Research on the Construction and Application of Evaluation Model for Innovation and Entrepreneurship Education in Universities

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Abstract: On the basis of integrating existing research and practical achievements in China and abroad, this study analyzes the quality demands of stakeholders such as the government, enterprises, schools, and students for innovation and entrepreneurship education in universities. This study systematically summarizes the existing research results on the evaluation of innovation and entrepreneurship education, and establishes an "indicator pool" for the evaluation of innovation and entrepreneurship education in universities. This study used the CIPP evaluation theory to classify relevant indicators. This study used the Delphi method to solicit the opinions of 15 experts in innovation and entrepreneurship education from 5 universities in Guangdong Province, and constructed an evaluation index system for innovation and entrepreneurship education in universities. This article proposes evaluation criteria for various indicators. On this basis, this study used the AHP method to determine the weights of various indicators and constructed an evaluation model for innovation and entrepreneurship education in universities.The evaluation model for innovation and entrepreneurship education in universities can be used by government education administrative departments to evaluate innovation and entrepreneurship education practices. It provided scientific basis for relevant decision-making. Meanwhile, this study also serves as a tool for evaluating innovation and entrepreneurship education in various levels and types of universities.

***Keywords*:** higher education, innovation and entrepreneurship education, CIPP evaluation model, AHP method

1. Introduction

As the main battlefield for cultivating technical and skilled talents, universities carrying out innovation and entrepreneurship education is not only the cradle of talent cultivation in the national strategy of transforming from resource driven to innovation driven. It is also a base for promoting students' pioneering spirit, autonomy, and creativity. This requires universities to continuously deepen their understanding of innovation and entrepreneurship education, and to root innovation and entrepreneurship education as a concept in the cultural soil of the school. Universities need to regard the cultivation of students' innovative and entrepreneurial spirit and the enhancement of their innovative and entrepreneurial abilities as one of the basic contents of talent cultivation in schools. Universities must combine innovation and entrepreneurship education with the development of students, gradually forming a theoretical and practical system of innovation and entrepreneurship education that can promote practical human development. Higher education enables more students to become knowledge workers with innovative spirit, entrepreneurs oriented towards knowledge elements, and individuals who achieve comprehensive self-development through innovative and entrepreneurial activities.

Since the 17th National Congress of the Communist Party of China, relevant administrative departments such as education have successively issued policies and measures to promote entrepreneurship and employment, encouraging the promotion of innovation and entrepreneurship education in universities across the country. In June 2015 and July 2017, the State Council of China successively proposed the Opinions on Vigorously Promoting Mass Entrepreneurship and Innovation, as well as the Opinions on Strengthening the Implementation of the Innovation Driven Development Strategy and Further Promoting the Deepening Development of Mass Entrepreneurship and Innovation, once again pushing innovation and entrepreneurship education to a climax. In 2018, the State Council proposed the Opinion on Promoting High Quality Development of Innovation and Entrepreneurship and Creating an Upgraded Version of "Double Creation", emphasizing the important role of innovation and entrepreneurship education in promoting economic growth. In 2019, the State Council's "Implementation Plan for National Higher Education Reform" proposed the establishment and improvement of school settings, faculty, teaching materials, information technology construction, safety facilities and other educational standards, leading the development of higher education services and promoting employment and entrepreneurship. In summary, it is

an important task for universities to do a good job in innovation and entrepreneurship education for a considerable period of time, both currently and in the future.

2. Literature Reviews

2.1 The Theoretical Basis

2.1.1 Theory of Innovation and Entrepreneurship Education

Economist Schumpeter (1912) proposed the theory of innovation and entrepreneurship. He believes that "innovation is the establishment of a new production function (the setting up of a new product in function), which achieves an unprecedented new combination of production factors and conditions.". It is a process of creative destruction. "Creative destruction" describes the process of engineering mutation, which constantly fundamentally changes the economic structure from within, constantly destroys the old economic structure, and creates new economic structures. This theory suggests that the innovation process can be divided into four stages: invention, innovation, dissemination, and imitation, highlighting the crucial role of innovation in entrepreneurship. Peter Drucker emphasized the importance of innovation and entrepreneurial spirit in the entrepreneurial process. He believes that innovation can be developed through learning and nurture. Innovation is the innovation of practice. Entrepreneurship is a form of innovation. The implementation of innovation and entrepreneurship education should be based on the "innovation and entrepreneurship theory" and pay more attention to cultivating students' innovation ability and entrepreneurial spirit. It not only emphasizes the acceptance and creativity of students towards new things and methods, but also emphasizes the cultivation of their entrepreneurial thinking.

