

An Empirical Study on the Relationship between Innovation and Entrepreneurship Education and Employ-ability in Higher Vocational Colleges

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Through the modeling and data analysis of the questionnaire data on the relationship between innovation and entrepreneurship education and employ-ability in higher vocational colleges, this paper concludes that all innovation and entrepreneurship education will have a significant positive impact on employ-ability, and it has a significant impact on higher vocational colleges. The promotion of innovation and entrepreneurship education in the school puts forward corresponding strategies.

Keywords: Innovation and entrepreneurship, Employ-ability

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INTRODUCTION

Premier Keqiang Li put forward the call of "Mass Entrepreneurship and Innovation" in the 2015 government work report. Following this, my country's higher education institutions have successively integrated innovation and entrepreneurship education, offering courses and practical activities related to innovation and entrepreneurship education. As one of the protagonists of national higher education, higher vocational colleges have successively carried out innovation and innovation education under the guidance and support of the national macro policy. The main purpose of innovation and entrepreneurship education in higher vocational colleges is to improve students' overall quality on the basis of enhancing students' entrepreneurial willingness, reduce students' employment pressure, and help them improve their employ-ability and employment competitiveness.

This paper studies the empirical research on the relationship between innovation and entrepreneurship education and employ-ability by issuing 400 questionnaires on the relationship between innovation and entrepreneurship and employ-ability in higher vocational colleges in Anhui Province.

This article aims to find out the current shortcomings of innovation and entrepreneurship education in higher vocational colleges through this investigation and research, and then find out measures to improve innovation and entrepreneurship education in higher vocational colleges, and ultimately reduce the employment pressure of students, improve students' employ-ability, and support The purpose of regional economic development.

STATISTICAL ANALYSIS OF SURVEY DATA

Analyze Data Sources

This paper distributed 400 copies of the "Questionnaire on the Relationship between Innovation and Entrepreneurship Education and employ-ability in Higher Vocational Colleges" in higher vocational colleges in Anhui Province, and collected 383 valid questionnaires. The following will quantify the data obtained from the questionnaire and carry out relevant procedures. analyze.

Analysis of Statistical Results

It can be seen from the table 1 that more than 60% of the gender samples are "female". In addition, the proportion of male samples is 38.90%. More than 80% of the identities are "students in higher vocational schools". More than 50% of the work types are "office workers." Another 49.35% of the sample started their own businesses. Judging from the innovation and entrepreneurship courses of the school, there are relatively more "compulsory courses" in the sample, the proportion is 44.13%, and the proportion of the elective courses sample is 30.03%. Judging from the practice of innovation and entrepreneurship education carried out by the school, 48.83% of the samples are "rare", and 36.03% of the samples are frequent. Judging from the distribution of innovation and entrepreneurship education in participating schools, 42.30% of the samples would choose "occasionally", and the proportion of no samples was 39.16%.

Table1
Describe the results of statistical analysis

name	Options	Frequency	percentage(%) □	Cumulative percentage (%) □
gender	Female	234	61.10	61.10
	male	149	38.90	100.00
identity	Vocational students at school	339	88.51	88.51
	Employed vocational students	44	11.49	100.00
job type	Office worker	194	50.65	50.65
	Start your own business	189	49.35	100.00
Innovation and Entrepreneurship Course of the School	Compulsory course	169	44.13	44.13
	Noting	99	25.85	69.97
	Elective course	115	30.03	100.00
The school carries out innovation and entrepreneurship education practice activities	almost none	40	10.44	10.44
	rare	187	48.83	59.27
	Noting	18	4.70	63.97
Participate in the school's innovation and entrepreneurship education	often	138	36.03	100.00
	Occasional	162	42.30	42.30
	Noting	150	39.16	81.46
total	often	71	18.54	100.00
		383	100.0	100.0

It can be seen from the table 2 that the chi-square test (cross-analysis) is used to study the difference between gender and the innovation and entrepreneurship class of the school (a total of 1 item). From the above table, it can be seen that the sample of different genders affects the innovation and entrepreneurship class of the school (1 item in total) is significant ($p < 0.05$), which means that samples of different

genders show differences in the innovation and entrepreneurship courses of the school (1 item in total). The specific suggestions can be combined with the percentages in brackets to compare the differences.

