

A study on the influence of innovation and entrepreneurship education on the relationship between entrepreneurial potential and entrepreneurial intention in a private university in Chongqing, China

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ABSTRACT: Innovation and entrepreneurship education is a lecture concept and model that has been created to meet the needs of economic, social and national development strategies. Vigorously promoting innovation and entrepreneurship education in higher education is conducive to cultivating college students' innovation spirit, entrepreneurial potential and entrepreneurial intention. In this study, a quantitative research method was used, and there are 133 students involved. These students are of two majors in their junior year in a private university in Chongqing (hereinafter referred to as C University). Among which the students who did not receive innovation and entrepreneurship education majored in property management, with a total of 65 students. The students who received innovation and entrepreneurship education majored in information management and information system, with 68 students in total. The results showed that the students' entrepreneurial potential ($M=4.63$, 7-point Likert scale) and entrepreneurial intention ($M=4.43$, 7-point Likert scale) were in the middle level in C University. The level of entrepreneurial potential and entrepreneurial intention of students who received innovation and entrepreneurship education were 0.22 and 0.31 higher than those of students who did not receive innovation and entrepreneurship education, respectively. Students' entrepreneurial potential had a positive effect on entrepreneurial intention ($R=0.692$). The correlation coefficient between entrepreneurial potential and entrepreneurial intention for students who did not receive innovation and entrepreneurship education was 0.722. For students who received innovation and entrepreneurship education, the correlation coefficient between entrepreneurial potential and entrepreneurial intention was 0.648. This indicates that innovation and entrepreneurship education contributes to the increase of entrepreneurial potential and entrepreneurial intention, but does not have a positive effect on the relationship between the two.

KEYWORDS: Innovation and entrepreneurship education, Entrepreneurial potential, Entrepreneurial intention, Quantitative analysis.

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I. INTRODUCTION

Entrepreneurship is the core driving force of a country or region (Praag & Versloot, 2007). Entrepreneurship can promote economic development, industrial upgrading and the transformation and upgrading of economic structure, while creating jobs and promoting social and technological progress (Hathaway & Litan, 2014). Economists and sociologists both agree that entrepreneurship is the most critical driver of all economic and human activities (Analoui, Moghimi & Khanifar, 2009). At the same time, innovation and entrepreneurship education, as an important input factor of entrepreneurship industry, is receiving more and more attention. Innovation and entrepreneurship education is considered as one of the most important factors in cultivating and developing the entrepreneurial passion, entrepreneurial spirit, and entrepreneurial behavior of the young generation (Kourilsky & Walstad, 1998).

College students play an important role in promoting economic development (Graevenitz et al., 2010). Empirical research shows that college students are easier to succeed and have better enterprise development prospects (Shane, 2004). College students' entrepreneurship has become one of the driving forces of social and economic development (Harhoff, 1999; Shane, 2004). As a result, national governments began to pay close attention to the ability and development of potential entrepreneurs of college students (Liñán, 2004). In recent years, innovation and entrepreneurship education has developed rapidly and made certain achievements in China. However, compared with the countries that took the lead in the innovation-driven industry, Chinese college students generally have problems such as insufficient innovation spirit, low innovation ability,

insufficient entrepreneurial intention and weak entrepreneurial potential in innovation and entrepreneurship (Jiang, 2018; Zhang, 2017). Innovation and entrepreneurship is the general trend of world development and the source of the driving force for national development. Strengthening innovation and entrepreneurship education is the era mission of higher education. Therefore, it is very important to understand the impact of innovation and entrepreneurship education on the relationship between entrepreneurial intention and entrepreneurial potential.