2.1.2 CIPP Evaluation Model Theory

Stufflebeam (2003) criticized Tyler's behavioral goal model and developed the CIPP evaluation model (also known as decision oriented or improvement oriented evaluation model) in the late 1960s. It aims to help improve and achieve accountability in American school curricula, especially those dedicated to improving teaching and learning in school districts. This model includes four evaluation indicators: Context Evaluation, Input Evaluation, Process Evaluation, and Product Evaluation. It provides evaluators with several important functions. Environmental assessment is used to assess the needs, problems, and opportunities in a specific environment. It helps evaluators define and evaluate goals, and then refer to the evaluation needs of target beneficiaries to determine school plans, teaching courses, consulting services, teacher evaluation systems, or other businesses. Input evaluation is used to evaluate the work plan and budget for competitive strategy and the methods chosen for implementation. It helps evaluators design improvement work, develop defensible funding proposals, develop detailed action plans, document alternative plans considered, and document the basis for selecting one method over others. Process evaluation refers to recording and evaluating activities. It helps evaluators with improvement work and maintains a record of their responsibility for executing action plans. Result evaluation can identify and evaluate short-term, long-term, expected, and unexpected outcomes. It helps evaluators focus on meeting the needs of students or other beneficiaries. Assess and document their level of success in achieving and meeting the target needs of beneficiaries. Identify intentional and unintentional side effects and make wise decisions to determine the continuation, cessation, or improvement of the plan.

This study determined the four dimensions of the evaluation system based on the four indicators of CIPP, and then constructed the overall framework of the evaluation index system for innovation and entrepreneurship education in universities, as well as the main and sub indicators of each dimension. This study lays the foundation for the construction and application of an evaluation model for innovation and entrepreneurship education in universities.

2.1.3 Meta Evaluation of Innovation and Entrepreneurship Education

Ketikidis (2012) believes that the evaluation of innovation and entrepreneurship education should not be limited to rote memorization, but should test students' reaction and higher-order thinking abilities. He believes that evaluation methods such as group reports, research papers, case studies, business plans or strategy development can be used to evaluate the innovation and entrepreneurship capabilities of universities. Herstatt (2014) believes that innovation and entrepreneurship education evaluation is a component of educational evaluation, and has evaluated entrepreneurship education in universities through the GIM program. He believes that evaluation indicators include student behavior, innovation intention, knowledge acquisition, and skill return, involving process evaluation and outcome evaluation. Basu (2014) elaborated on the evaluation system of entrepreneurship education in India. He believes that Indian business schools regard entrepreneurship as a fundamental course in business education, covering various aspects such as self entrepreneurship, joint entrepreneurship, and internal entrepreneurship, which to some extent promotes knowledge creation. Pittaway (2016) constructed an evaluation system for entrepreneurial education practice. He believes that there is little difference in entrepreneurship education between the United States and the United Kingdom, but universities are more focused on entrepreneurship education skills and practice.

Rasmussen (2016) drew 10 case studies based on the database curriculum outlines of seven universities in Denmark. After case analysis, he believes that formative assessment, learner centered assessment, and summative assessment are the three main forms of evaluation for innovation and entrepreneurship education.