Gender shows significance at the 0.01 level for the innovation and entrepreneurship courses of the school ($\chi^2 = 16.916$, $p = 0.000 < 0.01$). The percentage difference shows that the proportion

of males choosing compulsory courses is 47.65%, which is significantly higher than the proportion of females choosing 41.88%. . The proportion of women who did not choose was 32.91%, which was significantly higher than the proportion of men who chose 14.77%. The proportion of males choosing elective courses is 37.58%, which

is significantly higher than the proportion of females choosing 25.21%.

The summary shows that samples of different genders show significant differences in the innovation and entrepreneurship courses of their schools.

Table2
Cross-analysis results

topic	name	gender(%)		total	χ^2	p
		Female	male			
Innovation and Entrepreneurship Course of the School	Compulsory course	98(41.88)	71(47.65)	169(44.13)	16.916	0.000**
	Nothing	77(32.91)	22(14.77)	99(25.85)		
	Elective course	59(25.21)	56(37.58)	115(30.03)		
total		234	149	383		

* p<0.05 ** p<0.01

It can be seen from the table 3 that the chi-square test (cross-analysis) is used to study the difference between gender and the innovation and entrepreneurship education of participating schools (1 item in total). From the above table, it can be seen that different gender samples have an impact on the innovation and entrepreneurship education of participating schools (1 item in total) is significant (p<0.05), which means that different gender samples show differences in the innovation and entrepreneurship education of participating schools (1 item in total). Specific suggestions can be compared with the percentages in parentheses.

Gender shows significance at the 0.01 level (chi=22.353, p=0.000<0.01) for the innovation

and entrepreneurship education of participating schools. The difference in percentages shows that the occasional ratio of male choice is 47.65%, which is significantly higher than the percentage of female choice of 38.89%. The proportion of women who did not choose was 47.86%, which was significantly higher than the proportion of men who chose 25.50%. The proportion of men who choose frequently is 26.85%, which is significantly higher than the proportion of women who choose 13.25%.

The summary shows that samples of different genders show significant differences in the innovation and entrepreneurship education of participating schools.

Table3
Cross-analysis results

topic	name	gender(%)		total	χ^2	p
		Female	Male			
Innovation and Entrepreneurship Course of the School	Occasionally	91(38.89)	71(47.65)	162(42.30)	22.353	0.000**
	Noting	112(47.86)	38(25.50)	150(39.16)		
	often	31(13.25)	40(26.85)	71(18.54)		
total		234	149	383		

* p<0.05 ** p<0.01

It can be seen from the table 4 that the chi-square test (cross-analysis) is used to study the difference between gender and the school's

innovation and entrepreneurship education practice activities (1 item in total). From the above table, it can be seen that the samples of

different genders are relevant to the school's innovation and entrepreneurship. Educational practice activities (1 item in total) are significant ($p < 0.05$), which means that samples of different genders show differences for the school's innovative and entrepreneurial education practice activities (1 item in total). Specific suggestions can be combined with the percentages in parentheses. The difference is compared.

Gender shows significance at the 0.05 level ($\chi^2 = 8.041$, $p = 0.045 < 0.05$) for the school's

innovative and entrepreneurial education practice activities. The percentage difference shows that 12.39% of women choose almost no choice, which is significantly higher than that of men, 7.38%. 41.61% of men choose frequently, which is significantly higher than 32.48% of women.

The summary shows that the samples of different genders show significant differences in the innovation and entrepreneurship education practice activities carried out by their schools.

Table4
Cross-analysis results

topic	name	gender(%)		total	χ^2	p
		Female	Male			
Innovation and Entrepreneurship Course of the School	almost none	29(12.39)	11(7.38)	40(10.44)	8.041	0.045*
	rare	114(48.72)	73(48.99)	187(48.83)		
	Noting	15(6.41)	3(2.01)	18(4.70)		
	often	76(32.48)	62(41.61)	138(36.03)		
total		234	149	383		

* $p < 0.05$ ** $p < 0.01$

It can be seen from the table 5 that innovation and entrepreneurship education is used as an independent variable, and employ-ability is used as a dependent variable for linear regression analysis. As can be seen from the above table, the model formula is: $\text{employ-ability} = 2.990 + 0.494 * \text{innovation and entrepreneurship education}$, model R The value is 0.153, which means that innovation and entrepreneurship education can explain 15.3% of the change in employ-ability. When the F test is performed on the model, it is found that the model passes the F test ($F = 69.057$, $p = 0.000 < 0.05$), which means that innovation and entrepreneurship education will definitely have an impact on employ-ability. The final specific analysis shows: The regression coefficient of innovation and entrepreneurship education is 0.494 ($t = 8.310$, $p = 0.000 < 0.01$), which means

that innovation and entrepreneurship education will have a significant positive impact on employ-ability.

