Journal of Research Administration
Society of Research Administrators International

ENTREPRENEURIAL MENTAL MODEL AND ITS PREDICTORS IN COLLEGE STUDENTS

Feng Wang

Feng Wang, Phd candidate, International College, Krirk university in Thailand.

Fawen Hu

Fawen Hu, Advisor, International College, Krirk University in Thailand (International College,Krirk University, Bangkok 10220, Thailand)

***Corresponding Author:** Feng Wang
Feng Wang, Phd candidate, International College, Krirk university in Thailand.

Abstract：

To explore the characteristics of the entrepreneurial mental model and its influencing factors, four scales of the College Students' Entrepreneurial Mental Model Questionnaire, Chinese Multiethnic Adolescent Cultural Identity Questionnaire, Chinese Critical Thinking Disposition Inventory, and Williams's Creativity Tendency Inventory were used to survey total of 102 entrepreneurial and non-entrepreneurial college students. The results indicated: (1) Overall, the development of entrepreneurial mental model is at above medium level for college students, and the entrepreneurial students' scores were significantly higher than those of the non-entrepreneurial students. (2) For entrepreneurial students, the scores of entrepreneurial mental model were not associated with that of cultural identity, but were significantly positive correlated with the critical thinking and the creativity tendency. The critical thinking could indirectly positive affect the entrepreneurial mental model via the complete mediation of creativity tendency. (3) For the non-entrepreneurial students, the entrepreneurial mental model did not correlated with critical thinking and creativity tendency, but was positively affected by the cultural identity. The conclusions suggest that entrepreneurial experience can enhance the entrepreneurial mental model, and to intervene in the cultural identity, critical thinking ability and creativity tendency will promote the development of entrepreneurial mental model.

Keywords: College students; Entrepreneurial mental model; Cultural identity; Critical thinking; Creativity tendency

1. Question raising

The word "entrepreneurship" is translated from English entrepreneurship, and its original meaning is entrepreneurial ability. Economics believes that entrepreneurship is an economic activity for profit, that is, the combination of production factors and commercial innovation. Psychologists

regard entrepreneurship as an external manifestation of internal needs such as independence, achievement, autonomy, desire to create, and adventure. Management scholars regard entrepreneurship as the result of the interaction of four variables: individual, organization, process and environment [1]. Some researchers believe that entrepreneurship is an innovation process of discovering and capturing opportunities and creating new products [2-3]. Generally speaking, scholars in different fields have different views on entrepreneurship. To sum up, entrepreneurship, as an economic behavior, involves the collaborative process of individual psychological needs, opportunity identification, environmental utilization and other factors. Obviously, the commonness of these definitions is that the individual mental model plays an important driving and regulating role in the process of entrepreneurial behavior.

Mental model is a psychological model that people independently build to deal with the internal and external environment, including cognition, expectation, belief and hypothesis of internal factors and external environment. It is characterized by the internal cognitive structure, dynamic system and behavior model [4]. As a subordinate concept of mental model, entrepreneurial mental model refers to the knowledge and experience about self and entrepreneurship that individuals gradually form in the process of learning and exploration, and use the formed knowledge and experience to "explain" the event that they choose to start a business, and then make a basic judgment to drive themselves to make the final entrepreneurial choice and actually implement [5]. In the definition of this concept, the entrepreneurial mental model is a hierarchical structure: the first level mainly consists of three parts: Entrepreneurial cognitive system, entrepreneurial dynamic system and entrepreneurial behavior intention. The second level involves seven dimensions, including entrepreneurial awareness, entrepreneurial environment cognition, entrepreneurial motivation, entrepreneurial interest, entrepreneurial efficiency, innovation and boldness. The corresponding empirical research found that the Factors Affecting Entrepreneurial intelligence were gender, grade, school area, professional category, place of origin, whether they had received entrepreneurial education, entrepreneurial experience, and these factors had different focuses on entrepreneurial intelligence.