2.2 Standards for Evaluating Innovation and Entrepreneurship Education

In 2023, the Implementation Opinions of the State Council of China on Deepening the Reform of Innovation and Entrepreneurship Education in Higher Education Institutions emphasized the need to improve talent training standards, formulate and implement national standards for the quality of professional teaching in universities, revise and implement teaching standards for higher vocational colleges, clarify the goals and requirements of innovation and entrepreneurship education in higher vocational colleges, universities, and universities, and promote the spirit of innovation and entrepreneurship Innovation and entrepreneurship ability has become an important indicator for evaluating the quality of talent cultivation. This study searched relevant databases such as CNKI and found that there is relatively little research on the evaluation criteria for innovation and entrepreneurship education in China. Huang Yao (2017) conducted a study on the National Standards for Entrepreneurship Education in the United States, proposing that the National Standards for Entrepreneurship Education in the United States include two parts: Content Standards and Practice Standards. The Content Standards include three parts: entrepreneurial trait abilities (entrepreneurial process, entrepreneurial quality, and business foundation), entrepreneurial knowledge abilities (communication and interpersonal skills, digital technology, economic knowledge, financial literacy, professional development and planning, financial management, and human resource management), and business operation abilities (information management, marketing management, operational management, risk management, and strategic management). The Practice Standards include three parts: the training objectives of entrepreneurship education, curriculum design (curriculum content, curriculum implementation), and organizational management (establishment of entrepreneurship education teaching evaluation mechanism, improvement of entrepreneurship service system, and improvement of entrepreneurship education resource guarantee system). Wang Xingyang (2023) compared the core content of the National Standards for Entrepreneurship Education between China and the United States, and proposed that the core ideas of the National Standards for Entrepreneurship Education in the United States include four aspects: self realization of individual value goals, enhancing individual entrepreneurial ability, advocating lifelong learning, and the positive impact of entrepreneurship education on society; Basic Requirements for Entrepreneurship Education in Ordinary Higher Education Institutions in China (Trial) The core concept of "taking the transformation of educational ideas and updating educational concepts as the guide, enhancing students' sense of social responsibility, innovative spirit, entrepreneurial awareness and ability as the core, focusing on reforming talent training models and curriculum systems, based on the actual situation of professional education, vigorously promoting innovation and entrepreneurship education in higher education through professional education reform, and continuously improving the quality of talent training.". He believed that there are different motivations for entrepreneurship education standards in China and the United States, and the implementation of entrepreneurship education should focus on two aspects: continuity and completeness of content.

Li Kemin et al. (2016) proposed that evaluation criteria are an effective means of testing and standardizing the results of entrepreneurship education and training. The standards for entrepreneurship education should include three aspects: training objective standards, content standards, and evaluation standards. The diversity of teaching subjects and interdisciplinary nature of educational content in entrepreneurship education require that the standards for entrepreneurship education should be a universal standard. He believes that different majors can adjust their standards appropriately based on common standards and their own disciplinary content, in order to form specific standards for each major. Cui Jun (2017) proposed in his research on the EU Entrepreneurial Competency Framework that the EU Entrepreneurial Competency Framework provides a reference framework for EU countries in defining and describing entrepreneurial competence, and developing entrepreneurial competence at the knowledge, skills, and attitude levels. It also serves as a scientific tool for the EU to cultivate students' entrepreneurial abilities and evaluate the effectiveness of entrepreneurship education. The EU Entrepreneurial Capability Framework includes conceptual models and advanced models. It defines three areas of entrepreneurial ability: ideas and opportunities, resources and actions. It explains 15 specific entrepreneurial abilities and designs 8 levels of advanced learning models for entrepreneurial abilities. It has developed 60 entrepreneurial ability observation points and 422 entrepreneurial ability learning outcome indicators. This framework has the characteristics of comprehensiveness, scientificity, flexibility, and operability.

3. The Objects and Subjects of Innovation and Entrepreneurship Education Evaluation

The object of educational evaluation is the object of value judgment. It is a question about who to evaluate. Generally speaking, the evaluation object can be any element in the field of education. It can be a participant (character) in education, such as teachers, students, educational administrators, etc. It can also be educational phenomena and activities (things), such as educational policies, educational systems, educational activities, educational content, and educational effects. The content and specific indicators of educational evaluation may vary depending on the target audience. An evaluation activity should start with determining the evaluation object, and clarifying the evaluation object is a prerequisite for conducting evaluation work. The so-called evaluators refer to those who participate in the organization and implementation of educational evaluation activities. Individuals or groups who make value judgments on evaluation objects according to certain standards. The evaluation subject of innovation and entrepreneurship education. It answers the question of "who will evaluate".