II. METHODOLOGY

This study was conducted at C University in Chongqing, China between February 2022 and June 2022. It mainly includes juniors in two majors, who are property management majors and information management and information system majors. A total of 133 college students participated in this study. Among them, 65 are property management majors that have not received innovation and entrepreneurship education, and 68 are information management and information system majors that have received innovation and entrepreneurship education. This study used quantitative research using purposive sampling in non-random sampling. Students from two majors who are receiving innovation and entrepreneurship education and those who are not receiving innovation and entrepreneurship education were selected. Data were analyzed using SPSS 22. Gender differences in levels of entrepreneurial potential and entrepreneurial intention were measured by t-test. Simple linear regression was also used to test the influence of entrepreneurial potential on entrepreneurial intention.

III. FINDINGS

Electronic questionnaire was used in this study and they were sent through the questionnaire star. A total of 139 questionnaires were collected. The average answer time was 180 seconds. Excluding the questionnaire with the answer time being too short (less than 90 seconds), 133 valid questionnaires were actually recovered, with a recovery rate of 95.7%. As shown in Table 1, the proportion of males was 33.8% and 66.2% for females. The female proportion is relatively high, and the gender structure of this C university itself wants to fit. The proportion of students who did not receive innovation and entrepreneurship education and students who received innovation and entrepreneurship education was basically the same, with 48.9% and 47.9%, respectively. The questionnaire used the 7-point Likert scale to investigate the influence of innovation and entrepreneurship education on the relationship between entrepreneurial potential and entrepreneurial intention. According to Hair et al. (2018), if the Cronbach's Alpha value is greater than 0.7, it indicates that the reliability of the data is high. As shown in Table 2, the Cronbach's Alpha value of the questionnaire was 0.937, indicating the high reliability of the questionnaire used in this study.

		Frequency	Percent (%)
Gender	Male	45	33.8
	Female	88	66.2
Participation in IEE	Have not attended IEE	65	48.9
	Have attended IEE	68	47.9

Table 1: Demographics of respondents

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		N of Items
0.937	0.937	0.937	34

Table 2: Reliability Statistics

Normality and multicollinearity will need to be tested before performing the data analysis (Hair et al., 2018). The results of the normality test are shown in Figure 1, Figure 2 and Table 3. In this study, the values of skewness for entrepreneurial potential and entrepreneurial intention were 0.225 and 0.185, respectively. The value of kurtosis for entrepreneurial potential and entrepreneurial intention is -0.407. According to Kline (2010), Variables with skewness values between -2 and + 2 and kurtosis values between -7 and + 7 indicate that the data are normally distributed. Combining the values of P-P plots and skewness and kurtosis shows that the data in this study fit a normal distribution. The results of the multicollinearity test are shown in Table 4. The VIF value of the entrepreneurial potential in this study was 1. According to Li (2020), when judging the multicollinearity

of the model, a VIF value below 5 indicates that there is no multicollinearity (there is also a loose criterion of less than 10) and can regression analysis can be performed.