The current research mainly focuses on exploring the relationship between the components of Entrepreneurial mental model and its elements. As a part of the entrepreneurial cognition system, entrepreneurial cognition includes various thinking structures and knowledge reserves of individuals about entrepreneurship. Entrepreneurial cognition ability can directly promote entrepreneurial decision-making and positively affect entrepreneurial performance [6]. Cultural values can be used for entrepreneurial decision-making through the impact on entrepreneurial cognition [7], which shows that entrepreneurial cognition plays a partial intermediary role in the relationship between cultural psychological factors and entrepreneurial decision-making. From the perspective of the elements of entrepreneurial cognitive system, entrepreneurial environment perception can positively affect entrepreneurial intention and entrepreneurial ability [8-9]. The impact of the dynamic system on entrepreneurship includes the following aspects. First, entrepreneurial motivation can not only act on entrepreneurship in a one-way way way, but also

act on entrepreneurship through part of the intermediary of social network, and ultimately affect entrepreneurial activities [10], thus promoting the growth of enterprise performance [11]. Second, as a selective attitude and positive emotional response to entrepreneurial activities, entrepreneurial interest can mediate entrepreneurial activities through influencing entrepreneurial motivation and willingness [12]. Third, entrepreneurial self-efficacy positively regulates the relationship between institutional regulatory environment and individual entrepreneurial intention [13], and people with high entrepreneurial self-efficacy are more likely to adopt entrepreneurial behavior [14]. From the perspective of entrepreneurial behavior intention, entrepreneurial intention is the best predictor of entrepreneurial behavior. Previous studies have shown that personality characteristics, risk-taking, value orientation, autonomy, emotional intelligence and other factors can positively predict entrepreneurial intention [15-17]. In addition, personal background factors such as gender, age, education background, race, family, work experience and entrepreneurial experience will have an impact on entrepreneurial intention [18], but generally speaking, men's entrepreneurial intention is higher than women's [19]. In addition, meta-analysis found that there was a positive relationship between risk-taking and entrepreneurship, and there was a significant positive correlation with entrepreneurial intention [20-21].

To sum up, entrepreneurial mental model is an important internal psychological factor affecting entrepreneurial activities and entrepreneurial behavior, which can directly or indirectly affect entrepreneurial decision-making, entrepreneurial intention and entrepreneurial activities, and significantly improve entrepreneurial performance. However, from the perspective of the current development of entrepreneurship education and the cultivation of professional quality, only taking the career planning and employment guidance courses as the measures to deal with the employment pressure, the corresponding curriculum system is not perfect, and there is a lack of clear entrepreneurship education objectives and program measures [22]. In terms of teaching content, it is limited to thinking and talking on paper from some vague professional concepts and simple operating skills. Obviously, it is difficult to really improve college students' entrepreneurial psychological literacy and career planning skills only by theoretical course teaching or empirical preaching, with little effect [23]. In view of these defects in practice, in order to further optimize the working mode of entrepreneurship education in Colleges and universities, this study intends to investigate and analyze the development characteristics of contemporary college students' Entrepreneurial mental model from the psychological level, and explore the predictive effect of critical thinking ability, cultural identity, and creativity tendency on Entrepreneurial mental model and its influence path model. Therefore, under the social background of "mass entrepreneurship and innovation", it is of great practical and theoretical significance to explore the development characteristics and predictive factors of College Students' Entrepreneurial mental model.

2. Research design

2.1 Respondents

Based on the comparative research paradigm, entrepreneurial college students and non entrepreneurial college students were selected as the survey objects. Entrepreneurial college

students refer to college students who independently or cooperatively carry out entrepreneurial activities according to their own novel ideas, ideas, ideas and ideas [24]. Non entrepreneurial college students refer to college students who have never independently engaged in or participated in entrepreneurial activities. According to the purpose of the study and the design of the sampling scheme, the purposive sampling method was adopted. A total of 120 questionnaires were distributed, and 102 valid questionnaires were finally recovered, with a recovery rate of 85%. There were 40 boys and 62 girls, aged from 18 to 28 years old, with an average age of 21.74, SD=2.28. 51 entrepreneurial college students and 51 non entrepreneurial college students; There were 54 Han people, 48 ethnic minorities, 22 graduates and 80 non graduates.

