Curriculum Quality System Model of Entrepreneurship and Innovation Education in Vocational Colleges Across the Straits Based on Internet+

Jun Guo[1(✉)] and Zhan-yong Chen[2,3]

[1] Quanzhou University of Information Engineering College of Software, Quanzhou 362000, China
`lcg02650@163.com`
[2] International Business School of Beijing, Foreign Studies University, Beijing 100089, China
[3] Zhengzhou Foreign Language School, Affiliated to Beijing Foreign Studies University, Zhengzhou 450121, China

Abstract. With the rapid development of the Internet in the information age, entrepreneurship and innovation education courses have had a huge impact on the traditional teaching model of higher education. In order to improve the quality of entrepreneurship and innovation education in vocational colleges, an internet+ -based model for the quality system of entrepreneurship and innovation education in cross-strait vocational colleges is proposed. To review the literature on entrepreneurship and innovation education courses, curriculum evaluation, and quality evaluation of entrepreneurship and innovation education courses, and to study the elements of entrepreneurship and innovation education course quality evaluation to extract influencing factors of education quality; combined with network analytic hierarchy process (ANP) Super Decision software calculates the weight coefficient of the quality evaluation index system for education courses. Develop and distribute questionnaires for the evaluation of course quality, collect relevant empirical data, and verify the scientificity of the questionnaire through reliability and validity tests. Based on the scoring results and the weight coefficient of the evaluation index system, the key factors affecting the quality of entrepreneurial innovation education courses are derived. Based on the survey data, descriptive statistics, analysis of variance, and Pearson's correlation coefficient method were used to verify the research hypothesis and valuable empirical results were obtained. In addition, the method of this paper is compared with the traditional method to prove the effectiveness of the model of curriculum quality system designed this time.

Keywords: Internet+ · Vocational college · Entrepreneurial innovation · Education courses · Quality system model

1 Preface

In order to make better use of the radiation effect of high-quality education resources and meet the increasingly individualized learning needs of learners, educational institutions at all levels in China have comprehensively carried out mixed teaching reforms of traditional courses and entrepreneurial innovation education courses [1]. Many colleges and universities have established entrepreneurship and innovation education courses centers to independently develop entrepreneurship and innovation education courses and carry out traditional digital work of teaching materials. There are also some well-known universities that cooperate with large MOOC platforms to introduce massive high-quality entrepreneurial and innovative resources directly into traditional courses. Since 2012, Udacity, Coursera and Edx have provided hundreds of high-quality entrepreneurship and innovation education courses to registered learners from all over the world. China's Peking University, Tsinghua University and other top universities also joined in in 2013, and have established cooperative relationships with foreign entrepreneurship and innovation education curriculum platforms, sharing the independently developed entrepreneurial innovation education courses on the platform [2]. In the context of Internet +, entrepreneurship and innovation education courses are not simply using Internet tools to transfer traditional courses to online platforms. We must organically combine the course attributes of the entrepreneurial innovation education course from the characteristics of the network environment in the course development and teaching design to promote the deeper integration of online and offline education resources.

Improving the quality of entrepreneurship and innovation education is an issue that cannot be ignored in the development of higher education. At present, many colleges and universities have launched a wide range of entrepreneurship and innovation education courses, and the number of students learning entrepreneurship and innovation education courses is increasing. However, many problems have been exposed in the development of entrepreneurship and innovation education courses, which have not yet been effectively resolved. Research on the quality evaluation of entrepreneurial innovation education curriculum has become an urgent problem to be solved [3]. At present, there are few empirical studies on the quality evaluation of entrepreneurship and innovation education courses, and more is to explore the quality of entrepreneurship and innovation education courses from a macro level, and there is no analysis of the quality evaluation of entrepreneurship and innovation education courses from a micro perspective. By constructing an indicator system for the quality evaluation of entrepreneurial innovation education courses, this paper conducts an empirical study on the quality of entrepreneurial innovation education courses, collects and analyzes relevant empirical data, and provides effective empirical materials and method references for the study of the quality evaluation of entrepreneurial innovation education courses. The improvement and development of the curriculum evaluation system for entrepreneurial innovation education has enriched the significance of the quality management theory of entrepreneurial innovation education curriculum [4].

