

# Research on the Development of College Students' Entrepreneurship Leadership

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**Abstract.** Under the background of "double innovation", college students are the mainstay of future economic development, and the research on college students' entrepreneurial leadership is of great value. This paper takes college students as the research object, and uses the partial least squares method to analyze the influencing factors of college students' entrepreneurial leadership. The empirical results show that the five levels of individual, school, government, society, and family have a direct impact on the entrepreneurial leadership of college students, and the impact paths are 0.562, 0.433, 0.375, 0.321, and 0.252, respectively, and the degree of impact shows a downward trend. In addition, colleges and governments have an indirect impact on college students' entrepreneurial leadership through individuals. Finally, based on the perspective of human resource development and empirical results, starting from the above five dimensions, through systematic training, career planning and other ways, the entrepreneurial leadership development model of "training-experience-simulation-practice-reflection" is constructed. This study helps to understand the influence mechanism of entrepreneurial leadership, and has high practical application value.

**Keywords:** Entrepreneurial leadership; human resource development; partial least squares method.

## 1. Introduction

In 2014, Li Keqiang put forward the slogan of "Mass Entrepreneurship, Mass Innovation" for the first time, and in the 2015 Government Work Report, he once again mentioned the promotion of "double innovation" practice. It can be seen that under the background of rapid development, the development of innovation and entrepreneurship is in the ascendant, and it is gradually being recognized, accepted and advocated by people. From the country's vigorous call for "mass entrepreneurship and innovation", to the continuous introduction of relevant entrepreneurship subsidy policies and management methods, and to the entrepreneurial boom of college students, the public's passion for innovation and entrepreneurship has been stimulated time and time again. However, only a small number of entrepreneurs can lead their companies through difficult growth stages, and such successful entrepreneurs have specific leadership skills, which is what we call entrepreneurial leadership. Therefore, it is necessary to study entrepreneurial leadership. Although there have been some studies on entrepreneurial leadership at home and abroad, most of them mainly focuses on enterprises, focusing on the relationship with entrepreneurial performance[1]、innovative behavior[2], and college students, as the main source of future entrepreneurial groups, should be the main object of entrepreneurial leadership research, but there is no specific literature on college students as the research object in China. On the other hand, for college students, the entrepreneurial success rate is less than 5%, and most entrepreneurial enterprises stop at the first stage of the life cycle, and the main reason for this phenomenon is the lack of entrepreneurial leadership, so studying the development of entrepreneurial leadership of college students is a good entry point for improving the success rate of college students' entrepreneurship.

Because of this, based on the background of "double entrepreneurship and innovation", this paper takes college students as the research object, tries to build a model of entrepreneurial leadership development for college students based on empirical analysis, and puts forward countermeasures for entrepreneurial leadership development based on the perspective of human resource development, with a view to serving as a reference for the academic community. Research on entrepreneurial leadership provides a new perspective to make up for the lack of current research and reduce the failure rate of college students' entrepreneurial activities.

## 2. Literature Review

Entrepreneurial leadership of college students is defined as the ability of student leaders to respond to challenges and lead entrepreneurial activities, including establishing good interpersonal relationships and teamwork, assigning tasks using an authorized method, building and cohesive team members' confidence, and strengthening their commitment to entrepreneurial projects to achieve the goal[3]. Because of this, this paper defines college students' entrepreneurial leadership as the ability of college students to lead the team to cope with the uncertainty of the entrepreneurial environment, assume entrepreneurial roles, and achieve entrepreneurial goals accumulated through social practice, entrepreneurial simulation and other activities.

The research on entrepreneurial leadership mainly focuses on the measurement, theoretical model, influencing factors and promotion methods of entrepreneurial leadership. The research on the measurement of entrepreneurial leadership started earlier, and the typical measurements are as follows: The Global Leadership and Organizational Behavior Efficacy Questionnaire is summarized from six dimensions: charismatic, person-oriented, autonomous, team-oriented, self-protective and participatory characteristics of entrepreneurial leadership. On this basis, scholars have proposed that scenario performance and task performance are two challenges to entrepreneurial leadership[4]. Subsequent research will focus on the four dimensions of strategy, communication, personal traits, and motivation[5]. This paper draws on these four dimensions, combines the considerations of scholars on the dimension of motivation[6], and combines the current situation of college students to design a measurement scale for the entrepreneurial leadership of college students.

There are many studies on the theoretical model of entrepreneurial leadership, and the more mainstream views are as follows: Based on the perspective of entrepreneurship and strategic management, scholars propose a model of entrepreneurship, emphasizing that entrepreneurial experience, entrepreneurial culture, and entrepreneurial leadership are interconnected, and both Influencing strategic resource management, which in turn affects creative application and innovative development, to generate competitive advantage and thus wealth creation[7]. Based on the research on executives in knowledge-intensive industries, it is pointed out that strategic factors and behavioral factors will affect the effective entrepreneurial leadership of the top management team, and further affect innovative activities to achieve corporate success[8].