2.2 Research tools

(1) College Students' entrepreneurial mental model questionnaire This questionnaire is used to evaluate the characteristics of College Students' entrepreneurial mental development. It was compiled by chenzhiliang (2011). It contains 31 items and is divided into three subscales: Entrepreneurial cognitive system, entrepreneurial dynamic system and entrepreneurial behavior intention. The questionnaire of entrepreneurial cognition system includes two dimensions: Entrepreneurial awareness and entrepreneurial environment cognition, with 4 items in each dimension and 8 items in total; The sub questionnaire of entrepreneurial motivation system contains three dimensions: Entrepreneurial interest, entrepreneurial motivation and entrepreneurial efficacy, with 5 items in each dimension, a total of 15 items; The sub questionnaire of entrepreneurial behavior intention includes two dimensions of innovation tendency and boldness, each dimension has four items, a total of eight items. Each item was scored by using the 5-point Richter scale, with a score of 1-5, that is, 1 means completely unqualified, 2 means relatively unqualified, 3 means uncertain, 4 means relatively qualified, and 5 means fully qualified. Calculate the average number of item scores in each dimension as the score of that dimension, calculate the average number of dimension scores in each subscale as the score of this subscale, and calculate the average number of three subscale scores as the total questionnaire score. The higher the score, the better the development of Entrepreneurial mental model. Internal consistency of this questionnaire and its three sub questionnaires Cronbach α The coefficients were 0.93, 0.81, 0.82, 0.83, indicating good reliability. At the same time, validity analysis showed that the correlation coefficient between the questionnaire and entrepreneurial alertness questionnaire was 0.77, indicating that the validity met the requirements of psychometrics. In this test sample, of the total questionnaire α The coefficient is 0.94.

(2) Critical thinking ability scale (ctdi-cv)

The Chinese version of the critical thinking aptitude Questionnaire Revised by Peng MEICI et al. [25] was used to test the characteristics of the subjects' critical thinking aptitude. The scale has a total of 70 items (40 reverse scores), including 7 attitude tendencies: seeking truth, open thinking, analytical ability, systematic ability, self-confidence, thirst for knowledge, and cognitive maturity. Each attitude tendency contains 10 items. The 6-point Likert scale was used to evaluate the score of the item, i.e. 1=very agree, 2=quite agree, 3=relatively agree, 4=generally agree, 5=quite disagree, 6=very disagree. The capacity validity index (CVI) analysis showed that: the ability to

seek truth, open mind and analysis was evaluated as 1, the systematization ability and self-confidence were 0.9, and the curiosity and cognitive maturity were 0 6, and the total CVI was 0. 89. Ctdi-cv α Value 0.90, 7 traits α The value is 0.54~0.77, indicating that the scale has good reliability and validity. In this test sample, the α The value is 0.93.

(3) Multi ethnic adolescents' cultural identity questionnaire

The questionnaire was compiled by Hu, Wang and Li (2014) [26], with 34 items and two subscales: national cultural identity and mainstream cultural identity. The mainstream cultural identity includes two dimensions: social norms and subject culture, and the national cultural identity includes four dimensions: national acceptance, national preferences, national customs and religious beliefs. Using the 5-point Likert scale score, from 1 to 5, respectively means "completely unqualified completely qualified". Calculate the average number of entries in each dimension as the dimension score, calculate the average number of dimensions in each subscale as the subscale score, and calculate the average score of the two subscales as the total questionnaire score. The higher the score, the higher the degree of identification. Internal consistency coefficient of the total questionnaire α The Spearman Brown split coefficient was 0.91, and the construct validity was 0.92 χ 2=953.16, DF=512, χ 86, RMSEA=0. 04, nnfi=0. 98, CFI=0. 98, GFI=0. 91, SRMR=0 The correlation between each factor was 0.19~0.70, the correlation between each factor and the total questionnaire was 0.63~0.84, the correlation coefficient between the national cultural identity subscale and its four dimensions was 0.76~0.84, and the correlation coefficient between the mainstream cultural identity subscale and its two dimensions was 0.88 and 0.91, respectively, indicating that the questionnaire has good reliability and validity. In this sample, of the total questionnaire α The value is 0.94.

(4) Williams creativity tendency scale

The Creativity Assessment Packet (CAP) was used to test the subjects' creativity tendency. The scale was compiled by American psychologist Williams and revised by Taiwan scholars Lin Xingtai and Wang Murong [27], including 50 items. It is divided into four dimensions: adventure, curiosity, imagination and challenge. The three-level scoring method of "1 (completely unqualified) -3 (completely qualified)" is adopted. The higher the score, the more obvious the tendency of creativity. The original scale has good reliability and validity α The value is 0.85.

2.3 Research procedure

Using the college students' entrepreneurial mental model questionnaire, the critical thinking ability scale (ctdi-cv), the multi-ethnic youth cultural identity questionnaire, and the Williams creativity tendency scale, the entrepreneurial and non entrepreneurial college students in a local university in Yunnan Province were tested. For non entrepreneurial college students, they should be distributed on site within a limited time and recovered in time, mainly in classrooms and dormitories; For entrepreneurial college students, within a limited time, the researchers will go to the entrepreneurial base of the entrepreneur in person. A total of 120 questionnaires were distributed. After data screening and sorting, 102 valid questionnaires were finally recovered, with

a recovery rate of 85%, including 40 boys, 62 girls, 51 entrepreneurial college students and 51 non entrepreneurial college students.