High-quality educational resources are the core value of entrepreneurship and innovation education courses. Ensuring the quality of courses is the foundation for the sustainable and healthy development of entrepreneurship and innovation education. Therefore, the evaluation of the quality of entrepreneurship and innovation education courses is an

important first step to improve the quality. In order to effectively promote the popularization and internationalization of higher education, bring into play the radiation effect of large-scale entrepreneurship and innovation education courses, and form a new way of lifelong learning system, it is necessary to place the improvement of the quality of entrepreneurship and innovation education courses in an important strategic position [5]. This paper uses questionnaire surveys and data analysis to study the current situation of the quality of entrepreneurship and innovation education courses, finds out the problems in the quality management of entrepreneurship and innovation education courses through statistical analysis, and gives practical suggestions for the key influencing factors of entrepreneurship and innovation education courses. The quality of entrepreneurship and innovation education courses and the promotion of mixed teaching reforms provide effective evidence and policy references.

2 Cross-Strait Vocational Schools Entrepreneurship and Innovation Education Curriculum Quality System Model Design

2.1 Analysis of the Elements of the Quality System Model of Entrepreneurial Innovation Education

The selection based on core elements should have the principles of guidance, timeliness, entrepreneurial innovation, practicality, and acceptability. At the same time, the preliminary selection of survey results should be based on the rules that the level of selection results should be consistent. The core elements of the system model in this paper are The core elements of space, regional cognition, human-land conception, time perspective, comprehensive thinking, entrepreneurial innovation practice ability, map skills, globalization awareness, survivability, scale correlation, entrepreneurial innovation expression, entrepreneurial innovation tools and technologies, etc. [6].

The results of the preliminary selection of the core literacy elements of this article are combined with the connotation of the entrepreneurial innovation education curriculum standards of the vocational colleges across the Taiwan Strait to combine the connotations of the four major elements and the connotations of the main performances (Fig. 1).

Analyze the connotation and significance of the five entrepreneurial innovation core literacy embodied in the core literacy of entrepreneurial innovation, and clarify their respective priorities in constructing the core literacy system model of entrepreneurial innovation, and clarify the system element relationship for the construction process.

As can be seen from the above figure, based on the survey results, the elements that have been preliminarily selected to build a model of the core literacy system for entrepreneurial innovation can be incorporated into the four core literacy.

Entrepreneurship and innovation educators have pointed out that "all entrepreneurial innovation phenomena, all entrepreneurial innovation events, all entrepreneurial innovation effects, and all entrepreneurial innovation processes on the surface of the earth all take place on the basis of the entrepreneurial innovation space. The entrepreneurial innovation The systematic research of space, or the connotation of the distribution, form, structure, laws and other connotations of the entrepreneurial innovation space, the rest of
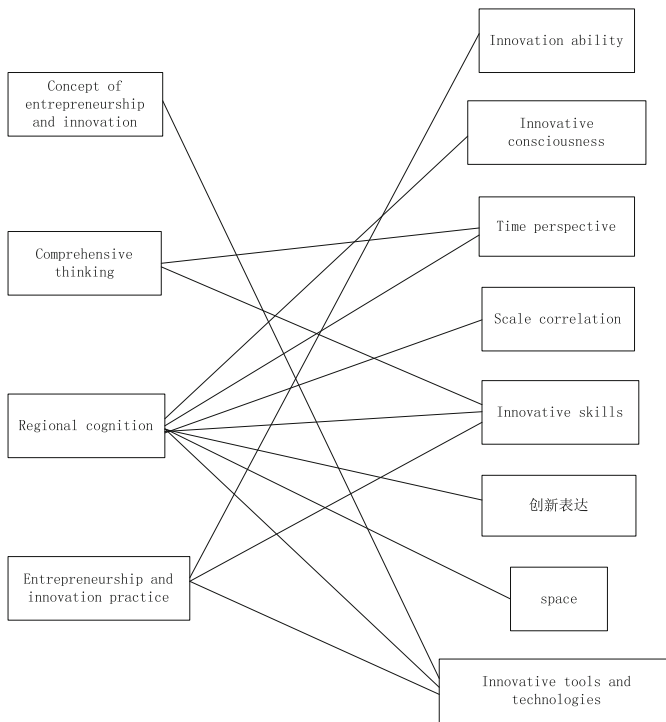
Fig. 1. Consolidation of the core elements of the preliminary selection

