Research on the Integration of Innovation and Entrepreneurship Education and Practice Teaching Based on the Improvement of the Employability

Yanhua Diao[1, *] and Yaguang Li[1]

[1] School of Economics and Management, Shandong Youth University of Political Science, Jinan, Shandong 250103, China
*Corresponding author. Email: guosiliang@nuaa.edu.cn

ABSTRACT
What is the effect of integrating innovation and entrepreneurship education with practice teaching? How does the combination of the two improve employability? To verify these, the maturity scale was used in this study. A questionnaire survey is conducted among 428 senior college students and 44 teachers are interviewed. After data collection, SPSS software was used for correlation analysis and regression analysis. The results of this study verify the important regulating role of practice teaching in innovation & entrepreneurship education and employability, and also verify the importance of the integration of practice teaching and innovation & entrepreneurship education. On the basis of empirical analysis, this paper puts forward suggestions on the effective integration of innovation & entrepreneurship education and practice teaching in view of the problems found in the investigation. It also puts forward the integration system combining innovation & entrepreneurship education with practice teaching.
Keywords*: Innovation and entrepreneurship education; Practice teaching; Employability; The Integration*

1. INTRODUCTION

The development trend of professional education in application-oriented universities requires graduates to have not only professional skills, but also innovative thinking and entrepreneurial ability. Only in this way can they be competent for the most basic jobs. With the development of big data, Internet and artificial intelligence, the progress of society and the development of enterprises also require professional and compound talents with professional competence, innovative development awareness and initiative entrepreneurial ability. The effective integration of practice teaching and innovation and entrepreneurship education can not only enable students to improve their professional skills, but also cultivate students' innovation consciousness and entrepreneurial ability based on the actual work, enabling students to actively transform from employed workers to creators and even entrepreneurs. This not only solves the problem of difficult employment of graduates, improves the competitiveness of students in employment, but also provides certain jobs for the society, improves the employment rate of the whole society, and promotes social stability and economic development. This study focuses on the improvement of graduates' employability and studies the integration of innovation and entrepreneurship education and practical teaching, to provide reference for the cultivation of talents in colleges and universities.

2. REVIEW OF LITERATURE

In 1991, the International Conference on Entrepreneurship and Innovation Education in Tokyo defined Entrepreneurship and Innovation Education as the cultivation of the most creative personalities, including initiative, risk-taking, entrepreneurial ability, independent working ability and technical, social and management skills. Practice teaching is an important platform for integrating theory with practice, training students to master scientific methods and improving their practical ability. At present, the research on improving employability through the integration of innovation and entrepreneurship education and practical teaching is still in the preliminary stage of discussion.

For example, Huang et al. (2017) studied the mode of integrating innovation and entrepreneurship education with practice teaching through three teaching levels [1]. Wang (2018) made a preliminary discussion on the practical teaching plan of application-oriented undergraduate course for entrepreneurship training [2]. Liu et al. (2018) proposed a progressive and three-dimensional practice teaching system aiming at cultivating students' innovation and entrepreneurship ability [3]. Pan (2018) analysed the necessity of the integration of innovation and entrepreneurship education and professional practice teaching for college students [4]. Jiang (2018) proposed the realization path of integrating practice teaching and innovation and entrepreneurship education for

undergraduate majors in taxation [5]. Tian (2018) proposed to construct and optimize the practical teaching system of accounting major oriented to the cultivation of innovation and entrepreneurship ability, so as to realize the deep integration [6]. Chang et al. (2018) discussed how to carry out in-depth integration of professional practice teaching and innovation and entrepreneurship education in application-oriented undergraduate universities [7]. Wang (2019) conducted a research on the integration of practical education from the three aspects of professional courses, internship education and entrepreneurship of environmental art major [8]. Zheng (2019) believes that under the course system of "major + Entrepreneurship", it is an effective way to cultivate students' innovative and entrepreneurial spirit and ability to find suitable employment or entrepreneurship methods in "learning by doing" [9]. Liu (2019) proposed to continuously explore the integration mode of accounting major and innovation and entrepreneurship education in application-oriented undergraduate universities from several dimensions, including educational concept, personnel training objectives, curriculum setting, teaching content, teaching methods, teacher team construction and practical teaching system construction [10]. Wei et al. (2020) put forward countermeasures to carry out practical teaching of human resource management major in universities from the perspective of practical teaching demand of innovation and entrepreneurship education [11].