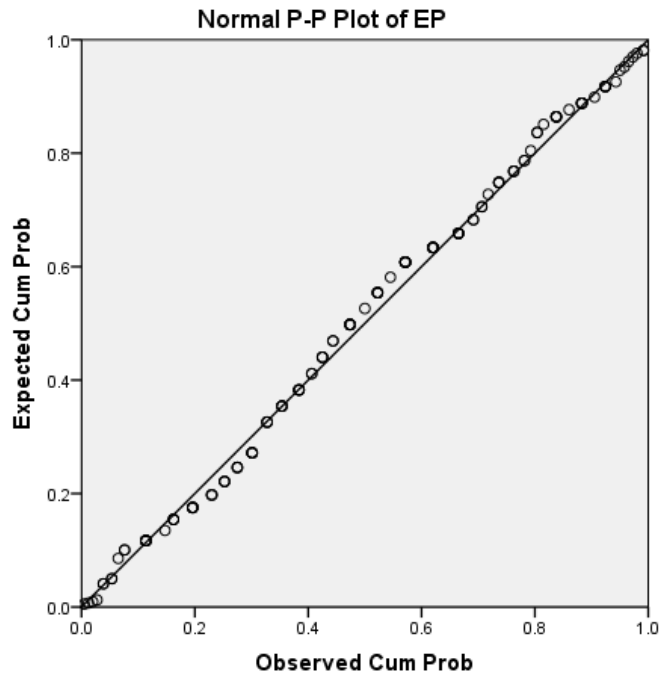


Figure 1: Normal P-P plot for entrepreneurship potential

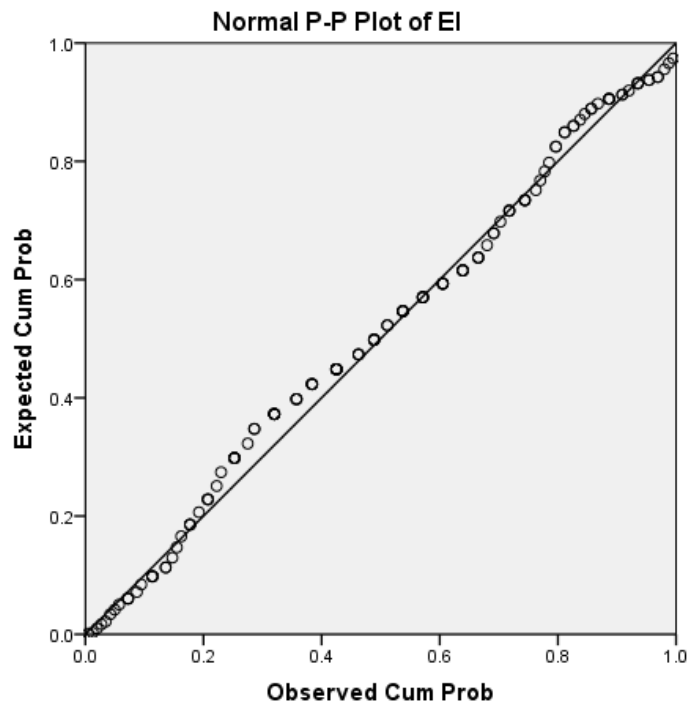


Figure 2: Normal P-P plot for entrepreneurial intention

	Skewness	Kurtosis
Entrepreneurship potential	0.225	-0.407
Entrepreneurial intention	0.185	-0.407

Table 3: The Skewness and Kurtosis values for entrepreneurship potential and entrepreneurial intention

Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	0.324	0.380		0.851	0.396		
	Entrepreneurship potential	0.888	0.081	0.692	10.958	0.000	1.000	1.000

a. Dependent Variable: Entrepreneurial intention

Table 4: The VIF value of entrepreneurship potential on entrepreneurial intention

As can be seen from Table 5, at the C University, students' entrepreneurial potential (M=4.63, 7-point Likert scale) and entrepreneurial intention (M=4.43, 7-point Likert scale) are all at moderate levels. Among them, the entrepreneurial potential and entrepreneurial intention level of students who have received innovation and entrepreneurship education are 0.22 and 0.31 higher than those of students who have not received innovation and entrepreneurship education, respectively. The differences in gender in the level of entrepreneurial potential and entrepreneurial intention are shown in Table 6. Overall, gender showed significant differences in the level of entrepreneurial potential and entrepreneurial intention (Sig_{entrepreneurial potential}: 0.015, Sig_{entrepreneurial intention}: 0.000). Interestingly, there was no significant gender difference in the entrepreneurial potential and entrepreneurship willingness level between the students who did not receive innovation and entrepreneurship education (Sig_{entrepreneurial potential}: 0.233, Sig_{entrepreneurial intention}: 0.051). However, the students who received innovation and entrepreneurship education have significant gender differences in the level of entrepreneurial potential and entrepreneurial intention (Sig_{entrepreneurial potential}: 0.041; Sig_{entrepreneurial intention}: 0.000).