The summary analysis shows that: innovation and entrepreneurship education will have a significant positive impact on employ-ability.

Table5
Linear regression analysis results (n=383)

	Non-standardized coefficient		Standardization factor		t	p	VIF	R ²	AdjustR ²	F
	B	Standard error	Beta							
constant	2.990	0.149	-		20.062	0.000**	-			F (1,381) =69.057, p=0.000
Innovation and Entrepreneurship Education	0.494	0.059	0.392		8.310	0.000**	1.000	0.153	0.151	

Dependent variable: employ-ability

D-W value: 1.987

* p<0.05 ** p<0.01

RESULTS

(1) Through the above analysis, it is concluded that 49.35% of the samples in higher vocational colleges are self-employed, and 44.13% of the samples in which innovation and entrepreneurship courses are "must" The proportion of compulsory courses is relatively large. At the same time, nearly half of the employed samples are self-employed. This also shows that the opening of innovation and entrepreneurship courses has a certain guiding effect on students' entrepreneurship.

Through cross-analysis, it is found that samples of different genders and samples of different genders are significant for the practice of innovation and entrepreneurship education in their schools. The proportion of men who choose their schools to conduct innovation and entrepreneurship education is 26.85%, which is significantly higher than that of women. It can be seen that men's participation in innovation and entrepreneurship education is much higher than that of women.

Using innovation and entrepreneurship education as an independent variable and employ-ability as a dependent variable for linear regression analysis, it can be seen that innovation and entrepreneurship education will definitely have

an impact on employ-ability. At the same time, the regression coefficient of innovation and entrepreneurship education is 0.494 (t=8.310, p=0.000<0.01), which means that innovation and entrepreneurship education will have a significant positive impact on employ-ability.

STRATEGIES FOR UPGRADING INNOVATION AND ENTREPRENEURSHIP EDUCATION IN HIGHER VOCATIONAL COLLEGES

Based on the above analysis, it is concluded that innovation and entrepreneurship education has a significant positive impact on employ-ability. Therefore, the promotion of innovation and entrepreneurship education in higher vocational colleges will help improve students' employ-ability and thereby enhance their employment competitiveness. Combining with the current situation and problems of innovation and entrepreneurship education in higher vocational colleges, corresponding improvement strategies are proposed.

(1) Enhance the importance of higher vocational colleges to innovation and

entrepreneurship education

Survey data shows that 30.26% of higher vocational colleges set innovation and entrepreneurship education as an optional course, and even some schools did not carry out innovation and entrepreneurship education. It can be seen that higher vocational colleges should increase their awareness of innovation and entrepreneurship. All-round attention will inevitably produce positive guidance for students, and at the same time enhance the educational effect of innovation and entrepreneurship.

(2) Increase the promotion of innovation and entrepreneurship education and increase student participation

Survey data shows that the proportion of schools that have established innovation and entrepreneurship practice bases has reached 63.68%, but the proportion of schools that rarely participate in the school's innovation and entrepreneurship education practice activities has reached 48.68%. Almost half of the students rarely participate in the school's innovation and entrepreneurship education practice. Activity. This phenomenon shows that the promotion of innovation and entrepreneurship education in higher vocational colleges is not strong enough, resulting in a very low degree of student participation, and ultimately innovation and entrepreneurship education becomes a formality.

(3) Improve teachers' practical guidance level

Through interviews and surveys, it is found that most of the instructors of innovation and entrepreneurship education practice activities in higher vocational colleges are generally undertaken by professional course teachers or instructors, lacking professionalism and practicality. The proportion of students who believe that schools lack practical teacher guidance has reached 41.05%. Insufficient practice guidance for innovation and entrepreneurship, students tend to be inferior, and cannot have a good understanding of the hardships of innovation and entrepreneurship. At the same time, lack of effective practical guidance makes it difficult to succeed in entrepreneurship, which will undermine students' enthusiasm and confidence in entrepreneurship. Institutions can train excellent instructors or introduce instructors with strong practical skills.