2.4 data processing

SPSS V22 for Windows software was used to conduct internal consistency analysis, descriptive statistical analysis, independent sample t-test, Pearson correlation analysis and multiple regression analysis on the effective data. In addition, on the basis of regression analysis, lisrel8.71 for windows analysis software is used to conduct structural equation modeling analysis on the relevant variables of entrepreneurs' entrepreneurial mental model, so as to further verify the possible predictive relationship between these variables.

3. Research results

3.1 Difference test of College Students' Entrepreneurial mental model

Table 1 Comparison of entrepreneurial mental models between entrepreneurial and non entrepreneurial College Students

Dimension and sub questionnaire	Student category	*M*	*SD*	*T*(df=100)	***P***
Entrepreneurial awareness	Entrepreneur	3.74	0.70	3.88	0.000187
	Non entrepreneur	3.24	0.61		
Cognition of entrepreneurial environment	Entrepreneur	3.51	0.62	3.60	0.001
	Non entrepreneur	3.11	0.50		
Entrepreneurial interest	Entrepreneur	3.69	0.64	3.79	0.000257
	Non entrepreneur	3.22	0.59		
Entrepreneurial effectiveness	Entrepreneur	3.51	0.63	3.62	0.000466
	Non entrepreneur	3.06	0.61		
Entrepreneurial motivation	Entrepreneur	3.53	0.65	3.52	0.002
	Non entrepreneur	3.12	0.64		
Innovation tendency	Entrepreneur	3.57	0.67	4.44	0.000024
	Non entrepreneur	3.03	0.55		
Daring	Entrepreneur	3.51	0.65	2.70	0.008
	Non entrepreneur	3.18	0.57		
Entrepreneurial cognitive system	Entrepreneur	3.63	0.58	4.35	0.000033
	Non entrepreneur	3.17	0.47		
Entrepreneurial Dynamic System	Entrepreneur	3.57	0.56	4.14	0.000073

Entrepreneurial behavior intention	Non entrepreneur	3.14	0.51		
	Entrepreneur	3.54	0.60	3.95	0.000144
Entrepreneurial mental model	Non entrepreneur	3.11	0.50		
	Entrepreneur	3.58	0.54	4.52	0.000017
	Non entrepreneur	3.14	0.44		

Table 1 shows that, in general, college students' entrepreneurial mental development is at the medium and upper levels. Independent sample t-test showed that entrepreneurial college students' scores of entrepreneurial mental dimensions were significantly higher than those of non entrepreneurial college students.

3.2 Analysis of predictive factors of College Students' Entrepreneurial mental model

Firstly, Pearson correlation analysis was conducted on the sample data of entrepreneurs and non entrepreneurs. The results showed that among the entrepreneurs, the score of entrepreneurial intelligence was not correlated with cultural identity (r=0.27, P=0.053), but was significantly positively correlated with critical thinking (r=0.42, P=0.002) and creativity tendency (r=0.27, P=0.00001), and there was a positive correlation between critical thinking and creativity tendency (r=0.41, P=0.003); Table 2 shows the correlation coefficients between the scores of the seven critical thinking ability dimensions, four creativity tendency dimensions and the three entrepreneurial intelligence subscales, indicating that the scores of the three subscales are not related to truth seeking, open thinking and cognitive maturity.

Table 2 Correlation Analysis of entrepreneurs' Entrepreneurial mental model, critical thinking and creativity tendency

创业心智	批判性思维能力								创造力倾向			
	寻找真相	开放思想	分析能力	系统化能力	自信心	求知欲	认知成熟度	批判思维能力	冒险性	好奇性	想象力	挑战性	总分
创业认知系统	0.04	0.18	0.52**	0.43**	0.48**	0.49**	0.01	0.48**	0.42 **	0.62**	0.27	0.53**	0.58**
创业动力系统	0.08	0.13	0.40**	0.47**	0.42**	0.36*	-0.02	0.41**	0.30*	0.55**	0.32*	0.46**	0.52**
创业行为意向	-0.07	0.09	0.29*	0.44**	0.34*	0.38**	-0.12	0.29 *	0.27	0.48**	0.37**	0.44**	0.50**

Note: * p<0.05, **p<0.01, bilateral test.

