There are three factors affect the quality of innovative and entrepreneurial talents in the processing of cultivation. The final objective to talents is the well-ground talents.

Factors that affect the cultivation talents refers to from the other literature reviews, there are some factors affecting the talents cultivating in current situation. Some experts think that the factors covering the all demands from stakeholders. In this research, the factors on the guideline for developing on cultivation of innovative and entrepreneurial talents in Chinese higher education includes the basic information of stakeholders, the awareness of education, social development needs, and the environment of Chinese innovation and entrepreneurship education.

Talent quality refers that from higher education itself has diversity, complexity and development, so the evaluation of training quality needs to set different evaluation dimensions according to different value orientations. In the

study, the quality of higher education training in a broad sense refers to the conscious thinking, personal qualities, social impact and knowledge and practice.

Cultivation talents refers to the comprehensive implementation of talent education process with relatively stable process system, management system and evaluation system in accordance with specific cultivation objectives and talent specifications under the guidelines of certain modern educational theories. It can specifically include four meanings: (1) background of objectives and specifications; (2) input of the entire educational process to achieve certain objectives and specifications; (3) process of a set of management and talent systems for the realization of this process; (4) product of matching scientific talents as the final product like assessment and modified. It is expressed in a simplified formula, namely: background + process and guidelines.

Awareness of education refers to the scale of innovation and entrepreneurship education and education investment, mainly including the supply and consumption of educational resources, such as the investment of funds and equipment in innovation and entrepreneurship education by some education groups or schools, whether the books in the library keep pace with the times, whether the multimedia equipment for teaching Timely updates, etc.

Social development needs refer to the needs of all sectors of society for innovative and entrepreneurial talents, such as the recruitment needs of enterprises and the supervision and evaluation of talent quality by parents and the public.

The environment of Chinese innovation and entrepreneurship education concludes external vertical structure and internal structure.

1) External vertical structure: It refers to the sequential structure of government-university-society. The government has established a primary line for entrepreneurship education through macro-management methods such as promulgating regulations and formulating policies. Universities are responsible for implementing policies and regulations, students are the main body of innovation and entrepreneurship education, and the public supervises the formulation and implementation of innovation and entrepreneurship policies.

2) Internal structure: Internal structure refers to the basic scale of innovation and entrepreneurship education within the university, including the university's system for students' innovation and entrepreneurship, teaching methods for innovation and entrepreneurship, and students' attitudes towards innovation and entrepreneurship.

Research Benefits

1. The researcher has already studied the various factors that affect the cultivation of innovative and entrepreneurial talents from the current situation in China.

2. The researcher has found a balance between education policy formulation and implementation.

3. The research has determined guidelines to improve the quality of innovative and entrepreneurial talents.

4. The researcher has evaluated the adaptability and feasibility of the talent system suitable for innovation and entrepreneurship.

Research Procedures

This study has the following research procedures.

1. Write a research proposal about the cultivation of innovative and entrepreneurial talent in China;

2. Put forward research proposals to research institutions, considering research funding, time-consuming and expected benefits;

3. Select appropriate research instruments, such as interviews and questionnaires;

4. Construct the expert target consistency index IOC to test the accuracy of research instruments;

5. Receive the objective consistency index IOC of professional scholars and experts to improve research instruments;

6. Improve research instruments;

7. Conclude the reliability on the improved research instruments;

8. Obtain the ethical approval permission of the research sample group;

9. Collect research data;
10. Processing and analyzing research data;
11. Guideline for the research;
12. Invite the related experts to evaluate the guidelines;
13. Integrate the conclusion and discussion;
14. Propose the future research.

Research Framework

Based on the relevant theories of cultivation of innovative and entrepreneurial talents in Chinese higher education, the research studies the current situation for the various factors that affect the cultivation of innovative and entrepreneurial talents in China, and develop the guideline for developing on cultivation of innovative and entrepreneurial talents in Chinese higher education.

The basic conceptual framework of this study is shown in Figure 1.1.

The factors affect the cultivation talents refers from the other literature reviews, there are four variables might be affected the current situation. In this research, it mainly includes basic information of students, teachers and universities, the awareness of education, social development needs, and the environment of Chinese innovation and entrepreneurship education.

1. Basic information variables of students, such as age, gender, place of origin, etc., teachers' educational background, teaching methods, campus facilities and so on.

2. The awareness of education, including education input, resource supply and consumption of innovation and entrepreneurship in Chinese colleges and universities.

3. Social development needs, such as the education scale, and teaching model of innovation and entrepreneurship education.

4. The environment of Chinese innovation and entrepreneurship education, such as the external vertical structure, the internal structure of universities, investment in innovation and entrepreneurship education, social benefits, and standards for innovation and entrepreneurship.

And the final objective is to guideline for developing on cultivation of innovative and entrepreneurial talents in Chinese high education.

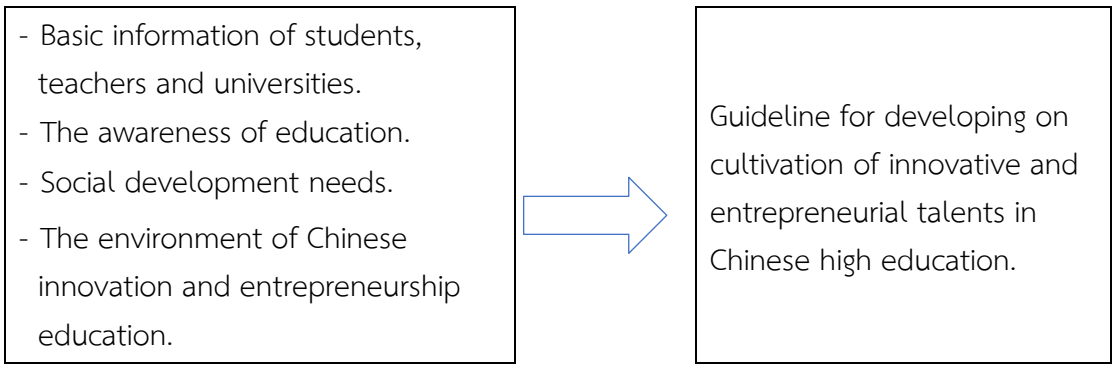

Figure 1.1 Research Framework

Chapter 2
Literature Review

To study the issue of policy execution and innovative and entrepreneurial talent system in higher education, first of all, a systematic literature review should be carried out on the basic theories involved. In the study, the researchers studied the relevant literature and studies, which are displayed by the following headings.

1. Reinforcement Theory of Innovation and Entrepreneurship Education
2. Related in Chinese Higher Education Policy
3. Context of cultivation of innovative and entrepreneurial talents
4. Related Research

The details are as follows.

Reinforcement Theory of Innovation and Entrepreneurship Education

Lu J. N. (2006). divided that the types of higher education, the quality of talent system are the three core concepts of this research, and the definitions and related theories of these three concepts constitute the basis of the research.

Hao H. (2006). studied that higher education refers to professional education and vocational education carried out on the basis of completing secondary education, and is the main social activity for cultivating senior professional talents and technology talent.

Higher education is one of the important and interconnected parts of the education system. It usually includes various educational institutions with high-level learning and training, teaching, research and social services as their main tasks and activities. The second half of the 20th century was an unusual period of expansion and qualitative change in the history of higher education development. The rapid growth of society's demand for high-level specialized talents and the urgent need for individuals to receive higher education opportunities made higher education develop at an unprecedented speed.

Higher education by functional level

Guan J. (2019). referred to the classification idea of and universities in the International Standard Classification of Education, Chinese universities can be divided into four types: research-oriented, teaching-research-oriented, teaching-oriented, and vocational-oriented, as shown in Table 2.1 The purpose of this classification is to guide colleges and universities to reasonably determine the school-running function, alleviate the tendency to blindly pursue research-oriented and academic, and facilitate society to implement monitoring, management and evaluation in accordance with the number of degrees awarded, degree structure, research level, and personnel training specifications.

Table 2.1 Classification System of Higher Education

Types of Institutions of Higher Education (All Classification)	**Outstanding Feature**
1. Research-Oriented	Establish the graduate school or universities with a high proportion of doctoral students.
2. Teaching-Research-Oriented	Universities with independently awarding doctoral degrees (without graduate schools) or undergraduate institutions with more than 15% graduate students
3. Teaching-Oriented	Undergraduate institutions with independently grant master's and bachelor's degrees (including vocational undergraduate institutions)
4. Vocational-Oriented	Higher vocational colleges
Total	**4**

In particular, the classification system of higher education is only a tool to guide the rational positioning of universities, for monitoring and evaluation, and to achieve scientific and effective management, focusing on positioning the nature of colleges and their functional boundaries. A systematic and complete classification system is also difficult to provide support for the scientific development of colleges and universities and to improve the effectiveness of government management.

General classification of major

Liu X. (2018). researched that according to the characteristics of disciplines and majors and the focus of talent training distribution structure.

The 3-5 subject groups and the student distribution structure composed of 3-5 disciplines and the distribution structure of the general colleges and universities are divided into 9 types, the specific classification is shown in Table 2.2

Table 2.2 Classification System of General Colleges and Universities.

Types of Ordinary Universities	Subject Disciplines	Subject Group
1. Humanities	Literature, History, Philosophy	Various colleges and universities are determined according to their own advantages and characteristics.
2. Science and Engineering	Science, Engineering	
3. Finance and Economics	Economics, Management	
4. Politics and Law	Law	
5. Normal Major	Pedagogy	
6. Agriculture and Forestry	Agronomy	
7. Medicine	Medicine	
8. Comprehensive University	Science, Literature	
9. Comprehensive College	--	
Total	**9**	

Combined with the internal relationship between disciplines and the current situation of disciplines and majors in universities, and considering the special importance of agriculture, education, and medical care to China and the needs of public services, according to the main disciplines and similar disciplines.

Related in Chinese Higher Education Policy

The management of education by university and society is realized through activities such as the formulation and implementation of the entire education. Educational policy begins with the problems in the implementation of education,

and also ends in solving the problems. David Easton, (2017). believes that policy formulation is a cyclic process, which is the interaction of the environment and the output, that is, the problems existing in the environment form pressure and exert an influence on the political system, prompting the political system to respond, and then issuing policies to respond to the problem. This cycle, endlessly reciprocating (David Easton, 1953).

The relationship between educational policy and educational implementation

Judging from the history of educational policy activities in China, educational policies can cause changes in educational practice in different ways. There are four relationships between educational policies and educational implementation:

First, the positive relationship. This relationship means that the national education policy has been well implemented and implemented, and it has promoted the reform and development of education implementation, and the positive effects are far greater than the negative effects.

Second, invalid relationship. In this relationship, education policy does not cause changes in education implementation. Education policy stays at the stage of policy formulation, exists only in the textual sense, and is not well implemented.

Third, the negative relationship. This relationship means that educational policy has caused changes in educational implementation, but this change is dominated by negative aspects.

Fourth, ambiguous relationships. Strictly speaking, every educational policy leads to changes in educational practice, but to varying degrees. The effects of educational policy implementation are usually both pros and cons, a situation called ambiguous relationship.

From the perspective of epistemology, educational policy is one of the media of educational theory and educational implementation. Lin believes that policy is a kind of knowledge, which is the manager's knowledge of the objective reality of the country or jurisdiction, and the understanding of the future development management based on this knowledge. According to Marxist epistemology, this kind of cognition must go back to practice and be tested by various difficulties, obstacles,

achievements, and failures in the implementation of policies, and then go back to cognition, and then revise, implement, and repeat in order to achieve the best results to get the most excellent policy (Lin, 1989).

Ferran. (2000). illustrated the mediating position of policy between theory and practice. Educational policy analyzes and structures abstract and general educational theories, makes them more concrete and operational, and ultimately guides practice and is tested by practice (Ferran Ferrer, 2000, p. 10).

It can be said that the activity process of educational policy is the transformation process from educational theory to implementation practice. Educational theory and educational policy, educational policy and educational implementation, educational theory and educational implementation constitute the "triangular" relationship of educational and educational activities. In this "triangle" relationship, the relationship between educational theory and educational implementation is the first to cause controversy (David K. Cohen, Susan L. Moffett, 2010, p. 3).

Judging from the materials read, the discussions on education implementation in China's education policy research mainly focus on three aspects: First, the discussion on the participation of executors in the decision-making process of education policy. The second is the implementation problems encountered in the implementation of education. This kind of discussion combines the implementation of specific educational policies to deeply analyze the practical problems encountered in the implementation of policies. These two types of research are mainly applied research. The third is to make a general discussion on the relationship between education policy and education implementation in theory. A representative point of view is: "Educational policy has both the characteristics of educational theory and the characteristics of educational implementation. It is a bridge for educational theory to be constructed and systematically applied to educational implementation through complex and rational construction. Education theory and education. The process of implementation is also the process of operation, improvement and development of the educational policy system" (Wang, 2005, p. 1). A common general expression is "educational policy is the bridge or intermediary between educational

theory and implementation" (Xiao, 2007, pp. 16-18). Existing research has indeed pointed out the practical problems encountered in the implementation of educational policies, and emphasized the “bridge” role and mediating value of educational policies.

The significance of educational policy implementation

Sun. (2011). said that since the founding of the People's Republic of China, especially over the past 30 years of reform and opening up, through active exploration and hard work, China's education cause has made remarkable achievements, but also faces some new opportunities and challenges. At present, China's education reform is in a transitional period from extension expansion to connotation construction. Faced with the major historical issues of education quality, equity and innovation, many scholars have deeply reflected on many problems in China's education reform, and sorted out a relatively clear set of issues. Education reform ideas and clear reform content to guide China's educational reform (Sun, 2011, pp. 20-722).

In general, the research on the relationship between educational policy and educational executive power can be carried out around the following themes: First, the theoretical study of the relationship between educational policy and educational practice. The key point is to re-discuss and understand the nature of educational policy and educational implementation; clarify the practical characteristics of educational policy and the policy-dependent characteristics of educational implementation, which are the basis for the relationship between the two; analyze the bidirectional transformation or bidirectional transformation of educational policy and educational implementation The nature and process of objectification, that is, educational policy execution and educational execution policy, reveal the theoretical relationship between the two. Second, practice reflection on the relationship between educational policy and educational implementation. It focuses on sorting out the operation process and benefits of important educational policies in the course of my country's educational reform from the macro and micro levels. Third, research on the effective mechanism and countermeasures of the interaction between education policy and education implementation.

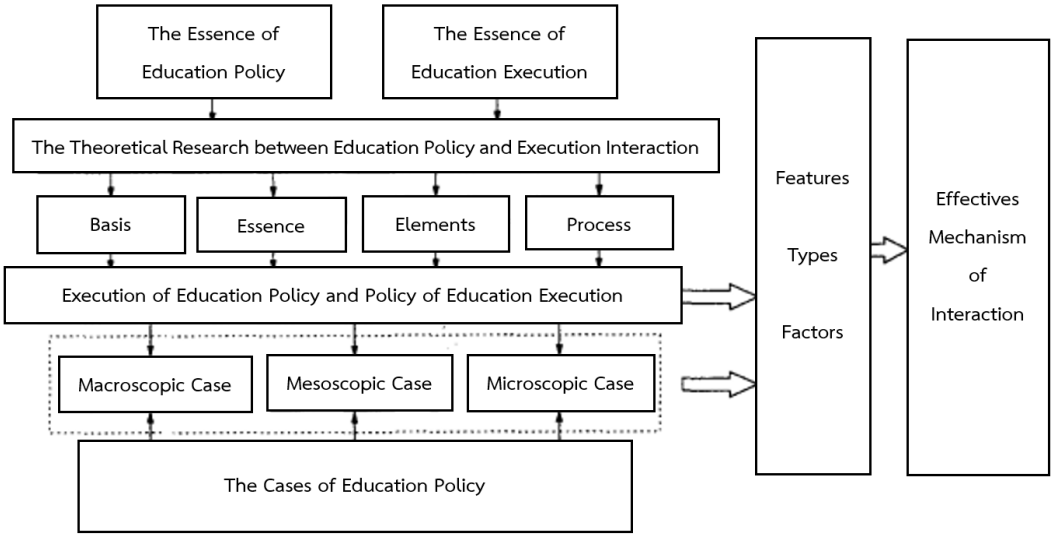

Figure 2.1 The Interaction between Education Policy and Implementation

Through the analysis of these influencing factors and the theoretical investigation of the interaction process, an effective mechanism for the interaction of education policy and education implementation suitable for Chinese socialist national conditions is constructed, and targeted and innovative solutions are put forward for the current difficulties in education policy and education implementation. and feasibility recommendations. The relationship between education policy and education execution is shown in Figure 2.1

Context of Cultivation of Innovative and Entrepreneurial Talents

Yan L. I. etc. (2016). believe that the talent system is the innovation and entrepreneurship goal, specification and basic training method of talents. Some scholars believe that the talent training model includes talent training goals and specifications, professional setting and construction, curriculum system and teaching content, teaching methods and means, teaching evaluation and quality monitoring, etc. Elements of talent training including training conditions. Other scholars also believe that the reform of the talent training model is a process of re-understanding and grasping the characteristics of the social transformation period and the law of

talent training, a process of reconfiguring educational and teaching resources and coordinating the interests of different groups, and a process of establishing a new university philosophy and re-selecting the university system.

Yang B. X. etc. (2011). found that at present, China has started the process of moving from a big country of higher education to a strong country of higher education, and higher education has made remarkable achievements. The quality of talent training in colleges and universities has been steadily improved, the reform of the talent model has been deepened, and college graduates have been widely recognized by the society. However, there are still many problems in the quality of talent training at present. For example, there is a big gap between the awareness of attaching importance to the quality of education and teaching and the actions to improve the quality of education and teaching. Models and teaching methods have become important factors affecting quality improvement at present. The problem of disconnection between scientific and technological innovation and talent training is prominent. The mechanism for combining teaching and scientific research needs further innovation. Perfect, students' innovation and entrepreneurship practice is restricted.

The Concept of Innovative and Entrepreneurial Talents

Zhu X. M. etc. (2013). studied that to improve the quality of education and teaching, the core content is to change the ideas and models of talent training. It must be scientifically positioned, according to the needs of economic and social development and its own training ability, to establish a talent training goal and talent training system with the school's personality and characteristics, attach great importance to the training of innovative talents, and play a leading role in the training of talents with relevant advantages and special disciplines. Demonstration effect. Pay attention to teaching students in accordance with their aptitude, while unifying teaching requirements, pay attention to the different characteristics and personality differences of students, and develop each student's superior potential. Improve the training methods of outstanding students, and implement personalized training for potential students.

In summary, promote the continuous deepening of teaching reform, insist on taking students as the main body and teachers as the leading, focusing on quality education and innovative education, focusing on teaching model innovation, taking teaching method reform as the breakthrough point and breakthrough, and establishing an innovative talent training model.

Jiao L. (2012). said that innovative talent training mode is the core content of talent training system reform. In recent years, Chinese universities have also made efforts in the reform of the training model, and have made some substantial progress in promoting general education, increasing the proportion of elective courses, and organizing student innovation activities. Many colleges and universities have established innovative talent training bases and student entrepreneurship platforms, and some schools have made bold attempts in training systems. China has made some new breakthroughs and achievements in the research and practice of talent training models, but the shortcomings of Chinese existing talent training models, such as single methods and outdated methods, have not fundamentally changed. In terms of the quality of talent training, the reform and innovation of education and teaching needs to be further deepened, the system and mechanism for training top-notch innovative talents still needs to be improved, elite education, individualized education, and comprehensive development education need to be strengthened, and the curriculum system setting and the combination of teaching and scientific research still need to be further improved. Improve.

In summary, the institutional mechanism to promote the in-depth cross-integration of disciplines has not been fully formed, and emerging advantageous disciplines need to be further developed and cultivated. The ability of independent innovation is not strong enough, and the high-level and deep-level collaborative innovation model needs to be improved.

Song H. (2010). researched that different types of colleges and universities should build their own unique curriculum system, teaching system and evaluation system according to their own talent training goals, and form their own unique talent training models. The exploration of multi-mode training of top-notch innovative talents not only meets the needs of student-oriented and individualized

development, but also satisfies the country’s needs for diversified innovative talents, and also greatly improves the school’s talent training level and social impact. Each institution has different histories, missions, goals, and orientations, and is not balanced in terms of levels and resources.

Therefore, there is no single model for higher education. The similarities in the training mode of innovative talents and the lack of characteristics are the important factors restricting the improvement of quality. However, there are still commonalities in the undergraduate education of excellent high-quality research universities, and there are still rules to follow to improve the quality of personnel training, which can be the basis for making suggestions for improvement.

Pan A. (2016). said that according to the characteristics and laws of education at different levels, explore suitable talent training models. The cultivation of innovative talents depends on a diversified and selective training system, a training approach that combines social practice and scientific research practice, a teaching model that encourages individual development, and a flexible and open evaluation system. Experience at home and abroad shows that individualization, selectivity, flexibility and openness are the basic characteristics that should be possessed by the innovative talent training system. It is necessary to form a talent training model that is conducive to the development of students' personality and the development of students' potential.

According to the needs of economic and social development and the training capacity of institutions of higher learning, we should establish training objectives with their own personalities and characteristics, and focus on cultivating students' social responsibility, innovation ability, practical ability, employment and entrepreneurship ability and sustainable development ability, so as to achieve scientific quality and humanities. The integration of quality promotes the all-round development of students. It is necessary to update the teaching content and methods, transform the knowledge imparting teaching mode to the ability training teaching mode, while imparting knowledge to students, enhance students' ability to learn in practice, and focus on cultivating students' sense of social responsibility, innovative spirit and practical ability.

In summary, it is necessary to optimize the elements and processes of teaching activities, and continuously improve the quality of personnel training and the level of serving the society. It is necessary to firmly establish the awareness of actively serving the society, take advantage of the school's ability to gather talents and comprehensively cross disciplines, carry out all-round services, and further promote the combination of production, education, research and application. It is necessary to optimize the structure of disciplines and majors in schools, enhance students' ability to adapt to society, develop individual characteristics, and allow the talents cultivated by schools to be tested by society and the market.

Factors that Affect the Cultivation Innovative and Entrepreneurial Talents

In order to study the factor that affect the cultivation innovative and entrepreneurial talents, the researchers consulted relevant literature and sorted the contents in Table 2.3.

According to Table 2.3, the researchers looked for relevant literatures of the cultivation innovative and entrepreneurial talents, including based on Liu Z. (2019), Zhang X. (2014), Zhang H. (2012), Wei H. U. (2008), Pan A. (2016), Zhu X. (2013), Yan B. X. (2013), Hao H. (2009) and Zhang Q. (2018). Researcher used a unified standard to screen the corresponding key factors affecting the cultivation innovative and entrepreneurial talents. In the framework of this study, factor that affect the cultivation innovative and entrepreneurial talents with a frequency of 7 or higher are selected.

From the literature reviews, there are some basic information like age, gender, place of origin, etc. could be also collected. For the convenience of this research, there are total 4 variables to survey the factors affect the cultivation innovative and entrepreneurial talents, such as 1) Basic information variables of students, such as age, gender, place of origin, etc., teachers' educational background, teaching methods, campus facilities and so on; 2) The awareness of education, including education input, resource supply and consumption of innovation and entrepreneurship in Chinese colleges and universities; 3) Social development needs, such as the education scale, and teaching model of innovation and entrepreneurship education; 4) The environment of Chinese innovation and entrepreneurship

education, such as the external vertical structure, the internal structure of universities, investment in innovation and entrepreneurship education, social benefits, and standards for innovation and entrepreneurship.

Table 2.3 Factors that Affect the Cultivation Innovative and Entrepreneurial Talents

Factors	Liu Z. (2019)	Zhang X. (2014)	Zhang H. (2012)	Wei H. U. (2008)	Pan A. (2016)	Zhu X. (2013)	Yan B. X. (2013)	Hao H. (2009)	Zhang Q. (2018)	Frequency
Awareness of education	√	√	√	√	√		√	√	√	8
Social development needs	√	√	√	√	√	√	√	√	√	9
The environment of Chinese innovation and entrepreneurship education	√		√	√	√	√		√	√	7
Target of education	√		√		√		√		√	5
Talent training method	√		√		√	√	√	√		6
Education input and supply		√	√		√		√	√		5
Scale	√	√	√	√		√			√	6

1. Awareness of Innovation and entrepreneurship education

Liu Z. (2019). focused on innovation and entrepreneurship education from higher education, and the quality of talent training is the core indicator of higher education. The "Outline of Educational Planning" proposes to "make quality

improvement the core task of educational reform and development" and to "designate national standards for educational needs". To designate quality standards for higher education, it is necessary to have a clear definition of higher education needs, which is the basis for higher education needs assurance and evaluation.

A correct understanding of the concept of higher education needs is the starting point for determining the quality standard of higher education.

Wei H. U. (2008). researched that according to the stakeholder theory, many scholars have clearly put forward a variety of perspectives for understanding "the awareness of innovation and entrepreneurship education", among which there are five different ways of understanding: awareness is excellence (the highest standard), awareness is compliance with standards, awareness is It is the appropriateness of the goal, awareness is the effect (effectiveness) of achieving the established goals of the organization, and awareness is the satisfaction of the user's explicit or potential needs. Therefore, when defining the awareness of higher education, it is necessary to pay attention to the different perspectives of target adequacy and target.

The awareness of the target

For a long time, many scholars have been accustomed to define awareness of education as excellence, and the gradual transformation into quality in the process of use is applicability. With the evolution of different definitions of higher education by different designers, the awareness of the goal is gradually recognized by the public, providing a methodological organizing principle for obtaining and checking quality. The target is appropriate to use with different types of institutions with different development goals, including comprehensive universities, specialized universities, vocational colleges, technical colleges, etc. Different higher education institutions can set their own development goals, and within the same higher education institution, the diversity of goals is also recognized.

Zhang X. (2014). said that defining awareness of education as the target is appropriate, endows the needs with great flexibility, and thus becomes an extremely important step in the development of the awareness concept. This makes universities no longer stick to the concept of "what is awareness of education", and is more suitable for diversified higher education. Different stakeholders in higher

education find the position of "awareness" in an appropriate definition, and the concept of "appropriate goals" is of great significance.