The subject of educational evaluation can be both teachers and students. It can also be educational administrative institutions, employers, and parents of students. Therefore, all stakeholders in education can serve as evaluators. Education evaluation can be divided into "individual evaluation" and "social evaluation" due to its different subjects and needs. In this study, an independent project research team served as the evaluator. The evaluation object of this study is the innovation and entrepreneurship education activities in universities. The evaluation of innovation and entrepreneurship education in universities belongs to "social evaluation".

4. Implementation of Innovation and Entrepreneurship Education Evaluation

4.1 Design Process of Evaluation Indicators

Compared to higher education at the university level, Chinese higher education has certain characteristics in terms of academic system, talent training positioning, and natural attributes of student sources. The ways, means, and paths of student employment and entrepreneurship also have unique characteristics. Therefore, based on the opinions and suggestions of innovation and entrepreneurship education research experts and relevant work leaders. This article is based on the CIPP evaluation model theory proposed by American education evaluation expert Stufflebeam. Through literature analysis, literature on innovation and entrepreneurship education in universities at home and abroad is extensively collected, and the current practice status of innovation and entrepreneurship education in five universities is "indexed". This study preliminarily established an evaluation index pool for innovation and entrepreneurship education in universities. This study used the Delphi method to interview 15 innovation and entrepreneurship experts, teachers, and related work leaders from the top 5 universities in China (including 5 experts engaged in innovation and entrepreneurship education research, 5 leaders in charge of innovation and entrepreneurship education in universities, and 5 full-time teachers in innovation and entrepreneurship education). This article supplements and revises the proposed evaluation indicators for innovation and entrepreneurship education in universities, after three rounds of soliciting opinions. This study ultimately determined various evaluation indicators and constructed an evaluation index system for innovation and entrepreneurship education in universities. This study developed a survey questionnaire on the importance of various indicators based on the evaluation index system, and re interviewed the 15 experts, full-time teachers, and project leaders mentioned above to determine the importance of each indicator. This study used Excel software to summarize the importance scores of various evaluation indicators obtained from universities. The Analytic Hierarchy Process (AHP) and Excel software were used to assign values to various indicators and determine their weights, in order to construct an evaluation model for innovation and entrepreneurship education in universities.

4.2 Construction of Evaluation Index System

On the basis of designing evaluation indicators, this study constructs an evaluation index system for innovation and entrepreneurship education in universities based on the CIPP evaluation model theory and the logical relationship between various indicators. It is specifically shown in Table 1. The evaluation index system includes four primary indicators: Context evaluation, Input evaluation, Process evaluation, and Product evaluation, 11 secondary indicators, and 28 tertiary indicators. In the first level indicator of innovation and entrepreneurship environment, there are six third level indicators, including external support environment, school implementation environment, and student background. The investment in innovation and entrepreneurship education includes three indicators: the construction of teaching staff, the current status of funding investment, and the construction of practical platforms, with nine three-level indicators set under it. The process of innovation and entrepreneurship education includes three indicators: curriculum system design, service guidance and support, and

student participation process, with nine three-level indicators under it. The results of innovation and entrepreneurship education include two indicators: social impact and educational effectiveness, with four three-level indicators under it.

Table 1. Evaluation index system for innovation and entrepreneurship education in universities

Primary Indicators	Secondary Indicators		Third-level Indicators
Innovation and entrepreneurship education environment C	External support environment C1	1	Government support policies C11
		2	Social assistance situation C12
	Implementation environment of universities C2	3	Talent training program C21
		4	Organizational management structure C22
		5	Formulation of a distribution system for entrepreneurial benefits C23
	Entrepreneurship ability in universities C3	6	Signing status of technology transfer C33
Investment in innovation and entrepreneurship education I	Construction of teaching staff I1	7	On campus teaching staff configuration I11
		8	Allocation of External Entrepreneurship Mentors I12
		9	Allocation of full-time teachers I13
		10	The proportion of teachers with entrepreneurial experience I14
	Current status of funding investment I2	11	On campus special fund guarantee I21
		12	Personal investment of students I22
	Practice platform construction I3	13	Number and scale of practical teaching bases I31
		14	Number and scale of events held I32
		15	The opening situation of teachers and students in the practice base I33
The process of innovation and entrepreneurship education P	Curriculum System Design P1	16	The proportion of courses in this major P11
		17	The proportion of course hours to the courses in this major P12
		18	The proportion of course credits to courses in this major P13
		19	The penetration of courses in professional courses P14
	Service guidance support P2	20	Information release on innovation and entrepreneurship P21
		21	Construction of Innovation and Entrepreneurship Guidance Institutions P22
		22	Construction of Innovation and Entrepreneurship Education Societies P23
	Student participation process P3	23	Course attendance P31
		24	Student participation in activities P32
Results of Innovation and Entrepreneurship Education P*	Social influence P*1	25	Number of successful alumni P*11
		26	Number of enterprises trained in practical training bases P*12
	Educational effectiveness P*2	27	Improvement of Student Entrepreneurship Quality P*21
		28	The proportion of graduates starting businesses to employed students P*22

