
**RESEARCH ON THE RELATIONSHIP AMONG COLLEGE STUDENTS'
ENTREPRENEURIAL ATTITUDE, ENTREPRENEURSHIP EDUCATION
AND ENTREPRENEURIAL INTENTIONⁱ**

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ABSTRACT

How to improve the entrepreneurial awareness of college students through entrepreneurship education is a hot issue in the current society. We conducted a large sample survey of college students to study the relationship among entrepreneurship education, college students' entrepreneurial attitude and entrepreneurial intention. The results show that college students' entrepreneurship education and entrepreneurial attitude have a significant positive impact on entrepreneurial intention. For college students majoring in natural science and humanities, entrepreneurship education has played a positive regulatory role in the impact of entrepreneurial attitudes on entrepreneurial preparation, but college students majoring in social science do not.

Keywords: Entrepreneurship Education; Entrepreneurial Attitude; Entrepreneurial Intention;
Subjects

1. INTRODUCTION

In December 2015, Chinese Ministry of Education requires that all universities should set up courses for innovation and entrepreneurship from 2016. In March 2016, Premier Li Keqiang answered the reporter's question that people's participation in entrepreneurship and innovation can help to withstand the downward pressure on the economy and achieve economic transformation. College students are the main force to promote mass entrepreneurship and innovation. How to carry out good entrepreneurship education and improve college students' entrepreneurial intention is a hot issue in the current society.

At present, the research on entrepreneurship education in China is rich. Combining foreign characteristics and experience, analyzing the existing problems of domestic entrepreneurship

education and exploring the future development model, it has a strong guiding significance for the development of the theory and practice of entrepreneurship education in China. Many scholars have conducted research on the impact of entrepreneurship education on entrepreneurial intentions^[1-2]. Some scholars have also proved that the role of entrepreneurship education played in the entrepreneurial attitude and entrepreneurial intentions^[3]. However, there are relatively few relevant empirical studies at present, and there is a lack of classification discussion for college students in different disciplines. Therefore, we will take the university students as the research object, carry out the questionnaire survey, the relationship between entrepreneurship education, college students' entrepreneurial attitude and entrepreneurial intention.

2. THEORETICAL BASIS AND RESEARCH HYPOTHESIS

2.1 Entrepreneurial Intention

The concept of "entrepreneurial intention" was first proposed by Bird in 1988, which refers to a mental state that leads the entrepreneur's attention, energy and behavior to a specific goal. Phan and Wong 's research suggested that students' entrepreneurial intentions mainly refer to the possibility of students choosing to start a business in the future, and measure entrepreneurial intentions from two aspects: entrepreneurial possibility and entrepreneurial preparation. Based on this, we define entrepreneurial intention as an attitude that objectively expresses whether potential entrepreneurs will carry out entrepreneurial activities. Entrepreneurial intention can predict entrepreneurial behavior well, and we measure entrepreneurial intention from two dimensions: entrepreneurial possibility and entrepreneurial preparation.

After years of research and development, the research results in the field of influencing factors of entrepreneurial intention are very rich. By combing relevant literature, we can find that factors that have a greater impact on entrepreneurial intentions include congenital factors such as gender, family, place of origin, and psychology. For example, Zhu Guanghua and others found that the current reality of China's entrepreneurial ratio is closely related to the psychological characteristics of conflict, group, risk aversion, self-efficacy, and adaptation disorders^[4]. In addition, factors that have a greater impact on entrepreneurial intentions include acquired factors such as personal experience, social environment, and school education.

2.2 Research Hypothesis

(1) The influence of entrepreneurial attitude on entrepreneurship education

Entrepreneurial attitude refers to the individual's perception and evaluation of entrepreneurial outcomes. It is the subjective judgment and internal motivation of a person's choice to engage in

entrepreneurial activities, and is the core factor that affects college students' entrepreneurial intentions. The entrepreneurial attitude orientation scale proposed by Robinson based on the attitude model was the basis of many related studies^[5]. The research by Phan and Wong further divides entrepreneurial attitude into internal ecology and external ecology, including attitudes toward independence, challenges, achievements, rights, wealth, and social recognition. Chinese research is also based on this.