It can be seen from these studies that the research on the integration of professional practice teaching and innovation and entrepreneurship education is of great significance for the cultivation of graduates who meet social needs, have the awareness of innovation and entrepreneurship in professional fields and continuously improve their learning ability. However, they are all qualitative studies, and there are few empirical studies on this issue, which is the entry point of this study and the research trend and focus in the future.

3. THE EMPIRICAL ANALYSIS

This paper randomly selects 22 universities from 67 universities in Shandong Province. Then a questionnaire survey is conducted among 20 senior students in different subjects from each university. A total of 440 students are sampled. At the same time, two teachers from each of the 22 universities are interviewed online to investigate the situation of innovation and entrepreneurship education and practical teaching.

The questionnaire is divided into four parts: basic information, innovation and entrepreneurship education scale, practical teaching level scale and employability scale. The innovation and Entrepreneurship Education Scale mainly refers to the Blue Book of Entrepreneurship Education for Chinese College Students published by Economic Science Press in 2011, with 7 items. The employability scale mainly refers to the maturity scale of Wang (2018) [12], with 14 items. The practical teaching level scale adopts the scale designed by Li (2016) and has 10 items [13].

3.1. Descriptive Statistics

In this study, 440 questionnaires are issued and 428 valid questionnaires are recovered, with an effective rate of 97.3%. After analysing the personal information of the questionnaire by descriptive statistical method, the basic information of the respondents is obtained. The respondents of this survey are mainly senior undergraduate students, with 202 male students and 226 female students, accounting for 47.2% and 52.8% of the total number respectively. The major distribution involves engineering, science, art and management, etc., which are relatively widespread. This paper believes that the selected samples are representative.

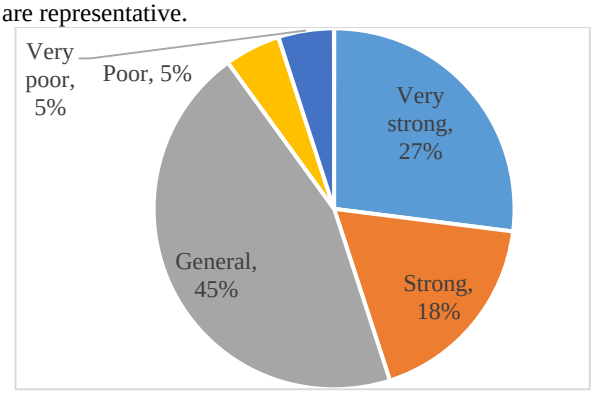

Figure 1. Innovation and entrepreneurship education and practical teaching ability of the teacher

Through sorting out the interview results of teachers, it is found that teachers' innovation and entrepreneurship education and practice teaching are unsatisfactory, as shown in figure 1. Combined with the survey results of students' innovation and entrepreneurship education scale, it is summarized as follows:

Firstly, fail to realize the importance of integrating. Although many colleges and universities have set up courses related to innovation and entrepreneurship education, they only regard it as an independent part, but do not deeply integrate it with professional practice teaching. In this teaching form, although college students' consciousness of innovation and entrepreneurship can be cultivated to a certain extent, their ability of innovation and entrepreneurship cannot meet the needs of society.

Secondly, low integration between innovation and entrepreneurship education and practical teaching. The integration of innovation and entrepreneurship education and professional practice teaching is not simply to put them together, but to integrate them into an organic whole according to their advantages and disadvantages. However, in many colleges and universities, the integration of the two cannot be fully developed.

Thirdly, students lack innovative practical ability and consciousness of innovation. Although students can

skilfully operate existing cases and solve practical problems under the guidance of teachers, if there are new changes and new problems, without the guidance of teachers, students' ability to solve problems is limited. It shows that the students' own innovation and practice ability is insufficient.

Lastly, there are also the following problems: innovation and entrepreneurship are basically set up with the help of public elective courses, there is no gradient in the content; In general, class time and credits are not enough. Innovation & entrepreneurship education focuses on lectures, competitions and club guidance, with few audiences. The degree of integration between innovation and entrepreneurship and professional teaching is not high; Some innovation & entrepreneurship activities are guided by relevant teachers of student affairs office, and some by professional teachers.