5. The Construction of an Evaluation Model for Innovation and Entrepreneurship Education in Universities

5.1 Indicator System Questionnaire Design

This study used the Analytic Hierarchy Process (AHP) to design a questionnaire, which was designed in the form of pairwise comparison of indicators at the same level and belonging to the same category. The questionnaire format for this study is an anonymous questionnaire. The questionnaire was sent to 15 experts to answer separately, and the experts did not communicate with each other and filled out the questionnaire independently. The questionnaire results of each expert are only known to the expert themselves and this study.

Due to the need to form a unified matrix table for the final questionnaire results, after the questionnaire was collected, this study conducted statistical analysis on the questionnaire and returned it to 15 experts. Expert opinions were collected again to modify the existing matrix table. After four rounds of revisions, a matrix table was finally formed that was recognized by 15 experts.

5.2 Calculation Results

This study normalized the matrix table and performed weight calculation. The results of this study are shown in Table

2. This study conducted a consistency test on the matrix, first calculating the CI value, and then calculating the CR value (consistency ratio) based on the RI indicator table. According to this study, all matrices passed the consistency test.

Table 2. Matrix Consistency Test（CI Value）

Index data	1	2	3	4	5	6	7	8	9
RI	0	0	0.58	0.9	1.12	1.24	1.38	1.41	1.46

Table 3. Consistency Ratio

Primary Indicators	Weight	Secondary Indicators	Weight	Third-level Indicators	Weight
Innovation and entrepreneurship education environment C	10.94%	External support environment C1	64.70%	Government support policies C11	66.67%
				Social assistance situation C12	33.33%
		Implementation environment of universities C2	7.64%	Talent training program C21	20.59%
				Organizational management structure C22	7.08%
				Formulation of a distribution system for entrepreneurial benefits C23	72.33%
		Entrepreneurship ability in universities C3	27.66%	Signing status of technology transfer C33	100.00%
Investment in innovation and entrepreneurship education I	8.74%	Construction of teaching staff I1	11.96%	On campus teaching staff configuration I11	25.09%
				Allocation of External Entrepreneurship Mentors I12	58.36%
				Allocation of full-time teachers I13	10.94%
		Current status of funding investment I2	33.12%	The proportion of teachers with entrepreneurial experience I14	5.61%
				On campus special fund guarantee I21	88.89%
				Personal investment of students I22	11.11%
		Practice platform construction I3	54.92%	Number and scale of practical teaching bases I31	33.24%
				Number and scale of events held I32	58.70%
				The opening situation of teachers and students in the practice base I33	8.06%
The process of innovation and entrepreneurship education P	18.71%	Curriculum System Design P1	7.38%	The proportion of courses in this major P11	26.69%
				The proportion of course hours to the courses in this major P12	15.55%
				The proportion of course credits to courses in this major P13	24.87%
				The penetration of courses in professional courses P14	32.89%
		Service guidance support P2	64.34%	Information release on innovation and entrepreneurship P21	23.90%
				Construction of Innovation and Entrepreneurship Guidance Institutions P22	13.76%
				Construction of Innovation and Entrepreneurship Education Societies P23	62.34%
		Student participation process P3	28.28%	Course attendance P31	80.00%
				Student participation in activities P32	20.00%
	61.61%	Social influence P*1	80.00%	Number of successful alumni P*11	14.29%
				Number of enterprises trained in practical training bases P*12	85.71%
		Educational effectiveness P*2	20.00%	Improvement of Student Entrepreneurship Quality P*21	80.00%
				The proportion of graduates starting businesses to employed students P*22	20.00%