According to Ajzen's theory of planned behavior, attitudes can predict intentions. Therefore, the relationship between entrepreneurial attitude and entrepreneurial intention is inseparable. Douglas and Shepherd's research have similar conclusions. They found that in addition to independence, individual entrepreneurial attitudes such as risk, work effort, income are also the motivational basis for entrepreneurship^[6]. Qian Yonghong's research believes that entrepreneurial returns are positively correlated with individual entrepreneurial intentions^[1]. Long Yan directly points out the attitude of college students as potential entrepreneurs to entrepreneurship and whether they choose to start a business in the future^[7].

Therefore, we propose the following assumptions:

- H1 : Entrepreneurial attitudes have a significant positive impact on entrepreneurial intentions;
- H1a : Entrepreneurial attitudes have a significant positive impact on entrepreneurial possibilities;
- H1b : Entrepreneurial attitudes have a significant positive impact on entrepreneurial preparations.

(2) The influence of entrepreneurship education on entrepreneurial intention

The study of entrepreneurship education in China began in the 1990s and gradually evolved into a unique system. Mu Zhirong proposed that Chinese entrepreneurship education can be divided into five modules: entrepreneurship course, entrepreneurship research, entrepreneurship forum, business plan competition and entrepreneur alliance. Yong Bin and Bai Wei discovered that entrepreneurship education is mainly based on lectures, elective courses and employment education in schools, supplemented by entrepreneurial competitions and business model competitions^[8]. However, according to the research of Li Weiming and others, it is pointed out that there is still a problem of insufficient curriculum segmentation in the curriculum of entrepreneurship education in domestic universities.

In addition to the study of entrepreneurship education, the impact of entrepreneurship education on individuals is also a research hotspot. Noel and Terry found that students who majored in

entrepreneurship courses have higher entrepreneurial intentions. Tkachev believes that entrepreneurship courses can improve students' entrepreneurial intentions. Xiang Hui and other scholars believe that students who have participated in entrepreneurship courses, entrepreneurial competitions or entrepreneurs have higher entrepreneurial intentions and entrepreneurial motivations than those without relevant experiences. Li Wenyi and Xu Lei believe that college entrepreneurs will be influenced by the school in their entrepreneurship. Zhu Guanghua's research verifies the promotion of entrepreneurial education to entrepreneurial tendencies^[9]. Wang Huafeng's research clearly points out that entrepreneurship education can not only improve the possibility of entrepreneurship, but also promote the preparation of potential entrepreneurs^[10].

Therefore, we propose the following assumptions:

- H2 : Entrepreneurship education has a significant positive impact on entrepreneurial intentions;
- H2a : Entrepreneurship education has a significant positive impact on entrepreneurial possibilities ;
- H2b : Entrepreneurship education has a significant positive impact on entrepreneurial preparations.

(3) The role of entrepreneurship education

Entrepreneurship education is an acquired factor affecting entrepreneurial intention. Although the entrepreneurial attitude is formed by the individual students, it is affected to some extent by the acquired factors. For example, entrepreneurship education can improve college students' entrepreneurial knowledge, skills and experience, so that they can more clearly understand entrepreneurial activities, and it may adjust the influence of entrepreneurial attitudes on entrepreneurial intentions. Zhu Hong and Zhang Jing believe that entrepreneurship education can reduce the blindness and irrationality of student entrepreneurship, change their entrepreneurial perception, and significantly improve students' entrepreneurial intentions^[11]. The research by Wang Xinhuan and Bo et al. directly pointed out that entrepreneurship education regulates the influence of entrepreneurial attitude on entrepreneurial intention.