the theoretical principles related to entrepreneurial innovation, without exception, will lose their existence. "Entrepreneurship and innovation emphasizes regionality. Regions are divided according to certain standards from a spatial scale. From the perspective of space, everything is an entrepreneurial innovation perspective of entrepreneurship and innovation education. It is the basic idea of entrepreneurship and innovation education. The four literacy connotations given by the group are not appropriate in the simple integration of entrepreneurial innovation space into regional cognition. Therefore, the core elements for constructing the core literacy system model of entrepreneurial innovation in this paper are the four elements of core literacy and the spatial perspective, that is, the human-land concept, spatial perspective, comprehensive thinking, regional cognition, and entrepreneurial innovation practice.

2.2 Set the Weight Coefficient of the Quality System Index for Entrepreneurial Innovation Education

Considering that the entrepreneurial innovation education curriculum is an organic combination of teaching activities and network environment, the construction of a curriculum quality system must cover all influencing factors. And there are many factors influencing the quality of entrepreneurial innovation education courses. Judging from the characteristics of the curriculum activities, the possibility of maintaining independent

existence among indicators is very small, and there may be a certain interdependence and interaction relationship. Therefore, in the selection of methods, we must consider the impact of this correlation between indicators on the quality evaluation results of entrepreneurial innovation education courses. At present, the construction of the evaluation index system for the quality of entrepreneurship and innovation education courses is mainly based on the AHP method, which cannot take into account the dependencies and feedback relationships between the factors that influence the quality of entrepreneurship and innovation education courses. Weighting factor for quality indicators. Calculate the unweighted supermatrix. The unweighted supermatrix can choose the criteria of the judgment matrix and the element set of which the judgment matrix is constructed. The association of all elements in all element sets will be quantitatively reflected in the way of this judgment matrix. After the unweighted super matrix is established, the super matrix can be weighted. Finally, in order to reflect the dependency relationship of the elements, the stability of the weighted matrix is calculated by calculating the limit super matrix of the weighted matrix [7].

According to the calculation results of the Super Decision software, the global weights of the quality evaluation indicators of entrepreneurial innovation education courses are obtained. The results are shown in Table 1.

Through the combination of qualitative and quantitative methods, a quality evaluation index system for entrepreneurship and innovation education courses was established and weights were determined for each indicator, making sufficient preparations for the construction of the entrepreneurship and innovation education course quality system.

2.3 Constructing a Quality System Model for Entrepreneurship and Innovation Education

The construction of the core literacy system model of vocational colleges' entrepreneurship and innovation is the unification of guiding ideology, operating methods, construction principles, model frameworks, and specific filling index systems, and requires coordinated operations.

There are two basic methods for constructing a model of the core literacy system of entrepreneurial innovation: the first is the discipline-based thinking, based on the characteristics of the entrepreneurial innovation discipline, selecting core and key elements from the constituent elements of the entrepreneurial innovation literacy to build a system; Thinking, starting from social needs, and seeking contributions to the cultivation of future qualified citizens in the discipline of entrepreneurship and innovation, involves the selection of key elements [8]. The "Opinion" points out that cultivating students' core literacy system is to enable students to have the necessary characters and key abilities to meet the needs of lifelong development and social development. It is a learning result that trains students according to social needs and is a socially-oriented need Based on this, this article adopts the second idea to build a core literacy system for entrepreneurship and innovation in vocational colleges.