According to the results in Table 3, this study found that innovation and entrepreneurship education results are considered the most important among the primary indicators. Its weight proportion is 61.61%. The process of innovation and entrepreneurship education accounts for 18.71% and ranks second. From the calculation results in the table, it can

be seen that the current view on innovation and entrepreneurship education is still result oriented. The outcome of the entire education process determines whether universities will continue to increase resource investment in innovation and entrepreneurship education.

In the secondary indicators of innovation and entrepreneurship education environment, the proportion of external environmental support exceeds 60%. This result is related to the real environment faced by innovation and entrepreneurship education. Although innovation and entrepreneurship education is completed in universities, its implementation requires practical testing in society. The more favorable the external environment is for innovation and entrepreneurship, the more students will be willing to receive education related to innovation and entrepreneurship. In the external environment, the proportion of government support far exceeds social assistance. This indicates that government policies have a decisive impact on social development. The efficient development of innovation and entrepreneurship also depends on government policy support. The second ranked is the school's entrepreneurial ability, specifically referring to the signing process of technology transfer. This indicator directly reflects the benefits of innovation and entrepreneurship education in the future career development of students. The implementation environment of universities accounts for 7.64%, with the formulation of the distribution system for entrepreneurial benefits accounting for the vast majority of the implementation environment.

In the secondary indicators of investment in innovation and entrepreneurship education, the weight proportions are practice platform construction (54.92%), current funding status (33.12%), and teacher team construction (11.96%). The construction of practical platforms determines the practical application testing and result analysis of innovation and entrepreneurship education received. Platform construction is an indispensable component of innovation and entrepreneurship education in universities. Innovation and entrepreneurship education is an applied education based on practice, and its frequency and scale will have a significant impact on the final outcome of innovation and entrepreneurship education. The investment in funds and the construction of teaching staff more demonstrate the auxiliary functions of platform construction. It is the fundamental part of platform construction, and the investment of financial, material, and human resources is also the determining factor of platform construction. These three factors interact and influence each other.

The secondary indicators of the innovation and entrepreneurship education process include curriculum system design (7.38%), service guidance and support (64.34%), and student participation process (28.28%). Among the three secondary indicators, the weight of service guidance and support exceeds 60%. It shows that there is still a significant lack of guidance and support for students outside of the curriculum in the current innovation and entrepreneurship education system.

In the secondary indicators of innovation and entrepreneurship education results, the weight of social impact accounts for 80%, and the proportion of educational effectiveness is 20%. Among them, the number of base training enterprises accounts for over 85% in terms of social impact.

5.3 Overall Analysis and Application Design of Indicator System

After questionnaire design, statistical results, and weight calculation, this study ultimately developed a weighted evaluation index system for innovation and entrepreneurship education in universities. This indicator system is a tool for evaluating the current development status of innovation and entrepreneurship education in universities. From an overall perspective, the focus of this article is whether there are good results in innovation and entrepreneurship education. It is also the most important factor in evaluating the overall situation of innovation and entrepreneurship education in universities. The indicator system designed by this research institute starts from the starting point of innovation and entrepreneurship education in universities and conducts comprehensive evaluation. The indicator system constructed in this study has sufficient accuracy and representativeness for evaluation.

After designing the indicator system and calculating its weights, it is necessary to design the application of the indicator system. This study designs the scoring application of the indicator system as a scoring mode, with a maximum score of 100 points. This article scores the third level indicators with a maximum score of 100 points. Based on the current situation of innovation and entrepreneurship education in universities, this study scored the university's innovation and entrepreneurship education according to the three-level indicators, and finally calculated the total score of the university's innovation and entrepreneurship education.

6. Conclusions and Suggestions

6.1 Research Conclusions

6.1.1 Established evaluation indicators for innovation and entrepreneurship education in universities

On the basis of drawing on the research results of innovation and entrepreneurship education evaluation and education quality evaluation both domestically and internationally, this study constructed an evaluation index system for innovation

and entrepreneurship education in universities based on the CIPP evaluation model. The formation of this evaluation index system has gone through three main stages.