2. Social needs of innovation and entrepreneurship education

Zhang H. (2012). divided the steps for ensuring the social needs, shown as follows.

First of all, it is necessary to clarify the main perspective of the needs of higher education. Under different views of educational quality, clearly define the identity of the proposer and what kind of interests this definition is based on. Teachers' definition of higher education emphasizes the quality of research work done by institutions; students pay attention to teaching quality, their own learning experience and environment; administrators pay attention to professional standards and related vocational skills that students have developed. That said, any approach to external evaluation or needs assurance must balance the different interests of various stakeholders.

Second, focus on the purpose perspective of higher education. According to the purpose of quality assurance of higher education, universities must make a proper definition of the concept of social needs, and under specific background conditions, the meaning must be clearly clarified.

Finally, pay attention to the perspective of the safeguarding agency. One of the main tasks of an assurance agency is to decide on the main method to be used to define needs. For quality assurance agencies responsible for overseeing and overseeing higher education providers, adhering to externally established standards means quality; in a system where universities are autonomous and well-regulated, needs assurance agencies will also interpret quality differently. Institutions must take into account the various stakeholders, take into account international standards and definitions, and how to legitimately legitimize and be recognized by the entire higher education system.

Some scholars have pointed out that the conflict of ideas is not a disaster, but an opportunity. For the environment view of higher education, the conflict between different perspectives, the conflict between the theoretical view and the practical view, and the conflict between the academic view and the commercial

view are constant. That is to say, there are four disputes in the concept of higher education environment, namely internal and external, process and result, bottom line and excellence, teaching and research. In this research, the researcher just divided the environment into two parts.

At the same time, in the quality of higher education, the value orientations of different subjects are also different, which mainly focus on three aspects. One is based on truth, such as the academic concept, the subject is colleges and universities; the other is based on effectiveness, focusing on effectiveness and efficiency, such as the value of money, the subject is the government; the third is around the needs, such as meeting the purpose, the subject is the society. Among them, each subject also has the pursuit of the other two values. Therefore, a diversified view is inevitable, and the higher education environment view is ultimately a balance between these multiple views.

3. The environment concept of innovation and entrepreneurship education

In the era when the quality of higher education is not yet clear, the determination of the environment concept of innovation and entrepreneurship education to refer to the internal logic of higher education and follow the development law of higher education. "Education, as an activity to awaken people's consciousness of life, enlighten people's spiritual world, build people's way of life, and realize the value of people's life, the rationality of its generation and development is determined by the needs of individuals and people's life".

Zhu X. etc. (2013). have summarized the views of educational policy makers and educational theorists on educational environment in educational practice as "internally adaptive quality, externally adaptive quality and individual adaptive environment", which are three aspects of the environment concept of talent training in universities. The value orientation corresponds to the knowledge-based view, the social-based view, and the individual-based view. Internal adaptability is the understanding of the traditional functions of universities, that is, universities are places for imparting knowledge and culture, and the development of universities should conform to the logic of knowledge development, the logic of discipline development, and the logic of education development. Intrinsic adaptability is

reflected in the process of knowledge imparting, which is the ability and degree of students to accept knowledge; in the process of knowledge creation, it is the important meaning of producing new knowledge, that is, academic value. External adaptability is the function that the talents cultivated by universities should be able to effectively serve the society, that is, the degree to which talents cultivated by colleges and universities meet the needs of the country, society and employers. The development of colleges and universities should reflect the logic of social development, economic development, and market development. Personality is the degree to which a university meets the individual needs of students and their all-round development. University development should reflect the logic of people-oriented and student-oriented. In general, internal adaptability is the premise and foundation of the development of colleges and universities, external adaptability is the driving force and direction of their respective development, and individual adaptability is the source and core of college development. The three are interdependent, transform each other, and complement each other.

The environment of the value orientation of internal adaptability, external adaptability and individual adaptability

The environment of the value of three aspects is the combination and unity of the three value orientations of internal adaptability, external adaptability and individual adaptability, and it is necessary to reflect the orientation goals of the three value orientations at the same time, that is, to meet the needs of social and economic development and the internal development needs of education, to meet the development needs of the main body of students, and the quality of personnel training can meet the concentrated expression of the development degree of these three aspects.

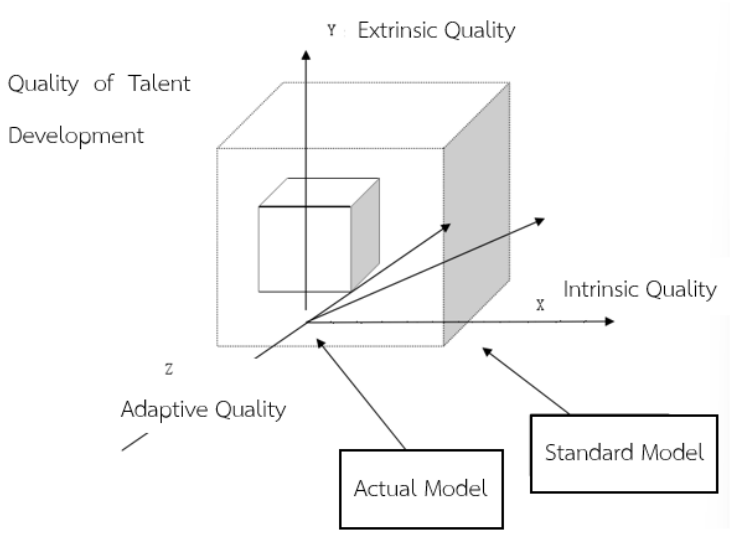

Figure 2.2 Three Values of the Quality of Talents

Tao Y. (2013). studied that the "Outline of Educational Planning" pointed out that the fundamental standard for measuring the environment of education is to promote the comprehensiveness of people, and the second is to adapt to social needs. To adhere to this fundamental standard, it is necessary to identify the focus of talent cultivation in universities in both vertical and horizontal aspects, and build a complete system to promote the talent cultivation. From a vertical point of view, it is very important to determine the scientific and reasonable personnel training goals in order to properly handle the educational relationship between the school and before enrollment and after graduation. From a horizontal perspective, it is necessary to properly handle the relationship between universities and society and industry enterprises, and build a new mechanism for collaborative training. One fundamental standard and two dimensions constitute a big education concept that examines the quality of talent training in colleges and universities. The new concept of talent training needs to be promoted in the whole society, it needs the advocacy of educators, and it needs the fat scale of talent training mechanism and training mode. Therefore, updating the concept of talent training is a long-term process that requires continuous exploration and practice.

To sum up, the environment of innovation and entrepreneurship in universities guides the development of practical work in Chinese higher education. The environment is a question worthy of discussion. It needs to reflect more people-oriented concepts, and the quality of personnel training should be put first. The design of the evaluation system is related to the long-term development of colleges and universities. The environment content should be well differentiated, the environment orientation should pay more attention to quality, and the environment criteria should pay more attention to the growth and development environment of students. In view of the current practical problems of talent environment of Chinese universities, it is necessary to focus on the goals and pursuits of the modern university system to promote innovation and entrepreneurship education, to explore the formation of a university evaluation model with Chinese characteristics, and to establish intermediate institutions to participate in professional environment.

Establish an open education environment of education

The government has the responsibility and necessity to invest in, supervise and national higher education, and clarify the demands of other higher education stakeholders for the innovation of higher education and the ways to achieve them. First, universities should have the autonomy to run a school, and the establishment and improvement of the implemented university system must include internal and external environment of innovation and entrepreneurship education of running a school. The acceptance of external environment by universities is a manifestation of the realization of the autonomy of running a school, and an important way for the environment of running a school to be recognized by the society. The second is to standardize the components, auditing, operation, and institutional systems of higher education institutions and create a favorable institutional environment based on Chinese national conditions. The government should go through the legislative process to clarify the respective responsibilities, powers and obligations of the government, intermediary institutions and universities in the evaluation of higher education. The third is to recognize the diversity of higher education evaluation institutions. The standardization benchmark requirements and diversification of the construction model of higher education evaluation institutions are equally important,

allowing diverse higher education evaluation institutions to coexist. The fourth is to emphasize the coordination mechanism between the government, society and universities to promote the healthy development of universities.

Reform the Evaluation Between Guideline and Implementation

The evaluation system has a guiding and stimulating effect on education and teaching activities. New social needs, new concepts of talent training, and the reform and development goals of education at all levels and types all require breaking the constraints and misdirection of the existing evaluation system on talent growth, and establishing a scientific, diverse and flexible evaluation of educational quality and talent. evaluation system.

Wei H. U. (2008). said that to improve the evaluation of education and teaching, starting from the requirements of quality education, change the way of student evaluation that is purely based on examinations and scores as the standard, evaluate students' developmental advantages and specialties, and evaluate students' innovative spirit and practical ability. According to the training objectives of different stages, establish a variety of student evaluation standards, promote students' growth records, developmental evaluation and other forms of student evaluation methods, encourage students to develop in a multi-faceted manner, pay attention to students' personality development, and encourage students to take a few steps. Further improve the curriculum and teaching evaluation system. According to different stages and different types of colleges and universities, formulate diversified teaching evaluation standards, and cultivate relatively independent third-party education certification agencies and evaluation mechanisms.

To sum up, support the development of educational quality evaluation and teaching diagnosis activities jointly participated by the government, colleges and universities, and all aspects of society; support colleges and universities to independently carry out teaching evaluation and diagnosis, and introduce professional peer evaluation and international certification systems.

Break the talent evaluation system based on the theory of education, and establish a talent evaluation system with diversity, multiple standards, and ability-based. The competent government departments organize relevant industries and

professional research institutions, and on the basis of extensive research and scientific analysis and reference to international standards, step up efforts to improve Chinese existing and effective competency sequences and vocational qualification standards for a period of time in the future, and establish a national vocational competency and vocational qualification standards. Qualification coordinating management agency. Strengthen the examination of practical ability in talent selection and use, and overcome the tendency of social employment to simply pursue academic qualifications. The reform of education quality evaluation and the reform of the talent evaluation system need to coordinate with each other, advance as a whole, constantly adapt to the new requirements for talent training put forward by economic and social development, and create a good development environment for the healthy growth of talents.

Wei H. E. (2013). researched that supporting colleges and universities to independently carry out teaching evaluation and diagnosis activities. Strengthen teaching quality assessment, monitoring and information release, and establish a system for regular monitoring and announcement of teaching quality. Support colleges and universities to introduce majors, peer evaluation of courses and international certification systems, and attract industries and enterprises to participate in college teaching evaluation. Improve the teaching quality assurance and monitoring system. A quality assurance system based on teaching supervision, college management, and student evaluation of teaching will be formed. Establish a normal monitoring system and improve reasonable evaluation standards, and explore new methods and new ways to scientifically evaluate teachers' teaching work. Formulate and improve reasonable evaluation standards, and explore new methods and new ways to scientifically evaluate teachers' teaching work. Formulate and improve high-level school-running quality standards, increase investment in school-running quality, strengthen overall quality management of teaching and research, formulate a systematic and scientific quality evaluation system, and strengthen institutional guarantee mechanisms for improving quality. Establish a quality annual report release system and strengthen the construction of the school's internal quality assessment system.

At present, it should be face up to the problems that exist in the cultivation of talents in colleges and universities, such as too narrow professional scope, insufficient innovation ability, and low humanistic quality. It is necessary to focus on promoting the transformation of the talent training model from professional talents to general talents, from employment-oriented to development-oriented, and from technical-oriented to comprehensive development-oriented. Only in this way can we adapt to economic and social development and meet the requirements of college concepts.

The idea of universities is the product of the times and social needs, and social needs directly promote the formation and development of college ideas. At present, the new trend of the concept and practice of world universities is the cultivation of innovative talents, and the training goal of innovative talents is to meet the needs of the future society. How to cultivate innovative talents requires us to change the traditional concept of education, and realize the transformation from professional counterpart education in the context of a single discipline to broad-caliber professional education based on general education in the context of interdisciplinary and comprehensive background; The transition from prior knowledge-based to the cultivation of cognitive ability and overall quality; from teacher-centered to student-centered and teacher-led; from one-way knowledge transfer to teacher-student interaction and guidance to stimulate students to learn independently, especially the transformation of research-based teaching methods through exploratory research methods. In the training mode, lay a solid foundation and broaden the scope of training; optimize the curriculum system and build a reasonable knowledge structure; improve the practical teaching system, enrich the application and innovation connotation; strengthen the research-based teaching mode to promote the improvement of students' practical ability and innovative spirit; establish independent Learning and training mechanism to encourage students to grow individually.

The goal of talent training in colleges and universities is to cultivate high-quality talents with solid basic knowledge, broad professional orientation, coordinated development of scientific spirit and humanistic quality, outstanding

practical ability and innovative spirit, with international vision and sustainable development. In terms of knowledge structure, build a comprehensive knowledge base of natural sciences and humanities and social sciences, have an in-depth understanding of the knowledge system and basic framework of this discipline, have a solid grasp of the basic theory, basic knowledge and basic skills of this major, and have a good ability to engage in the professional work of this major. In terms of ability structure, form a scientific way of thinking and learning methods, have outstanding practical ability, research literacy and innovative spirit, and have strong self-learning and self-development ability.

Importance of Innovation and Entrepreneurship

Liu Z. (2020). said that to cultivate innovative and entrepreneurial talents, entrepreneurship education must run through the process of higher education, and the key is to cultivate the thinking, skills and quality of innovation and entrepreneurship of contemporary college students. Judging from the current development situation, it is necessary to run entrepreneurship education throughout the current development process of higher education, rather than simply adding entrepreneurship education to higher education. Generally speaking, there are broad and narrow senses of entrepreneurship education. Entrepreneurship education in the narrow sense is to cultivate the business ability of college students to be able to start a business. Simple understanding, entrepreneurship education in the narrow sense is a crash course for entrepreneurs (Zhao, 2008, pp. 136-137).

According to the definition of UNESCO, entrepreneurship education in a broad sense is "cultivating individuals with creative personalities. It is also important for people who are paid because employers or individuals, in addition to requiring employees to be successful in their careers, are More and more emphasis is placed on the initiative, risk-taking spirit, entrepreneurial ability, independent work ability and technical, social and management skills of employees" (He, Teng, 2007, pp. 127-128). That is to infiltrate and integrate entrepreneurship education into the current educational process, highlighting the cultivation of students' innovative and entrepreneurial spirit, innovative and entrepreneurial ability, and innovative and entrepreneurial quality. Therefore, the cultivation of innovative and entrepreneurial

talents and the development of entrepreneurial education must include three aspects: innovative and entrepreneurial knowledge, innovative and entrepreneurial skills, and innovative and entrepreneurial quality (personality).

This kind of entrepreneurship education is the real quality education, can really cultivate innovative and entrepreneurial talents, and can really promote the all-round development of people.

Dong Z. F. (2014). researched that China is building an innovative country. The so-called innovative country refers to a country that takes technological innovation as the core driving force of economic and social development. The requirements are that the country's R&D investment must account for more than 2% of GDP; the contribution rate of scientific and technological progress must be more than 70%; the independent innovation ability must be strong, and the dependence on foreign countries must be less than 30%; the innovation output is high, and the world's recognized 20 or so. The number of invention patents owned by innovative countries has reached 99% of the world (Ren, 2011).

In summary, to truly realize the establishment of an innovative country in 2020, the key is that Chinese universities can continuously cultivate innovative and entrepreneurial talents and enhance their independent innovation capabilities. Due to the lack of qualified talents and the lack of progress in science and technology, innovation output can only be a castle in the air.

Related Research

Chen W. (2019). studied that building an innovative country and cultivating innovative and entrepreneurial talents is the general direction of the country's future development. Based on the importance of innovation and entrepreneurship education, many scholars have conducted in-depth research on the policy implementation and internal management of innovation and entrepreneurship education in China from different perspectives, both theoretical and practical. By sorting out the existing research, clarifying the connotation and research theme of innovation and entrepreneurship education, making a phased summary of innovation

and entrepreneurship education research in higher education, and trying to look forward to the direction of further research.

"Entrepreneurship education" was first proposed by UNESCO at the "International Symposium on Education for the 21st Century" held in 1989. Kirin Bor, an expert from the World Economic Cooperation Organization, summed up entrepreneurship education as "the future of human beings". The third educational passport" refers to the education that develops and improves the basic quality and entrepreneurial ability of students, so that students have the necessary knowledge, ability and psychological quality to engage in entrepreneurial practice activities (Xu, 2004, pp. 74–75). From 1998, when Tsinghua University launched the Entrepreneurship Competition, until 2009, the research of domestic scholars mostly focused on employment-oriented entrepreneurship education. Employment issues, train more entrepreneurs (Hou, 2007, pp. 31–34). Since 2010, the state has officially issued a document on innovation and entrepreneurship education, and the connotation of entrepreneurship education has also changed, from employment-oriented to cultivating innovation and entrepreneurship, that is, the core of entrepreneurship education should be to cultivate innovative Spirit, individuals who master innovative knowledge and ability (Zhan, 2013, pp. 77–80). Yan Maoxin also proposed that the focus of entrepreneurship education in colleges and universities is to cultivate students' entrepreneurial spirit and promote the free development of students' individuality (Yan, 2014, pp. 63–68).

Education (Chen, 2010, pp. 4–6). Wang Hongcai and others believe that innovation and entrepreneurship education is the cultivation of students' personality quality, mental thinking and ability quality, of which the cultivation of innovation and entrepreneurship is the core (Wang, 2017, pp. 61–63). Some scholars believe that the essence of innovation and entrepreneurship education is to cultivate innovative and entrepreneurial talents as the fundamental direction of comprehensive education reform and innovation. The new educational concept and model with the core as the core is an education aimed at comprehensively reforming traditional education and teaching and effectively cultivating innovative and entrepreneurial talents (Li, 2016, pp. 83–87).

The core and essence of entrepreneurship is innovation, and innovation supports entrepreneurship (Zhang, 2010, pp. 45–46). As a new educational concept, innovation and entrepreneurship education is not a simple superposition of innovation education and entrepreneurship education, but a transcendence of innovation or entrepreneurship education in terms of concept and content, focusing on updating educational concepts and reforming talent training. Model to achieve the goal of educating people (Zhang, 2014, pp. 48–52).

Wang Zhanren. (2015). also proposed that innovation and entrepreneurship education inherently includes innovation education and entrepreneurship education, but it is not a simple superposition of the two, but requires that the purpose of innovation education should point to entrepreneurship, focusing on applied innovation, and entrepreneurship education should be based on innovation. As the core (Wang, 2015, pp. 56–63).

In summary, many factors are related to the cultivation and system of innovative and entrepreneurial talents in China. This study focuses on various factors that affect Chinese creative and entrepreneurial talents, the gap between the formulation and implementation of education policies, the ways to improve the quality of talent, and the talent training system.

Chapter 3
Research Methodology

To study the cultivation of entrepreneurial and entrepreneurial talents, the researchers have the following procedures;

1. Type of the research methodology
2. The population / the sample Group
3. Research Instruments
4. Data Collection
5. Data Analysis

The details are as follows.

Type of the research methodology

The study used by mixed-method research to collect both research data.

The research supports the basic concept of integrated mixed methodology, quantitative research methods are used to infer the leading cause and effect, and qualitative methods are used to support the theory.

Quantitative Research Method

Quantitative research method is generally used to obtain statistical results for a specific research object. To be precise, quantitative research refers to scientific research that determines the quantitative nature of the research object in a particular aspect. It is a research method that expresses problems and phenomena quantitatively and then analyzes, examines, and explains them to obtain meaning.

Objective 1 of this study uses the questionnaire as instrument to survey the current situation of innovation and entrepreneurship education to obtain more accurate and reliable first-hand data. This method is value-neutral, unaffected by the situation, and suitable for large-size sample groups.

The objective 4 is to evaluate the adaptability and feasibility of the guidelines through assessment that is qualitative research method.

Table 3.1 Detailed Sample Group Information.

No.	Sample Groups	Research Instruments	Data Collection	Data Analysis
1	186 lecturers 385 students	Questionnaire	Survey	Quantitative analysis by spss. Mean value and standard deviation Correlation analysis Multiple linear regression.
2	14 administrators 21 professors 35 associate professors 34 enterprises	Interview	Interview	Qualitative analysis by content analysis and multidimensional scaling
3	7 specific experts	Assessment	Evaluate	Quantitative analysis by mean and standard deviation

Qualitative Research Method

Qualitative research is to gain a qualitative understanding of the underlying reasons and motivations, involving collecting, analyzing, and interpreting data by describing what people do. It is always described as the soft side of research. And responses do not usually involve numbers except if the researcher codes them.

The objective 2 is to find the balance between formulation and implementation Chinese innovation and entrepreneurship policies through interview.

The objective 3 is to determine the guidelines of different stakeholders on innovation and entrepreneurship education for this research through interview qualitative research method.

In mixed-method research, quantitative research usually comes first, and it would be presented by charts to show the regular of innovation and entrepreneurship and then qualitative research comes before quantitative research. At last there are quantitative research for assessment to evaluate the guidelines.

The Population / Sample Group

The Population

The population of the study were 28 management cadres, 34 professors, 107 associate professors, 362 lecturers and 9673 students related innovation and entrepreneurship from 7 universities and 68 enterprises in the Yangtze River Delta G60 Science and Technology Corridor in Shanghai, China.

Table 3.2 The Details of the Information for Universities as Sample

No.	Named	Name of University	Type
1	U1	Shanghai Jiaotong University	Research-Oriented
2	U2	University of Shanghai for Science and Technology	
3	U3	Shanghai University of Electric Power	
4	U4	Shanghai Normal University	Teaching-Research-Oriented
5	U5	Shanghai Lixin University of Accounting and Finance	Teaching-Oriented
6	U6	Shanghai Lida University	Vocational-Oriented
7	U7	Shanghai Jian Qiao University	
Total	**–**	**7**	**4**

The Sample Group

It should be selected different sample groups from different objectives.

1. Objective 1

1.1 The objective is to study the current situation about the various factors that affect the cultivation of innovative and entrepreneurial talents in China.

1.2 The sample group

The sample group in objective 1 is 186 lecturers and 385 students by Yamane (Yamane, 1973.) from 7 university which comprehensive in Shanghai, China.

1.3 The research instrument is questionnaires. The detail is shown as Research Instruments 2.

1.4 The data collection is survey. The detail is shown as Data Collection 2.

1.5 The data analysis is to use the qualitative data method shown as Data Analysis 2.

Table 3.3 The Details of Sampling for Lecturers and Students

No.	Named	Lecturers		Students	
		Population	Sample	Population	Sample
1	U1	69	35	1454	58
2	U2	58	30	1429	57
3	U3	61	31	1349	54
4	U4	52	27	1545	61
5	U5	47	24	1397	56
6	U6	34	18	1246	49
7	U7	41	21	1253	50
Total	**7**	**362**	**186**	**9673**	**385**

2. Objective 2

2.1 The objective is to find a balance education policy formulation and implementation.

2.2 The sample group in objective 2 is 14 managers, 21 professors and 35 associate professors in total by systematic random sampling from one university which is comprehensive and 34 enterprises related in innovation and entrepreneurship in Shanghai.

The details of how to pick up the sample is shown as the follow steps.

Step 1, the administrators, professors, and associate professors will be identified as the population is divided into different groups according to positions.

Step 2, according to the principle of sample selection, the sample group must be representative and meet the variable in Objective 1; that is, there needs to be more in the formulation and practice of innovation and entrepreneurship policies in China.

Step 3 Through systematic random sampling to pick up the sample group. Choose numbers from a random range and find samples from different groups by drawing lots. The details is shown as Table 3.4 and Table 3.5.

Table 3.4 The Details of the Interview Sample Selection for Universities

No.	Named	Management		Professor		Associate Professor	
		Population	Sample	Population	Sample	Population	Sample
1	U1	5	3	7	5	17	7
2	U2	4	2	6	4	15	5
3	U3	4	2	5	2	15	5
4	U4	5	3	6	3	17	7
5	U5	4	2	7	5	16	6
6	U6	3	1	2	1	14	3
7	U7	3	1	2	1	13	2
Total		**28**	**14**	**34**	**21**	**107**	**35**

2.3 The research instrument is interview. The detail is shown as Research Instruments 2.

2.4 The data collection is interview. The detail is shown as Data Collection 2.

2.5 The data analysis is to use the qualitative data method shown as Data Analysis 2.

Table 3.5 The Details of the Interview Sample Selection for Enterprises

No.	Type of Enterprises	Population	Sample
1	First-Government Supported	4	12
2	Second-Government Supported	56	28
3	Third-Government Supported	8	4
Total	**3**	**68**	**34**

3. Objective 3

3.1 The objective is to determine the guidelines to improve the quality of innovative and entrepreneurial talents.

3.2 The sample group in objective 3 is same as objective 2.

3.3 The research instrument is interview. The detail is shown as Research Instruments 3.

3.4 The data collection is to interview. The detail is shown as Data Collection 3.

3.5 The data analysis is to use the qualitative data method shown as Data Analysis 3.

4. Objectives 4

4.1 The objective is to evaluate the adaptability and feasibility of guidelines for talent system suitable for innovation and entrepreneurship.

4.2 The sample group in objective 4 is 7 high-level experts from the population universities. The qualifications of assessments are as follows, 1) at 10 years of work experience in related innovation and entrepreneurship education; 2) have extensive experience in guideline for talent system to improve the quality of innovative and entrepreneurial talents; 3) graduated with doctoral degree.

4.3 The research instrument is assessment form. The detail is shown as Research Instruments 4.

4.4 The data collection is to evaluation. The detail is shown as Data Collection 4.

4.5 The data analysis is to use the quantitative data method shown as Data Analysis 4.

Research Instruments

Instruments for Collecting Quantitative Data with Questionnaire

Questionnaire is one of the most commonly used methods in scientific research. It is a purposeful, planned, and systematic method of collecting information about the actual, historical and current situation of the research object.

Questionnaire is a practical and feasible method for finding various factors that affect the cultivation of innovative and entrepreneurial talents.