Influencing factors and promotion of entrepreneurial leadership. Through the analysis of the successful experience of American college students' entrepreneurial leadership education, Weng pointed out that participating in social activities and serving as student cadres will affect the performance of participation in leadership[9]. Scholars point to the impact of university instructional leadership on entrepreneurial leadership[10]. Li Guoyan and Li Nan used structural equations to study youth entrepreneurial behavior and pointed out that both individuals and families have a great impact on youth entrepreneurial leadership[11]. Wang Lei, Tong Jun, and Wang Kai pointed out that the ineffectiveness of policy incentives at the government level will have an impact on college students' entrepreneurial leadership[12]. Cui Jiandong pointed out that initiative, innovation, and adventurous spirit at the personal level are the key to entrepreneurial leadership[13]. Based on this, this paper combines the mainstream views of domestic and foreign scholars, combines the Chinese management situation and the main characteristics of college students, and designs a scale that affects college students' entrepreneurial leadership from five dimensions: society, colleges, families, governments, and individuals.

To sum up, the research on entrepreneurial leadership is still in its infancy. Foreign research is relatively complete, while domestic research started late and is still in the preliminary exploration stage. Conceptually, the academic community has not reached a consensus, but the definition focuses on "entrepreneurial characteristics + leadership characteristics". In terms of research content, it mainly focuses on theoretical model research, and rarely involves empirical analysis. The research methods tend to be case studies, literature studies or surveys; The research focuses on companies, governments, nonprofits, communities, etc., but it focuses on founders, senior executives, and executives. The promotion of entrepreneurial leadership mainly focuses on

curriculum projects. Therefore, focusing on college students and taking human resources development as the perspective to study college students' entrepreneurial leadership is a new perspective worth studying. At the same time, it is worth noting that the research on entrepreneurial leadership originated from the West, and most of the existing research is rooted in western management concepts and situations. The characteristics of local entrepreneurial leadership are formed based on the edifices of traditional Chinese culture and education background and the atmosphere of The Times, and there are certain cultural differences with foreign entrepreneurial leadership. Therefore, the construction of college students' entrepreneurial leadership model in the Chinese context is the catalyst for the development of "mass entrepreneurship and innovation".

### 3. Research methods and conclusions

#### 3.1 Sample and Data Collection

This study takes college students as the research object, and conducts a questionnaire survey on college students across the country. A total of 220 questionnaires were collected. After excluding invalid questionnaires, a total of 203 valid questionnaires were obtained, and the effective rate of the questionnaires was 92.27%. The specific sample conditions are shown in Table 1. The samples are relatively evenly distributed in the three dimensions of gender, region and grade, roughly meeting the research requirements. And more than 70% of college students have a certain understanding of entrepreneurial leadership.

Table 1. Survey samples

Category	Content	Fre	Fre (%)	Category	Content	Fre	Fre (%)
gender	male	97	47.78	grade	freshman	47	23.15
	female	106	52.22		sophomore	48	23.67
region	north	31	15.27		junior	45	22.17
	south	30	14.78		senior	61	30.05
	central	29	14.29		other	6	2.96
	east	29	14.29	Recognition	incomprehension	47	23.15
	northeast	26	12.80		little understand	122	60.10
	southwest	28	13.79		understand better	30	14.78
	northwest	30	14.78		know very well	4	1.97

#### 3.2 Model Selection

The research on influencing factors mainly adopts AHP method, Logit regression method, structural equation, principal component analysis method, factor analysis method and so on. However, like the AHP method, the requirements for the original data are not high, and the subjectivity is strong. However, this paper involves multi-dimensional influencing factors, and the variables of each dimension are not completely independent and unobservable. The structural equation just meets the requirements and can measure the internal relationship between latent variables and the relationship between latent variables and observed quantities. There are mainly two types of estimation techniques for structural equation models. One is parameter estimation by partial least squares (PLS model), and the other is based on covariance estimation. Represented by LISRE, the PLS model can avoid uncertainty and compensate for small samples. The error is more in line with the requirements of this article to a certain extent.

In order to test the reliability and validity of the questionnaire data, Smart PLS 3 was used to test the reliability and validity of the data before empirical analysis. Cronbachs Alpha ( $\alpha = \frac{k}{k-1}(1 - \frac{\sum_{i=1}^k \sigma_i^2}{\sigma_T^2})$ ) and composite reliability ( $CR = \frac{(\sum_t \pi_{rt})^2}{(\sum_t \pi_{rt})^2 + \sum_t (1 - \pi_{rt}^2)}$ ) were used to test reliability. It can be seen from the table that the reliability coefficients of all other variables are between 0.808