(4) Integrate innovation and entrepreneurship education into daily teaching links

Innovation and entrepreneurship education is

the key to improving students' comprehensive ability. As teachers, apart from recognizing the effect of innovation and entrepreneurship education on students, they must also understand and study how to integrate innovation and entrepreneurship education into daily teaching. The achievements of innovation and entrepreneurship education are not overnight. Teachers need to effectively integrate innovation and entrepreneurship education into daily teaching links, so that students can be exposed to innovation and entrepreneurship education in daily learning, which will play an important role in the quality of innovation and entrepreneurship education. effect.

(5) Improve the curriculum system

Most vocational colleges do not have a complete innovation and entrepreneurship curriculum system, and the teaching methods are too single. The main mode is concentrated on the levels of elective courses, lectures and innovation and entrepreneurship competitions, which are not enough to build an innovation and entrepreneurship education system.

At the same time, the curriculum settings of higher vocational colleges are rather chaotic. The teaching content is based on innovation and entrepreneurship competitions as a guide. The teaching content mainly focuses on the knowledge required for innovation and entrepreneurship competitions, employment and career selection concepts, and application for employment. After learning, college students only acquire theories and concepts. In terms of improvement, the practical skills learned for entrepreneurship are still relatively scarce.

In addition, many colleges and universities have great randomness in the opening of innovation and entrepreneurship education courses. Some colleges are opened in the freshman year, some colleges are opened in the sophomore year, and some colleges are opened only in the third year. There is no uniform standard on the opening time, and it is not combined with the real situation of the students to open it. Freshman students have just entered university and are very unclear about their university life and future life plans. There will be an imbalance between supply and demand in opening innovative and entrepreneurial education courses, and the students' enthusiasm and motivation for learning are naturally insufficient. Therefore, higher vocational colleges must improve the innovation and entrepreneurship curriculum system, and carry out innovation and entrepreneurship education in a planned and scientific manner.

(6) Create an accompanying professional innovation and entrepreneurship tutoring model

The advantages of college students' innovation and entrepreneurship are their passion and energy, but lack of social experience, interpersonal communication skills, team management skills, and psychological quality are all disadvantages. These disadvantages have become the limiting factors for college students' success in entrepreneurship. Accompanying professional tutors follow the students' entrepreneurial process throughout the entire process, discover in time the psychological state of entrepreneurial students and various problems encountered in the entrepreneurial process, and provide help and guidance at critical moments to stimulate the entrepreneurial enthusiasm of the innovation and entrepreneurship team and enhance entrepreneurship Proportion of success.

(7) Integration of innovation and entrepreneurship courses into professional culture

The scientificity and rationality of the innovation and entrepreneurship curriculum system will directly affect the effect of innovation and entrepreneurship. Therefore, colleges and universities should attach importance to the construction of innovation and entrepreneurship curriculum system, and integrate professional culture into the construction of innovation and entrepreneurship curriculum system to provide professional support for innovation and entrepreneurship. When choosing innovation and entrepreneurship education, colleges and universities should try their best to design courses related to students' professional culture, so that students can more directly participate in project practice, improve practical experience and practical ability, and lay a solid foundation for subsequent innovation and entrepreneurship. Colleges and universities should also conduct pre-professional research and extended curriculum education for college students. On the one hand, students can understand the status of pre-professional research, and on the other hand, they can increase their professional interest, so as to actively track the dynamics of pre-professional research and improve the prediction and understanding of professional development trends Control ability. It can be seen that the integration of innovation and entrepreneurship courses into professional culture can not only cultivate students' innovation and entrepreneurship quality, but also enhance students' professional quality, and the two achieve a synergistic effect.

(8) Expand the innovation and entrepreneurship practice platform inside and outside the school

Innovation drives entrepreneurship and entrepreneurship stimulates innovation. The cultivation of innovation and entrepreneurship capabilities focuses on the cultivation of innovation and entrepreneurship practice capabilities. Therefore, the establishment of innovation and entrepreneurship practice platforms in higher vocational colleges is directly related to the quality of innovation and entrepreneurship training.

The first is to integrate the teachers and educational resources of the whole school, to select and set up a "double innovation practice" class, the second is to establish a cluster of maker spaces, and the third is to build a platform for collaborative education and innovation. Organically integrate the three practical links of on-campus practical training experimental courses, off-campus entrepreneurship practice bases, and school-enterprise industry-university-research joint R&D centers to build a practice platform for innovation and entrepreneurship inside and outside the school. Multi-party preparation of entrepreneurial funds, reasonable planning and establishment of entrepreneurial incubation bases and entrepreneurial parks, integrating entrepreneurial theory guidance and training and entrepreneurial entity operations, through various forms of innovation and entrepreneurship practical learning, exercise the practical ability of college students, and achieve the organic unity of theory and practice. Enhance the depth and breadth of university knowledge stock, and promote the market recognition of university knowledge.