Therefore, we propose the following assumptions:

- H3 : Entrepreneurship education is positively regulating the impact of entrepreneurial attitude on entrepreneurial intention;
- H3a : Entrepreneurship education is positively regulating the impact of entrepreneurial attitude on entrepreneurial possibilities;

H3b : Entrepreneurship education is positively regulating the impact of entrepreneurial attitude on entrepreneurial preparations.

In summary, we propose the basic conceptual model shown in Figure 1:

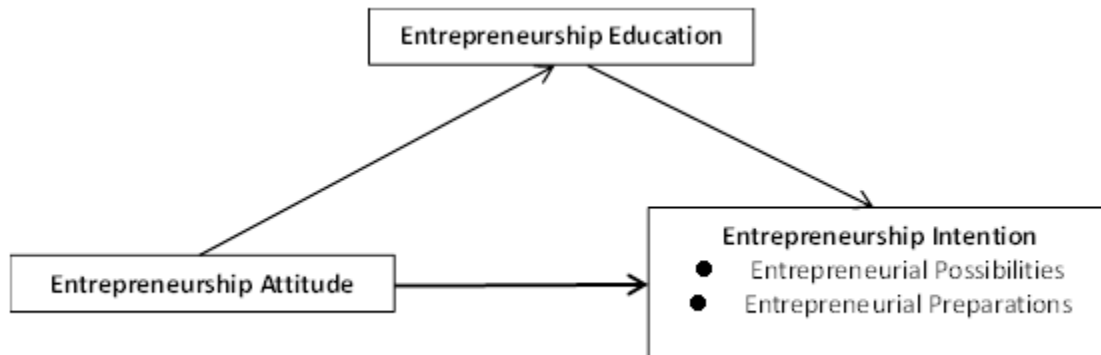


Figure 1: Basic conceptual model

3. RESEARCH DESIGN

3.1 Sample Selection and Data Collection

The questionnaire survey was launched by the “College Students in Opportunity Recognition and Policy Selection in Small and Micro Enterprises” (National Soft Science Project). A total of 1,550 questionnaires were distributed and 1,491 valid questionnaires were collected. The effective recovery rate was 96.20%. It covers 178 colleges and universities in the eastern, central and western regions of China, including first-class research universities and general provincial or municipal universities and colleges. It includes different majors such as natural science (37.56%), humanities (10.26%), and social science (52.18%).

3.2 Variable Measurement

According to the relevant literature and the actual situation, the following scale is obtained. All scales are measured using the Likert5 point scale

- (1) Entrepreneurial Intention (EI) : It includes entrepreneurial possibilities (EPO) and entrepreneurial preparation (EPR) . The test questions for entrepreneurial possibilities include “I have the intention to start a business or participate in entrepreneurship” and “I may have ideas for starting a business in the future”. The test questions for entrepreneurship preparations include “I am thinking about or have considered

entrepreneurial plans (such as products/teams/technologies, etc.)” and “I will often collect some entrepreneurial cases or internships in related industries”.

- (2) Entrepreneurship Education (EE) : The test questions includes “Do you often participate in entrepreneurship education?”, " Entrepreneurs motivate students to participate in entrepreneurship", "Do you often participate in entrepreneurship internships", "Do you often participate in entrepreneurial clubs or entrepreneurial competitions?".
- (3) Entrepreneurial Attitude (EA) : The test questions includes “Do you think that entrepreneurship can make individuals more accessible to power or status?” “Do you think that entrepreneurship can better accumulate wealth or provide living security for the family?” “Do you think that entrepreneurship can achieve personal achievement will or personal value?” “Do you think that entrepreneurship can fulfill the desire of the individual to serve the society and serve the country?” Do you think that entrepreneurship can better control your own destiny?”.

In addition, considering that demographic variables may affect the research results, the gender, household registration and family annual income of college entrepreneurs are introduced as control variables to ensure the rigor and scientificity of the research results.