According to the previous analysis, taking creativity tendency as the intermediary variable, this paper tests the impact of critical thinking ability on entrepreneurial intelligence. Using the mediation effect analysis method of successively testing the regression coefficient [28], the regression analysis shows that the direct effect of critical thinking ability on Entrepreneurial mental model is significant, β= 42, t=3. 23, P=0. 002, R2=0; The direct effect of critical thinking ability

on creativity tendency is significant, β= 41, t=3. 12, P=0. 003, R2=0; At the same time, when analyzing the predictive effect of critical thinking ability and creativity tendency on Entrepreneurial mental model, although the regression equation is significant (f (2,48)=14.09, p<0.001, r2=0.37), the regression coefficient of critical thinking ability is （ β= 22, t=1. 78, P=0, β= 48, t=3.85, p<0.001, indicating that creativity tendency has a complete mediating effect in the influence of critical thinking ability on Entrepreneurial mental model. This mediating effect model can be expressed as the structural equation model shown in Figure 1.

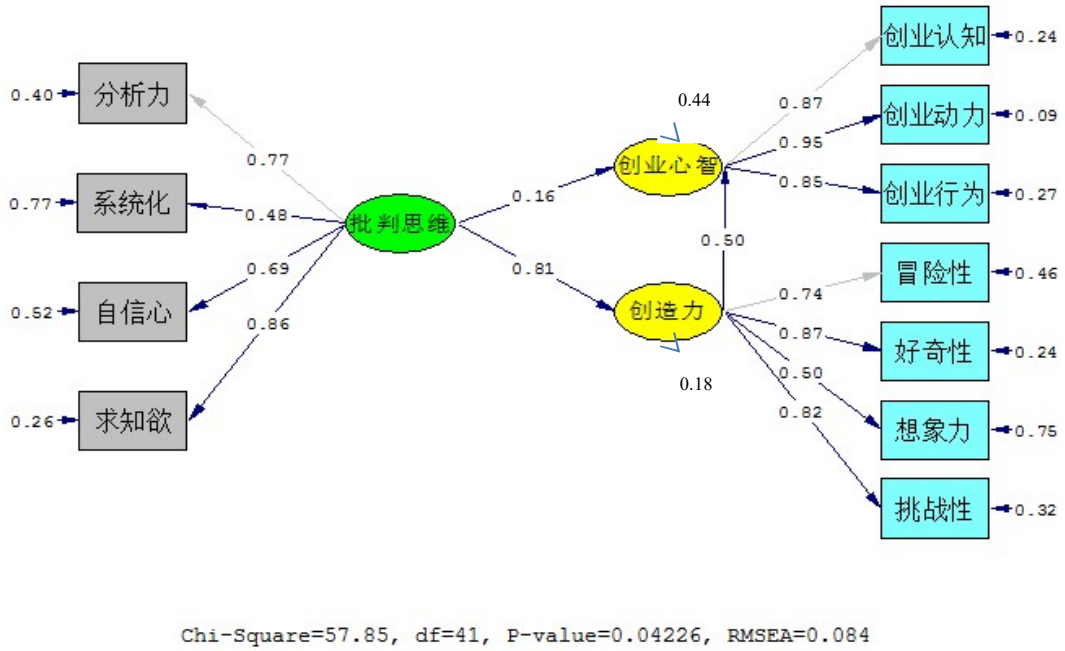

Figure 1 the complete mediating effect model of the impact of entrepreneurs' critical thinking ability on Entrepreneurial mental model

SEM full model analysis shows that (see Figure 1), χ 2=57.85, DF=41, χ 41, RMSEA=0. 08, nnfi=0. 95, CFI=0. 96, GFI=0. 83, SRMR=0; The direct effect of critical thinking ability on Entrepreneurial mental model is not significant, the influence coefficient is 0.16, t=0.58, but the mediating effect of creativity tendency is significant, the influence coefficients are 0.81 (t=4.41) and 0.50 (t=4.01), respectively, indicating that critical thinking ability has a positive and indirect effect on Entrepreneurial mental model through the complete mediation of creativity tendency, and its indirect effect β 41, accounting for 71. 68% of the total effect.

In the non entrepreneur subjects, the score of entrepreneurial intelligence was significantly positively correlated with cultural identity (r=0.34, P=0.015), but not with critical thinking (r=-0.10, P=0.504) and creativity tendency (r=0.25, P=0.082). Cultural identity was negatively correlated with critical thinking (r=-0.41, P=0.003); Further regression analysis showed that cultural identity could positively predict entrepreneurial intelligence f (1,49)=6.32, p<0.05, β= 34, t=2. 51 (P=0. 015), R2=0.