In order to further stimulate the enthusiasm for innovation and entrepreneurship of college students, accelerate the cultivation of innovative and entrepreneurial talents, promote innovation-driven entrepreneurship, and entrepreneurship to lead employment, insist on promoting learning by competition, and cultivate innovative and entrepreneurial forces; promote education by competition and explore new ways of quality education; promote innovation by competition , Build a dedicated platform for achievements, actively promote innovation and entrepreneurship training and practice, and actively participate in the provincial Internet + college student innovation and entrepreneurship competition, and the China International Internet + college student innovation and entrepreneurship competition organized by the Ministry of Education. At the

same time, colleges and universities can hold entrepreneurship seminars, entrepreneurship salons, typical entrepreneurial deeds report meetings, etc. to vigorously promote advanced deeds of innovation and entrepreneurship, and build a platform for exchanges and learning for innovative and entrepreneurial forces.

(9) Establish a guarantee system for innovation and entrepreneurship education

To improve the quality of cultivating innovation and entrepreneurship, and to form a good education situation for innovation and entrepreneurship, higher vocational colleges need to expand the cooperation fields, and closely cooperate with the three collaborations of school-local collaboration, school-enterprise collaboration, and school-school collaboration to build an all-round and three-dimensional Only by innovating the entrepreneurial education guarantee system can the desire for mutual benefit and win-win cooperation and development be realized. Higher vocational colleges should refer to the spirit of relevant documents, clarify the guiding ideology and goals of entrepreneurship education, formulate policies to encourage and recommend college students to start their own businesses, improve corresponding systems, standardize the development process of innovation and entrepreneurship education, and promote college student entrepreneurship education activities and in- and out-of-class entrepreneurship practice activities Scientific and orderly development.

CONCLUSION AND DISCUSSION

Through questionnaire surveys and interviews with some higher vocational colleges, and processing the questionnaire survey data, this paper concludes that innovation and entrepreneurship education has a positive impact on the improvement of employ-ability, and puts forward the innovation and entrepreneurship education of higher vocational colleges. The nine-point improvement strategy is expected to be of reference significance for the development of innovation and entrepreneurship education.

DECLARATION OF CONFLICTING INTERESTS

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REFERENCES

1. Longlong Wang. The problems and countermeasures of innovation and entrepreneurship education in private colleges under the concept of "Three All-round Education" . Vocational Education, January 2021
2. Yuanyuan Zeng, Qiulan Luo. Innovation and Entrepreneurship Education and Development Strategies in Colleges and Universities. Guangxi Social Sciences, 2017(4):216
3. Xiao Wang, Research on the Employment Status of College Students and Coping Strategies[J]. Society and Law, March 2021
4. Yangjie Huang , Yijun Lu. Problems and Countermeasures of Entrepreneurship Education in Colleges and Universities [J]. Educational Research, 2018 (8): 82
5. Yating Zhang,Xiaoling Yao . The development status and path optimization of the entrepreneurial education model in colleges and universities [J]. Ideological and theoretical education, 2019 (4): 110
6. Linpeng Xiao. Some thoughts on innovation and entrepreneurship education for social sports majors in applied undergraduate colleges [J]. Journal of Daqing Normal University, 2015 (03)
7. Lijuan Shen . An Empirical Study on the Influencing Factors of Entrepreneurship Education in Colleges and Universities [J]. Journal of Liuzhou Vocational and Technical College, 2018.18 (06)
8. Aixue Zhang. Under the "Internet +" background under the new model of innovation and entrepreneurship education for college students [J]. Heilongjiang Higher Education Research, 2017 (04)
9. Xiao He. Analysis on the innovation and entrepreneurship education of college students [J]. Changjiang Series, 2019 (6): 135
10. Hongxia Zhang . Construction of the evaluation index system of the scientific and technological talents ecological environment system under the innovation-driven strategy [J]. Economic Forum, 2019 (11): 35-42
11. Fei Han. Research on the construction of innovation and entrepreneurship practice bases in vocational colleges [J]. Vocational Education, 2019 (31): 66-67