Based on accumulating a large amount of literature, this study constructs the framework of the innovative and entrepreneurial talent system in higher education and designs a questionnaire. The sample group of this questionnaire survey was selected using the Yamane formula, and the survey was conducted on lecturers and students of selected universities in China. After collecting the questionnaires, statistical analysis was carried out. Then, according to the statistical results, analyze the model and implementation of the management of innovation and entrepreneurship education in colleges and universities and the talent system.

Constructing a Questionnaire Process

The study is through the Likert scale to evaluate metrics (Likert, 1932.). The detailed types of questionnaires are shown as follow.

The researchers obtained in the following designed the questionnaire for lecturers and students.

Step 1, review the theoretical basic high education related to innovation and entrepreneurship;

Step 2, establish an appropriate conceptual framework based on relevant literature on innovation and entrepreneurship education;

Step 3, delineate the scope of factors which from the current situation that affect the cultivation of innovative and entrepreneurial talents;

Step 4, construct appropriate questionnaires, distribute questionnaires, collect questionnaires, organize questionnaires, and draw conclusions.

The questionnaire consists of the following 3 sections.

Section 1, basic information of the respondent, such as major, academic background, work experience and the attitude to innovation and entrepreneurship from lecturers and grade, major, birthplace, academic performance and whether as student cadre from students;

Section 2, closed-ended questions on the independent variables involved in objective 2;

- The questions related in the awareness of education for innovation and entrepreneurship;

- The questions related in the social development needs for innovative and entrepreneurial talents;

- The questions related in the environment of Chinese innovation and entrepreneurship education;

- The questions related in the system about cultivation of innovative and entrepreneurial talents in Chinese high education.

Section 3, open-ended questions about the suggestions for cultivating innovative and entrepreneurial talents which could be respond freely.

There are 8 questions for having the awareness of education, 8 questions for having social development needs, 10 questions for having the environment of Chinese innovation and entrepreneurship and 17 questions for having the system about cultivation of innovative and entrepreneurial talents in Chinese higher education, total 43 questions.

The criteria for data interpretation based on 5-point Likert's scale (1932), as follows.

- 5 express the level of indicators were at strongly high level.
- 4 express the level of indicators were at high level.
- 3 express the level of indicators were at medium level.
- 2 express the level of indicators were at low level.
- 1 express the level of indicators were at strongly low level.

Constructing Index of Item-Objective Congruence (IOC)

The index of item-objective congruence developed by Rovinelli and Hambleton is a procedure used in test development for evaluating content validity at the item development stage. This measure is limited to the assessment of unidimensional items or items that measure specified composites of skills (Rovinelli, Hambleton, 1977).

IOC is a process in which respondents rate the degree to which individual items agree or disagree with specific goals listed by the researcher (Turner, 2002). Therefore, the experts placed each item with a score of 1 if the objective was

measured, 1 if it was not measured, or 0 if it was unclear. After the experts score things, the results are calculated to create an IOC index for each item on each objective. The formula of Rovinelli and Hambleton. (1977). is used under the assumption that an item measures only one objective.

Where an item measures multiple targets, Crocker and Aligna's simplified multidimensional item formulation is utilized to assess the similarity between an object and a set of objectives (Turner, 2002; Turner and Carlson, 2003).

The researchers improved the questionnaire based on expert opinion. Consider improving or eliminating questions with IOC less than 0.6 to make the questionnaire more convincing.

The detail of IOC is shown as follows.

Step 1, research the literature, concepts and theories related to the cultivation of innovative and entrepreneurial talents, and determine the scope and content of the questionnaire;

Step 2, draft and write a research statement report about the cultivation of innovative and entrepreneurial talents influenced by lecturers and students.

Step 3, prepare a complete questionnaire;

Step 4, submit the questionnaire to experts to check the index of item-objective congruence (IOC).

Step 5, analyze the questionnaire to find out the IOC. The specific IOC calculation formula is as follows (Buntham KS, 2010). The obtained IOC must be greater than 0.6, otherwise, it must be improved or eliminated;

Step 6, revision of the questionnaire based on expert opinion;

Step 7, conduct reliability analysis (Cronbach’s Alpha);

Step 8, improve lower confidence questionnaires;

Step 9, re-prepare a complete questionnaire for further research.

Step 10, analysis the Reliability of the questionnaire. Before the data analysis of the returned questionnaires, the reliability was analyzed using spss26. After inspection and research, Cronbach's Alpha reliability coefficient of the scale is indicated that the scale whether has relatively good reliability.

Before the collection data in this study, the researcher statistic the data by Reliability and got the Cronbach's Alpha are 0.966 for students and 0.945 for lecturers. It is all $>$ 0.9, indicating that the scale has relatively best reliability.

Instruments for Collecting Qualitative Data with Interview

The interview is a method in which the researcher collects information through face-to-face talks with the analysis object and is a general method for obtaining job analysis information. This is a survey in which the researcher collects data systematically and organically through individual interviews or collective conversations according to the requirements and purposes determined by the investigation and research, according to the interview outline.

According to the result of questionnaires, it could be found that the factors that affect the cultivation of innovative and entrepreneurial talents in current situation.

The whole interview process is in which the researcher and the experts interact with each other. At the same time, the researcher can take appropriate methods to conduct interviews according to the specific conditions of the experts being interviewed and record the experts' actual thoughts, opinions, attitudes, emotions, and other relevant situations. The interview method has a specific scientific purpose and a set of principles for its design, preparation, and execution.

Structured Interview Process

The instrument for researching relevant persons in Chinese universities is a structured interview.

The researchers developed the interview content according to the following steps.

Step 1, review the literature on innovation and entrepreneurship education;

Step 2, find the lower level interpretation and integrate the relatively lower level questions to interview;

Step 3, create an interview based on the relevant literature review about innovation and entrepreneurship education;

Step 4, design an interview form with questions consistent with the research conceptual framework including the cultivation of innovative and entrepreneurial talents;

Step 5, ask experts to help check the quality of the interview form;

Step 6, adjust the format of the interview according to the experts' suggestions.

Instruments for Collecting Quantitative Data with Evaluation Form

The instrument to collect the data for objective 4, to evaluate the adaptability and feasibility of guidelines for talent system suitable for innovation and entrepreneurship.

The data interpretation for mean value based on Likert. (1932). The data interpretation are as follows.

4.50 – 5.00 express highest level.

3.50 – 4.49 express high level.

2.50 – 3.49 express medium level.

1.50 – 2.49 express low level.

1.00 – 1.49 express lowest level.

Data Collection

Collecting Quantitative Data with Questionnaire

The researchers performed the following quantitative data collection.

Step 1, check the completeness of the questionnaire;

Step 2, send questionnaires to selected sample groups;

Step 3, send 186 questionnaires to lecturers and 385 questionnaires to students;

Step 4, respondents are required to return the questionnaire within 15 days.

Step 5, complete the recovery of questionnaires and check the number of valid questionnaires;

Step 6, 571 questionnaires were distributed, and 556 questionnaires were recovered, with an effective rate of 97%;

Step 7, extract useful information from valid questionnaires for further analysis.

Collecting Qualitative Data with Interview

Researchers used interviews for qualitative data analysis. The specific steps are as follows.

Step 1, researcher invites the interviewed experts to be interviewed, and prepares for the interview after receiving the experts' reply;

Step 2, selected experts to conduct research procedures;

Step 3, experts signed the informed consent form for the interview;

Step 4, ask questions based on the content of the interview;

Step 5, take notes and save recordings.

Collecting Qualitative Data with Evaluation

The researchers performed the following quantitative data collection.

Step 1, check the completeness of the evaluation form;

Step 2, send evaluation to selected high-level experts;

Step 3, respondents are required to return the evaluation within 5 days.

Step 4, complete the recovery of evaluation and calculate the results;

Step 6, extract useful information from valid evaluation for further analysis.

Data Analysis

Analysis for Quantitative Data

The steps for using quantitative data analysis and statistics are shown as follows.

Step 1, the basic information table of the respondents uses descriptive statistics, expressed as frequency and percentages;

Steps 2, the data analysis on factors affecting the cultivation of innovative and entrepreneurial talents from the current situation is presented with mean and standard deviation;

Step 3, check the difference between groups through F-test;

Step 4, using multiple linear regression equation to fit the data to find the trend of innovative and entrepreneurial talent cultivation.

Analysis for Qualitative Data

Content analysis is a general method for qualitative analysis of transcripts or other similar text data sources. It deals with data that involves creating and applying codes to data.

The steps for content analysis are shown as follows.

Step 1, prepare data and transcript from interview;

- Transcribe the qualitative data into text accurately;
- Describe in words.

Step 2, identify meaning units;

- The formulation and execution of innovation and entrepreneurship education in China;
- The quality of innovative and entrepreneurial talents in China;
- Innovation and entrepreneurship talent system in China.

Step 3, group patterned meaning units;

- Divide interview content according to different types of interviewees.

Step 4, generate theme statements;

- Describe the interviews with different subjects in descriptive language.

Step 5, create a thematic table of themes and meaning units;

- Create main interview question form.

Step 6, write out a summary of the themes.

- Detailed description and summary description of each interview question;
- Summarize the development trend of innovation and entrepreneurship education.

Chapter 4
Result of Analysis

This research was to study the developing on cultivation of innovative and entrepreneurial talents in Chinese higher education. The data analysis result can be presented as follows:

1. Symbol and Abbreviations
2. Presentation of data analysis
3. Result of data analysis

The details are as follows.

Symbol and Abbreviations

n	Refer to Sample Group.
$\overline{X}$	Refer to Mean Value.
S.D.	Refer to Stand Deviation.

Presentation of Data Analysis

This study uses mixed-research methods to analyze the data, presents 1) the factors that affect the cultivation of innovative and entrepreneurial talents in current situation through quantitative analysis; 2) use qualitative research methods to analyze the policy and implementation of innovation and entrepreneurship education policies in Chinese universities; 3) how to improve the quality of innovative and entrepreneurial talents; 4) be evaluated the adaptability and feasibility for an appropriate training system for cultivation of innovative and entrepreneurial talents through quantitative analysis.

Quantitative Analysis with Questionnaire

In this study, questionnaires are adopted to study the factors that affect the cultivation of innovative and entrepreneurial talents.

There need to be more evaluation studies on the influencing factors of innovation and entrepreneurship education in and universities, especially the effect

factors of innovation and entrepreneurship ability in the training objectives. Most research is qualitative, and the quantitative indicators must be clarified. In response to this research defect, the researchers used questionnaires as a research tool to collect questionnaire evaluations on the cultivation of innovative and entrepreneurial talents from lecturers and students of universities in Shanghai through survey research methods.

In this study, the questionnaires were distributed mainly to the lecturers and students of a comprehensive university in Shanghai, distributed in six colleges, including the College of Science, the College of Engineering, the College of Information Technology, the College of Economics and Management, the College of Humanities and Social Sciences, and the College of Art. The sampling situation is shown in Table 4.1

Table 4.1 Sampling of Questionnaires for Lecturers and Students

No.	Type of Faculty	Lecturers	Students	Major
1	Faculty of Social Sciences	28	50	Humanities and Social
2	Faculty of Economic Management	20	45	Sciences
3	Faculty of Science and Technology	44	95	Science Technology
4	Faculty of Engineering and Industrial Technology	24	48	Engineering
5	Faculty of Computer Technology	18	41	
6	College of Arts	50	93	Art
Total	**6**	**184**	**372**	**4**

Sampling was conducted according to majors (Yamane, 1973), and 186 questionnaires for lecturers and 385 questionnaires for students were distributed, totaling 571 questionnaires. And return questionnaires are 184 questionnaires for

lecturers, efficiency 98.9% and 372 questionnaires for students, efficiency 96.6%, totaling efficiency 97.3%

Questionnaire for Lecturers

The basic information of the returned effective questionnaires for lecturers is summarized, and the obtained samples are shown in Table 4.2 and Table 4.3.

Table 4.2 Major, Academic Background of Questionnaire Sampling for Lecturers

Type		**Frequency**	**Percentage, %**
Major	Humanities and Social Sciences	48	26.2%
	Science Technology	44	23.8%
	Engineering	42	22.6%
	Art	50	27.4%
Total		**184**	**100%**
Academic Background	Bachelor	20	10.7%
	Master	114	61.9%
	Ph.D	50	27.4%
Total		**184**	**100%**

It can be seen from the table that when the survey objects are lecturers, the proportion of the lecturers' majors is similar. Therefore, it can be concluded that this questionnaire survey is evenly oriented to all majors in the school and has a certain representativeness.

From the perspective of academic background, most lecturers have a master's degree, accounting for 61.9% of the surveyed lecturers, and doctoral lecturers account for 27.4% of the faculty situation of most comprehensive universities.

Table 4.3 Other Information of Questionnaire Sampling for Lecturers

Type		Frequency	Percentage, %
Time of work	Below 3 years	57	30.9%
	3-5 years	74	40.5%
	5-10 years	28	15.5%
	5-10 years	25	13.1%
Total		**184**	**100%**
Whether guided the activities	Yes	164	89.3%
	No	20	10.7%
Total		**184**	**100%**
Attitude	Interested	173	94%
	Not interested	11	6%
Total		**184**	**100%**

In terms of other situations, most of the surveyed lecturers are young teachers with a working experience of 5 years or less, of which 30.9% are lecturers who have worked for less than three years, and 40.5% have lecturers who have worked for 3-5 years. At the same time, most of the surveyed lecturers are senior teachers with more than five years of working experience. Among them, 15.5% of lecturers have 5-10 years of experience, and 13.1% have ten years or more. This reflects that young teachers are the most basic lecturers in most colleges and universities in China, and the teaching staff is gradually getting younger.

In addition, among the surveyed lecturers, 89.3% of the lecturers have guided college students to participate in innovation and entrepreneurship activities, and 94% are interested in cultivating innovative and entrepreneurial talents. Through the primary information survey, it is reflected that the lecturer questionnaire covers a wide range of lecturers with different majors, academic backgrounds, and working years, and the attitude towards innovation and entrepreneurship education is in line with the research situation. Therefore, the primary information survey of the lecturer questionnaire meets expectations.

To sum up, at present, the teachers of comprehensive universities are mainly young teachers, most of whom have master's and doctoral degrees, and they have a positive attitude towards cultivating innovative and entrepreneurial talents.

The scores of the returned lecturer questionnaires are shown in Table 4.4, Table 4.5, Table 4.6, Table 4.7

Table 4.4 Evaluation of Lecturers About the Awareness of Education Indicators

Content	Indicators	Mean	Standard Deviation	Interpretation (Level)	Rank
The awareness of education	A1	3.72	.606	High	1
	A2	3.24	.502	Medium	7
	A3	3.51	.553	High	5
	A4	3.69	.583	High	2
	A5	3.61	.576	High	3
	A6	3.12	.496	Medium	8
	A7	3.54	.556	High	4
	A8	3.29	.704	Medium	6
Total	**8**	**3.47**	**.720**	**Medium**	**-**

The mean of the questionnaire items collected above shows that university lecturers have a positive attitude toward cultivating innovative and entrepreneurial talents. According to table 4.4, found that the current situation of innovation and entrepreneurship education in awareness of education indicator was at medium level ($\overline{X}$ = 3.47). Considering the results of this research indicator ranged from the highest to lowest level were as follow: the high level was A1 ($\overline{X}$ = 3.72), followed by A4 ($\overline{X}$ = 3.69), and A6 was the medium level ($\overline{X}$ = 3.12) as the lowest of rank.

From the study of the overall questionnaire results, most university lecturers have a specific awareness of innovation and entrepreneurship. Traditional paper-and-pencil education has been gradually replaced by science and technology education.

Table 4.5 Evaluation of Lecturers About Social Development Needs Indicators

Content	Indicators	Mean	Standard Deviation	Interpretation (Level)	Rank
Social development needs	N1	3.82	.740	High	2
	N2	3.94	.901	High	1
	N3	3.17	.484	Medium	8
	N4	3.69	.601	High	4
	N5	3.72	.629	High	3
	N6	3.25	.508	Medium	7
	N7	3.47	.486	Medium	6
	N8	3.51	.596	High	5
Total	**8**	**3.57**	**.632**	**High**	**-**

Table 4.6 Evaluation of Lecturers About the Environment of Chinese Innovation and Entrepreneurship Indicators

Content	Indicators	Mean	Standard Deviation	Interpretation (Level)	Rank
The environment of Chinese innovation and entrepreneurship	E1	3.42	.536	Medium	6
	E2	3.17	.498	Medium	10
	E3	3.51	.569	High	3
	E4	3.57	.779	High	2
	E5	3.64	.581	High	1
	E6	3.47	.347	Medium	4
	E7	3.46	.543	Medium	5
	E8	3.32	.712	Medium	9
	E9	3.40	.529	Medium	7
	E10	3.36	.615	Medium	8
Total	**10**	**3.43**	**.674**	**Medium**	**-**

The mean of questionnaire items regarding the environment of education is medium, which also shows that lecturers have realized that innovation and entrepreneurship education should in better atmosphere. According to Table 4.6,

found that the current situation of innovation and entrepreneurship education in the environment of Chinese high education indicator was at medium level ($\overline{X}$ = 3.43). Considering the results of this research indicator ranged from the highest to lowest level were as follow: the high level was E5 ($\overline{X}$ = 3.64), followed by E4 ($\overline{X}$ = 3.57), and E10 was the medium level ($\overline{X}$ = 3.36) as the lowest of rank.

At the same time, in the part of the questionnaire on the system of cultivation of innovative and entrepreneurial talents, the result of mean value is high. According to Table 4.7

Table 4.7 Evaluation of Lecturers About Innovative and Entrepreneurial Talent System Indicators

Content	Indicators	Mean	Standard Deviation	Interpretation (Level)	Rank
The system about cultivation of innovative and entrepreneurial talents in Chinese higher education	C1	4.17	.568	High	12
	C2	4.23	.507	High	9
	C3	4.09	.504	High	13
	C4	4.21	.498	High	10
	C5	3.09	.490	Medium	17
	C6	3.20	.517	Medium	16
	C7	3.67	.508	High	14
	C8	3.43	.547	Medium	15
	C9	4.32	.503	High	5
	C10	4.34	.507	High	4
	C11	4.47	.547	High	1
	C12	4.29	.493	High	6
	C13	4.45	.541	High	2
	C14	4.29	.507	High	6
	C15	4.27	.501	High	8
	C16	4.18	.487	High	11
	C17	4.36	.519	High	3
Total	**17**	**4.06**	**.704**	**High**	-

It found that the system about cultivation of innovative and entrepreneurial talents in Chinese high education was at high level ($\overline{X}$ = 4.06). Considering the results of this research indicator ranged from the highest to lowest level were as follow: the high level was C11 ($\overline{X}$ = 4.47), followed by C13 ($\overline{X}$ = 4.45), and C5 was the medium level ($\overline{X}$ = 3.09) as the lowest of rank.

At the same time, the indicators were re-divided according to the variables of this study, and the cross-analysis was carried out on the recovered teacher questionnaires. The results are shown in Figures 4.1, 4.2, 4.3 and 4.4.

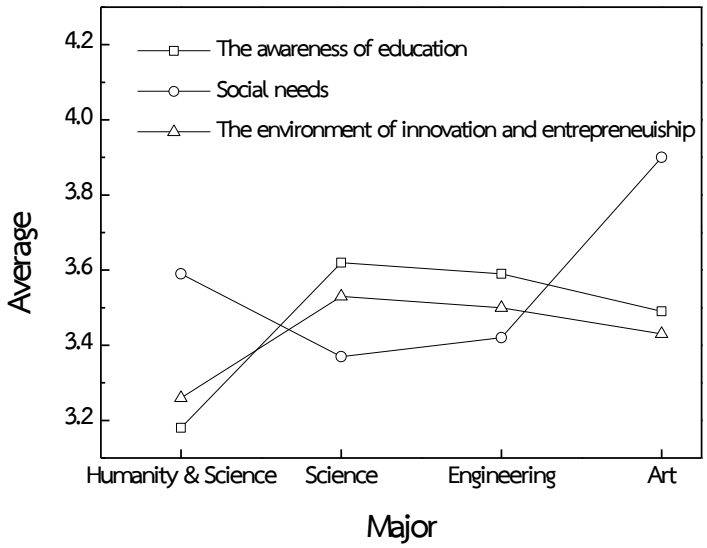

Figure 4.1 Assessment about the factors in different major from lecturer sampling

From the perspective of different lecturers, the evaluation trends of educational awareness and social needs are consistent, and the evaluation trend of innovation and entrepreneurship environment is opposite to the former two, which is related to professional correlation.

Taking Humanity & Science as an example, in China, this major is characterized by ideology, commonality, and universality and requires the major to have the characteristics of humanistic spirit precipitation and cultural inheritance. This is in line with the survey results of the lecturers, that is, the awareness of innovation and

entrepreneurship education in significant requirements for social needs are lower than in other majors. Still, the criteria for innovation and entrepreneurship education environment are higher, and the talents cultivated align with the social development of the times. Taking Science and Engineering as an example, these two majors are majors for cultivating engineers and scientific research talents. The lecturers have a high awareness of innovation and entrepreneurship education, and society has a high demand for these two majors. At the same time, these two majors This major has an increased need for an innovation and entrepreneurship education environment. The environment of teaching, experimentation, and practice platforms is a crucial factor for cultivating scientific and technological talents. However, according to the survey results, lecturers are unsatisfied with the professional innovation and entrepreneurship environment. Taking Art as an example, this sign needs to cultivate talents with innovative and entrepreneurial spirits. Therefore, according to the results of the questionnaire survey of lecturers, this trend is entirely in line with this trend.

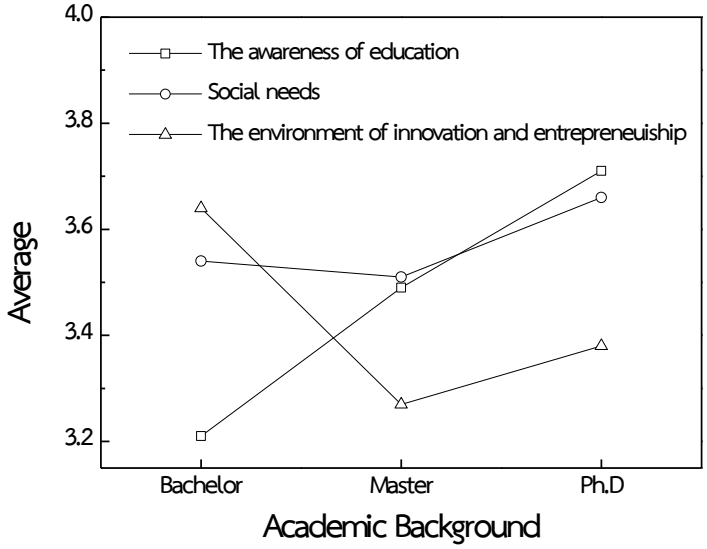

Figure 4.2 Assessment about the factors in different academic background from lecturer sampling

From the perspective of different academic backgrounds, educational awareness, and social needs evaluation trends are opposite to those of innovation and entrepreneurship environment. It can be seen from the figure that, compared with lecturers with a master's degree or above, lecturers with a bachelor's degree have lower evaluations regarding innovation and entrepreneurship education awareness. Lecturers with a master's degree and a doctoral degree have an inadequate assessment of the innovation and entrepreneurship environment, reflecting that universities still need to provide more support in the invention and entrepreneurship environment.

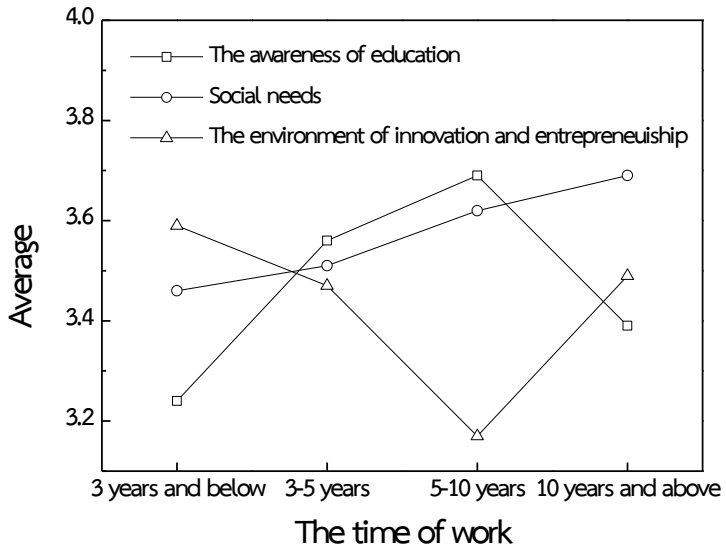

Figure 4.3 Assessment about the factors in different time of work from lecturer sampling

From the perspective of working hours, the lecturer questionnaire results align with the basic situation of teachers in colleges and universities. The awareness of innovation and entrepreneurship among teachers who have worked for less than three years and those who have worked for more than ten years is relatively low, which shows that young teachers are rich in creativity and innovative spirit endowed by the times and are not satisfied with the current awareness of innovation and entrepreneurship in colleges and universities. Teachers have a long working experience and have certain self-views and ideas about the present awareness of

innovation and entrepreneurship education in colleges and universities. In terms of social development needs, with the increase in teachers' working hours, they have a deeper understanding of social development needs. After graduating, students must enter society and contribute to social development. Finally, I have a deeper understanding of the follow-up development of innovative and entrepreneurial talents. In terms of the innovation and entrepreneurship education environment, teachers who have worked for 3-10 years have lower scores on this score, which is also related to the development of teachers. Teachers who have worked here for a long time are in a critical period of professional title and academic qualification promotion, which is also essential for college teachers. The main force guides students to carry out innovation and entrepreneurship-related activities often, has particular experience in guiding innovation and entrepreneurship, and has specific insights into the current environment of innovation and entrepreneurship in colleges and universities.