4. RESEARCH RESULTS

4.1 Data Inspection

(1) Reliability and Validity

The results show that the Cronbach α of the three scales of entrepreneurial intention, entrepreneurship education and entrepreneurial attitude are all more than 0.8. This shows that the scale has good reliability. And the KMO values for each scale are all more than 0.7, we can perform factor analysis. The factor analysis results show that the load factor of each factor is more than 0.5. This means that the questionnaire has good structural validity.

(2) Common Method Deviation Test

The questionnaire was used in an anonymous manner, emphasizing that the content of the questionnaire will be kept strictly confidential, and all subjects independently completed the questionnaire. A Harman test of exploratory factor analysis was performed on all measurement items of the questionnaire. The results show that the first principal component interpretation variation without rotation is 33.70%, which does not exceed the recommended value of 50%. Therefore, there is no serious common method bias in this study.

4.2 Regression Analysis

(1) The influence of entrepreneurial attitude and entrepreneurship education on entrepreneurial intention

Taking gender, household registration and family annual income as control variables, and taking the entrepreneurial intention as the dependent variable, the regression analysis was carried out with entrepreneurial attitude and entrepreneurship education as independent variables. It includes entrepreneurial possibilities and entrepreneurial preparation.

Table 1: Results of regression analysis

Variables	EPO	EPR	EPO	EPR
Gender	0.324***	0.335***	0.441***	0.516***
Household Registration	-0.213***	-0.022	-0.217***	-0.044
Family Annual Income	0.042**	0.038**	0.050**	0.054***
EA			0.665***	0.508***
EE	0.441***	0.618***		
Constant	1.800***	0.932***	0.521***	0.649***
R^2	0.200	0.386	0.255	0.205
ΔR^2	0.198	0.385	0.253	0.203
F	92.867***	233.877***	127.266***	95.965***

Note: *p<0.1; **p<0.05; ***p<0.01

According to Table 1, although the ΔR^2 is small, the regression analysis in this paper is only used to analyze the relationship between the independent variable and the dependent variable, and is not used to make any prediction conclusions, so it is acceptable. The test is significant, so the regression model is established. The results show that entrepreneurial attitudes and entrepreneurial education have a significant positive impact on entrepreneurial possibilities and entrepreneurial preparation. H1, H1a, H1b and H2, H2a, H2b are all supported.

(2) The regulatory role of entrepreneurship education

Firstly, taking gender, household registration and family income as the control variables, entrepreneurial intention is the dependent variable, entrepreneurial attitude, entrepreneurship education as the independent variable, and regression analysis. Secondly, on the basis of first step, introduces the product term of entrepreneurial attitude and entrepreneurship education as an independent variable to further carry out regression analysis.

Table 2: The regulatory role of entrepreneurship education in the total sample

Models	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Variables	EPO	EPR	EPO	EPR	EPO	EPR
Gender	0.469***	0.538***	0.345***	0.346***	0.344***	0.342***
Household Registration	-0.242***	-0.064	-0.201***	-0.016	-0.202***	-0.020
Family Annual Income	0.058**	0.060***	0.040**	0.037**	0.041**	0.039**
EA			0.540***	0.285***	0.492***	0.136*
EE			0.306***	0.547***	0.234**	0.322***
EA×EE					0.019	0.059**
Constant	2.890***	2.458***	0.208	0.091	0.388	0.648**
R ²	0.060	0.077	0.316	0.423	0.316	0.425
ΔR ²	0.058	0.075	0.314	0.421	0.313	0.422
F	31.454***	41.458***	137.173***	217.450***	114.332***	182.581***

Note: *p<0.1; **p<0.05; ***p<0.01

Compared with model 3, the ΔR^2 of model 5 does not become larger, and the regression coefficient of the product term is not significant. Therefore, entrepreneurship education does not play a regulatory role in the impact of entrepreneurial attitude on the possibility of entrepreneurship. Compared with model 4, although the change in ΔR^2 of model 6 is not obvious, it passes the significance test. Entrepreneurship education clearly positively regulates the impact of entrepreneurial attitudes on entrepreneurial readiness. Therefore, H3a is verified, H3b is not verified, and H3 is partially supported.