Phase 1: This article used the Delphi method to visit innovation and entrepreneurship experts and relevant work leaders from 5 universities, and screened and evaluated the preliminary 39 evaluation indicators for innovation and entrepreneurship education in universities. This study ultimately determined the evaluation index system for innovation and entrepreneurship education in universities (28 items).

Phase 2: This article once again used the Delphi method to visit 15 innovation and entrepreneurship experts and relevant leaders from 5 universities. This study evaluated the importance of evaluation indicators for innovation and entrepreneurship education in universities, and ultimately determined an indicator system for the current evaluation status of innovation and entrepreneurship education in universities, including 4 primary indicators, 11 secondary indicators, and 28 tertiary indicators.

6.1.2 Constructing an evaluation model for innovation and entrepreneurship education in universities

On the basis of analyzing the current development and future plans of innovation and entrepreneurship education in universities, this study establishes an evaluation index system for innovation and entrepreneurship education in universities. This study developed a survey questionnaire based on the established evaluation index system for innovation and entrepreneurship education in universities. Five universities in Guangdong Province were selected to conduct a survey on the importance of various indicators among innovation and entrepreneurship leaders, experts in innovation and entrepreneurship education, and full-time teachers. This study used the Analytic Hierarchy Process (AHP) to calculate the weights of each indicator at a single level and the overall ranking of weights for each level using Excel software. This study ultimately constructed an evaluation model for innovation and entrepreneurship education in universities based on the CIPP model.

6.2 Suggestions

6.2.1 The Function and Evaluation of Innovation and Entrepreneurship Education in Universities

Currently, there are two main forms of innovation and entrepreneurship education in universities. One type is innovation and entrepreneurship courses and teaching activities such as the "Spark Plan" aimed at students on campus. Another type is external training aimed at employment and entrepreneurship for social personnel. At the school level, although various universities have generally carried out large-scale innovation and entrepreneurship education and built innovation and entrepreneurship practice platforms, some university innovation and entrepreneurship teachers are mostly undertaken by ideological and political teachers or moral education teachers. The integration of innovation and entrepreneurship education concepts and knowledge in professional courses and practical courses in universities is still at a relatively shallow level. The development, positioning, and evaluation focus of innovation and entrepreneurship education in universities need further in-depth research in the future.

6.2.2 Training and Evaluation of Innovation and Entrepreneurship Teachers in Universities

In February 2019, "China Education Modernization 2035" proposed to improve the system of teacher titles, positions, and assessment and evaluation. It can be seen that actively addressing and properly arranging the professional titles, positions, and assessment of innovation and entrepreneurship teachers has become an urgent task. There is a common problem in the current innovation and entrepreneurship education in Chinese universities, which is the construction of specialized innovation and entrepreneurship teaching staff.

Building a high-quality team of innovation and entrepreneurship teachers not only requires solving the problem of teaching content, but also measuring the ability level of innovation and entrepreneurship teachers through scientific and unified evaluation standards and tools. Therefore, the cultivation and evaluation of innovation and entrepreneurship teachers in universities will also be one of the focuses of future research.

6.2.3 Diagnosis and Improvement of Innovation and Entrepreneurship Education in Universities

This study is based on the basic theory of educational evaluation, and the evaluation of innovation and entrepreneurship education in universities can be regarded as a diagnosis of innovation and entrepreneurship education. Diagnosis originates from medical terminology, with the aim of identifying problems and providing targeted solutions. However, this study found that there are significant differences in the infrastructure construction conditions and economic development levels of different universities, making it difficult to propose corresponding improvement measures uniformly. Therefore, this study regards the diagnosis and improvement of innovation and entrepreneurship in universities as two stages, with evaluation as the main content of this paper. As for the problems discovered after evaluation (diagnosis), it is necessary for each university to propose improvement measures that are in line with its own characteristics based on the actual situation and professional settings of the university, in order to promote the continuous improvement of the level of innovation and entrepreneurship education in higher education and achieve the goal of establishing higher education that satisfies people.

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