The core literacy system model of entrepreneurship and innovation in vocational colleges is the main content of the academic quality standards reached by students after the completion of the higher education stage. The level division of each element constitutes the main part of the system model and should be hierarchical. In the process

Table 1. Global power of quality evaluation indicators for entrepreneurial innovation education

Control layer	Two level index	Three level index	ANP weight
Curriculum quality of entrepreneurship and innovation education	Curriculum preset	Course description	0.060090
		Environment creation	0.014004
		Goal setting	0.031365
		Interest arousing	0.121398
	Curriculum interaction	Student interaction	0.047685
		Media presentation	0.154391
		Target collaboration	0.084266
		Interface design	0.033207
		Teacher-student interaction	0.264721
	Course support	network transmission	0.030863
		Operational assistance	0.039793
		Content linkage	0.012347
		Download mode	0.027683
	Curriculum analysis	Data analysis	0.011360
		Achievement evaluation	0.006441
		Intelligent learning	0.045928
		Duration of course	0.006085
		Language standard	0.008374

of level-specific division of the index system, the thematic method of interpretation, the method of screening elements, etc. are mainly used; the reference teaching goal statement process includes the Majestic behavior statement method, Glenland internal and explicit behavior combination statement method, Eisner performance Declarative method. The model construction process in this paper mainly adopts a flexible declarative method combining three technologies, supplemented by literature reference method.

The core literacy system model of entrepreneurship and innovation in vocational colleges is the concrete implementation of the core literacy system in the discipline of entrepreneurship and innovation in China's higher education stage. The construction process should follow the following principles: first, it must reflect the future entrepreneurial and innovative needs of qualified citizens; It is necessary to highlight the unique educational value of the entrepreneurial and innovative discipline; thirdly, to lead the direction

of entrepreneurial and innovative curriculum reform and teacher professional development; fourthly, to undertake effective vertical connection with other academic levels; fourthly, to closely follow international Under the premise of the reform trend of entrepreneurial innovation education, we should pay attention to the current situation of China's basic national conditions. Sixth, we should pay attention to the integration of horizontal lines between different disciplines.

Entrepreneurial innovators point out that looking at everything from space is the basic perspective of entrepreneurial innovation. The American National Entrepreneurship and Innovation Curriculum Standard states that a spatial perspective enables students to participate in human, regional, and environmental issues related to the world around them; it helps students answer important questions such as past, present, and future spatial organizational structures, and can predict events in different regions The results and predictions of what might happen under certain conditions underscore the importance of a spatial perspective for training qualified future talents in the country. Based on this, the spatial perspective should run through the entire process of cultivating high school students' entrepreneurial innovation core literacy. Based on this, based on the four major elements of the standard group of entrepreneurship and innovation courses in vocational colleges, this article builds a model of the core literacy system for entrepreneurship and innovation of higher vocational students as shown in Fig. 2.
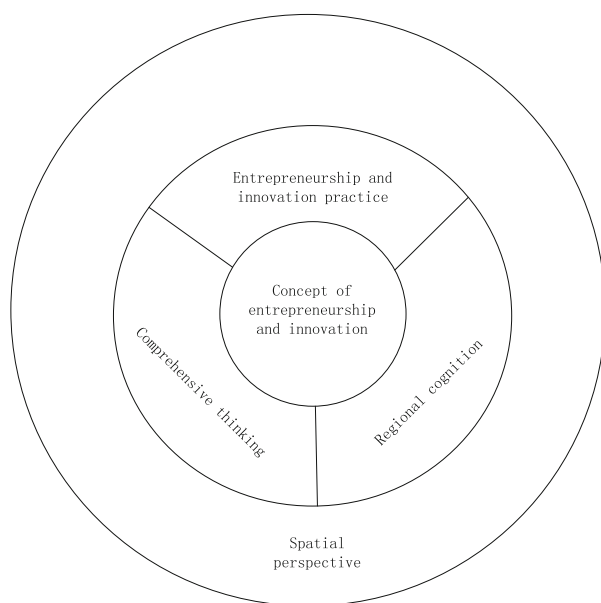

Fig. 2. Model of core literacy system for entrepreneurship and innovation of higher vocational students