In order to carefully study the regulatory role of entrepreneurship education in the impact of entrepreneurial attitudes on entrepreneurial preparation, the effect of adjustment on the student data of different subjects was tested.

Table 3: The Regulating Role of Entrepreneurship Education for Students of Different Subjects

Subject	Natural Science		Humanities		Social Science	
Variables	EPR					
Models	Model7	Model8	Model9	Model10	Model11	Model12
Gender	0.263***	0.254***	0.170	0.172	0.368***	0.368***
Household Registration	-0.041	-0.046	0.025	0.020	-0.046	-0.046
Family Annual Income	0.062**	0.066**	0.010	0.014	0.033	0.033
EA	0.365***	0.144	0.307***	0.054	0.220***	0.240**
EE	0.490***	0.161	0.606***	0.192	0.574***	0.603***
EA×EE		0.086**		0.105*		-0.008
constant	0.043	0.868**	0.044	1.003*	0.194	0.122
R ²	0.402	0.408	0.592	0.601	0.405	0.405
ΔR ²	0.397	0.401	0.578	0.585	0.401	0.400
F	74.605***	63.400***	42.571***	36.655***	104.981***	87.380***

Note: *p<0.1; **p<0.05; ***p<0.01

Compared with model 7 and model 9, it can be found that for students majoring in natural science and humanities, entrepreneurship education has clearly positively adjusted the influence of entrepreneurial attitudes on entrepreneurial preparation in model 8 and model 10. Compared with model 11, the ΔR^2 of model 12 does not become larger, and the regression coefficient of the product term is not significant. Therefore, for students majoring in social science, entrepreneurship education does not play a regulatory role in the impact of entrepreneurial attitudes on entrepreneurial preparation.

We de-centered the data and substituted it into the regression model for plotting.