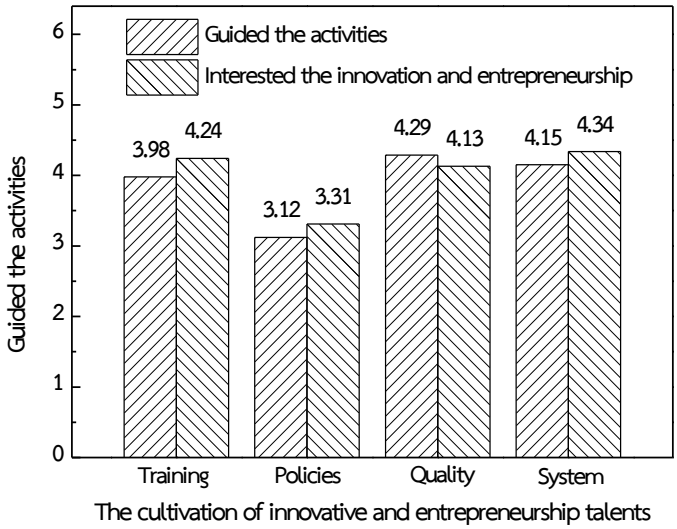

Figure 4.4 Assessment about other factors in the cultivation of talents from lecturers sampling

Regarding whether to guide students to participate in innovation and entrepreneurship activities and whether they are interested in innovation and entrepreneurship education, most lecturers are not satisfied with formulating and implementing innovation and entrepreneurship education policies. Universities and governments need to strengthen this aspect. Most lecturers highly evaluate the quality and system of innovative and entrepreneurial talent training, which shows that innovation and entrepreneurship education are gradually becoming mainstream for universities to cultivate talents.

Questionnaire for Students

Summarize the returned student questionnaires and the obtained samples are shown in Table 4.8 and 4.9.

Table 4.8 Major, Grade of Questionnaire Sampling for Students

Type		Frequency	Percentage, %
Major	Humanities and Social Sciences	96	25.7%
	Science Technology	94	25.5%
	Engineering	90	23.9%
	Art	92	24.9%
Total		**372**	**100%**
Grade	Freshman	104	28.1%
	Sophomore	113	30.4%
	Junior	90	24.2%
	Senior	65	17.3%
Total		**372**	**100%**

From the perspective of student grades, the distribution ratios of first-year students, sophomores, juniors, and seniors are 28.1%, 30.4%, 24.2%, and 17.3%, respectively. The sample selection ratios of first- and second-year students are similar, while the proportion of juniors is relatively low, and the balance of seniors is the lowest. This aligns with the situation that most universities in China have internships for juniors and seniors who face employment, and the number of

students in school is small. Therefore, this questionnaire can be considered uniform and comprehensive for all grades in the school, in line with the actual situation, and has a certain representativeness.

From the perspective of majors, the proportion of sample numbers of students selected in each major category is the same. This is also in line with the essential characteristics of comprehensive universities.

From the perspective of student achievement performance, the First 75% of the surveyed students accounted for more than 95%. Overall, the survey results were in line with the expectations of the vast majority of samples.

Table 4.9 Academic Performance, Birthplace and Student Cadre of Questionnaire Sampling for Students

Type		**Frequency**	**Percentage, %**
Academic Performance	First 25%	101	27.0%
	First 50%	178	47.8%
	First 75%	75	20.3%
	Other	18	4.9%
Total		**372**	**100%**
Birthplace	Yes	311	83.6%
	No	61	16.4%
Total		**372**	**100%**
Whether as student cadre	Interested	172	46.2%
	Not interested	200	53.8%
Total		**372**	**100%**

From the perspective of other situations, most of the students are urban students, accounting for 83.6%, which is in line with the current development characteristics of Chinese population situation, and most rural families move to cities; From the perspective of the survey item of whether they have served as class cadres, 46.2% of the student samples have done as class cadres, and 53.8% of the student samples are ordinary students. The selection ratios are the same.

To sum up, judging from the overall selection of student samples, the sample of the student questionnaire covers a wide range of students at different levels, and the relevant indicators are in line with Chinese national conditions and the current situation of universities, which can reflect the real Investigate the case.

Conduct the analysis on the returned student questionnaires, different opinions expressed in different grades, different subject types, grades, and other situations, and conduct single-factor variance and mean analysis of student questionnaires in various stages, as shown in Table 4.10, Table 4.11, Table 4.12 and Table 4.13.

Table 4.10 Evaluation of Students About the Awareness of Education Indicators

Content	Indicators	Mean	Standard Deviation	Interpretation (Level)	Rank
The awareness of education	A1	4.15	.436	High	3
	A2	3.74	.695	High	6
	A3	3.26	.540	Medium	8
	A4	3.95	.802	High	5
	A5	4.18	.465	High	2
	A6	3.62	.524	High	7
	A7	4.07	.584	High	4
	A8	4.34	.748	High	1
Total	**8**	**3.91**	**.651**	**High**	**-**

The mean of the questionnaire items collected above shows that students have a positive attitude toward cultivating innovative and entrepreneurial talents. According to Table 4.10, found that the current situation of innovation and entrepreneurship education in awareness of education indicator was at high level ($\overline{X}$ = 3.91). Considering the results of this research indicator ranged from the highest to lowest level were as follow: the high level was A8 ($\overline{X}$ = 4.34), followed by A5 ($\overline{X}$ = 4.18), and A3 was the medium level ($\overline{X}$ = 3.26) as the lowest of rank.

Table 4.11 Evaluation of Students About Social Development Needs Indicators

Content	Indicators	Mean	Standard Deviation	Interpretation (Level)	Rank
Social development needs	N1	4.52	.408	Highest	1
	N2	3.97	.743	High	4
	N3	3.24	.724	Medium	8
	N4	3.43	.408	Medium	6
	N5	4.06	.556	High	3
	N6	4.25	.408	High	2
	N7	3.44	.670	Medium	5
	N8	3.29	.802	Medium	7
Total	**8**	**3.78**	**.692**	**High**	**-**

The mean of questionnaire items from students return questionnaire regarding social needs is high. According to Table 4.11, found that the current situation of innovation and entrepreneurship education in social development needs indicator was at high level ($\overline{X}$ = 3.78). Considering the results of this research indicator ranged from the highest to lowest level were as follow: the highest level was N1 ($\overline{X}$ = 4.52), followed by N6 ($\overline{X}$ = 4.25), and N3 was the medium level ($\overline{X}$ = 3.24) as the lowest of rank.

The mean of questionnaire items regarding the environment of education is medium, which also shows that students have some different results from this indicator.

Table 4.12 Evaluation of Students About the Environment of Chinese Innovation and Entrepreneurship Indicators

Content	Indicators	Mean	Standard Deviation	Interpretation (Level)	Rank
The environment of Chinese innovation and entrepreneurship	E1	3.27	.557	Medium	6
	E2	3.16	.408	Medium	9
	E3	3.94	.408	High	1
	E4	3.52	.639	High	4
	E5	3.62	.703	High	3
	E6	3.07	.557	Medium	10
	E7	3.19	.502	Medium	7
	E8	3.17	.340	Medium	8
	E9	3.64	.802	High	2
	E10	3.47	.573	Medium	5
Total	**10**	**3.41**	**.628**	**Medium**	**-**

According to Table 4.12, found that the current situation of innovation and entrepreneurship education in the environment of Chinese high education indicator was at medium level ($\overline{X}$ = 3.41). Considering the results of this research indicator ranged from the highest to lowest level were as follow: the high level was E3 ($\overline{X}$ = 3.94), followed by E9 ($\overline{X}$ = 3.64), and E6 was the medium level ($\overline{X}$ = 3.07) as the lowest of rank.

Table 4.13 Evaluation of Students About Innovative and Entrepreneurial Talent System Indicators

Content	Indicators	Mean	Standard Deviation	Interpretation (Level)	Rank
Cultivation of innovative and entrepreneurial talents in Chinese higher education	C1	3.76	.772	High	10
	C2	4.09	.419	High	3
	C3	4.50	.509	Highest	1
	C4	3.64	.673	High	13
	C5	3.98	.772	High	7
	C6	3.42	.803	Medium	16
	C7	3.27	.646	Medium	17
	C8	4.03	.419	High	4
	C9	3.92	.583	High	8
	C10	3.67	.564	High	12
	C11	4.02	.602	High	5
	C12	4.14	.449	High	2
	C13	3.45	.437	Medium	15
	C14	3.91	.506	High	9
	C15	3.76	.624	High	10
	C16	3.49	.643	Medium	14
	C17	3.99	.529	High	6
Total	**17**	**3.83**	**.646**	**High**	-

At the same time, in the part of the questionnaire on the system of cultivation of innovative and entrepreneurial talents, the result of mean value is high. According to Table 4.13, found that the system about cultivation of innovative and entrepreneurial talents in Chinese high education was at high level ($\overline{X}$ = 3.83). Considering the results of this research indicator ranged from the highest to lowest level were as follow: the high level was C3 ($\overline{X}$ = 4.50), followed by C12 ($\overline{X}$ = 4.14), and C7 was the medium level ($\overline{X}$ = 3.27) as the lowest of rank.

Therefore, it is necessary to add cross-analysis to analyze the student questionnaire further.

Cross-analysis of relevant samples is carried out on the questionnaire results

of students of different grades and majors, that is, correlation analysis, as shown in Table 4.14.

Table 4.14 Correlation Analysis Result About the Cultivation of Innovative and Entrepreneurial Talents in Different Grades and Majors by Sampling Students

No.			The Cultivation of Innovative and Entrepreneurial Talents	Grades	Majors
1	**The Cultivation of Innovative and Entrepreneurial Talents**	Correlation Coefficient	1.000	0.733**	0.774**
		Sig. (2-tailed)	0.000	0.000	0.000
2	**Grades**	Correlation Coefficient	0.7773**	1.000	0.786**
		Sig. (2-tailed)	0.000	0.000	0.000
3	**Majors**	Correlation Coefficient	0.774**	0.786**	1.000
		Sig. (2-tailed)	0.000	0.000	0.000

Spearman correlation analysis was conducted on cultivating innovative and entrepreneurial talents, grade, and professional factors. The correlation coefficient between innovative and entrepreneurial talent cultivation and different grade elements is 0.733. The correlation coefficient with other professional features is 0.774, and they are all significantly correlated at the 0.01 level (two-sided). This shows that cultivating innovative and entrepreneurial talents correlates considerably with these two elements.

In summary, through the statistics of the primary results of the student questionnaire, it can be concluded that the cultivation of innovative and entrepreneurial talents is affected by various factors.

And then, according to the presentation of quantitative data, the interview form will be designed for qualitative analysis.

Qualitative Analysis for Interview

In this study, structured interviews are adopted to study the formulation and implementation of innovation and entrepreneurship education policies and the quality of innovation and entrepreneurship talents.

The researchers conducted structured interviews with professors, associate professors, and management of universities in Shanghai, as well as local innovative companies in Shanghai. The entire interview was a unified question through face-to-face interviews to understand the opinions and suggestions of experts on innovation and entrepreneurship education policies and talent quality.

The interview in this study is a structured Immediately Rated Interview (Structured Immediately Rated Interview), a fast and effective scoring method.

The interview in this study is a structured Immediately Rated Interview (Structured Immediately Rated Interview), a fast and effective scoring method. The structured interview used by the researchers is a scientific interview method with a particular interview structure: the prescribed evaluation indicators, the order of questions, standardized operating procedures, and unified scoring standards. An evaluation method that conforms to the three principles of scientific measurement (Kevin R. Murphy, 2006).

During the interview, the interview questions were coded and scored, and the results were obtained. In this study, specific evaluation indicators of interview questions are shown in Table 4.15.

Table 4.15 Interview Evaluation Indicators

No.	Indicator	Content	Variable
1	The awareness of education	The ideas of current situation of students' innovation and entrepreneurship.	Cultivation of innovative and entrepreneurial talents in Chinese higher education
		Whether support students to do something of innovation and entrepreneurship.	
		The key to cultivate innovative spirit and practical ability.	
2	Social development needs	The ways of promoting the cultivation of innovative and entrepreneurial talents by the government and society	
		The demands for talents through the current government's innovation and entrepreneurship policies.	
		Whether the major related to innovation and entrepreneurship.	
		The role parents played in innovation and entrepreneurship education.	
3	The environment of Chinese innovation and entrepreneurship	It's essential that sets up the innovation and entrepreneurship education for students' successful entrepreneurship.	Cultivation of innovative and entrepreneurial talents in Chinese higher education
		The most significant which help university to give more suggestions for students.	
		Universities and enterprises have established and built innovative incubators.	
		The ways that universities should promote the cultivation of innovative and entrepreneurial talents.	

Table 4.15 (Continued)

No.	Indicator	Content	Variable
4	The open questions	Whether satisfied with the current status of innovation and entrepreneurship education.	
		The suggestions on cultivating innovative and entrepreneurial talents.	
Total	**4**	**13**	**1**

Using the interview content index for analysis, the researchers sorted out the collected interview answers, sorted out the comments and opinions expressed by the interviewees word for word, and at the same time effectively deleted the less informative or invalid information and effectively deleted the remaining effective ones.

The information content is open-coded and labeled concerning the five basic principles of open coding proposed by Strauss (Strauss & Corbin, 1990), and 16 conceptual categories are obtained. The details shown in Table 4.16, Table 4.17, Table 4.18, and Table 4.19.

Table 4.16 Conceptual Generic Statistics About Awareness Of Innovation And Entrepreneurship

No.	Described Content	Conceptual Type
1	Students' awareness of innovation and entrepreneurship is not enough. Innovation and entrepreneurship education require students to have this awareness and combine their majors. Students have great ideas about innovation and entrepreneurship but must realize they can be transformed into entrepreneurial projects. The innovation and entrepreneurship thinking of college students is active, but the quality of innovation and entrepreneurship projects could be higher.	Entrepreneurial Awareness Cultivation
2	Students are active in innovative thinking and have many creative ideas conducive to the continuous development of creative and entrepreneurial projects. The university actively promotes innovation and entrepreneurship education, conducts lectures for outstanding entrepreneurs, and improves students' awareness of innovation.	Innovation Awareness
Total	**5**	**2**

In the awareness of education part, there are two conceptual types, including entrepreneurship awareness cultivation and innovation awareness.

From the entrepreneurial awareness cultivation, the contents included that students should develop the awareness combined their own majors and transformed into high-level projects.

From the innovation awareness, the contents included that students should have active thinking about innovation and lecturers should do more word about cultivate the innovation awareness to students.

To sum up, the awareness of innovation and entrepreneurship is related to the students who could be the talents in future.

In the social development needs, there are three conceptual types, including resource integration and utilization, technical support and talent support. According to the described content of the answers, it could be picked up some key words from it, like technology education, talent cultivation and so on.

Table 4.17 Conceptual Generic Statistics of Social Development Needs

No.	Described Content	Conceptual Type
1	For innovation and entrepreneurship education, many resources can be used, such as university, social, and instructor resources.	Resource Integration and Utilization
	The resources of the university's off-campus platform need to be improved, and there are few opportunities for joint innovation and entrepreneurship with enterprises.	
	Students need more practicality, can directly contact society, and need more social power resources.	
	Students have less access to social support and lack entrepreneurial resources.	
	More student entrepreneurial funds, industry resources, and human resources should be needed.	
2	The students trained by universities are based on professional knowledge, and only a few meet society's needs.	Technical support
	Universities should provide technical support for enterprises and bring new technology to enterprises.	
	University teachers should have technical advantages and can bring technical support to enterprises.	
	The development of technology-based enterprises requires continuous technology innovation.	
3	Universities provide enterprises with talent support to meet the needs of enterprise development.	Talent support
	Universities can efficiently cultivate talents needed by society according to the needs of enterprises.	

Table 4.17 (Continued)

No.	Described Content	Conceptual Type
	There are differences in the demand for talent in different urban areas, in the cultivation of talent in universities and the needs of society, and the professional ability of skills needs to be improved.	
	Talents cultivated by universities only sometimes meet the actual needs of enterprises.	
Total	**13**	**3**

From the resource integration and utilization, it divided into university resource, social resource and instructor resource. And many resource should match on the students needs, like the more practicality and more entrepreneurial funds and so on.

From the technical support, it mentioned a concept that means the technical and professional advantages. It's between the university and enterprise. And it could be developed the technology-based education.

From the talent support, it shown that the relationship between university, society and enterprise related to the stakeholder in innovation and entrepreneurship education.

To sum up, it means that the social development needs related to innovation and entrepreneurship is complex to meet all aspects in stakeholder.

Table 4.18 Conceptual Generic Statistics of Environment in Chinese Innovative and Entrepreneurial Education

No.	Described Content	Conceptual Type
1	Universities attach great importance to developing innovation and entrepreneurship education, but there needs to be guiding supporting measures for teachers, such as assessment and professional title evaluation.	Teacher structure system
	The university's innovation and entrepreneurship education is mainly managed by the school's academic office rather than technical teachers.	
	Universities should attract enterprises to settle in, establish innovation and entrepreneurship guidance workstations, and carry out technology transfer.	
	The university is changing the previous management-based concept and gradually becoming a technical instructor.	
2	Innovation and entrepreneurship instructors have no practical experience and are limited to theoretical knowledge.	Teacher Structure of Knowledge
	The knowledge system of many instructors equipped by universities needs to be more perfect.	
	In students' innovation and entrepreneurship projects, the instructors cannot give practical guidance in time.	
	Innovation and entrepreneurship guidance teachers should have a broader knowledge career.	
3	University innovation and entrepreneurship education emphasize theory, and there needs to be practical simulation teaching.	University practice simulation
	Universities should add courses such as the actual operation simulation of enterprises so that students can have a macroscopic grasp of the essential operation of enterprises.	
	The university has set up the School of Innovation and Entrepreneurship Education, which should be used as a carrier to improve the setting of simulated business operation courses.	
Total	**11**	**3**

In the environment of Chinese innovation and entrepreneurship education, there are three conceptual types, including teacher structure system, teacher structure of knowledge and university practice simulation. According to the described content of the answers, it could be picked up some key words like technology transfer, support guidelines and practical guidelines.

From the teacher structure system, the main topic is to be evaluate the guidelines that whether fit the system. It also mentioned that the technology transfer could be carried out through the guidelines by system.

From the teacher structure of knowledge, researcher divided the content into that the abundance of teacher is related to the work experiences.

From the university practice simulation, it means that university should provide the course to students developing their simulation for practicing, operation and so on.

Table 4.19 Conceptual Generic Statistics of System About Cultivation of Innovative and Entrepreneurial Talents

No.	Described Content	Conceptual Type
1	In the future, innovation and entrepreneurship education should be implemented in curriculum teaching.	Innovation and Entrepreneurship Learning
	The university has launched many innovative and entrepreneurial courses, such as e-commerce, business management, etc.	
	There are a few optional topics for students in innovation and entrepreneurship education.	
	Innovation and entrepreneurship education should communicate more with local enterprises, rely on classrooms, and strengthen practice.	
2	Enterprises can allow students to visit and study to understand the actual situation of the industry.	Practice Learning
	Combined with the exact condition of the enterprise, let students go deep into the enterprise to carry out innovation and entrepreneurship education better.	

Table 4.19 (Continued)

No.	Described Content	Conceptual Type
3	For entrepreneurs, the most important thing is the entrepreneurial project.	Innovation and Entrepreneurship Project
	Universities can provide projects for enterprises and students and help students find their identity in joint completion.	
	First- and second-year students have time and energy but often need ideas for entrepreneurial projects.	
	Junior and senior students have entrepreneurial projects, but due to internships and graduation, they often need more time and energy.	
4	The professional expertise that students possess could be more solid.	Professional knowledge and literacy
	For innovation and entrepreneurship education, students need to understand the development direction of enterprises and have an entrepreneurial spirit.	
5	Chinese policy support for innovation and entrepreneurship is strong.	National Support Policy
	Local governments have many support policies for college students to start their businesses.	
	The government has promulgated many preferential policies on taxation and start-up capital for students' entrepreneurship.	
	Due to geographical restrictions, talents flow to big cities, and talent policies in small cities are needed.	
6	Universities provide venues and financial support for entrepreneurial students.	University Support Policy
	The university provides entrepreneurial guidance teachers for students who start their businesses during school.	
	University policy support for innovation and entrepreneurship funding should focus on benefiting all students.	

Table 4.19 (Continued)

No.	Described Content	Conceptual Type
7	China needs to protect top technology more.	Technology Protection Policy
	Professors have many cutting-edge technological innovations but have lost the protection of technology because of profit-driven.	
8	Universities must improve innovation and entrepreneurship education thinking, education, and management models.	Cultivation System of Innovation and Entrepreneurship Education
	The current innovation and entrepreneurship education is limited to teaching theory, and there are relatively few actual entrepreneurship simulations.	
	Universities have advantages in technology and talents and also in resource integration. The cooperation between universities and enterprises has been challenging.	
	Strengthen school-enterprise cooperation and transform the professional skills of teachers and students into enterprise productivity.	
Total	**26**	**8**

In the system about cultivation of innovative and entrepreneurial talents, there are eight conceptual types, including innovation and entrepreneurship learning, practice learning, innovation and entrepreneurship project, professional knowledge and literacy, national support policy, university support policy, technology protection policy and cultivation system of innovation and entrepreneurship education.

From the innovation and entrepreneurship learning, it focused on the curriculum and course. It means that university should give the innovation and entrepreneurship education more support about teaching and practice and communicate with enterprise more time.

From the practice learning, it concluded that university and enterprise should combined the education and provide more deep chance of practicing.

From the innovation and entrepreneurship project, it means that university encouraged students to create and have their own innovation and entrepreneurship projects, like entrepreneurial projects.

From the professional knowledge and literacy, it means that the related knowledge about innovation and entrepreneurship should be understood as more solid and more careful.

From the national support policy, it concluded that government could provide more and more support to develop the innovation and entrepreneurship education and the talent policy should fit the development of society.

From the university support policy, it means that university management carders could provide more financial supports for innovation and entrepreneurship education. And on the same time, it could be considered the benefit to all talents.

From the technology protection policy, it focused on the protection for technology and technological achievement. It means that everyone in innovation and entrepreneurship education should form the protection of achievement in the processing of cultivation talents.

From the cultivation system of innovation and entrepreneurship education, there are some suggestions that could promote the cultivation of talents.

In this study, the researchers conducted a deeper category analysis based on the described content sorted out in above. They obtained the clarification of the main categories and secondary categories, as shown in Table 4.20 According to the 14 conceptual categories, the relationship between each abstract type is analyzed, and 11 deeply classified categorical types are obtained.

Table 4.20 Various Categories of Affiliation

No.	Core Generics	Categorized Generics	Conceptual Generics
1	Awareness	Entrepreneurship	Entrepreneurship Awareness Cultivation
		Innovation	Innovation awareness
2	Needs and Support	Resource Sharing	Resource Integration and Utilization
		Science and Technology Support	Technical Support, Talent Support
3	Environment	Teacher Structure	Teacher Structure System, Teacher Structure of Knowledge
		Practice for Students	University Practice Simulation
4	Training and Quality	Learning and Training	Innovation and Entrepreneurship Learning, Practice Learning
		Training Project	Innovation and Entrepreneurship Project
		Students Quality	Professional Knowledge and Literacy
5	Policy and System	Policy Design	National Support Policy, University Support Policy, Technology Protection Policy
		System Improvement	Cultivation System of Innovation and Entrepreneurship Education
Total		**11**	**14**

According to the collation and analysis of conceptual and categorical categories, the researchers obtained five core categories: awareness, environment, training and quality, policy, and system. At the same time, in this study, the researchers obtained the relationship structure of the core categories as shown in Table 4.21 It also means the guidelines from the aspects.

Table 4.21 Guidelines from the aspects

No.	Core Category	Relationship Structure
1	Awareness	Innovation ⟷ Entrepreneurship
2	Needs and Support	Social Development ⟷ Public Support
3	Environment	Teacher Structure ⟷ Education
4	Training and Quality	Training Project ⟷ Talent Quality
5	Policy and System	Policy Design ⟷ System Perfect
Total		**5**

According to the data integration of the above interview results, 14 conceptual categories, 11 categorical categories, and 5 core categories were extracted to finally determine the formulation and implementation of innovation and entrepreneurship education policies and the development of talent quality.

In terms of awareness, it mainly includes two elements: innovation awareness and entrepreneurial awareness. Specifically, students' innovation awareness is self-perception of their innovative concepts, innovative practices, and innovative psychology and is a self-feedback awareness activity. Entrepreneurial awareness is the practice of self-awareness.

In terms of needs and support, it mainly includes social needs and public support. Specifically, social demand refers to the developmental requirements all sectors of society put forward for talents in social development, including the ability, quality, and type of talent. Terms of public support refer to the support provided by the government, universities, and enterprises to develop students' innovation and entrepreneurship with funds, venues, and ideas. In carrying out innovative and entrepreneurial projects, students will be affected by market and capital elements. Among the market elements, students need help understanding the market demand, but unthinkingly and too much carry out projects based on their own insufficient social experience, leading to an excessive disconnect between innovation and entrepreneurship education, and social development. Regarding funding elements, students' excellent innovative and entrepreneurial ideas often lead to losing creative and entrepreneurial projects due to a policy or financial support cut-off. At the same

time, the school's necessary scientific and technological support projects and teams also affect the cultivation of innovative and entrepreneurial talents. Therefore, in terms of demand and support, innovation and entrepreneurship education should better integrate with the status quo of social development and provide appropriate support for cultivating talents.

In terms of environment, it mainly includes two aspects: teacher elements and innovation and entrepreneurship practice elements. Teacher elements refer to the age structure, education structure, working years structure, and knowledge system structure of innovation and entrepreneurship teachers. Universities can invite corporate lecturers to give lectures on innovation and entrepreneurship education. The elements of innovation and entrepreneurship practice mean that universities provide students with a simulation platform for innovation and entrepreneurship practice. Therefore, the organic combination of universities and enterprises is more conducive to improving the quality of innovative and entrepreneurial talents.

In terms of training and quality, it mainly includes learning, training, and talent quality. In developing innovation and entrepreneurship education in universities, how to carry out innovation and entrepreneurship teaching is a crucial issue. The necessary knowledge for innovative and entrepreneurial talents is theoretical knowledge learned in universities and practical ability. In imparting academic knowledge to students, universities also need to teach students professional knowledge so that students have the professional expertise required to work in enterprises or the innovation and development of small and medium-sized technology-based small and medium-sized enterprises need professional knowledge of university support. The university's training of students includes going to enterprises for practical learning or carrying out the practice of innovation and entrepreneurship projects within the university.