The lack of communication channels makes it impossible to maximize guidance advantages. There are few forms to carry out professional education and innovation and entrepreneurship activities by integrating cross-college and multi-specialty advantageous resources.

3.2. Reliability Analysis

The Cronbach's coefficients of innovation and entrepreneurship education, practical teaching level and employability are 0.917, 0.933 and 0.887 respectively, which are all greater than 0.7, indicating that the reliability of the three scales is good.

Table 1. Reliability analysis results

Variable	Cronbach's α	Number of items
Innovation and Entrepreneurship education	0.917	7
Practical teaching level	0.933	9
Employability	0.887	14

Data source: Collected and analysed in this study.

3.3. Correlation Analysis

Table 2. Correlation analysis results

Variable	1	2	3
1 Innovation and Entrepreneurship education	1		
2 Practical teaching level	0.435***	1	
3 Employability	0.565***	0.735***	1

Note: ***means P<0.001.

The results of correlation analysis show that there is a significant positive correlation between innovation and entrepreneurship education and employment ability and practical teaching. The correlation coefficients are 0.435, 0.565 and 0.735 respectively (P<0.001), which provided a premise for the following regression analysis.

3.4. Regression Analysis

SPSS software is used to conduct hierarchical regression. In two steps, the innovation and entrepreneurship education (IEE), practical teaching level (PTL), innovation and entrepreneurship education and practical teaching integration (IEE*PTL) are respectively analyzed with the employability of college students. The regression results are shown in Table 3.

Table 3. The moderating effect of practice teaching level

The dependent variable			**Employability**	
Variable	**Model 1**		**Model 2**	
	β	t	β	t
Gender	-0.04	-1.18	-0.02	-0.62
Major	-0.04	-0.93	-0.04	-0.93
Innovation and Entrepreneurship education (IEE)	0.44	11.92***	0.43	10.85***
Practical teaching level (PTL)	0.51	13.88***	0.51	13.91***
IEE * PTL			0.13	0.86***
DW	1.923		1.911	
F	13.712***		11.697***	
R^2	0.742		0.755	
adj-R^2	0.731		0.751	
P	0.000		0.000	

Note: ***means P<0.001.

It can be seen from model 1 that the regression coefficient of innovation and entrepreneurship education and practice teaching level on employability is 0.44 and 0.51 respectively, which is significant at the level of 0.001, indicating that they have a significant impact on employability. The R^2 value in Model 2 is 0.755, which is greater than the R^2 value in model 1 (0.742). The regression coefficient of innovation and entrepreneurship education and practical teaching integration (innovation and entrepreneurship education * practical teaching level) is 0.13, T value is 0.86, and P<0.001, indicating that innovation and entrepreneurship education and practical teaching integration interaction is significant, and practice teaching plays a significant moderating effect in the relationship between innovation and entrepreneurship education and employment ability. This also proves the necessity and importance of the integration of practice teaching and innovation and entrepreneurship education.

4. PROBLEMS ANALYSIS

First, the integrated teaching environment is difficult to construct. Although the courses of most universities are arranged with innovation and entrepreneurship courses and professional training courses, most of them are separated from practical teaching. This leads the students to think that there is no purpose in this arrangement. Innovation & entrepreneurship education has no new ideas, professional training courses are boring, practical activities have no innovation, etc., which may eventually make students lose interest in learning.

Second, Lack of professional teachers. Both innovation and entrepreneurship and practical teaching require the guidance of professional teachers. In the case of the integration of the two, it puts forward higher requirements for teachers' professional quality. On the one hand, teachers must have certain professional knowledge of innovation and entrepreneurship. On the other hand, teachers should also have a high level of professional knowledge. At present, such teachers are in short supply in China's colleges and universities, which makes it difficult for colleges and universities to combine innovation and entrepreneurship education with professional education.

Third, it is difficult to acquire enterprise practice projects. Although there are many small and medium-sized enterprises, it is difficult to find enterprises willing to provide students with entrepreneurial opportunities. To solve this problem, it is necessary to strengthen students' own problem-solving ability.