4. Analysis and discussion

4.1 Differences in entrepreneurial mental development between entrepreneurs and non entrepreneurs

The statistical results show that there are differences in entrepreneurial mental models between entrepreneurial college students and non entrepreneurial college students. The level of entrepreneurial mental development of entrepreneurs is significantly higher than that of non entrepreneurs, which is mainly reflected in three main aspects: Entrepreneurial cognitive system, entrepreneurial dynamic system and entrepreneurial behavior intention, as well as seven dimensions: Entrepreneurial awareness, entrepreneurial environment cognition, entrepreneurial interest, entrepreneurial efficiency, entrepreneurial motivation, innovation tendency and boldness. This is consistent with the research results of chenzhiliang (2011), which shows that entrepreneurs have high entrepreneurial psychological quality. The reason may be that entrepreneurs have strong foresight and insight, strong enterprise and opportunity recognition ability, and strong desire for wealth [29]. On the other hand, college students with entrepreneurial experience have rich practical experience, deeper understanding of things, strong logical analysis ability, and deeper understanding of entrepreneurship. Therefore, compared with non entrepreneurial college students, they have higher scores in all dimensions of entrepreneurial mental model. The entrepreneurial mental development of non entrepreneurial college students is generally in a medium state, tending to be mature, but not perfect. This level of development may be affected by personal characteristics, family upbringing, school education, and social environment, as well as the current employment pressure and entrepreneurship advocacy [30-31]. On the whole, the difference in the development of Entrepreneurial mental model between the two can be attributed to the defects of universities in cultivating students' entrepreneurial ability. The mechanism of accepting explicit knowledge and the mechanism of acquiring entrepreneurial ability are different. The acquisition of College Students' entrepreneurial ability requires students to realize the transformation from traditional school learning to entrepreneurial learning, and schools should also promote it from the aspects of creating an atmosphere and system guarantee. Therefore, in order to successfully start a business, entrepreneurs or entrepreneurial college students will take the initiative to collect and learn more explicit knowledge about entrepreneurship, and create opportunities to improve their entrepreneurial ability; Non entrepreneurial college students' demand for entrepreneurship related knowledge, atmosphere and ability is not as strong as entrepreneurial college students [31]. This early information selection bias and the difference in social practice experience are the main reasons for the differences in entrepreneurial mentality between the two groups.

4.2 Predictors of College Students' entrepreneurial mentality

The main purpose of this study is to take entrepreneurial college students as the target population, and use comparative research examples to explore the promoting factors of College Students' entrepreneurial mental development. The results show that entrepreneurial intelligence is significantly positively correlated with critical thinking and creativity tendency, indicating that the stronger the critical thinking ability and creativity tendency are, the more conducive it is to college

students' entrepreneurial decision-making and entrepreneurial behavior. Specifically, the thinking ability training of analytical ability, systematic ability, self-confidence and thirst for knowledge is helpful to improve college students' entrepreneurial mental level and promote entrepreneurial decision-making and behavior orientation; From the perspective of creativity tendency, as the core element of creativity, risk-taking is an indispensable ability for entrepreneurial talents [32]. Curiosity, imagination and challenge can also positively predict the entrepreneurial mental level of college students, which is consistent with some existing research [33-34], indicating that entrepreneurs need to have strong creative and innovative ability in addition to critical thinking ability. At the same time, in the entrepreneurship and vocational education activities in Colleges and universities, it is also necessary to pay special attention to the positive relationship between critical thinking and creativity tendency [35]. The SEM analysis results in this study show that critical thinking ability has a positive and indirect effect on Entrepreneurial mental model through the complete intermediary of creativity tendency, indicating that critical thinking ability is the premise for the development and improvement of Entrepreneurial mental model. This is because critical thinking is a mode of thinking closely related to creativity. In the process of cognition, criticism is the premise of creation, and creation is the internal requirement of the spirit of scientific criticism. The two are interdependent and mutual penetration [36]. Therefore, in college students' entrepreneurial mental training, we should not only guide students to carry out critical thinking ability training activities with the theme of entrepreneurship, but also create conditions to stimulate students' creativity and innovation.