The model is viewed from the inside to the outside. At the innermost level is the concept of entrepreneurship and innovation, which is essential for the study of entrepreneurship and innovation. The correct concept of entrepreneurship and innovation is the

ultimate goal of cultivating the core literacy system of entrepreneurship and innovation for higher vocational students. Located on the second layer are comprehensive thinking, regional cognition, and entrepreneurial innovation practice: the discipline of entrepreneurial innovation has two characteristics of comprehensiveness and regionality. Based on this, two major factors of regional cognition and comprehensive thinking of the core literacy of entrepreneurial innovation are proposed; In addition to these two characteristics, entrepreneurship and innovation is still a highly practical discipline. The scientific process of establishing a scientific concept of entrepreneurship and innovation, cultivating comprehensive thinking, and regional cognitive literacy cannot be separated from human practice. Higher vocational education should be cultivated more. Students' practical ability, instead of doing problems every day in the classroom; the three together constitute a way to cultivate the correct concept of human and land [9]. At the outermost level is a spatial perspective. Comprehensive thinking, regional cognition, and entrepreneurial innovation practice are inseparable from the spatial scale. It is like fish cannot be separated from water. The entrepreneurial innovation learning process cannot be separated from the perspective of spatial perspective. The phenomenon of innovation is the prerequisite for cultivating the three core elements of entrepreneurial innovation in the second tier.

Based on the composition and connotation of the five core literacy, construct a core literacy model for entrepreneurial innovation, as shown in Table 2:

From a horizontal perspective, the model is divided into core literacy, components, and specific connotations from left to right, following the construction idea of dividing core literacy by components and elaborating the content of each component. From a vertical perspective, the five core literacy are juxtaposed, the levels of each component are kept consistent, and the connotation interpretation focuses on operability and measurability [10].

3   Empirical Analysis

3.1   Questionnaire Analysis

This survey researches different types of student groups in science and engineering, social sciences, and art design disciplines in vocational colleges across the Taiwan Straits, respectively, and collects and collects data. The distribution of samples is shown in Tables 3 to 5 below. The number of boys participating in the survey accounted for 28.4%, and girls accounted for 71.6%. Among them, the number of seniors is the largest, with 132, and the number of seniors is the smallest, 104. The number of people classified by subject category is as follows: humanities and social sciences, science and engineering, agriculture, medical science, and art design (Table 4).

The average score of each indicator can be calculated through data calculation, see Table 6.

It can be seen from Table 6 that overall, the course interaction score is the lowest, and the course support score is the highest. The scores in descending order are course support, course analysis, course preset, and course interaction. The average scores for course description, goal setting, content connection, and course duration are relatively high; the average scores for environment creation, interest stimulation, interface design,

Table 2. Model of core literacy system of entrepreneurship and innovation education for higher vocational students

Five qualities	Component	Concrete connotation
Entrepreneurial innovation	The impact of entrepreneurship and innovation on Students	Correctly stating that entrepreneurship and innovation are the basis of human existence, and establishing scientific outlook on innovation, learning and education
		Rational view on the impact of entrepreneurship and innovation on human activities, and take reasonable measures
	The influence of students on entrepreneurship and innovation	Explain the process of students' activities adapting to entrepreneurship and innovation
		On the basis of following the learning law, we should transform the learning environment reasonably
		Analyze the impact of transforming learning environment
	Students' coordination of entrepreneurship and innovation	A correct understanding of the evolution of entrepreneurship and innovation education
		In the process of practice, we should follow the concept of coordinated development of entrepreneurship and innovation, and establish a science and technology department Entrepreneurship and innovation of learning
Spatial perspective	Feature space location	Be good at observing research objects and forming awareness of overall spatial pattern
	Feature space analysis	Integrate spatial related elements and analyze their interrelations comprehensively
Comprehensive thinking	Object innovation	Study regional integration and analyze its leading factors

Table 2. (*continued*)