		N	Minimum	Maximum	Mean	Std. Deviation
Have not attended IEE	Entrepreneurship potential	65	3.00	6.50	4.5120	0.79698
	Entrepreneurial intention	65	2.13	6.19	4.2721	0.99341
Have attended IEE	Entrepreneurship potential	68	2.94	6.50	4.7337	0.75381
	Entrepreneurial intention	68	2.50	6.81	4.5864	0.99380
Total	Entrepreneurship potential	133	2.94	6.50	4.6253	0.78023
	Entrepreneurial intention	133	2.13	6.81	4.4328	1.00232

Table 5: Distribution of means and standard deviations for the level of entrepreneurship potential and entrepreneurial intention

		t	Sig. (2-tailed)
Have not attended IEE	Entrepreneurship potential	1.205	0.233
	Entrepreneurial intention	1.991	0.051
Have attended IEE	Entrepreneurship potential	2.086	0.041*
	Entrepreneurial intention	4.050	0.000*
Total	Entrepreneurship potential	2.493	0.015*
	Entrepreneurial intention	4.050	0.000*

Table 6: The level of entrepreneurship potential and entrepreneurial intention of respondents with different gender

Simple linear regression was used to explore the impact of innovation and entrepreneurship education on the relationship between entrepreneurial potential and entrepreneurial intention. As can be seen from Table 7, overall, students' entrepreneurial potential has a positive and positive impact on their willingness to start a business ($R=0.692$). The correlation coefficient between entrepreneurial potential and entrepreneurial intention for students who did not receive innovation and entrepreneurship education was 0.722.

	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Have not attended IEE	0.722 ^a	0.521	0.513	0.69307	1.731
Have attended IEE	0.648 ^a	0.419	0.411	0.76301	1.831
Total	0.692 ^a	0.478	0.474	0.72678	1.773

a. Predictors: (Constant), Entrepreneurship potential

b. Dependent Variable: ntrepreneurial intention

Table 7: Simple linear regression results

IV. DISCUSSION AND CONCLUSION

Entrepreneurship is closely related to the sustainable economic growth of a country, and individual entrepreneurial intention means potential entrepreneurial behavior. High entrepreneurial potential means a high entrepreneurial success rate. This study demonstrates the influence of innovation and entrepreneurship education on the relationship between entrepreneurial potential and entrepreneurial intention. The specific research conclusions are as follows:

At CUniversity, students' levels of entrepreneurial potential and willingness are moderate. However, the entrepreneurial potential and entrepreneurial intention level of students who have received innovation and entrepreneurship education are 0.22 and 0.31 higher than those of students who have not received innovation and entrepreneurship education, respectively. It shows that innovation and entrepreneurship education is helpful to the cultivation of students' entrepreneurial potential and entrepreneurial intention. This is also widely shared by many scholars (Drost, 2010; De Clercq, 2013; Agu & Nwachukwu, 2020; Thomakis & Daskalopoulou, 2021).

Overall, gender showed significant differences in the level of entrepreneurial potential and entrepreneurial intention. There was no significant gender difference in the entrepreneurial potential and entrepreneurship willingness level between the students who did not receive innovation and entrepreneurship education. However, the students who received innovation and entrepreneurship education have significant gender differences in the level of entrepreneurial potential and entrepreneurial intention. It shows that the influence of innovation and entrepreneurship education on entrepreneurial potential and entrepreneurial intention is related to gender. This was also found in studies conducted by other scholars (Delmar & Davidsson, 2000; Zeffane, 2013; Zhao et al., 2005)

In total, students' entrepreneurial potential has a significant positively impact on their entrepreneurial intention. Among them, the entrepreneurial potential of students who have not received innovation and entrepreneurship education has a higher impact on their entrepreneurial intention than that of students who have received innovation and entrepreneurship education. This may give students a more accurate judgment of their entrepreneurial potential and entrepreneurial risks after receiving innovation and entrepreneurship education. This will also be the focus of future research.

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