In terms of policy and system, it includes two aspects: system design and quality improvement. Specifically, the system design elements mean that the development of innovation and entrepreneurship education is inseparable from a series of overall system designs of the country, government, and universities, to provide policy guidance for universities to carry out innovation and entrepreneurship

education and better promote innovation and entrepreneurship education development of. At the same time, enterprises also need policy guidance to recruit better and introduce innovative and entrepreneurial talents. Regarding mechanism improvement elements, the innovation and entrepreneurship education policy should have more complete regulations to protect students and the technical projects of innovation and entrepreneurship enterprises.

While analyzing the interview results, it is also found that many indicator factors overlap; that is, the same element may be categorized into multiple parts. Therefore, all indicators are interrelated and do not exist independently of other indicators.

Result of Data Analysis

The Current Situation for the various factors that affect the cultivation of innovative and entrepreneurial talents in China

In innovation and entrepreneurship education, only by scientifically designing the training content of innovation and entrepreneurship talents can teachers improve the education content according to the needs, enhancing the quality of innovation and entrepreneurship talent cultivating. In this study, through the statistical analysis of the results of the questionnaire part of the lecturers and students questionnaires, the key issues and inherent laws of designing innovative and entrepreneurial talent system are explored, and a statistical analysis system is guideline to improve the demand for innovative and entrepreneurial talent cultivating.

The innovative and entrepreneurial talent cultivating in this study adopts the factor analysis method for data analysis, which illustrates the process of the entire talent system. The results of this data are obtained through the cultivation part of the questionnaire for lecturers and students. This part has four essential elements, corresponding to Y1: personalized training, Y2: interdisciplinary training, Y3: general education, and Y4: comprehensive education and training.

At the same time, for system, the awareness of innovation and entrepreneurship education, social development needs, and Chinese innovation and entrepreneurship education environment also affect the results.

After sorting out the valid questionnaires and cross-analyzing, the mean scores of the lecturers and students on the 26 questions of the three influencing factors in the four significant aspects involved in system are obtained, as shown in Table 4.22

Table 4.22 The Mean Scores in Talents Training With Crossing Analysis

Type	Indicator	Y1	Y2	Y3	Y4
Awareness	A1	4.46	4.42	4.23	4.1
	A2	3.58	3.31	3.29	3.6
	A3	4.29	3.92	4.05	3.76
	A4	4.16	4.21	3.78	4.17
	A5	3.87	4.18	3.98	4.14
	A6	3.9	4.03	3.56	4.35
	A7	3.65	4.08	4.35	4.28
	A8	4.23	3.97	4.09	4.13
Social Development Needs	N1	4.01	4.15	4.23	4.09
	N2	3.95	4.34	4.05	4.34
	N3	4.22	4.27	4.12	4.39
	N4	4.09	4.01	4.13	4.08
	N5	4.31	4.19	4.07	4.02
	N6	4.29	4.09	4.02	4.12
	N7	4.11	3.82	4.09	4.26
	N8	4.12	3.82	3.29	3.76
Environment	E1	3.58	3.31	3.24	4.4
	E2	4.42	4.37	4.34	4.67
	E3	4.46	4.47	4.53	3.62
	E4	3.18	3.82	3.92	3.76
	E5	4.19	3.92	3.58	4.75
	E6	4.41	4.36	4.05	4.39
	E7	4.59	4.34	4.27	4.18
	E8	4.55	4.45	4.24	4.07
	E9	4.67	4.21	4.57	4.43
	E10	3.71	4.21	4.06	4.07

Use the factor analysis in the statistical analysis software spss26 to obtain the eigenvalues and variance contribution rates of the factors, and use the orthogonal maximum variance rotation method to rotate the factors, observe the specific meaning of each factor in teaching, and carry out the factor analysis according to the meaning name.

Calculate the KMO sample measure and the Bartlett sphericity test to test the average value of the 26 questions in the lecturer and student questionnaires. The KMO value is 0.676, the Bartlett star test value is 22.412, and the degree of freedom is 6. The significance probability is 0.000, indicating a strong correlation between variables, which is suitable for factor analysis.

Four main factors were extracted by principal component analysis, and each factor's eigenvalues and variance contribution rates were analyzed. as shown in Table 4.23

Table 4.23 Explanation of total variance

	Initial Eigenvalues			**Extract the Sum Squares of the Loads**			**Sum of Squares of Rotational Loads**		
	Total	Variance %	Accrued %	Total	Variance %	Accrued %	Total	Variance %	Accrued %
1	2.352	58.792	58.792	2.352	58.792	58.792	1.698	42.460	42.460
2	0.953	23.822	82.614	0.953	23.822	82.614	1.072	26.802	69.262
3	0.480	12.012	94.625	0.480	12.012	94.625	1.015	25.363	94.625
4	0.215	5.375	100.000						

The cumulative contribution rate of the variance of factor 1 is 58.792%, the contribution rate of factor 2 to the overall conflict is 23.822%, and the contribution rate of factor 2 to the overall variance is 12.012%. The cumulative contribution rate of these three factors to the total conflict reaches 94.635%, which can reflect most of the information provided by the original data. Therefore, it is enough to extract three factors represented as *F1*, *F2*, and *F3*, respectively. The loading matrix and rotation factor loading matrix analysis of factors *F1, F2,* and *F3* are performed, and the results are shown in Table 4.24.

Table 4.24 Component Matrix and Rotating Composition Matrix

	Components			Components		
	F1	*F2*	*F3*	*F1*	*F2*	*F3*
Y1	0.816	0.014	-0.570	0.338	0.930	0.107
Y2	0.918	-0.111	0.137	0.834	0.402	0.129
Y3	0.857	-0.256	0.350	0.941	0.191	0.011
Y4	0.331	0.935	0.121	0.061	0.094	0.993
	Extraction method: principal component analysis a. 3 ingredients extracted.			Extraction method: principal component analysis. Rotation method: Caesar normalizes the maximum variance method. a. The rotation converged after 4 iterations.		

According to the loading matrix of the rotation factors, interdisciplinary training Y2 and general education Y3 have a significant load on the first factor *F1*, individualized training Y1 has a large load on the second factor *F2*, and comprehensive education Y4 has a large bag, on the third factor. There is a more significant load on *F3*. Therefore, the high-loading indicators and factor names of each main factor are shown in Table 4.25. That is, the specific meanings of the three factors that significantly impact the training of innovative and entrepreneurial talents are knowledge, personality, and comprehension.

Table 4.25 Higher Loading Indicators of 3 Factors

Factor	Higher Loading Indicators	Rename
F1	Y2: Interdisciplinary talents training Y3: General education	Knowledge Factor
F2	Y1: Individuation talents training	Personalize Factor
F3	Y4: Comprehensive	Comprehensive Factor

The first factor *F1*, the knowledge factor, reflects the degree of evaluation of curriculum education, sorted according to *F1*, and found that the comprehensive factor *F* is the same as its ranking. It can be seen from this that the knowledge factor is very important in talents system.

Therefore, through the above analysis, it can be concluded that in the cultivation of innovative and entrepreneurial talents, it should be paid more attention to the knowledge of interdisciplinary education and general education, to the personality of individuation talents training, and to the comprehensive of all.

To sum up, there are three main factors that affect the cultivation of innovative and entrepreneurial talents in China, including Knowledge Factor, Personalize Factor and Comprehensive Factor.

The Balance between Education Related Policies Formulation and Implementation

Generally speaking, in China, the primary policy-making participants include policy decision-making departments, policy implementation departments, policy target groups, research institutions, the public, etc.

These groups are collectively referred to as innovation and entrepreneurship education stakeholders in this study. In this study, the innovation and entrepreneurship education policy stakeholders are subdivided into core, essential, indirect, and marginal stakeholders.

The degree of their relevance to the innovation and entrepreneurship education policy is shown in Figure 4.5.

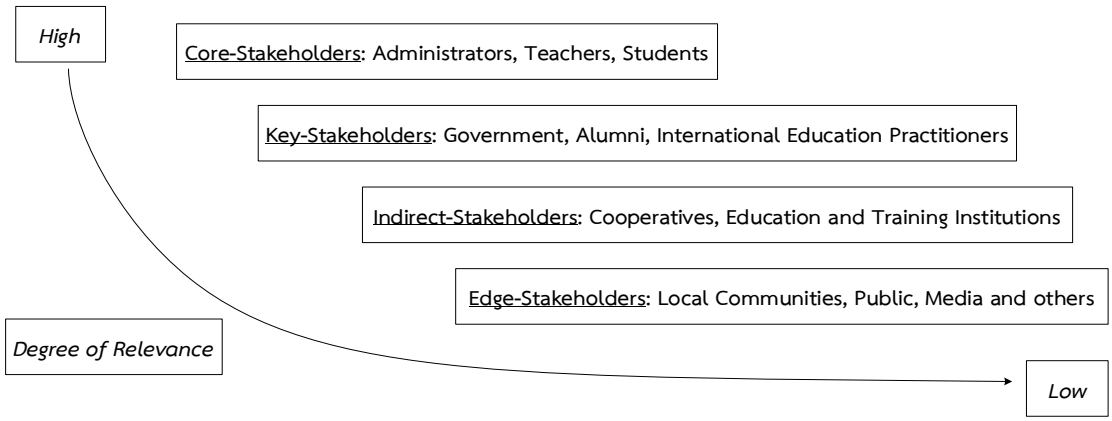

Figure 4.5 The degree of relevance between stakeholders and innovation and entrepreneurship policies

It shown that the core-stakeholders include administrators, teachers and students, the key-stakeholders include government, alumni, international education practitioners, the indirect-stakeholders include cooperatives, education and training institutions, and the edge-stakeholders include local communities, public, media and others.

After interviews with experts, scholars, and enterprises, we obtained the multi-dimensional appeals of different stakeholders, as shown in Table 4.26.

Table 4.26 Multidimensional Demands of Different Stakeholders

Stakeholders	Type of Benefit	
	Positive Benefit	**Negative Benefit**
Government	- Guarantee the quality of innovation and entrepreneurship education; - Meet the needs of various policies; - Give necessary material support to universities, etc.	- Daily supervision is not in place; - Insufficient funding guarantee; - Inadequate policy formulation, and so on.
University	- Introduce high-quality educational resources; - Cultivate more diverse talents; - Provide students with more learning and funding.	- There is no more scientific training program for students; - Policies need to be better implemented.
Administration	- Committed to providing teachers and students with an excellent educational environment for innovation and entrepreneurship; - Strengthen innovation and entrepreneurship education and talent management.	- Innovation and entrepreneurship management is just a form; - Not take the initiative to understand the relevant demands of teachers and students.

Table 4.26 (Continued)

Stakeholders	Type of Benefit	
	Positive Benefit	**Negative Benefit**
Enterprise	- Can have high-quality graduates; - Improve the overall level of innovation and entrepreneurship of enterprises; - Solve the employment problem of students.	- It is believed that the comprehensive quality of innovation and entrepreneurship of students is not high; - Not take the initiative to explain the requirements of enterprises and industries to students.
Teacher	- To provide students with better innovation and entrepreneurship education; - The working environment is excellent.	- Not paying attention to the professional quality demands of students; - The work environment is depressing.
Student	- Can improve their overall quality; - Master the knowledge and skills necessary for innovation and entrepreneurship.	- Tensions with teachers and administrators; - Have a rebellious mentality; - Ignore entrepreneurial ideas.

For the government, it could be guaranteed the quality of innovation and entrepreneurship education, met the needs of various policies and gave necessary material support to university. And it should take more notice that daily supervision, insufficient funding guarantee and inadequate policy formulation is not in place.

For university, it introduced that high-quality education resources, cultivation more diverse talents and providing students with more learning and funding. And it should take more focus on the scientific training program and implemented policy.

For administration, it committed to providing teachers and students with an excellent educational environment for innovation and entrepreneurship and

strengthen innovation and entrepreneurship education and talent management. And it should take more focus on forming innovation and entrepreneurship management and determined the demands of teachers and students.

Table 4.27 Bounce Result High Frequency Keywords

No.	Key word	Frequency of Occurrence
1	Innovation and Entrepreneurship Education	58
2	Innovation and Entrepreneurship Education Policy	46
3	Education Policy	42
4	National Policy	41
5	Innovative Education Policy	39
6	Innovation and Entrepreneurship Practice	37
7	Entrepreneurship Education Policy	32
8	Higher Education	30
9	National Identity	26
10	Education Policy Research	22
11	Technology Education	20
12	Educators	19
13	Policy Implementation	17
14	Employment Needs	16
15	Policy Development	12
	Total	**15**

For enterprises, it could have high-quality graduates, improve the overall level of innovation and entrepreneurship of enterprises and solve the employment problem of students. And it should be notice that the comprehensive quality of innovation and entrepreneurship of students and the requirements of enterprises and industries to students is not determined to explain.

For teacher and student, the last stakeholder, it could be provided the better education of innovation and entrepreneurship to students and should pay attention to the talent quality.

After further excavating the keywords in the interview results, the top 15 were sorted out, as shown in Table 4.27.

According to the statistical outcomes, the high-frequency keywords from the interview results can reflect the focus and concentration trend of Chinese innovation and entrepreneurship education policy. The results of word frequency statistics preliminarily show that the research on innovation and entrepreneurship education policy mainly focuses on innovation education policy, entrepreneurship education policy, innovation and entrepreneurship practice, and technology education. However, the word frequency statistics do not explain the current research focus on innovation and entrepreneurship education policy. Therefore, further digging out the critical information hidden between high-frequency keywords is necessary.

The 15 high-frequency keywords were classified and sorted, and four parts of high-frequency topics. This matrix is transformed into a dissimilarity matrix for further analysis, as shown in Table 4.28.

Calculate the dissimilarity matrix for the four high-frequency issues. The values in the dissimilarity matrix represent the dissimilarity of the data between the two issues. The closer the matter is to 1, the farther the distance between the two issues is, that is, the degree of similarity. On the contrary, the closer its value is to 0, the greater the similarity between the two subjects (Zhong JW. 2013, pp. 3-8). Based on this principle, use spss26 to calculate the Ochiai coefficient of the subject matrix and generate a 4×4 similar subject matrix.

Table 4.28 Dissimilarity matrix

Theme	Matrix			
	Related Policy	Educational Research	Employment Promotion	Governmental Support
Related Policy	0.00	0.67	0.82	0.89
Educational Research	0.67	0.00	0.95	1.00
Employment Promotion	0.82	0.95	0.00	0.94
Governmental Support	0.89	1.00	0.94	0.00

MDS mainly uses the similarity or difference data between keywords, distributes observation data in the form of points to specific positions in the concept space, and displays the relationship between keywords very intuitively.

In this study, the keywords in the first quadrant are mainly related to relevant policy topics, indicating that the issues in the first quadrant are closely related to the research background, and they are in the center of the research network, which is the focus on research; the keywords in the second quadrant.

The structure is relatively loose, mainly focusing on the theme of educational research, which belongs to the focus of the study, but there is still room for further development.

It has excellent action and signing and is likely to become a research focus on the future; the keywords in the third quadrant are very close, and they also involve research on related policies, but it is at a relatively marginal position in the entire research network; the research in the fourth quadrant is relatively tiny, and it is at the edge of the region, which needs to be further developed and researched. As shown in Figure 4.6.

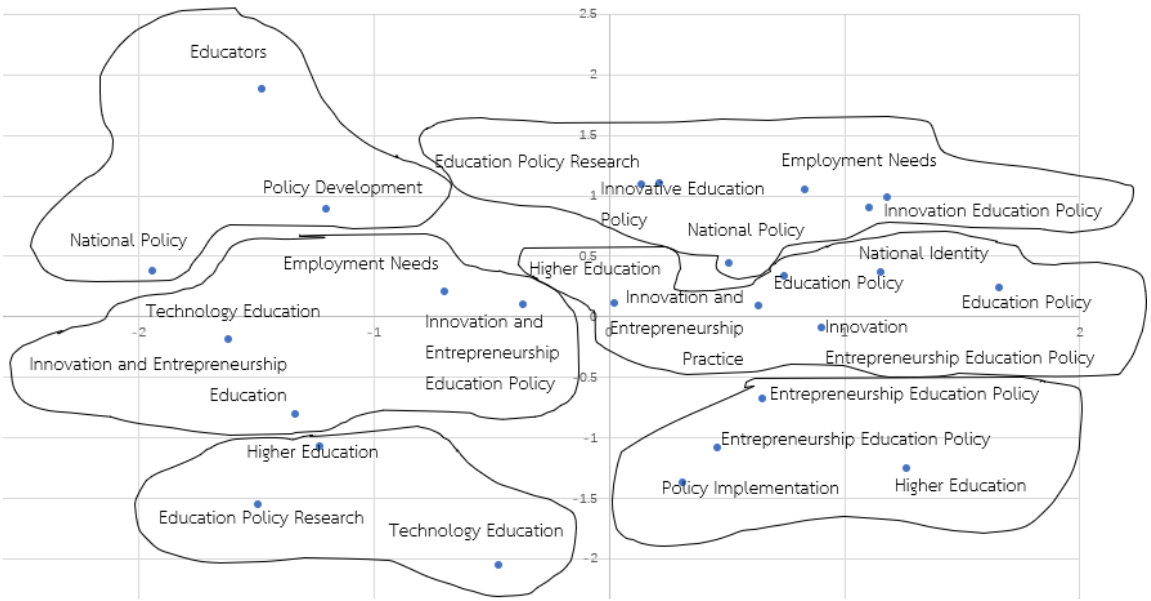

Figure 4.6 Multidimensional Scaling Analysis

It can be seen that among the interview results collected in this study, many experts focused on combining government and policy, education, and employment. Through the dissimilarity matrix coefficients, researchers have done more research on policies related to innovation and entrepreneurship education from the macro, theoretical, and conceptual levels while ignoring the mesoscopic and onlooker stories. Therefore, the multidimensional scaling analysis (MDS) is required.

Therefore, by analyzing the keywords in the formulation and implementation of innovation and entrepreneurship policies, it could be obtained a scale analysis map of innovation and entrepreneurship policies, which can further explain that the formulation and implementation of innovation and entrepreneurship policies in universities lack the support of the government and related education system support.

Guidelines for developing on cultivation of innovative and entrepreneurial talents in Chinese higher education

According to the comprehensive analysis of the questionnaires and interview results, and based on careful consideration of the innovative and entrepreneurial talent training of comprehensive universities and the influencing factors of students' innovation and entrepreneurship, the analytic hierarchy process can be used to develop the guidelines for quality evaluation indicators for innovative and entrepreneurial talents for universities.

The guiding indicators come from the results of questionnaires and interviews, and each arrow indicators as the criteria for the quality of innovative and entrepreneurial talents by universities, enterprises, lecturers and students.

The indicator hierarchy table is determined through research on the questionnaires, and expert interview results, as mentioned above the literature review, as shown in Table 4.29.

In the questionnaire issued by the researchers, the respondents covered lecturers and students. The part of the questionnaire that involves the quality of talents includes the current situation for the various factors, the guidelines to improve quality, the explicit indicators of talent ability, the items of the environment for talent cultivation, etc., and measure research.

According to the descending order of combination weight, the index system of innovative and entrepreneurial talent quality can be obtained, as shown in Figure 4.7.

According to the index of the innovative and entrepreneurial talent quality, it could be seen the rank level of every indicator in the last hierarchy. It provided the details about how to give the guidelines for improving the quality of talents.

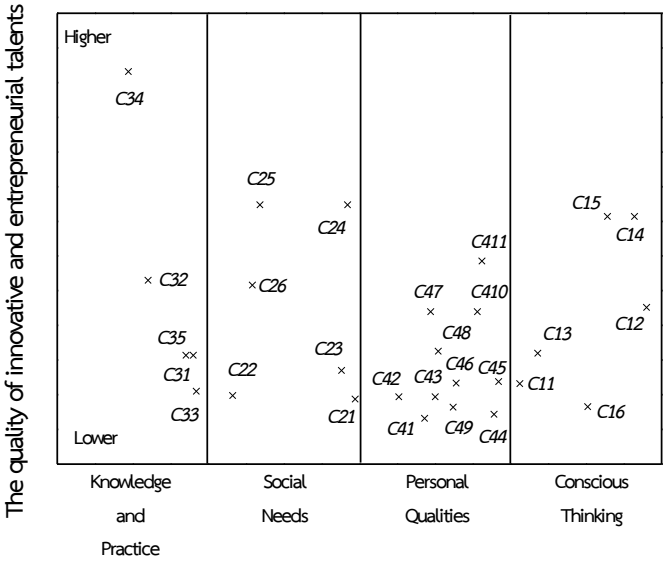

Figure 4.7 Index system for the cultivation of innovative and entrepreneurial talents

Table 4.29 Indicator Hierarchy

No.	*A*	*B*	The Indicator of *C*
1	*A:* The cultivation of Innovative and Entrepreneurial Talents	*B1:* Conscious Thinking	*C11:* Innovation and Entrepreneurship Interest
2			*C12:* Clear Motivation
3			*C13:* Time Investment
4			*C14:* Innovative Mind
5			*C15:* Entrepreneurial Awareness
6			*C16:* Training Participation
7		*B2*: Social Influence	*C21:* Skills Competition Participation
8			*C22:* Team Construction
9			*C23:* Public Attention

Table 4.29 (Continued)

No.	*A*	*B*	The Indicator of *C*
10			*C24:* Social Needs
11			*C25:* Achievement Transformation
12			*C26:* Intellectual Property Acquisition
13		*B3:*	*C31:* Professional Knowledge
14		Knowledge	*C32:* Interdisciplinary Knowledge
15		and Practice	*C33:* Social Practice Participation
16			*C34:* Interpretation of Relevant Policies
17	*A:* The		*C35:* Entrepreneurship Practice
18	cultivation of	*B4:* Personal	*C41:* Knowledge Learning Ability
19	Innovative and	Qualities	*C42:* Time Planning Ability
20	Entrepreneurial		*C43:* Learning Planning Ability
21	Talents		*C44:* Interpersonal Communication Ability
22			*C45:* Psychological Quality
23			*C46:* Organization and Planning Ability
24			*C47:* Divergent Thinking Ability
25			*C48:* Market Insights
26			*C49:* Teamwork
27			*C410:* Discover and Summarize Ability
28			*C411:* Innovative Thinking Ability
Total	**1**	**4**	**28**

Basic Concepts of Guidelines

Through the above analysis, it could be concluded that the guidelines for improving the quality of innovative and entrepreneurial talents for talent system. The details shown as Table 4.30.

Table 4.30 Guidelines for Improving the Quality of Innovative and Entrepreneurial Talents for Talent System

No.	Concept	Summary
1	**Conscious Thinking**	- To draw the interest of innovation and entrepreneurship from students by different learning. - To define the clear motivation about why get the innovation and entrepreneurship education. - To pay more time in innovation and entrepreneurship education. - To possess more innovative mind. - To possess more entrepreneurial awareness. - To take part in more training about innovation and entrepreneurship.
2	**Social Influence**	- To participate more competition to improve the skills of innovation and entrepreneurship. - To arrange more team work for students making them more unity and confidence. - To get more information and accept public scrutiny. - To survey more needs from society related in innovation and entrepreneurship. - To transform the achievement between stakeholders. - To focus on the intellectual property.
3	**Knowledge and Practice**	- To get more professional knowledge. - To get more interdisciplinary knowledge. - To take more part in social practice. - To interpretate the relevant policies by management. - To develop more entrepreneurship practice.
4	**Personal Qualities**	- To develop the knowledge learning ability from students. - To develop the time planning ability from students. - To develop the learn planning ability from students. - To develop the interpersonal communication ability from students. - To develop the psychological ability from students.

Table 4.30 (Continued)

No.	Concept	Summary
		- To develop the organization and planning ability from students. - To develop the divergent thinking ability from students. - To develop the market insights from students. - To do more teamwork from students. - To develop the discover and summarize ability from students. - To develop the innovative thinking ability.
Total	**4**	**28**

According to the above table, the basic concepts of guidelines from literature review were divided into four aspects, like Conscious Thinking, Social Influence, Knowledge and Practice, and Personal Qualities.

From the Conscious Thinking, the researcher provided some items about the awareness of innovation and entrepreneurship education, including the interest, motivation, mind and another training activity related in innovation and entrepreneurship.

From the Social Influence, the researcher guided for the focus on outside of education in university like the competition, social teamwork, development needs, and more achievement and intellectual property in the society related in innovation and entrepreneurship.

From the Knowledge and Practice, the researcher studied in the general and interdisciplinary education, relevant policy, and more practice for talents to guide the develop the system for talents quality in innovation and entrepreneurship education.

From the Personal Qualities, the researcher gave some guidelines for developing the talent abilities in several aspects, like planning, working, discover, and another basic ability in innovation and entrepreneurship.

Objective of guidelines

The objective of guidelines is to improve the quality of innovative and entrepreneurial talents for talent system.

Scope of guidelines

The guidelines are developed through the related stakeholder in innovation and entrepreneurship education, including university, enterprise, lecturers and students.

Application of guidelines

The guidelines are always applied in the university by the cultivation of innovative and entrepreneurial talents.

Evaluation of guidelines

The innovation and entrepreneurship talent system mentioned in this study is based on a CIPP evaluation proposed and advocated by American education evaluation expert Daniel L Stufflebeam. (1966). after reflecting on Taylor's behavioral goal model. The model has four links based on the agreed center, the innovation and entrepreneurship talent system.

The innovation and entrepreneurship talent system in this study includes innovation and entrepreneurship conscious thinking, social influence, knowledge and practice, and personal qualities. Different talent systems have apparent differential effects on critical indicators of talent, such as professionalism, skill level, and comprehensive application ability.

To sum up, the researchers systematically and comprehensively analyzed the conscious thinking, social influence, knowledge and practice, and personal qualities in the innovation and entrepreneurship talent system, and the CIPP can better realize the construction of the system.