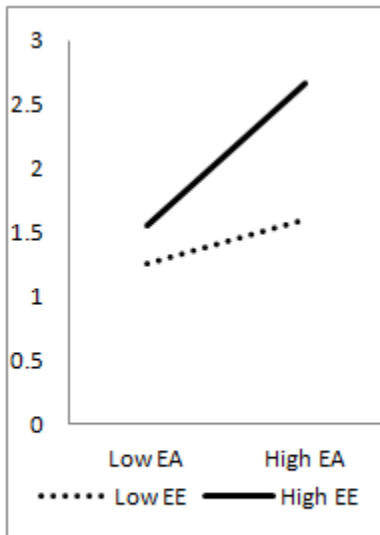


Figure 2: Total sample

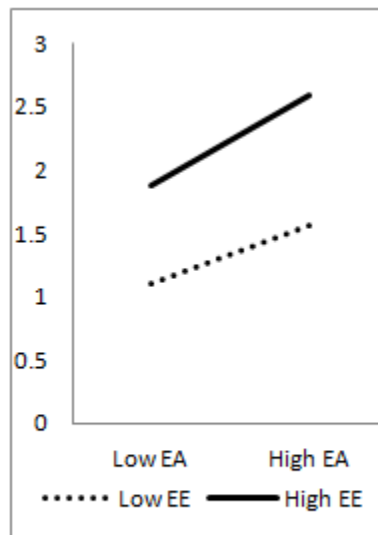


Figure 3: Natural Science

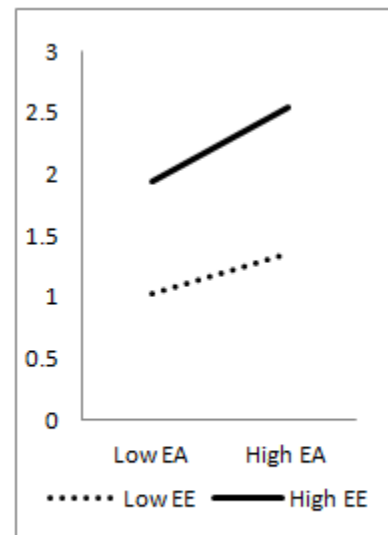


Figure 4: Humanities

As shown in the figure, when the level of entrepreneurship education is high, the positive correlation between entrepreneurial attitude and entrepreneurial preparation is strong. When the level of entrepreneurship education is low, the positive correlation between entrepreneurial attitude and entrepreneurial preparation is weak. It shows that entrepreneurship education in the total sample, natural science subjects, and humanities subjects has indeed enhanced the positive impact of entrepreneurial attitude on entrepreneurial preparation. The results of the total sample may be affected by the proportion of these two types of professions, so the positive adjustment results are presented. In reality, students majoring in natural science are more likely to produce patented inventions, students majoring in humanities are more likely to appear "passionate entrepreneurship". For example, students majoring in art are more likely to carry out entrepreneurial activities because they have certain literary and artistic specialties. It is surprising that entrepreneurship education for students majoring in social science does not have a regulatory role in the impact of entrepreneurial attitudes on entrepreneurial intentions. This may be because economic, management, education, law and other social majors are more popular at present, students are more likely to get stable and high-paying job opportunities, and the adjustment role of entrepreneurship education is less obvious. Generally speaking, the influence of entrepreneurial intentions of college students majoring in different subjects is more complicated, and further research is needed.

5. CONCLUSION

5.1 Results

- (1) Entrepreneurship education has a positive impact on entrepreneurial intentions, including entrepreneurial possibilities and entrepreneurial preparation. The more theoretical and practical entrepreneurship education a college student receives in a university, the more entrepreneurial preparations students will make and the higher the likelihood of starting a business.
- (2) Entrepreneurial attitudes have a significant positive impact on entrepreneurial intentions, including entrepreneurial possibilities and entrepreneurial preparation. College students with higher levels of entrepreneurial attitudes are more likely to start a business, and their entrepreneurial preparations are more. When college students have the idea of acquiring high profits, gaining power status, and achieving personal achievements through entrepreneurship, their entrepreneurial intention will also increase. It is suggested that colleges and universities to improve college students' entrepreneurial intentions can start from changing college students' entrepreneurial attitude. In the process of starting entrepreneurship education, colleges and universities should pay attention to the added value of promoting entrepreneurship to college students. For example, colleges can invite successful college students' entrepreneurial representatives to give lectures and introduce outstanding college students' entrepreneurial projects. It can trigger college students' enthusiasm for entrepreneurship and improve their entrepreneurial attitudes.
- (3) For students majoring in natural sciences and humanities, entrepreneurship education and entrepreneurship education will positively regulate the impact of entrepreneurial attitudes on entrepreneurial preparation. After the development of entrepreneurship education, students with more positive entrepreneurial attitudes will be more prepared for entrepreneurship. This point reminds us once again that although the impact of entrepreneurial attitudes of individual college students on entrepreneurial intentions is very obvious, colleges and universities can regulate this part of the influence through entrepreneurship education. However, it is worth noting that the regulation of entrepreneurship education is only reflected in the impact of entrepreneurial attitudes on entrepreneurial readiness, and there are disciplinary restrictions. Colleges and universities should note that there is a shortage of entrepreneurship education for students majoring in social science. Colleges and universities can promote interdisciplinary entrepreneurial cooperation, in order to bring new possibilities for college students to start a business.

5.2 Insufficient and Prospect

We study the relationship among entrepreneurship education, college students' entrepreneurial attitude and entrepreneurial intention. But we also have the following deficiencies: First, the classification of subject disciplines in the study sample collection is not detailed enough; Second, the study of college students' entrepreneurial intention is a complicated issue, If we consider more of the above factors, it needs to think further.

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