In addition, among the non entrepreneur subjects, the score of Entrepreneurial mental model is positively correlated with cultural identity, indicating that the development of Entrepreneurial mental model of non entrepreneurial college students is affected by cultural factors, which is similar to the recent relevant research conclusions [37-38]. These studies found that identifying with the traditional subject culture has a positive predictive effect on entrepreneurial opportunities, entrepreneurial knowledge acquisition and entrepreneurial desire. In addition, it is not found that the Entrepreneurial mental model of non entrepreneurs is related to critical thinking and creativity tendency, which may be related to the lack of critical thinking ability and creativity development of non entrepreneurial college students. Previous studies have found that the overall level of critical thinking of college students is low and needs to be improved [39]. Therefore, non entrepreneurial college students lack a comprehensive understanding of entrepreneurship, are one-sided in considering problems, are not good at systematic analysis of problems, and lack the ability to seek heterogeneous doubts, systematic analysis, exploration and innovation, and comprehensive reasoning. On the other hand, the creativity level of college students in China is generally not high [40], so the correlation between creativity tendency and Entrepreneurial mental model can not be observed, which shows that entrepreneurs may need to have a high level of creativity. Moreover, cultural identity is negatively correlated with critical thinking, which is consistent with people's daily experience. The original intention of cultural identity is to emphasize the degree to which individual's cognition, attitude and behavior are the same or consistent with that of most members of a culture [41]. Therefore, in a specific cultural environment, the higher the degree of cultural

identity, the more unfavorable it is for individuals to think or deal with entrepreneurial problems with critical thinking. On the whole, critical thinking ability, creativity tendency and cultural identity are the main factors affecting the development of College Students' entrepreneurial mental model. Entrepreneurs need to have high innovation and creativity ability and unique critical thinking ability, and should also maintain significant differences in cognition, attitude and behavior from most of the surrounding members.

5. Research conclusion

In order to explore the characteristics of College Students' entrepreneurial mental development and its predictive factors, this study used the questionnaire survey method to measure and analyze 51 entrepreneurial college students and 51 non entrepreneurial college students

1. in general, college students' entrepreneurial mental development is above the medium level, and entrepreneurs' entrepreneurial mental development level is higher than that of non entrepreneurs.

2. critical thinking ability and creativity tendency are the core cognitive factors that affect the development of College Students' Entrepreneurial mental model, and creativity tendency plays a complete intermediary role in the path model of critical thinking ability predicting the development of Entrepreneurial mental model.

3. for non entrepreneurs, although cultural identity is negatively correlated with critical thinking, it can positively predict the level of entrepreneurial mental development.

References:

1. Gartner, W. B. a conceptual framework for describing the phenomenon of new venture creation [J] The Academy of management review, 1985 (4): 696-706.
2. Roberts, E. B. entrepreneurs in high technology: lessons from MIT and beyond (1 ed.) [m] New york: Oxford University Press, 1991.
3. Lizhineng, yuyihong, Robert D. Sisrick. Entrepreneurship [M] Shanghai: Fudan University Press, 2001.
4. Lvxiaojun, yuwenzhao Empirical research on employee mental model [J] Psychological science, 2002 (06): 736-737.
5. Chen Zhiliang Preliminary development and measurement of College Students' entrepreneurial mental model questionnaire [D]. Shanghai Normal University, 2011.
6. Hebin Research on the relationship between entrepreneurial strategy, entrepreneurial cognition and performance [D] Zhejiang University, 2004.
7. Zhangxiue, zhourongxin, Wang Ye The relationship between cultural values, entrepreneurial cognition and entrepreneurial decision making [J] Exploration of economic issues, 2012 (10): 74-80.
8. Liuyunli Research on the relationship between entrepreneurial environment and college students' entrepreneurial competitive strategy choice [D] Hangzhou University of Electronic Science and technology, 2012.