The talent system is orderly, with specific training purposes, input, output, and feedback functions. The innovation and entrepreneurship talent system is a plan, arrangement, deployment, and prospect for developing innovation and entrepreneurship education. In the creation and entrepreneurship talent system, it is equivalent to being in the social environment.

Figure 4.8 shows the composition and impact of the open innovation and entrepreneurship talent system.

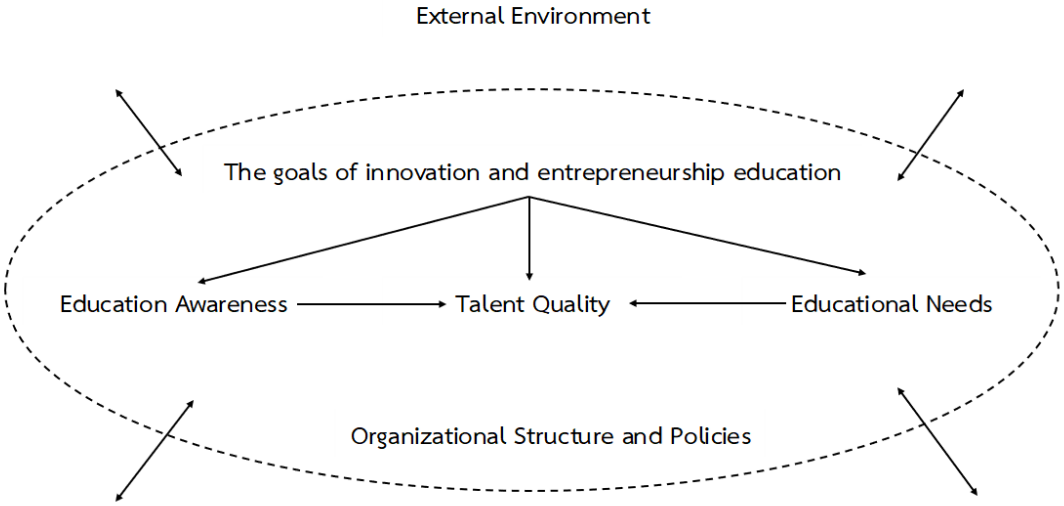

Figure 4.8 The composition and influence of an open innovation and entrepreneurship talent system

Here, the outside of the school is collectively called the external environment. The exchange of talent information, the interaction and role of innovation and entrepreneurship resources between the university and the external environment Better play a role in the talent system.

And then analysis the collection data from the specific experts by mean value, standard deviation, interpretation and ranking to explain the result of evaluation.

Evaluation the adaptability and feasibility of guidelines for developing on cultivation suitable for innovation and entrepreneurship

According to the above guidelines for improving the guidelines for developing on cultivation suitable for innovation and entrepreneurship, the researcher provided the 4 main topic of guidelines to divided the basic concepts.

The evaluation form designed by researcher divided into 3 parts.

- Part 1 is the suitable for the guidelines;
- Part 2 is the adaptability of the guidelines;
- Part 3 is the feasibility of the guidelines.

According to the specific experts' evaluation, the suitable for guidelines shown as Table 4.31.

According to the above table, the suitable for guidelines for system suitable for innovation and entrepreneurship in improving the talents quality was the highest level in the overview.

It means that the guidelines developed by researcher were suitable in the relationship of philosophy, concepts and theories, and completeness of the items, and connection between every item.

The overview of guidelines includes the relationship of philosophy, concepts and theories used in guidelines, the completeness of the items of the guidelines, and the connection or relationship between the items of the guidelines.

Table 4.31 The Suitable for Guidelines

No.	Guidelines for improving the quality of talent for system	Suitable		
		$\overline{X}$	S.D.	Level
	The overview of guidelines			
1	The relationship of philosophy, concepts and theories used in the guidelines.	4.57	.79	Highest
2	The completeness of the items of the guidelines.	4.72	.49	Highest
3	The connection/relationship between the items of the guidelines.	4.29	.76	High
	Total	**4.52**	**.70**	**Highest**

That's shown the relation between the overview of guidelines. And through the results of adaptability, the mean is the highest level. It means that the overview of guidelines is suitable for improving the talent quality for innovation and

entrepreneurship talent system.

According to the specific experts' evaluation, the adaptability of guidelines shown as Table 4.32.

According to the above table, the adaptability of guidelines for system suitable for innovation and entrepreneurship in improving the talents quality was the highest level between every item.

It means that in basic concepts, objective and scope of guidelines were highest level and in application and evaluation of guidelines were high level.

The index of guidelines includes basic concepts, objectives, scope, application and evaluation of guidelines. That's shown the content of every selection of guidelines. And there are many relationships between selections. To evaluate the adaptability means that provide evidence to apply the guidelines in reality.

Table 4.32 The Adaptability of Guidelines

No.	Guidelines for improving the quality of talent for system	Adaptability		
		$\overline{X}$	S.D.	Level
	Every item of guidelines			
1	Basic concepts of guidelines.	4.71	.49	Highest
2	Objective of guidelines.	4.57	.79	Highest
3	Scope of guidelines.	4.71	.49	Highest
4	Application of guidelines.	4.43	.79	High
5	Evaluation of guidelines.	4.14	.69	High
	Total	**4.51**	**.66**	**Highest**

And in the last of the adaptability of guidelines, the result is the highest level. But the application of guidelines and evaluation of guidelines both are high level. It means that in total of every item of guidelines, researcher should do more study in the application and evaluation of guidelines.

According to the specific experts' evaluation, the feasibility of guidelines shown as Table 4.33.

According to the table above, the feasibility of guidelines for talent system in improving the quality of innovative and entrepreneurial talents in four aspects were highest level with the values, which means the guidelines for talent system in improving the quality of innovative and entrepreneurial talents are feasibility.

In the evaluation for feasibility of guidelines, it evaluated from four parts, like conscious thinking, social influence, knowledge and practice, and personal qualities. It also matched on the variables as same meaning.

From the conscious thinking, the awareness of innovation and entrepreneurship education includes the interest, motivation, mind and another training activity related in innovation and entrepreneurship.

Table 4.33 The Feasibility of Guidelines

No.	Guidelines for improving the quality of talent for system	Feasibility		
		$\overline{X}$	S.D.	Level
	Conscious Thinking			
1	The awareness of innovation and entrepreneurship education, including the interest, motivation, mind and another training activity related in innovation and entrepreneurship.	4.57	.53	Highest
	Social Influence			
2	The focus on outside of education in university like the competition, social teamwork, development needs, and more achievement and intellectual property in the society related in innovation and entrepreneurship.	4.57	.79	Highest

Table 4.33 (Continued)

No.	Guidelines for improving the quality of talent for system	Feasibility		
		$\overline{X}$	S.D.	Level
	Knowledge and Practice			
3	The multi-knowledge including the general and interdisciplinary education, relevant policy, and more practice for talents to guide the develop the system for talents quality in innovation and entrepreneurship education.	4.71	.76	Highest
	Personal Qualities			
4	Developing the talent abilities in several aspects, like planning, working, discover, and another basic ability in innovation and entrepreneurship.	4.57	.53	Highest
	Total	**4.61**	**.63**	**Highest**

From the social influence, the focus on outside of education in university like the competition, social teamwork, development needs, and more achievement and intellectual property in the society related in innovation and entrepreneurship.

From the knowledge and practice, the multi-knowledge includes the general and interdisciplinary education, relevant policy, and more practice for talents to guide the develop the system for talents quality in innovation and entrepreneurship education.

From the personal qualities, it could be developed the talent abilities in several aspects, like planning, working, discover, and another basic ability in innovation and entrepreneurship.

Therefore, through the evaluation of guidelines, it could be got the results that the guidelines are suitable for talent system in innovation and entrepreneurship education. And the adaptability and feasibility of guidelines were also highest level in the interpretation.

Chapter 5
Discussion Conclusion and Recommendations

The objectives of the present study include four objectives, show as follows.

1. To study the current situation for the various factors that affect the cultivation of innovative and entrepreneurial talents in China.

2. To find the balance between education policy formulation and implementation.

3. To guideline for developing on cultivation of innovative and entrepreneurial talents in Chinese higher education.

4. To evaluate the adaptability and feasibility of guidelines for developing on cultivation suitable for innovation and entrepreneurship.

Then the conclusion and discussion details shown as follow.

Conclusion

The conclusion and discussion of this study consist of the following points.

Part 1. The current situation for the various factors that affect the cultivation of innovative and entrepreneurial talents in China

Part 2. The balance between formulation and implementation of policy

Part 3. The guidelines for developing on cultivation of innovative and entrepreneurial talents in Chinese higher education

Part 4. The evaluation the adaptability and feasibility of guidelines for developing on cultivation suitable for innovation and entrepreneurship

The details show as follows.

Part 1. The Current Situation for the Various Factors that Affect the Cultivation of Innovative and Entrepreneurial Talents in China

The current situation for the various factors that affect the cultivation of innovative and entrepreneurial talents in four aspects of all variables was at high or medium level for lecturers or students.

The research aspects ranged from highest to lowest in lecturers were follow as, the highest level was system about cultivation of innovative and entrepreneurial talents, followed by social development needs, and the environment of Chinese innovation and entrepreneurship education was the lowest level.

Awareness of Education

Awareness of education was at high level by lecturers. Considering the results of the questionnaire from lecturers, the all aspects ranged from the highest to lowest level were as follow: the highest level was that the universities carried out innovation and entrepreneurship education courses necessarily; followed by that the courses offered by the universities are helpful for the cultivation of innovative abilities of students; and that universities have invested a lot in innovation and entrepreneurship education supply compared with consumption was the lowest level.

Awareness of education was at high level by students. Considering the results of the questionnaire from students, the all aspects ranged from the highest to lowest level were as follow: the highest level was that universities have provided a lot of support for innovation and entrepreneurship education; followed by that the courses offered by the universities are wide-ranging and open and it could meet the needs of students to acquire all aspects of knowledge; and that the combination of theory and practice offered by the universities could arouse the enthusiasm for learning of students was the lowest level.

Social Development Needs

Social development needs was at high level by lecturers. Considering the results of the questionnaire from lecturers, the all aspects ranged from the highest to lowest level were as follow: the highest level was that every teacher loves teaching and has a strong sense of responsibility; followed by that innovation and entrepreneurship education in universities has formed a certain scale; and that teachers would introduce students to the latest research trends and achievement in the subject in the classroom was the lowest level.

Social development needs was at high level by students. Considering the results of the questionnaire from students, the all aspects ranged from the highest to

lowest level were as follow: the highest level was that innovation and entrepreneurship education in universities has formed a certain scale; followed by that parents support innovation and entrepreneurship education and fully cooperate with universities to develop innovation and entrepreneurship capabilities of students; and that teachers would introduce students to the latest research trends and achievement in the subject in the classroom was the lowest level same like level from lecturers.

Environment of Chinese Innovation and Entrepreneurship

Environment of Chinese innovation and entrepreneurship was at medium level by lecturers. Considering the results of the questionnaire from lecturers, the all aspects ranged from the highest to lowest level were as follow: the highest level was that science and technology education has gradually become the main component of innovation and entrepreneurship education with providing a more modern education for students; followed by universities provides students more opportunities that make them take part in more practice; and that government vigorously promotes innovation and entrepreneurship education and has set up socialized professional education management service institutions was the lowest.

Environment of Chinese innovation and entrepreneurship was at medium level by students. Considering the results of the questionnaire from students, the all aspects ranged from the highest to lowest level were as follow: the highest level was that universities often invite well-known experts and scholars to lecture to cultivate talents; followed by that teachers' scientific research work is often willing to attract students to join them; and that universities often organize various innovation competitions under the guidance of teachers was the lowest.

Cultivation of Innovative and Entrepreneurial Talents in Chinese Higher Education

System about cultivation of innovative and entrepreneurial talents in Chinese higher education was at high level by lecturers. Considering the results of the questionnaire from lecturers, the all aspects ranged from the highest to lowest level were as follow: the highest level was that paying attention to cultivating students practical ability is the foundation of developing innovative and entrepreneurial

talents; followed by that the final objective of innovation and entrepreneurship education is to cultivate talents with overall developments; and that government has issued a series of innovation and entrepreneurship policies to support universities in carrying out innovation and entrepreneurship education was the lowest level.

System about cultivation of innovative and entrepreneurial talents in Chinese higher education was at high level by students. Considering the results of the questionnaire from students, the all aspects ranged from the highest to lowest level were as follow: the highest level was that universities should reduce the proportion of professional courses and increase general education courses to better cultivate innovative talents; followed by that strengthening general education based on general knowledge is the basis for cultivating innovative and entrepreneurial talents; and that technology education policies are gradually developing, replacing traditional paper-and-pencil education and broadening horizons of students was the lowest level.

Through the questionnaire results of analysis, it could be concluded that the three main factors covering the current situation, including Knowledge Factor, Personalize Factor, and Comprehensive Factor.

Part 2. The Balance Between Formulation and Implementation of Policy

The balance formulation and implementation of policy in the research was analysis by interview results for content analysis.

Through the stakeholder theory, the policy of innovation and entrepreneurship education is related in government, university, administration, enterprise, teacher, and student which called stakeholders of innovation and entrepreneurship.

According to the result of content analysis, there are 15 high-frequency keywords reflecting the focus and trend of policy. And researchers classified and sorted the high-frequency words to 4 aspects like related policy, educational research, employment promotion, and government support. The relationship between 4 aspects shown as Figure 5.1.

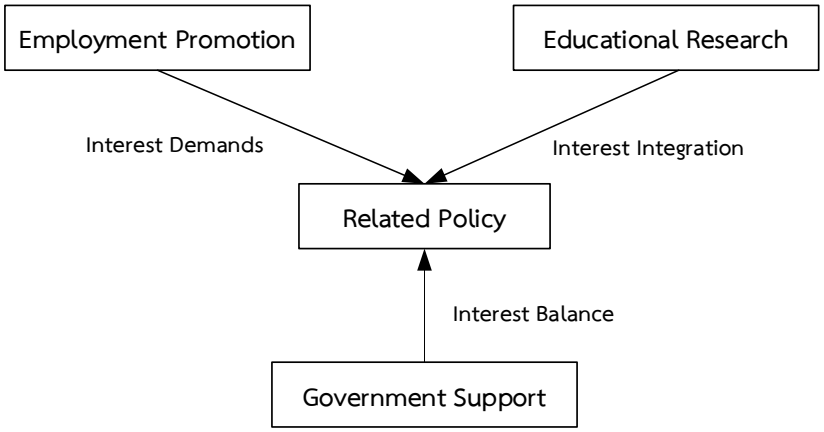

Figure 5.1 The relationship between the four aspects

And according to the relationship of every aspect of policy, it could analysis by multidimensional scaling that shown the similarity data between some points from the 4 aspects.

The conclusion is as follows.

- National policy developing need all educator focus.
- Some employments like enterprises need more talents in technology education from innovation and entrepreneurship, with supporting by some relevant policy.
- There are some national policy reviews related in innovation education in the education policy research.
- In the overview of education policy, technology education is the main development in higher education.
- There are some entrepreneurship education policies which needs to implement.
- The focus on the innovation and entrepreneurship policy are national identity and practice in society.

Part 3. The Guidelines for Developing on Cultivation of Innovative and Entrepreneurial Talents in Chinese Higher Education

The guidelines for developing on cultivation of innovative and entrepreneurial talents in Chinese higher education in four aspects, which contains 28 items. There are 6 items for conscious thinking, 6 items for social influence, 5 items for knowledge and practice, and 11 items for personal qualities.

Conscious thinking consisted of 6 items.

- To draw the interest of innovation and entrepreneurship from students by different learning.
- To define the clear motivation about why get the innovation and entrepreneurship education.
- To pay more time in innovation and entrepreneurship education.
- To possess more innovative mind.
- To possess more entrepreneurial awareness.
- To take part in more training about innovation and entrepreneurship.

Social influence consisted of 6 items.

- To participate more competition to improve the skills of innovation and entrepreneurship.
- To arrange more team work for students making them more unity and confidence.
- To get more information from all public and accept public scrutiny.
- To survey more needs from society related in innovation and entrepreneurship.
- To transform the achievement between enterprise and university.
- To focus on the intellectual property.

Knowledge and practice consisted in 5 items.

- To get more professional knowledge.
- To get more interdisciplinary knowledge.
- To take more part in social practice.
- To interpretate the relevant policies by management.
- To develop more entrepreneurship practice.

Personal qualities consisted in 11 items.

- To develop the knowledge learning ability from students.
- To develop the time planning ability from students.
- To develop the learn planning ability from students.
- To develop the interpersonal communication ability from students.
- To develop the psychological ability from students.
- To develop the organization and planning ability from students.
- To develop the divergent thinking ability from students.
- To develop the market insights from students.
- To do more teamwork from students.
- To develop the discover and summarize ability from students.
- To develop the innovative thinking ability from students.

Part 4. The Evaluation the Adaptability and Feasibility of Guidelines for Developing on Cultivation Suitable for innovation and Entrepreneurship

The adaptability and feasibility of guidelines for developing on cultivation suitable for innovation and entrepreneurship in every evaluation form were at highest level with the values between 4.00 and 5.00, which means the guidelines for improving the quality of talents in innovation and entrepreneurship are adaptability and feasibility.

And it could be concluded that the guidelines can apply in university.

Discussion

The discussion and discussion of this study consist of the following points.

Part 1. The current situation for the various factors that affect the cultivation of innovative and entrepreneurial talents in China

Part 2. The balance between formulation and implementation of policy

Part 3. The guidelines for developing on cultivation of innovative and entrepreneurial talents in Chinese higher education

Part 4. The evaluation the adaptability and feasibility of guidelines for developing on cultivation suitable for innovation and entrepreneurship

The details show as follows.

Part 1. The Current Situation for the Various Factors that Affect the Cultivation of Innovative and Entrepreneurial Talents in China

With the era of the knowledge economy, technological innovation, social development, and talent cultivation ecosystem evolve and integrate, forming innovation and entrepreneurship with complementary functions, overlapping relationships, and synergistic interactions among the four major innovation and entrepreneurship needs of universities, governments, enterprises, and society. Educational relationship model. Therefore, various aspects influence and promote each other and influence innovative and entrepreneurial talents.

Knowledge Factors

According to this study's definition of knowledge factors, knowledge factors include general education and interdisciplinary knowledge.

General education aims to provide the educated with knowledge sources and values. The government has planted the innovation and entrepreneurship gene of thinking and innovation in the enlightenment of general education, focusing on shaping values and laying the foundation of innovation and entrepreneurship culture (Xu AJ, 2015). Interdisciplinary knowledge refers to the combination of current educational hotspots, such as science and technology education, for Students to provide academic knowledge that aligns with social development.

It can be seen from this study that although innovation and entrepreneurship education has been vigorously developed in China, there is still a part of separation between theory and practice. Universities generally take general education and technology education courses as extended courses, and most of the courses are still theoretical explanations. This will lead to the university's educational settings needing to meet social development needs. At the same time, limited by regional scientific and technological services, the scale of university science and technology parks and the richness of scientific and technological resources could be more developed. The awareness of scientific and technical assistance and professional counterparts is weak, and there need to be more professional services that cannot meet the needs of different majors for different knowledge. The depth of

entrepreneurship teaching is shallow, the entrepreneurship environment needs to be more utilized, and the utilization rate of technological services needs to be higher.

Therefore, students' enthusiasm for innovation and entrepreneurship has not been well supported, the functions of general education and interdisciplinary education have not been clarified, and the services for students' innovation and entrepreneurship are not in place, which is not conducive to educating students in the practice of innovation and entrepreneurship.

Personalize Factors

The personality factors in this study include innovation and personalized entrepreneurship education for university characteristics.

The focus of innovation and entrepreneurship teaching is to enhance students' comprehensive quality, pay attention to knowledge education and personality development, meet social needs, and be student-oriented so that they can exert their creativity and vision. The social stage provides new opportunities and development space for innovation and entrepreneurship education. Still, in the actual process of talent cultivation, students often need more high-quality educational resources.

The quality and richness of teacher resources are important educational factors in personnel training. Still, teachers are one of the areas for improvement in developing innovation and entrepreneurship education in Chinese universities. This short board is due to the single composition of college teachers and the professional level of teachers. Many innovation and entrepreneurship courses offered by some colleges and universities in China are developed by teachers through their thinking and research, which needs to be more in touch with reality. The lack of actual entrepreneurial management experience has led to many theories that need to have practical application value. Therefore, this teaching method is not much improved compared with traditional teaching, and it cannot integrate theory with practice, which limits students' innovative and entrepreneurial thinking ability and their creative consciousness in the course learning process.

Comprehensive Factors

The comprehensive factors in this study include the total quality and extensive ability training of innovative and entrepreneurial talents.

Compared with the traditional education model, this kind of education places more emphasis on the cultivation of students' practical ability and executive abilities. In the process of learning knowledge and hands-on learning, students understand innovation, and entrepreneurship, enhance their comprehensive quality, and develop their potential to adapt to the ever-changing science and technology and competitive market demands. In-depth understanding of the current development level and degree of innovation and entrepreneurship education, we can find that the methods adopted by many universities to promote innovation and entrepreneurship education are mostly the same and even in form, and many activities need to be revised. As a result, they needed to develop a suitable educational development model for their own university's actual situation. Emphasis on theory rather than practice, following the traditional training plan, without the support of a formal scientific talent training plan. At the same time, it is difficult for some innovation and entrepreneurship courses in colleges and universities to meet the corresponding standard requirements. Most of them stay on the knowledge points taught in the classroom and rarely train students to apply knowledge in social practice. The knowledge students learn in school takes a lot of work to practice. Difficult to expand.

Therefore, it is difficult for students to combine theory and meet the actual needs of society for innovative talents without in-depth understanding in practice.

Part 2. The Balance Between Formulation and implementation of Policy

As far as the current innovation and entrepreneurship education policy is concerned, many universities still need to establish an innovation and entrepreneurship education system and pay little attention to important parts of innovation and entrepreneurship awareness, social development needs, and innovation and entrepreneurship environment.

Basic Policy Instruments

According to the data results in Chapter 4, among the questionnaire results, the degree of satisfaction with using essential policy instruments is only above average, indicating that there needs to be a more balanced use of basic policy tools in policy texts.

In the proportion of policy texts, there are more texts on innovation and entrepreneurship education for universities, which shows that the current development of innovation and entrepreneurship education relies more on universities. College students have the most significant innovation potential, so colleges and universities are encouraged to set up innovation and entrepreneurship education courses, promote the reform of the curriculum system of colleges and universities, and integrate innovation and entrepreneurship education into general education and professional course education. At the same time, due to the lack of resources in colleges and universities, they must rely on the support of small and medium-sized enterprises. Schools and enterprises jointly run schools to build training bases to meet the basic needs of innovation and entrepreneurship education in colleges and universities. Entrepreneurs can also be hired to provide entrepreneurial guidance and training for college students. Government policy also tends to rely on the strength of organizations, such as markets and businesses, without direct participation.

To develop innovation and entrepreneurship education, the government should speed up the formulation of relevant policies and regulations to create an excellent legal atmosphere, provide legal support, and ensure that there are laws to follow better to guide the development of innovation and entrepreneurship education. At the same time, education development is inseparable from the support of funds. The government should introduce practical financial support and subsidy policies to provide special funds for innovation and entrepreneurship education. The government should also improve the supervision system, do an excellent job in the follow-up work of innovation and entrepreneurship education, strengthen pilot demonstrations, and build demonstration bases to make timely adjustments according to existing problems; for advanced demonstration cases at

home and abroad, it is also necessary to actively exchange and learn, and introduce outstanding talents, strengthen international cooperation, and cultivate more high-quality innovative skills for the country.

Therefore, colleges and universities innovation and entrepreneurship education policy should appropriately reduce voluntary tools, strengthen the use of mandatory and mixed tools, and properly adjust the internal structure of the primary policy tools of the policy text.

Targeted Instruments for Innovation and Entrepreneurship Policy

Through the analysis of the interview code text, it can be seen that the policy's pertinence and effectiveness need to be revised. First, there needs to be more policy content on teaching. The development of innovation and entrepreneurship education in colleges and universities has not formed a complete system and has yet to receive adequate attention. The implementation effect is difficult to predict, and there are differences among colleges and universities, and the curriculum settings are also different. There needs to be a unified standard for innovation, and entrepreneurship education arrangements will have a negative impact. At the same time, the country also lacks teachers with professional literacy for innovation and entrepreneurship, as well as professional training for teachers, which makes it difficult to control the follow-up teaching effect, and most teachers lack practical experience, so it is difficult to determine whether they can effectively apply the theoretical knowledge in books.

Efficiency in practical operation. Secondly, the content of the transformation of achievements in the innovation and entrepreneurship policy text is still in its infancy, needs more operability, and more stays at the level of encouragement and guidance, and cannot guarantee its effectiveness in specific operations. Finally, the funds and subsidies provided by the government for innovation and entrepreneurship education are far from enough compared with the funds required for the development of innovation and entrepreneurship education, and the government's policy supply of relevant funds needs to be increased. At the same time, the funds required for innovation and entrepreneurship education cannot unthinkingly seek government funding but also need the government to guide social

forces (venture investment institutions, social organizations) to play their leading role and provide necessary financial support for the development of innovation and entrepreneurship education, to promote the compelling connection between innovation and entrepreneurship and social capital.

Educational and Environmental Instruments

By analyzing the encoded interview text, we can see that the distribution of ecological tools in the policy text of innovation and entrepreneurship education in colleges and universities needs to be more balanced. Environmental ecology accounts for nearly half, and concepts and strategic guidelines account for more. Government policies still focus on interpreting the connotation and importance of innovation and entrepreneurship education, as well as explaining the implementation of policies and strategies.

This reflects that the development of innovation and entrepreneurship education is still in development. In the planning stage, the awareness of innovation and entrepreneurship education in society has yet to be formed. The country should increase the publicity of innovation and entrepreneurship education, innovate publicity methods, broaden the channels of advertising, improve the guidance of mainstream media on innovation and entrepreneurship education, let the whole society participate, integrate into the social environment of innovation and entrepreneurship, encourage and support more Join social forces to create a good atmosphere of public opinion that promotes innovation and entrepreneurship. The curriculum is the key to educational development but only accounts for a little in policy texts. Innovation and entrepreneurship education need to build a systematic and scientific curriculum system.