5. CONCLUSIONS AND SUGGESTIONS

The result of empirical analysis proves the necessity and importance of combining practice teaching with innovation and entrepreneurship education. Through the analysis of the problems and difficulties, this study proposes the following countermeasures to promote the integration of them.

5.1. Construction of the Integration System

Colleges and universities should combine the needs of industry development, implement national innovation and entrepreneurship policy, and design professional practice teaching system suitable for innovation and entrepreneurship education. It is possible to build a professional talent program oriented by innovation and entrepreneurship, and build a practical teaching model based on the cognition of basic knowledge of innovation and entrepreneurship -- The training of innovation and entrepreneurship skills --The improvement of innovation and entrepreneurship quality.

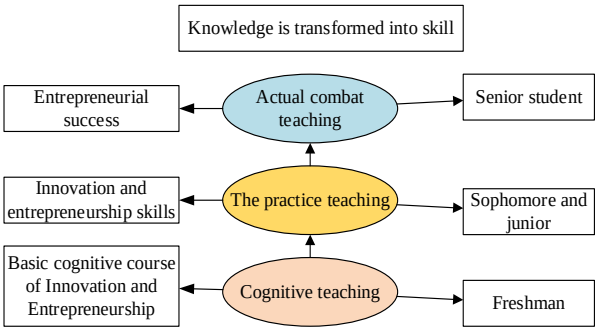

Figure 2. Integration model of innovation and entrepreneurship education and practice teaching

5.1.1. Cognitive teaching

The cognitive level is mainly for freshmen, who can not only contact with the professional basic courses, but also integrate the basic knowledge courses of innovation and entrepreneurship. To cultivate students' entrepreneurial consciousness and spirit.

5.1.2. Practical teaching

It mainly cultivates students' innovation and entrepreneurship skills. Sophomores and juniors have entered the stage of learning the core courses of their majors. At this stage, in the face of many courses, students should also enter the practice of innovation and entrepreneurship training, cultivate students' innovation and entrepreneurship skills and improve the knowledge structure of innovation and entrepreneurship.

5.1.3. Actual combat teaching

After students have completed their on-campus courses, they enter the internship stage. In the internship stage, students will apply the professional knowledge in the school to the actual combat and transform the knowledge into skills.

5.2. Integrated Reform Measures

5.2.1. Strengthen professional practice in innovation and entrepreneurship education

Colleges and universities should actively integrate professional practice teaching content when carrying out innovation and entrepreneurship education. When formulating the talent training program, schools should also fully consider the actual situation of the major and integrate the professional practice teaching system into it

to ensure the effectiveness of innovation and entrepreneurship education.

5.2.2. Reform the teaching mode and content of professional practice, and highlight the concept of innovation and entrepreneurship

In view of the fixed professional practice teaching mode and content, each university should take reasonable measures to reform actively and highlight the innovation and entrepreneurship concept. The concept of innovation and entrepreneurship should be reflected in all aspects of professional practice teaching, including curriculum design, classroom teaching, practical activities and so on. At the same time, schools should also encourage students to put what they have learned into practice, make innovations in the learning process and improve their entrepreneurial ability.

5.2.3. Improve the integrated linking system and management mechanism

To realize the deep fusion of the two, we must optimize their management mechanism based on constructing and perfecting their linking mechanism. The first is the connection of teaching content. The second is the connection of teaching form.

5.2.4. Develop teacher training plans for school-enterprise cooperation

Colleges and universities can actively cooperate with social enterprises to develop teacher training programs based on school-enterprise cooperation. Off-campus enterprises provide corresponding resource support and innovation and entrepreneurship bases for teacher training to greatly improve the level of innovation and entrepreneurship education for teachers.

5.2.5. Realize the extracurricular integration of innovation and entrepreneurship education and professional practice teaching

Colleges and universities should not only strengthen the integrated course teaching and on-campus practical teaching, but also encourage students to use what they have learned to develop off-campus practical training and social entrepreneurship. Only through off-campus training and social entrepreneurship training and practice, students can truly apply what they have learned and deepened their understanding of innovation and entrepreneurship and professional courses in the process of practice, to further promote the deep integration of the two.

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