Five qualities	Component	Concrete connotation
	Comprehensive analysis	Comprehensive analysis of the leading factors according to the problem orientation, including the integration of elements, space-time and education
Innovative cognition	Organization area	Region objectification, frame space position
	Learning area	Horizontal and vertical scanning, overall perception of the main characteristics of entrepreneurship and innovation
		Analyze the learning environment and conditions that form the main characteristics of the region
		Rational evaluation of regional policies to promote regional sustainable development
Entrepreneurship and innovation practice	Innovation and technology consciousness	Be good at using science and technology to describe the characteristics of learning environment
	Practical ability and quality	Using the knowledge we have learned to explain and reason the innovation around us, and making use of it to form a comprehensive thinking of attention perception explanation of innovation
		To survive under the condition of learning and maintain the solid and optimistic character of accumulation

and performance evaluation are relatively low. The environment creation score is the most serious in the course preset, and the interest stimulation score is also relatively low. The scores of student interaction, goal collaboration, and teacher-student interaction in the course interaction are relatively high; interface design scores are the worst. The content support part of the course supports the highest scores in connection, and the lowest download score. The order from highest to lowest is content contact, network transmission, operation assistance and download method. In the course analysis, scores were severely lost. From the analysis and comparison, it can be seen that the interactive part of the course with a low score is the key aspect that we need to pay attention to

Table 3. List of sample gender distribution

	Male	Female	Total
Number	130	328	458
Percentage	28.4	71.6	100
Effective percentage	28.4	71.6	100
Cumulative percentage	28.4	100	

Table 4. List of sample grade distributions

	Number	Percentage	Effective percentage	Cumulative percentage
First grade	106	23.1	23.1	23.1
Second grade	116	25.3	25.3	48.5
Grade three	104	22.7	22.7	71.2
Fourth grade	132	28.8	28.8	100
Total	458	100	100	

Table 5. List of sample disciplines

	Number	Percentage	Effective percentage	Cumulative percentage
Science, technology, agriculture and medicine	184	40.2	40.2	40.2
Social science	196	42.8	42.8	83
Art design	78	17	17	100
Total	458	100	100	

when formulating the recommended strategy. At the same time, environmental creation, interest stimulation, interface design and performance assessment are also key factors in improving the quality of our entrepreneurial innovation courses.

Since the weight coefficient of each indicator has been determined in the foregoing, we calculate the weighted comprehensive score based on the survey data scoring situation. The results are shown in Table 7 and Table 8 below.

From Table 7, we can see that the number of valid observations is 229, of which the first grade is the highest, and the fourth grade is the lowest. The comprehensive scores for grades one through four increase in order: 4.0285, 3.9291, 3.9148 and 3.9090. The averages of the sample average 95% confidence interval estimates include the total averages. We know that students in all grades have no significant difference in the overall scores of the entrepreneurial innovation courses and the overall comprehensive scores.

Table 6. List of average scores of various indicators

Control layer	Two level index	Average score	Three level index	Average score
Curriculum quality of entrepreneurship and innovation education in vocational colleges across the Straits	Curriculum preset	3.98	Course description	4.07
			Environment creation	3.83
			Goal setting	4.16
			Interest arousing	3.87
	Curriculum interaction Course support	3.91	Student interaction	3.93
			Media presentation	3.90
			Target collaboration	3.94
			Interface design	3.84
			Teacher-student interaction	3.93
		4.02	network transmission	4.05
			Operational assistance	3.98
			Content linkage	4.07
			Download mode	3.96
	Curriculum analysis	4.01	Data analysis	4.01
			Achievement evaluation	3.87
			Intelligent learning	3.94
			Duration of course	4.15
			Language standard	4.08

From Table 8, we can see that the comprehensive score of the science, technology, agriculture and medical group is the lowest, and the overall score of the art design group is the highest. The comprehensive scores in order from low to high are science and technology, agriculture and medical science, humanities and social sciences, and art design. The intervals formed by the 95% confidence interval estimates of the sample averages in the table include the total averages. We know that the students' scores on the

Table 7. List of comprehensive grades for different grades

		First grade	Second grade	Grade three	Fourth grade	Total
Number		106	116	104	132	458
Average value		4.0285	3.9291	3.9148	3.9090	3.9431
Standard deviation		0.5023	0.5583	0.5444	0.5250	0.5316
Standard error		0.0690	0.0733	0.0755	0.0646	0.0351
95% confidence interval of mean	Lower limit	3.8901	3.7823	3.7632	3.7799	3.8738
	Upper limit	4.1670	4.0759	4.0663	4.0380	4.0123
Minimum value		2.18	2.39	2.47	2.67	2.18
Maximum value		4.88	5.00	4.97	4.98	5.00