9. Zhaobo, duwanheng Research on the relationship between College Students' personality traits, entrepreneurial environment perception and entrepreneurial intention Operation and management, 2016 (01): 147-150.
10. Zhaowenhong, Chen Li Research on the relationship between entrepreneurial opportunity, motivation and entrepreneurial spirit based on social network [j] Scientific and technological progress and countermeasures, 2007 (08): 39-42.
11. Yanchunxiao Research on the relationship between entrepreneurial ability, entrepreneurial motivation and enterprise performance of entrepreneurial enterprises in Zhejiang Province [D] Zhejiang business and Technology University, 2010.
12. Wangchengjie, solemn Research on the long-term mechanism of entrepreneurship education based on College Students' entrepreneurial interest, willingness and motivation [J] Journal of Nanjing University of Finance and economics, 2013 (06): 90-93.
13. Hulingyu, wujianlin, Gu Jibao The impact of entrepreneurial environment and entrepreneurial self-efficacy on individual entrepreneurial intention [J] Journal of management, 2014 (10): 1484-1490.
14. Makunshu Research on entrepreneurial cognitive decision under the influence of culture [D] Southwestjiaotonguniversity, 2009.
15. Zhang min Research on the relationship between College Students' emotional intelligence, entrepreneurial self-efficacy and entrepreneurial intention [D] Henan University, 2011.
16. Qianyonghong A comparative study of the impact of personal traits on men's and women's entrepreneurial intentions [J] Technical economy, 2007 (07): 8-13, 124.
17. Chenmeijun Research on the relationship between initiative personality and entrepreneurial intention of college students [D] Jinan University, 2009.
18. Jiandandan, duanjinyun, zhuyuelong Conception measurement, influencing factors and theoretical model of entrepreneurial intention [J] Progress in psychological science, 2010 (01): 162-169.
19. Lichuicui An empirical study on the influencing factors of College Students' entrepreneurial intention [19] China higher education assessment, 2015 (02): 44-49.
20. Stewart, W. H., Jr.,&Roth, P. L. risk dependency differences between entrepreneurs and managers: a meta analytical review [J] Journal of applied psychology, 2001 (1): 145-153.
21. lihailei, Gong Yanming, zhangwenxin The relationship between College Students' risk taking and entrepreneurial intention: the moderating role of perceived entrepreneurial culture [J] Psychological development and education, 2013 (02): 152-158.
22. Julie, Jiang Feng Practice and strategy of College Students' Entrepreneurship [M] Jinan: Shandong University Press, 2010.
23. Deng Pingping The current situation and Countermeasures of entrepreneurship education for college students in China [J] Ningxia Social Sciences, 2013 (05): 159-161.
24. Wan Ximei, zhuguangxi Analysis of College Students' entrepreneurial model in China [J] Youth exploration, 2007 (01): 21-22.
25. pengmeici, wangguocheng, chenjile, etc Reliability and validity test of critical thinking ability scale [J] Chinese Journal of nursing, 2004 (09): 7-10.
26. Hu, F. W., Wang, P.,&Li, L. J. psychological structure of the Chinese multinational adult cultural identity questionnaire [J] Psychological assessment, 2014 (4): 1356-1368.
27. Lin Xingtai, wangmurong Williams creativity test [M] Taiwan: psychological publishing house, 1994.

28. wenzhonglin, liuhongyun, Hou Jietai Regulation effect and mediation effect analysis [M] Beijing: Educational Science Press, 2012.
29. Zhong yuerui Analysis of the characteristics of Chinese entrepreneurs [J] Modern commerce and trade industry, 2012 (02): 6-10.
30. panmingming, wuyali Analysis on the key factors of the formation of entrepreneurial consciousness of college students in Xinjiang [J] Journal of XPCC Institute of education, 2014 (04): 10-15.
31. Jia Shaohua The acquisition of College Students' entrepreneurial ability -- Enlightenment and Reflection on the survey of entrepreneurs' entrepreneurial practice in Yiwu, Zhejiang [J] China higher education research, 2008 (07): 74-76.
32. Hu DAAO Several expressions of entrepreneurial talents' creativity [J] China high tech Zone, 2003 (11): 53-54.
33. Zhang Xi An empirical study on the influencing factors of College Students' entrepreneurial intention [J] Journal of higher education, 2015 (11): 14-15.
34. zhaoxiangyang, Li Hai, sun Chuan From personal values to entrepreneurial intention: creativity as an intermediary variable [J] Journal of Beijing Normal University (SOCIAL SCIENCE EDITION), 2014 (03): 115-130.
35. LiJianfeng, zhangmingxia Critical thinking and innovative quality [J] Journal of Hunan University of science and Technology (SOCIAL SCIENCE EDITION), 2006 (04): 30-33.
36. zhaodefang Comparative analysis of critical thinking and creative thinking [J] Journal of Zhanjiang Normal University, 2011 (01): 58-61.
37. Xu Jun The influence of regional culture on College Students' entrepreneurial tendency [D] East China Normal University, 2011.
38. Kan Xinghui The impact of traditional culture on College Students' Entrepreneurship [J] China staff education, 2014 (24): 108-109.
39. Zeng Jinling Research on the current situation of College Students' critical thinking and its correlation with personality traits and achievement goals [D] Inner Mongolia Normal University, 2013.
40. Wuyi The current situation of College Students' creativity and the main personality factors influencing creativity [J] Journal of Yanbei Normal University, 2002 (06): 36-39.
41. Zheng Xue, Wang Lei Cultural identity, social orientation and subjective well-being of Chinese international students [J] Psychological development and education, 2005 (01): 48-54.