Therefore, universities should reform the curriculum system, integrate innovation and entrepreneurship education into students' introductory and professional courses, and develop innovation and entrepreneurship courses to strengthen entrepreneurial guidance for college students. In addition to academic counseling, college students must improve their practical ability. The state should guide more social forces to carry out education.

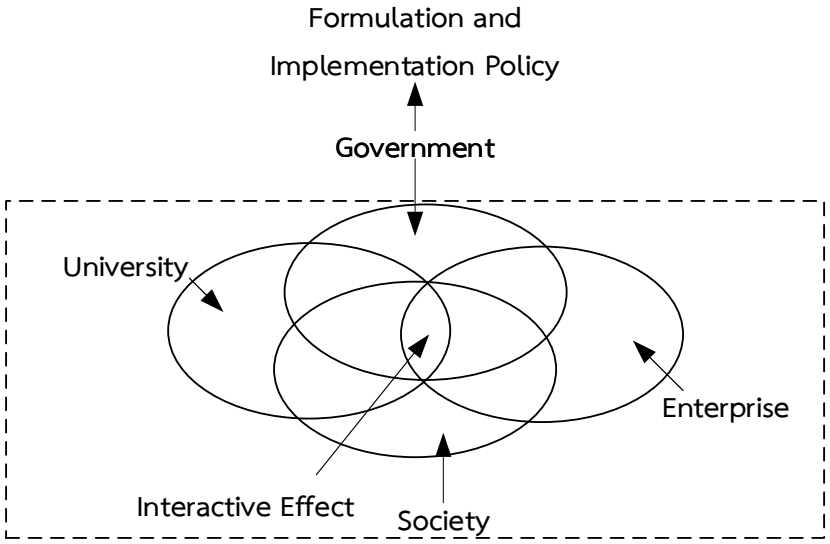

Figure 5.2 Multilateral Relations in Policymaking

Education, providing guidance and assistance for students to innovate and start businesses. Only when the government, universities, enterprises, and markets build a complete ecosystem from top to bottom can innovation and entrepreneurship education gain vitality and promote high-quality development.

Part 3. The Guidelines for Developing on Cultivation of Innovative and Entrepreneurial Talents in Chinese Higher Education

Conscious thinking

In the questionnaire on the cultivation of innovative and entrepreneurial talents for students, it can be seen that students have a relatively weak awareness of innovation and entrepreneurship and do not take the initiative to understand the content of innovation and entrepreneurship, resulting in most students knowing nothing about innovation and entrepreneurship policy requirements, theoretical knowledge, and practical knowledge. In the face of such a situation, these students feel that innovation and entrepreneurship are only somewhat important to their own development. This violates the original intention of cultivating innovative and entrepreneurial talents and leads to most students' poor innovation and entrepreneurship abilities.

Personal Qualities

In the evaluation results of the innovation and entrepreneurship education structure, the weight of the ability to acquire knowledge about innovation and entrepreneurship is the largest, and the scores are in the middle. Although the index scores are reasonable, there is a certain degree of deviation between the scores and the weights, which shows that students pass specific entrepreneurship. Knowledge learning activities have exercised their overall literacy and gradually formed the essential qualities required for innovation and entrepreneurship. However, the core capabilities necessary for innovation and entrepreneurship still need further improvement. In addition, divergent thinking ability has the highest score in the personal quality structure, and the scores of various secondary indicators are relatively high. However, from the actual situation and the analysis conclusions of the essential characteristics of Chinese students' innovation and entrepreneurship, Chinese students' innovation and entrepreneurship education are more critical. Most of them make the cultivation of fundamental theoretical knowledge and the awareness and ability of technological innovation relatively weak.

Social Influence

According to the resource synergy theory, when intersections between different subsystems and the development of external demand are relatively limited, competition or exclusion may occur between the meetings of various subsystems, reducing resource allocation and use of the overall system efficiency. To improve students' creative and entrepreneurial practical ability, relevant government departments, universities, and enterprises are establishing various entrepreneurial bases or incubation centers. Still, the social impact and social development that should be addressed have resulted in repeated investment in resources as a whole, With waste. The government, universities, and society have their internal systems. For example, the government departments responsible for supporting college students' entrepreneurship include the Human Resources Security Department, the Finance and Taxation Department, the Education Department, and the Science and Technology Department, etc. Universities can be divided into employment departments, student affairs departments, innovation Entrepreneurship departments,

outreach departments, etc.; the social system can be disassembled into college student entrepreneurship support subsystems, such as enterprises, social organizations, financing institutions, etc. The synergistic relationship between these subsystems is unclear; overlapping or vacuum will affect the external environment of student's entrepreneurship, which will hurt the development of college students' entrepreneurship.

Knowledge and Practice

The cultivation of innovative and entrepreneurial talents can not only rely on course teaching, but also rely on their ability to match specific jobs and positions. In the particular education process, much tacit knowledge and potential skills cannot be obtained through course learning and students' awareness of innovation and entrepreneurship; cultivating innovative and entrepreneurial spirit also needs to be matured through practical experience. To a large extent, practice is the fundamental path for students to form their creative and entrepreneurial goals. This requires the government, society, and universities to integrate all kinds of entrepreneurship resources and build a training or practice platform for students that matches their cultivation. Some universities cooperate with enterprises to establish various entrepreneurial science parks and spaces, which only provide activities for realizing entrepreneurial plans and need more support in incubating projects such as systematic training and financial assistance. The holistic and developmental planning of college students' comprehensive entrepreneurial ability training has resulted in students' weak awareness of innovation and entrepreneurship and specific entrepreneurial skills.

Part 4. The evaluation the adaptability and feasibility of guidelines for developing on cultivation suitable for innovation and entrepreneurship

According to the adaptability and feasibility of guidelines for developing on cultivation suitable for innovation and entrepreneurship, it could be discussed that the appropriate system suitable for talent cultivating.

System Based on Background Evaluation

According to questionnaires and interviews, there are some misunderstandings in the society's understanding of entrepreneurship education. They believe that innovation and entrepreneurship education is to create enterprises, and innovation and entrepreneurship education is to provide employment guidance courses for graduates. These ideas imprison the development of entrepreneurship education. Now, Chinese universities are transforming from employment-oriented to entrepreneurial-oriented. Correctly understanding entrepreneurship education and the essence of entrepreneurship education are the first problems to be solved. University innovation and entrepreneurship education is a comprehensive quality education for all college students. Universities should integrate innovation and entrepreneurship education into the training programs of various majors, seek the best fit for innovation and entrepreneurship education in discipline construction and professional construction, and form a reasonably Effective educational curriculum system.

The innovation and entrepreneurship education environment not only refers to the campus culture in universities but also includes the social innovation and entrepreneurship environment. The sustainable and healthy development of university innovation and entrepreneurship education depends on the pioneering spirit of campus culture and social environment. On the one hand, the government and society's support for innovation and entrepreneurship education in colleges and universities is an external condition to promote colleges and universities to carry out related education. On the other hand, the creation of an innovation and entrepreneurship environment also depends on a good campus culture. In the campus culture, students' comprehensive quality can be improved gradually through the campus culture.

Therefore, the background evaluation in the talent system proposed in this study is based on the function of innovation and entrepreneurship education, the analysis of the internal and external structure and environment of the university, the current situation and existing problems of the development of innovation and entrepreneurship education, as well as its positioning and the social impact on the number of innovation and entrepreneurship. It is determined by demand.

System Based on Input Evaluation

The main evaluation content of the input evaluation in this study includes training program design and teaching input. The talent training plan is the talent training program, and the talent training plan design for each major presents a certain degree of standardization and stability. To achieve the training objectives in the program, teaching investment has a significant impact. The innovation and entrepreneurship education resource system is mainly aimed at the resource capacity of the university. It reflects the university's organizational support and resource investment for innovation and entrepreneurship education. It specifically includes two aspects: the challenging environment and the peaceful environment. Safeguard measures; quiet environment refers to the school's academic atmosphere that encourages entrepreneurship. It stimulates students' entrepreneurial enthusiasm through entrepreneurship-related policies, mainly including a good campus entrepreneurship atmosphere, a sound organizational structure, and a scientific management system. The challenging environment is primarily through the funding of the school. At the same time, the arrangement of the training plan is also essential.

Therefore, the input evaluation elements in the talent system proposed in this study are the critical work of talent training, the relevance and feasibility of training plans and courses, and the support and guarantee of university resource capabilities and related policies to realize talent training.

System Based On Process Evaluation

According to research findings, innovation, and entrepreneurship require solid professional knowledge and rich knowledge accumulation, including some interdisciplinary theories and practices. Universities should pay special attention to exploring the teaching rules of entrepreneurship education, follow the entrepreneurial talent training model, rationally arrange the curriculum system of innovation and entrepreneurship education, continuously improve the pertinence and effectiveness of courses, and improve students' innovative thinking and comprehensive ability of entrepreneurship, to realize innovation and entrepreneurship education. The transformation from imparting knowledge to

cultivating ability can ensure that students acquire thorough entrepreneurial application knowledge and can improve and optimize the knowledge composition of talents. At the same time, problems are found and fed back into talent cultivation.

Therefore, the basis of process evaluation in the talent system proposed in this study is to supervise and control the implementation of talent training, examine the specific performance of an activity, and discover, analyze, and solve problems in time to ensure the realization of stage objectives and tasks.

System Based on Product Evaluation

This study's result evaluation is a comprehensive test of the program's implementation, focusing on the student's course learning, professional identity, and social evaluation feedback.

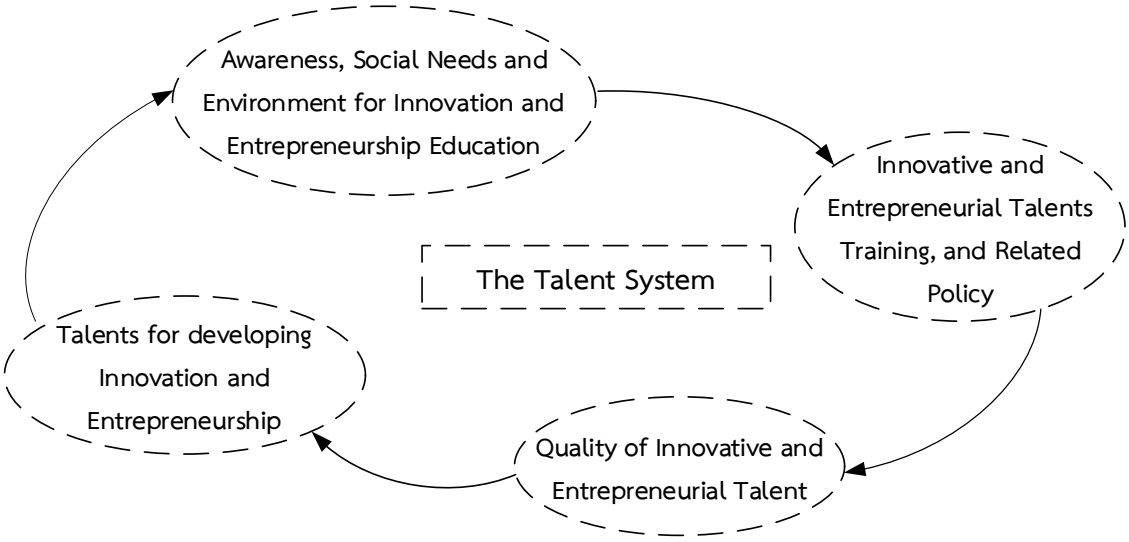

Figure 5.3 The Talent System for Basic Processing

Therefore, the product evaluation of the talent system proposed in this study is based on the review and satisfaction of all innovation and entrepreneurship education stakeholders, as well as summarizing the experience of education in the process of talent training to improve the talent system.

Recommendations

According to the research in this paper, the following suggestions can be put forward for Chinese innovation and entrepreneurship education and personnel training.

There are suggestions for implications.

Implications

There are three items in the implications to overview research.

Item 1. To enhance the awareness of innovation and entrepreneurship education

Item 2. To meet the needs of social development in multiple dimensions

Item 3. To construct a suitable environment for university innovation and entrepreneurship

To Enhance the Awareness of Innovation and Entrepreneurship Education

The study of this paper finds that multi-dimensional, multi-level, and multi-subject analysis of the problem of innovative and innovative talent training. Improving the cultivation of creative and entrepreneurial talents is a systematic project which requires the joint efforts of all parties involved to create a good atmosphere for innovation and entrepreneurship, that is, to have an awareness of innovation and entrepreneurship. Researching and cultivating top-notch innovative and innovative talents is the fundamental mission of a high-level comprehensive research university. The detail content is shown as follows.

- It requires a broad cultural foundation, multi-disciplinary and interdisciplinary knowledge accumulation, and an overall academic vision.
- The intellectual atmosphere of free debate, the truth-seeking spirit of daring to question, the learning attitude of seeking truth from facts, the teaching method of democracy and equality, and the practical training in multiple fields.
- Such talents must be created by something other than traditional talent training models and educational concepts.
- Innovation and entrepreneurship education require sound systems, resource support, and the efforts of the whole society.

Therefore, stakeholders must have a high awareness of innovation and entrepreneurship education.

The recommendation of enhancing the awareness of innovation and entrepreneurship education is shown as follows.

- Universities must rely on the government and internal structure to adapt to local conditions, give full play to the initiative, enthusiasm, and creativity of teachers, students, and parents, and boldly carry out reform and exploration.

- Strengthen the research on the practical teaching link, and build an applicable teaching model that can effectively promote the improvement of innovation ability.

- Adopt the idea of going from shallow to deep, from basic to comprehensive, build a three-dimensional structure of practical teaching mode consisting of essential practice links, complete practice links, and innovative practice links, and make full use of the rich research experience and scientific research level of comprehensive research universities and engineering practice, stimulate students' interest in learning and exploration, improve students' practical ability and creative ability, and highlight the display of students' subjective initiative.

To Meet the Needs of Social Development in Multiple Dimensions

The study of this paper finds that multi-dimensionality meets the needs of all aspects of social development and lays the foundation for innovation and entrepreneurship education.

- The teaching purpose of the university is to provide society with graduates with lofty ideals, rich theoretical and practical knowledge, and strong abilities. It is best for the graduates to adapt to the employer shortly after graduation and contribute their talents to the unit.

- The university can rely on government and social support. To jointly run schools, universities must understand the needs of employers, sign joint training agreements with employers, and directly implement the positions to be recruited by students so that students can go to employers for internships during school holidays and understand the technology development and management of employers In order to choose related courses purposefully; employers also recognize their

internship status. They can train them in relevant knowledge and skills without reservation.

- Such graduates have learned the knowledge and technology needed by the employer, mastered the skills required by the unit, and have a better understanding of the unit's operation and the functions of the position as soon as they start work. They are more suitable for employers than traditional teaching students need.

To Construct a Suitable Environment for University Innovation and Entrepreneurship

Further, strengthen the government's and universities' collaborative functions, and create a good external environment for cultivating innovative wilderness talents in universities.

The improvement of innovative and entrepreneurial skills training is a complex systematic project. In the process of system and mechanism innovation, some restrictive factors will inevitably appear, mainly the restrictions of the policy environment and university conditions.

- From the perspective of improving the quality of talent training in universities

The government should change its functions and management concepts, promote the classified development and rational positioning of universities, expand the autonomy of universities in running schools, support reform pilots, increase financial support, and create a good external environment for university talent training environment.

- From the perspective of historical experience

The development of a robust higher education country has been combined with a series of institutional innovations. Strengthening the relationship between the government, society, and universities is necessary. Based on adhering to and improving the principal responsibility system under the leadership of the party committee, guide.

- From the perspective of university

Support universities to actively explore the innovation of governance structure and management system so that the vitality of running a university and the enthusiasm of all aspects can be fully released.

It is necessary to further expand the autonomy of research universities, especially the autonomy of education and teaching reform, and ensure the deepening of reforms in terms of professional settings, flexible academic systems, and practical teaching. Independent innovation at the university level can solve specific training process model design and quality control issues.

- From the perspective of innovative and entrepreneurial policy

Still, the policy bottleneck that restricts the establishment of new mechanisms for innovative talent training and related measures is beyond the university itself, and more powerful policy support is yet to be obtained. To enhance the work enthusiasm and creativity of pilot universities to carry out projects.

Therefore, at present, Chinese innovation and entrepreneurship education is still dominated by universities. At the same time, university innovation and entrepreneurship education still exist in the form of theoretical learning and are based on something other than social development needs.

To sum up, to strengthen the scientific judgment ability of innovative and entrepreneurial talents and make them become fully-developed people, it is necessary for the whole society to build a talent training system of talent-government-university-society linkage jointly and to increase the public's enthusiasm for participation in innovation and entrepreneurship education. Realization is resource sharing again. Universities should organically integrate higher education with innovation and entrepreneurship education, cultivate more talents who adapt to social development, and help students realize their self-worth and social value.

Future Research

Due to the limited time and ability of researchers, it is impossible to further improve the innovative and entrepreneurial talent training system. The details are as follows.

Item 1. The development of scientific and technological innovation and entrepreneurial talents

Item 2. Regional talent interaction

Item 3. Talent feedback evaluation mechanism innovation

The details show as follows.

The Development of Scientific and Technological Innovation and Entrepreneurial Talents

The innovation of scientific and technological talents is an inevitable future development trend.

A sound innovation and development system for scientific and technological talents can promote breakthroughs in managing scientific and technical entrepreneurial talents, truly realize scientific management, and demonstrate the role of talents.

For a long time, Chinese innovative and entrepreneurial talent education rarely involves the management of scientific and technological talents. With the correct understanding of scientific and technical talents, to better train students to develop into scientific and technical talents, most researchers are working hard on improving the innovation system of scientific and technological talents.

Regional Talent Interaction

Regional talent interaction can promote the complementary advantages and disadvantages of talents. It can accelerate the joint development and progress of talents, which is an inevitable economic and social development trend.

The researchers should have mentioned regional talent interaction in this study. With a further understanding of innovative and entrepreneurial talents, it is possible to integrate talent allocation and build a talent network communication platform through talent exchange and interaction.

Talent Feedback Evaluation Mechanism Innovation

The talent feedback evaluation mechanism is fundamental to improving the quality of talent further.

The talent feedback evaluation mechanism is an amendment to the current talent training system and a summary of the company's employment needs and industry employment standards.

In the global market competition, the feedback and evaluation of talents are affected by many aspects. This study has no national research on the feedback evaluation mechanism.

In future research, talents can be evaluated and given feedback through various advanced international means.

Therefore, researchers will focus on the above three aspects in the future and continue to research the system about cultivation of innovative and entrepreneurial talents.

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Appendixes

Appendix A

List of Specialists and Letters of Specialists Invitation for IOC Verification

List of Specialists for IOC Verification

1. **Assoc. Prof. Dr. Jittawisut Wimuttipanya**
   Degree Doctor of Curriculum and Instruction
   Position Vice Dean of Faculty of Education,
   Bansomdejchaopraya Rajabhat University

2. **Assist. Prof. Dr. Aree Phasansinthuwong**
   Degree Doctor of Public Administration
   (Public Policy and Public Management)
   Position Public Administration Department,
   Faculty of Humanities and Social Science,
   Bansomdejchaopraya Rajabhat University

3. **Assist. Prof. Acting Sub Lt. Dr. Nantouchaporn Panarat**
   Degree Philosophy Doctor
   (Public Administration)
   Ph.D (Public Administration)
   Position Pranakron Rajabhat University

Ref.No. MHESI 0643.14/ 697

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

12 July 2023

RE: Invitation to validate research instrument

Dear Assoc. Prof. Dr.Jittawisut Wimuttipanya

Miss Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration of Bansomdejchaopraya Rajabhat University. She is undertaking research entitle "Developing on the System about Cultivation of Innovative and Entrepreneurial Talents in Chinese Higher Education"

The thesis adversity committee has considered that you are an expert in this topic. Your recommendations would be useful for further improvement of this research instrument.

With your expertise, we would like to ask your permission to validate the attached research instrument. Would like to avail ourselves of this opportunity to express our sincere thanks and appreciation for your help.

Sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School

Bansomdejchaopraya Rajabhat University
Tel.+662-473-7000
www.bsru.ac.th
E-mail: grad@bsru.ac.th

Ref.No. MHESI 0643.14/ 695

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

12 July 2023

RE: Invitation to validate research instrument

Dear Assist. Prof. Dr.Aree Phasansinthuwong

Miss Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration of Bansomdejchaopraya Rajabhat University. She is undertaking research entitle "Developing on the System about Cultivation of Innovative and Entrepreneurial Talents in Chinese Higher Education"

The thesis adversity committee has considered that you are an expert in this topic. Your recommendations would be useful for further improvement of this research instrument.

With your expertise, we would like to ask your permission to validate the attached research instrument. Would like to avail ourselves of this opportunity to express our sincere thanks and appreciation for your help.

Sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School

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Ref.No. MHESI 0643.14/ 695

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1061 Itsaraparb Hirunrujee
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12 July 2023

RE: Invitation to validate research instrument

Dear Assist. Prof. Acting Sub Lt. Dr.Nantouchaporn Panarat

Miss Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration of Bansomdejchaopraya Rajabhat University. She is undertaking research entitle "Developing on the System about Cultivation of Innovative and Entrepreneurial Talents in Chinese Higher Education"

The thesis adversity committee has considered that you are an expert in this topic. Your recommendations would be useful for further improvement of this research instrument.

With your expertise, we would like to ask your permission to validate the attached research instrument. Would like to avail ourselves of this opportunity to express our sincere thanks and appreciation for your help.

Sincerely,

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Appendix B

Official Letter

Ref.No. MHESI 0643.14/ 9..4

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

17 August 2023

Subject Request for Cooperation in Data Collection

Dear President of Shanghai Jiaotong University

This is to certify that Ms. Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration, Bansomdejchaopraya Rajabhat University. She is conducting research entitled "Developing on the System about Cultivation of Innovation and Entrepreneurial Talents in Higher Education" under the supervision of Associate Professor Dr. Niran Sutheeniran, Her contact information is as follows: telephone number 18217113536, email awmugt@163.com

In this regard, the student researcher has to collect data from lecturers and students using questionnaire, interview and assessment. The students will subsequently coordinate with you and provide more detail on this matter.

Accordingly, I would like to kindly request for your permission to allow this student researcher to collect data for academic purposes. Your cooperation will be highly appreciated.

Yours sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)
Dean of Graduate School

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Ref.No. MHESI 0643.14/ 915

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

17 August 2023

Subject Request for Cooperation in Data Collection

Dear President of University of Shanghai for Science and Technology

This is to certify that Ms. Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration, Bansomdejchaopraya Rajabhat University. She is conducting research entitled "Developing on the System about Cultivation of Innovation and Entrepreneurial Talents in Higher Education" under the supervision of Associate Professor Dr. Niran Sutheeniran, Her contact information is as follows: telephone number 18217113536, email awmugt@163.com

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Dean of Graduate School

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Ref.No. MHESI 0643.14/ 926

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

17 August 2023

Subject Request for Cooperation in Data Collection

Dear President of Shanghai University of Electric Power

This is to certify that Ms. Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration, Bansomdejchaopraya Rajabhat University. She is conducting research entitled "Developing on the System about Cultivation of Innovation and Entrepreneurial Talents in Higher Education" under the supervision of Associate Professor Dr. Niran Sutheeniran, Her contact information is as follows: telephone number 18217113536, email awmugt@163.com

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Yours sincerely,

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Ref.No. MHESI 0643.14/ 917

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

17 August 2023

Subject Request for Cooperation in Data Collection

Dear President of Shanghai Normal University

This is to certify that Ms. Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration, Bansomdejchaopraya Rajabhat University. She is conducting research entitled "Developing on the System about Cultivation of Innovation and Entrepreneurial Talents in Higher Education" under the supervision of Associate Professor Dr. Niran Sutheeniran, Her contact information is as follows: telephone number 18217113536, email awmugt@163.com

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Yours sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)
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Ref.No. MHESI 0643.14/ 923

Bansomdejchaopraya Rajabhat University
1061 Itsaraparb Hirunrujee
Thonburi Bangkok 10600

17 August 2023

Subject Request for Cooperation in Data Collection

Dear President of Shanghai Lixin University of Accounting and Finance

This is to certify that Ms. Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration, Bansomdejchaopraya Rajabhat University. She is conducting research entitled "Developing on the System about Cultivation of Innovation and Entrepreneurial Talents in Higher Education" under the supervision of Associate Professor Dr. Niran Sutheeniran, Her contact information is as follows: telephone number 18217113536, email awmugt@163.com

In this regard, the student researcher has to collect data from lecturers and students using questionnaire, interview and assessment. The students will subsequently coordinate with you and provide more detail on this matter.

Accordingly, I would like to kindly request for your permission to allow this student researcher to collect data for academic purposes. Your cooperation will be highly appreciated.

Yours sincerely,

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Ref.No. MHESI 0643.14/ 929

Bansomdejchaopraya Rajabhat University
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17 August 2023

Subject Request for Cooperation in Data Collection

Dear President of Shanghai Lida University

This is to certify that Ms. Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration, Bansomdejchaopraya Rajabhat University. She is conducting research entitled "Developing on the System about Cultivation of Innovation and Entrepreneurial Talents in Higher Education" under the supervision of Associate Professor Dr. Niran Sutheeniran, Her contact information is as follows: telephone number 18217113536, email awmugt@163.com

In this regard, the student researcher has to collect data from lecturers and students using questionnaire, interview and assessment. The students will subsequently coordinate with you and provide more detail on this matter.

Accordingly, I would like to kindly request for your permission to allow this student researcher to collect data for academic purposes. Your cooperation will be highly appreciated.