Table 8. Summary scores of different subject categories

		Science, technology, agriculture and medicine	Social science	Art design	Total
Number		184	196	78	458
Average value		3.8322	3.9786	4.1152	3.9431
Standard deviation		0.5578	0.5150	0.4584	0.5316
Standard error		0.0582	0.0520	0.0734	0.0351
95% confidence interval of mean	Lower limit	3.7167	3.8754	3.9666	3.8738
	Upper limit	3.9477	4.0818	4.2638	4.0123
Minimum value		2.18	2.47	2.98	2.18
Maximum value		4.98	5.00	4.88	5.00

entrepreneurial and innovative courses are not significantly different from the overall scores.

3.2 Comparative Analysis

The questionnaire survey and corresponding analysis above prove the effectiveness of this method. Next, the method is compared with the traditional method, and a class in a vocational college is selected as the comparison object. The design model and traditional method are used to evaluate the teaching quality., The comparison results are shown in Table 9:

Table 9. Comparative analysis table

	Traditional method	This article method
System integrity	60%	95%
Teaching evaluation accuracy	55%	92%
Student satisfaction	70%	98%

Through comparative analysis, it can be seen that the quality system model of entrepreneurship innovation education curriculum designed in this paper is superior to the traditional methods in student satisfaction and integrity, which proves the effectiveness and practicality of the design model in this paper.

4   Concluding Remarks

This article puts forward a model of the quality system of entrepreneurship and innovation education courses based on the Internet + across straits vocational colleges. The construction of the evaluation index system for entrepreneurship and innovation education has always been the focus of domestic research on the quality of entrepreneurship innovation education courses. However, there are few empirical studies on the evaluation index system that has been constructed. A questionnaire survey on the quality evaluation of entrepreneurship and innovation education courses collected relevant empirical data and conducted empirical analysis in order to provide effective empirical materials and practical experience for further research.

References

1. Xiaotang, L.: Research on the construction of innovation and entrepreneurship education curriculum system in higher vocational colleges in the internet era. China Inf. Technol. Educ. **12**, 98–101 (2017)
2. Xiuli, L.: The construction of innovation and entrepreneurship education system in vocational colleges. Educ. Vocat. **16**, 57–61 (2019)
3. Juanhui, D.: Construction of innovation and entrepreneurship education system in higher vocational colleges from the perspective of strategic management. Vocat. Techn. Educ. **38**(2), 52–54 (2017)
4. Xianjie, B.: The construction of innovation and entrepreneurship education system for college students majoring in archives. Arch. Manag. **5**, 53–55 (2017)
5. Yi, Q., Luwen, Z., Geng, F.: SWOT analysis of entrepreneur and innovation education in medical colleges. Chin. Health Serv. Manag. **36**(06), 452–455 (2019)
6. Yongxiang, W., Yijun, L., Xueli, H.: Exploration and construction of the curriculum system for the cloud computing technology and application specialty of higher vocational education— based on the investigation on the national first scheme of higher vocational demonstration colleges. Vocat. Tech. Educ. **38**(8), 29–32 (2017)

7. Jing-yi, W.: Research on the mechanism of innovation and entrepreneurship education to enhances college students 'opportunity-identification ability. Technoeconomics Manag. Res. **08**, 32–38 (2019)
8. Xiaozhou, X., Hao, N.I.: Towards 2050: vision and strategies of building an innovation and entrepreneurship education ecosystem. China High. Educ. Res. (01), 53–56 + 103 (2018)
9. Xueying, Z.: Research on promoting mechanism of innovation and entrepreneurship education in American higher education institutions. Vocat. Tech. Educ. **38**(9), 66–71 (2017)
10. Liewei, X., Hongmin, R., Jianshe, W.: Study on the relationship between Tao Xingzhi's education thoughts and innovation and entrepreneurship talents training in higher vocational colleges. Vocat. Tech. Educ. **38**(07), 63–68 (2017)