Yours sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)
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Ref.No. MHESI 0643.14/ 900

Bansomdejchaopraya Rajabhat University
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Thonburi Bangkok 10600

17 August 2023

Subject Request for Cooperation in Data Collection

Dear President of Shanghai Jian Qiao University

This is to certify that Ms. Mu Aiwei is a graduate student in Doctor of Philosophy Program in Educational Administration, Bansomdejchaopraya Rajabhat University. She is conducting research entitled "Developing on the System about Cultivation of Innovation and Entrepreneurial Talents in Higher Education" under the supervision of Associate Professor Dr. Niran Sutheeniran, Her contact information is as follows: telephone number 18217113536, email awmugt@163.com

In this regard, the student researcher has to collect data from lecturers and students using questionnaire, interview and assessment. The students will subsequently coordinate with you and provide more detail on this matter.

Accordingly, I would like to kindly request for your permission to allow this student researcher to collect data for academic purposes. Your cooperation will be highly appreciated.

Yours sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)
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Appendix C

Research Instruments

Questionnaire Form

Questionnaire for Shanghai XXX College's innovative talent training

Dear students / lecturers:
Hello!

To deeply understand the current situation of innovation and entrepreneurship education for college students and to further provide guidance and reference for strengthening innovation and entrepreneurship education, we are investigating the current situation of innovation and entrepreneurship education, hoping to get your help. The questionnaire is anonymous, and the contents of the collected questionnaire are kept confidential and are only used as research materials. Your honest thoughts and situation have practical reference value for this study; thank you for your support!

Part 1. Basic Information

Please fill in the basic information according to the actual situation

1.1 For students' basic information (for students fill in)

1) Your grade

A. Freshman B. Sophomore C. Junior D. Senior

2) Your major

A. Humanities and Social Science B. Engineering C. Science D. Art

3) Your birthplace

A. Rural B. Urban

4) Your academic performance

A. First 25% B. First 50% C. First 75% D. Other

5) Have you served as a student cadre during university

A. Yes B. No

1.2 For lecturers basic information (for lecturers fill in)

1) Your major

A. Humanities and Social Science B. Engineering C. Science D. Art

2) Your academic background

A. Bachelor B. Master C. Ph.D

3) The time of work

A. 3 years and below B. 3-5 years C. 5-10 years D. 5 years and above

4) Have you ever guided innovation and entrepreneurship activities?

A. Yes B. No

5) What is your attitude towards innovation and entrepreneurship?

A. Very interested B. General interested C. Not very interested D. Not interested

Part 2. Please fill in the degree of conformity according to the actual situation of your school (please mark √ in the corresponding column)

No.	Content	Very much in line	More in line	Basically	Not quite	Very inconsistent
		5	4	3	2	1
The awareness of education						
A1	Universities carry out innovation and entrepreneurship education courses necessarily.					
A2	The courses offered by the school have a lot of interdisciplinary knowledge, which is very helpful in expanding students' horizons.					
A3	The combination of theory and practice offered by the school can arouse students' enthusiasm for learning.					
A4	The courses offered by the school are helpful for the cultivation of students' innovative abilities.					
A5	The courses offered by the school are wide-ranging and open and can meet the needs of students to acquire all					

No.	Content	Very much in line	More in line	Basically	Not quite	Very inconsistent
		5	4	3	2	1
	aspects of knowledge.					
A6	Compared with consumption, universities have invested a lot in innovation and entrepreneurship education supply.					
A7	The university is committed to cultivating college students' awareness and the concept of innovation and entrepreneurship.					
A8	Universities have provided a lot of support for innovation and entrepreneurship education.					
Social development needs						
N1	Innovation and entrepreneurship education in universities has formed a certain scale.					
N2	Every teacher loves teaching and has a strong sense of responsibility.					
N3	Teachers will introduce students to the latest research trends and achievements in the subject in the classroom.					
N4	University activities are organized in a variety of forms. It is beneficial to stimulate students' enthusiasm for learning.					
N5	Teachers use teaching methods such as inspiration and interaction to guide students to think independently.					
N6	Parents support innovation and entrepreneurship education and fully cooperate with universities to develop					

No.	Content	Very much in line	More in line	Basically	Not quite	Very inconsistent
		5	4	3	2	1
	students' innovation and entrepreneurship capabilities.					
N7	The government has provided policy and fund support for innovation and entrepreneurship for college students.					
N8	The innovation and entrepreneurship education standards that have been established at present meet the needs of the development of the times.					
The environment of Chinese innovation and entrepreneurship						
E1	National policies provide various support for innovative and entrepreneurial talents to facilitate college students to show themselves in innovation and entrepreneurship.					
E2	The government vigorously promotes innovation and entrepreneurship education and has set up socialized professional education management service institutions.					
E3	The university often invites well-known experts and scholars to lecture to cultivate students' innovative interests.					
E4	The university provides students with personal out-of-school practice and internship opportunities to help students grow from theory to practice.					

No.	Content	Very much in line	More in line	Basically	Not quite	Very inconsistent
		5	4	3	2	1
E5	Science and technology education has gradually become the main component of innovation and entrepreneurship education, providing a more modern education model for innovation and entrepreneurship college students.					
E6	The university often organizes various innovation competitions under the guidance of teachers. Training and training students' innovative abilities.					
E7	The university often organizes excellent teachers to give lectures, guide students to learn, and help students build confidence in innovation.					
E8	The reasonable age structure of school teachers.					
E9	Teachers' scientific research work is often willing to attract students to join.					
E10	Under the cultivation of innovation and entrepreneurship education, college students have become fully developed people who can create value for society.					

Part 3. Please choose the appropriate option according to the situation (some multiple-choice questions)

No.	Content	Very much in line	More in line	Basically	Not quite	Very inconsistent
		5	4	3	2	1
Innovative and entrepreneurial talent training						
C1	From the perspective of training concepts and goals, individualized training should be adopted to train innovative talents according to their aptitude.					
C2	From the perspective of the sustainable development awareness of personnel training, innovative talents should adopt international, open, and interdisciplinary training.					
The formulation and execution for policies						
C3	To better cultivate innovative talents, universities should reduce the proportion of professional courses, increase general education courses, and expand students' knowledge.					
C4	To make students' knowledge systems more systematic, universities should strengthen the curriculum and ensure that the curriculum is comprehensive.					
C5	The government has issued a series of innovation and entrepreneurship policies to support colleges and universities in carrying out innovation and entrepreneurship education.					
C6	Colleges and universities have thoroughly implemented the national innovation and entrepreneurship policy and strengthened education reform according to themselves.					
C7	Technology education policies are gradually developing, replacing					

No.	Content	Very much in line	More in line	Basically	Not quite	Very inconsistent
		5	4	3	2	1
	traditional paper-and-pencil education and broadening students' horizons.					
C8	The university has strengthened the incentive and support policies for innovation and entrepreneurship and provided various supports for innovative and entrepreneurial talents.					
The quality of innovative and entrepreneurial talent						
C9	Practical activities or projects such as technological innovation and competition are conducive to cultivating innovative and entrepreneurial talents.					
C10	Cultivating students' ability to analyze problems independently is the key to improving the quality of innovative and entrepreneurial talents.					
C11	Paying attention to cultivating students' practical ability is the foundation of developing innovative and entrepreneurial talents.					
C12	Strengthening general education based on general knowledge is the basis for cultivating innovative and entrepreneurial talents.					
C13	The ultimate goal of innovation and entrepreneurship education is to strengthen interdisciplinary education and cultivate talents with overall development.					
The innovative and entrepreneurial talent system						
C14	In the current innovation and entrepreneurship talent system, students learn very little about the basic knowledge of innovation and entrepreneurship, and many knowledge points need to be clarified.					

No.	Content	Very much in line	More in line	Basically	Not quite	Very inconsistent
		5	4	3	2	1
C15	In university innovation and entrepreneurship education, students' practical experience and feasible innovation and entrepreneurship points are significant.					
C16	The purpose of systematizing innovation and entrepreneurship is to cultivate students' more substantial interest in learning and improve their self-learning ability.					
C17	The ability of students to think independently, analyze problems, and solve problems is the ultimate criterion for judging whether the university innovation and entrepreneurship system is practical.					

Part 4. Please write down the appropriate answers according to the situation

4.1 Your innovation achievements are: **(for students fill in)**

_____

_____

_____

_____

4.2 Your innovation improvements are: **(for lecturers fill in)**

_____

_____

_____

_____

This is the end of the questionnaire. Thank you again for your participation and wish you all the best!

Interview Form

Interview for Shanghai XXX College's innovative talent training

Dear professors:

Hello!

Hello! Innovation and entrepreneurship education is a new topics facing higher education. To better carry out the innovation and entrepreneurship work in our school, this questionnaire is specially designed to help us construct the curriculum system and cultivate students' related abilities. This interview is conducted anonymously, with no right or wrong answer. Thank you for taking the time out of your busy schedule to accept our interview!

Part 1. Basic information

- Manager of university
- Professor
- Associate Professor
- Enterprises

Part 2. The awareness of education

- What do you think of the current situation of students' innovation and entrepreneurship?
- Do you support students to do something of innovation and entrepreneurship?
- What is the key to cultivating innovative spirit and practical ability?

Part 3. Social development needs

- In what ways do you think the government and society should promote the cultivation of innovative and entrepreneurial talents for college students?
- Do you think the current government's innovation and entrepreneurship policies meet the current demand for talents? Please give an example.
- Do you think your major is closely related to innovation and entrepreneurship?
- What role do you think parents play in innovation and entrepreneurship education?

Part 4. The environment of Chinese innovation and entrepreneurship

- Do you think that innovation and entrepreneurship education in university is essential to students' successful entrepreneurship?

- What is the most significant help university can give students who want to participate in innovation and entrepreneurship?
- Many universities and enterprises have established and built innovative incubators. Do you think universities must establish business incubation projects?
- In what ways do you think colleges and universities should promote the cultivation of innovative and entrepreneurial talents?

Part 5. The open questions

- Are you satisfied with the current status of innovation and entrepreneurship education in universities?
- Do you have any comments and suggestions on cultivating innovative and entrepreneurial talents in colleges and universities?

This is the end of the interview. Thank you again for your participation and wish you all the best!

Evaluation Form

Guidelines Quality Evaluation Form
Developing on the System about Cultivation of Innovative and Entrepreneurial Talents in Chinese Higher Education

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Introduction

1. The evaluation form was created to be used as a tool for evaluating the adaptability and feasibility of "guidelines for talent system suitable for innovation and entrepreneurship in improving the quality of talents."

2. The evaluation form is divided into 2 parts as follows:

Part 1. The suitable for the guidelines

Part 2. Adaptability of the guidelines

Part 3. Feasibility of the guidelines

3. Please evaluate the adaptability and feasibility of the format in each item of the assessment form base on your opinion.

Evaluation the adaptability and feasibility of the guidelines will be of great benefit to the development on the system about cultivation of innovative and entrepreneurial talents in Chinese higher education.

Part 1. The suitable for the guidelines

No.	Evaluation Items	Fitness Level					Suggestion
		5	4	3	2	1	
	The overview of guidelines						
1	The relationship of philosophy, concepts and theories used in the guidelines.						
2	The completeness of the items of the guidelines.						
3	The connection/relationship between the items of the guidelines						

Part 2. Adaptability of the guidelines

No.	Evaluation Items	Fitness Level					Suggestion
		5	4	3	2	1	
	Every item of guidelines						
1	Basic concepts of guidelines.						
2	Objective of guidelines.						
3	Scope of guidelines.						
4	Application of guidelines.						
5	Evaluation of guidelines.						

Part 3. Feasibility of the guidelines

No.	Evaluation Items	Fitness Level					Suggestion
		5	4	3	2	1	
	Conscious Thinking						
1	The awareness of innovation and entrepreneurship education, including the interest, motivation, mind and another training activity related in innovation and entrepreneurship.						
	Social Influence						
2	The focus on outside of education in university like the competition, social teamwork, development needs, and more achievement and intellectual property in the society related in innovation and entrepreneurship.						

Part 3. Feasibility of the guidelines (Continue)

No.	Evaluation Items	Fitness Level					Suggestion
		5	4	3	2	1	
	Knowledge and Practice						
3	The multi-knowledge including the general and interdisciplinary education, relevant policy, and more practice for talents to guide the develop the system for talents quality in innovation and entrepreneurship education.						
	Personal Qualities						
4	Developing the talent abilities in several aspects, like planning, working, discover, and another basic ability in innovation and entrepreneurship.						

Suggestion and more

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(.....)

Appendix D

The Results of the Quality Analysis of Research Instruments

IOC Form

Evaluation Form

Evaluation table of Developing on the System about Cultivation of Innovative and Entrepreneurial Talents in Chinese Higher Education

Explanation Request experts to consider the consistency, comprehensiveness and completeness of the questionnaire. with the definition and check ✓ into the actual score box The score values are as follows:

+1 mean	The question is consistent with the definition to be measured.
0 mean	Not sure if the question is consistent with the definition to be measured.
-1 mean	The question is inconsistent with the definition of measurement.

Factors affecting the system of innovative and entrepreneurial talent.
Description: Experts are invited to comment on the factors that foster innovative and entrepreneurial talent. Put a tick (✓) in the comment box with helpful writing suggestions for improving the questionnaire.

No.	Question	IOC Value	Suggestion
1	Universities carry out innovation and entrepreneurship education courses necessarily.	1.00	
2	The courses offered by the school have a lot of interdisciplinary knowledge, which is very helpful in expanding students' horizons.	1.00	
3	The combination of theory and practice offered by the school can arouse students' enthusiasm for learning.	1.00	

No.	Question	IOC Value	Suggestion
4	The courses offered by the school are helpful for the cultivation of students' innovative abilities.	1.00	
5	The courses offered by the school are wide-ranging and open and can meet the needs of students to acquire all aspects of knowledge.	1.00	
6	Compared with consumption, universities have invested a lot in innovation and entrepreneurship education supply.	1.00	
7	The university is committed to cultivating college students' awareness and the concept of innovation and entrepreneurship.	1.00	
8	Universities have provided a lot of support for innovation and entrepreneurship education.	1.00	
9	Innovation and entrepreneurship education in universities has formed a certain scale.	1.00	
10	Every teacher loves teaching and has a strong sense of responsibility.	1.00	
11	Teachers will introduce students to the latest research trends and achievements in the subject in the classroom.	1.00	
12	University activities are organized in a variety of forms. It is beneficial to stimulate students' enthusiasm for learning.	1.00	
13	Teachers use teaching methods such as inspiration and interaction	1.00	

No.	Question	IOC Value	Suggestion
	to guide students to think independently.		
14	Parents support innovation and entrepreneurship education and fully cooperate with universities to develop students' innovation and entrepreneurship capabilities.	1.00	
15	The government has provided policy and fund support for innovation and entrepreneurship for college students.	1.00	
16	The innovation and entrepreneurship education standards that have been established at present meet the needs of the development of the times.	1.00	
17	National policies provide various support for innovative and entrepreneurial talents to facilitate college students to show themselves in innovation and entrepreneurship.	1.00	
18	The government vigorously promotes innovation and entrepreneurship education and has set up socialized professional education management service institutions.	1.00	
19	The university often invites well-known experts and scholars to lecture to cultivate students' innovative interests.	1.00	

No.	Question	IOC Value	Suggestion
20	The university provides students with personal out-of-school practice and internship opportunities to help students grow from theory to practice.	0.33	Modify: University could provide more opportunities to students that make them take part in more practice.
21	Science and technology education has gradually become the main component of innovation and entrepreneurship education, providing a more modern education model for innovation and entrepreneurship college students.	1.00	
22	The university often organizes various innovation competitions under the guidance of teachers. Training and training students' innovative abilities.	0.67	
23	The university often organizes excellent teachers to give lectures, guide students to learn, and help students build confidence in innovation.	1.00	
24	The reasonable age structure of school teachers.	1	
25	Teachers' scientific research work is often willing to attract students to join.	0.67	
26	Under the cultivation of innovation and entrepreneurship education, college students have become fully developed people who can create value for society.	0.33	Modify: Under the cultivation of innovation and entrepreneurship education, students could become more

No.	Question	IOC Value	Suggestion
			developing person and do some contribution for society.

Perspectives on cultivation of innovative and entrepreneurial talents.

No.	Question	IOC Value	Suggestion
1	From the perspective of training concepts and goals, individualized training should be adopted to train innovative talents according to their aptitude.	1.00	
2	From the perspective of the sustainable development awareness of personnel training, innovative talents should adopt international, open, and interdisciplinary training.	1.00	
3	To better cultivate innovative talents, universities should reduce the proportion of professional courses, increase general education courses, and expand students' knowledge.	1.00	
4	To make students' knowledge systems more systematic, universities should strengthen the curriculum and ensure that the curriculum is comprehensive.	1.00	
5	The government has issued a series of innovation and entrepreneurship policies to support colleges and universities in carrying out	1.00	

No.	Question	IOC Value	Suggestion
	innovation and entrepreneurship education.		
6	Colleges and universities have thoroughly implemented the national innovation and entrepreneurship policy and strengthened education reform according to themselves.	1.00	
7	Technology education policies are gradually developing, replacing traditional paper-and-pencil education and broadening students' horizons.	0.67	
8	The university has strengthened the incentive and support policies for innovation and entrepreneurship and provided various supports for innovative and entrepreneurial talents.	0.67	
9	Practical activities or projects such as technological innovation and competition are conducive to cultivating innovative and entrepreneurial talents.	1.00	
10	Cultivating students' ability to analyze problems independently is the key to improving the quality of innovative and entrepreneurial talents.	1.00	
11	Paying attention to cultivating students' practical ability is the foundation of developing innovative and entrepreneurial talents.	1.00	

No.	Question	IOC Value	Suggestion
12	Strengthening general education based on general knowledge is the basis for cultivating innovative and entrepreneurial talents.	1.00	
13	The ultimate goal of innovation and entrepreneurship education is to strengthen interdisciplinary education and cultivate talents with overall development.	0.33	Modify: The final objective of innovation and entrepreneurship education is to cultivate talents with overall development.
14	In the current innovation and entrepreneurship talent system, students learn very little about the basic knowledge of innovation and entrepreneurship, and many knowledge points need to be clarified.	1.00	
15	In university innovation and entre preneurship education, students' practical experience and feasible innovation and entrepreneurship points are significant.	1.00	
16	The purpose of systematizing innovation and entrepreneurship is to cultivate students' more substantial interest in learning and improve their self-learning ability.	1.00	
17	The ability of students to think independently, analyze problems, and solve problems is the ultimate criterion for judging whether the university innovation and entrepreneurship system is practical.	1.00	

Reliability Analysis

Reliability Analysis from Students' Questionnaire

Case Processing Summary

		N	%
Case	Vaild	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.966	.967	43

Item Total Statistics

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
A1	187.00	452.552	.311	.966
A2	186.93	439.168	.744	.964
A3	186.93	442.409	.642	.965
A4	186.97	442.999	.625	.965
A5	186.90	445.748	.670	.965
A6	187.00	437.448	.721	.964
A7	186.90	439.403	.784	.964
A8	187.07	434.478	.745	.964
N1	187.10	442.852	.580	.965
N2	187.07	454.892	.163	.968
N3	187.00	433.586	.760	.964
N4	186.93	440.616	.744	.964
N5	186.93	444.409	.579	.965
N6	187.03	438.723	.770	.964
N7	187.07	435.444	.752	.964
N8	186.80	449.476	.491	.965

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
E1	187.03	441.757	.505	.966
E2	186.80	445.200	.643	.965
E3	186.93	445.582	.543	.965
E4	186.87	447.223	.525	.965
E5	186.90	443.541	.606	.965
E6	186.90	440.507	.803	.964
E7	186.83	447.178	.619	.965
E8	186.77	446.668	.723	.965
E9	186.90	435.955	.845	.964
E10	187.03	445.551	.552	.965
T1	187.13	459.085	.127	.967
T2	186.87	445.223	.591	.965
T3	186.93	441.651	.597	.965
T4	186.83	444.902	.650	.965
P1	187.03	442.585	.690	.965
P2	187.10	428.852	.805	.964
P3	186.90	457.403	.209	.966
P4	187.03	444.585	.623	.965
Q1	187.07	439.375	.756	.964
Q2	186.93	447.720	.596	.965
Q3	186.97	445.826	.573	.965
Q4	186.90	434.024	.777	.964
Q5	186.87	452.809	.369	.966
S1	187.00	435.448	.779	.964
S2	186.77	445.151	.711	.965
S3	186.87	439.637	.835	.964
S4	187.00	431.586	.850	.964

Case Processing Summary

		N	%
Case	Vaild	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.847	.851	8

Item Total Statistics

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
A1	31.10	16.921	.245	.306	.869
A2	31.03	14.378	.721	.664	.812
A3	31.03	15.344	.539	.394	.834
A4	31.07	15.168	.574	.418	.830
A5	31.00	15.586	.652	.629	.824
A6	31.10	14.369	.636	.461	.822
A7	31.00	14.621	.728	.633	.812
A8	31.17	13.937	.644	.574	.821

Case Processing Summary

		N	%
Case	Vaild	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.823	.842	8

Item Total Statistics

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
N1	30.97	15.826	.625	.469	.791
N2	30.93	18.202	.127	.182	.877
N3	30.87	14.740	.709	.812	.777
N4	30.80	15.890	.732	.816	.781
N5	30.80	17.131	.459	.596	.813
N6	30.90	15.610	.743	.780	.778
N7	30.93	14.892	.734	.816	.774
N8	30.67	17.609	.463	.650	.813

Case Processing Summary

		N	%
Case	Vaild	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.869	.877	10

Item Total Statistics

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E1	40.67	20.437	.440	.513	.875
E2	40.43	21.220	.601	.547	.855
E3	40.57	21.013	.534	.545	.860
E4	40.50	21.293	.532	.548	.860
E5	40.53	20.464	.618	.698	.853
E6	40.53	20.326	.751	.749	.844
E7	40.47	21.775	.556	.636	.859
E8	40.40	21.766	.643	.676	.854
E9	40.53	19.706	.740	.668	.843
E10	40.67	20.851	.569	.535	.857

Reliability Analysis from Lecturers' Questionnaire

Case Processing Summary

		N	%
Case	**Vaild**	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.945	.950	43

Item Total Statistics

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
A1	185.87	161.568	.391	.945
A2	185.70	157.803	.683	.943
A3	185.80	158.441	.649	.943
A4	185.93	166.064	.103	.947
A5	185.97	159.895	.485	.944
A6	185.90	163.955	.239	.946
A7	185.83	159.247	.599	.943
A8	185.77	158.944	.689	.943
N1	185.87	160.189	.540	.944
N2	186.27	165.857	.055	.950
N3	185.93	159.789	.440	.944
N4	185.70	157.941	.763	.942
N5	185.87	162.878	.343	.945
N6	185.67	160.506	.560	.943
N7	185.77	158.185	.751	.942
N8	185.73	159.513	.639	.943
E1	185.80	158.855	.705	.943
E2	185.80	163.269	.349	.945
E3	185.77	160.599	.556	.943
E4	185.70	160.700	.543	.944
E5	185.70	157.941	.763	.942
E6	185.80	162.234	.431	.944
E7	185.57	158.461	.750	.942
E8	185.70	157.734	.780	.942
E9	185.63	157.964	.769	.942
E10	185.73	159.651	.628	.943
T1	185.77	161.978	.391	.945
T2	185.73	161.582	.474	.944
T3	185.63	159.137	.674	.943
T4	185.60	158.386	.743	.942
P1	185.83	160.971	.543	.944

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Cronbach's Alpha if Item Deleted
P2	185.83	160.971	.543	.944
P3	185.73	159.306	.655	.943
P4	185.87	161.292	.459	.944
Q1	185.70	158.838	.609	.943
Q2	185.80	163.752	.240	.946
Q3	185.70	162.976	.319	.945
Q4	185.83	159.937	.491	.944
Q5	185.83	160.420	.588	.943
S1	185.87	162.120	.459	.944
S2	185.53	161.637	.500	.944
S3	185.67	158.851	.610	.943
S4	185.70	158.907	.686	.943

Case Processing Summary

		N	%
Case	Vaild	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.723	.732	8

Item Total Statistics

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
A1	30.50	5.845	.353	.537	.708
A2	30.33	5.333	.600	.656	.716
A3	30.43	5.426	.573	.653	.722

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
A4	30.57	6.461	.150	.108	.747
A5	30.60	5.697	.388	.420	.702
A6	30.53	6.602	.095	.342	.759
A7	30.47	5.223	.675	.527	.701
A8	30.40	5.559	.604	.567	.711

Case Processing Summary

		N	%
Case	Vaild	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.711	.742	8

Item Total Statistics

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
N1	30.47	6.120	.365	.394	.726
N2	30.87	6.120	.103	.232	.766
N3	30.53	5.430	.465	.505	.741
N4	30.30	5.803	.549	.520	.630
N5	30.47	6.671	.155	.388	.707
N6	30.27	6.202	.375	.418	.705
N7	30.37	5.482	.708	.767	.708
N8	30.33	5.540	.674	.737	.705

Case Processing Summary

		N	%
Case	Vaild	30	100.0
	Excluded	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.872	.872	10

Item Total Statistics

	Scale Mean of Item Deleted	Scale Variance if Item Deleted	Corrected Item Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
E1	40.40	9.421	.681	.549	.853
E2	40.40	10.593	.281	.324	.883
E3	40.37	9.551	.625	.706	.857
E4	40.30	9.803	.531	.748	.865
E5	40.30	9.252	.725	.593	.849
E6	40.40	10.179	.416	.440	.873
E7	40.17	9.178	.786	.728	.845
E8	40.30	9.459	.650	.680	.855
E9	40.23	9.426	.669	.657	.854
E10	40.33	9.678	.575	.545	.861

Appendix E

Certificate of English

BANSOMDEJCHAOPRAYA
RAJABHAT UNIVERSITY

This is to certify that

Mu Ai Wei

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Director

Appendix F

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Tuijin Jishu/Journal of Propulsion Technology
ISSN : 1001-4055
Website : www.propulsiontechjournal.com/index.php/journal
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JPT

Acceptance Letter

Dear Author(s): Aiwei Mu, Buranajit Kaewsrimol, Niran Sutheeniran, Patchara Dechhome

Paper ID	JPT_236
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