and 0.887, except for ZF and FX, which are 0.698 and 0.658 respectively (the reliability coefficients greater than 0.6 are acceptable, 0.7-0.8 are good, and greater than 0.8 are high), indicating that the reliability of questionnaire analysis is good. Among them, although the reliability coefficient of ZF is 0.698, all CITC values are greater than 0.4, indicating that the reliability quality of data is acceptable. The original reliability coefficient value of FX was 0.675, and the corresponding CITC value of FX1 was less than 0.4. After the deletion of FX1, the reliability coefficient was 0.658, and the CITC values of each item were greater than 0.4, indicating that the data reliability quality was acceptable. Similarly, the corresponding CITC value of SH4 and SH5 is less than 0.4, and the reliability coefficient of SH after correction is 0.839, indicating that the data reliability quality is acceptable. For validity analysis, the average variance extraction rate AVE (when all factor loads are standardized  $AVE = \frac{\sum \pi_{rt}^2 AVE}{t}$ ) was selected as the validity analysis index. It can be seen that AVE of all variables is greater than 0.5, indicating that the questionnaire analysis validity is good, which further indicates that the latent variables in the model can better reflect their significant variables. At the same time, in order to test the explanatory ability of the structural equation, the determinable coefficient was used as an index to measure the explanatory ability and prediction ability of the model, and the Bootstrap test and the Bootstrap test of the path coefficient were used to conduct statistical tests of the model. The empirical results showed that the reliability and validity of the model passed the test standards, and the model had certain explanatory significance.

Table 2. Reliability and validity test of PLS path model

Data	Cronbachs Alpha	Composite Reliability	AVE	inspection
level	reliability		validity	
standard	>0.6 acceptable,>0.7 better		>0.5 acceptable	CR>0.7, AVE>0.5 better
ZL	0.884	0.887	0.506	better
GT	0.808	0.813	0.572	better
GR	0.882	0.887	0.571	better
JL	0.864	0.886	0.519	better
GRCM	0.808	0.808	0.501	better
GX	0.853	0.819	0.568	better
JT	0.817	0.815	0.594	better
SH	0.839	0.838	0.665	better
ZF	0.698	0.700	0.536	better

Note. ZL: strategy, GT: communication, GR: personal level, JL: motivation; GRCM: individual level, GX: university, JT: family, SH: society, ZF: government. The first four are the measurement of entrepreneurial leadership, and the last five are the influencing factors of entrepreneurial leadership.

After the model is checked, the data path analysis is performed, and the standardized regression equation is obtained from the path result:

$$CYLDL(\text{Entrepreneurial leadership}) = 0.562 * GRCM + 0.433 * GX + 0.252 * JT + 0.321 * SH + 0.375 * ZF$$

It can be obtained that the individual level, university level, family level, social level, and government level all have a direct impact on the entrepreneurial leadership of college students, and the impact paths are 0.562, 0.433, 0.252, 0.321, and 0.375, respectively. Because each exogenous variable not only directly affects the entrepreneurial leadership of college students, but also indirectly affects the entrepreneurial leadership of college students through the interaction between exogenous variables. Through the operation of SmartPLS 3, combined with the direct impact and indirect impact path coefficients, the path influence diagram shown in Figure1 can be obtained, where the solid arrows indicate direct impacts and the empty arrows indicate indirect impacts.

### 3.3 Summary

The following conclusions can be obtained from the empirical analysis, and the following will build a model for the development of entrepreneurial leadership for college students based on this.

(1) The quality of the individual level has the greatest impact on the entrepreneurial leadership of college students (0.562), which is consistent with Wang Fang's research that personal conditions, such as innovation and adventurous spirit, will promote entrepreneurial leadership the point of view is similar[14]. Therefore, it is very important to improve leadership knowledge and skills, ideas, entrepreneurial roles, adventurous spirit, communication skills, creativity, team building skills, self-motivation, leadership and self-confidence from the perspective of college students. It can improve the entrepreneurial leadership of college students through the acquisition of knowledge and skills, and gain experience through practice to improve the success rate of entrepreneurship.

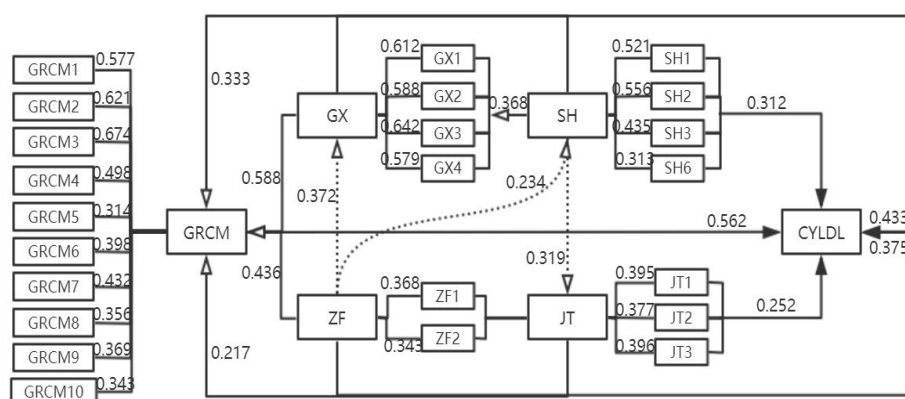


Figure1. PLS path analysis diagram of entrepreneurial leadership of college students

(2) The college has a greater impact on the entrepreneurial leadership of college students (0.433), which is similar to Ghazali's research that schools can provide rich resources for the development of college students' entrepreneurial leadership and thus promote the development of college students' entrepreneurial leadership[15]. Therefore, setting up entrepreneurial leadership courses, holding entrepreneurial leadership projects, providing entrepreneurial leadership practice opportunities, and at the same time increasing the importance of leaders to entrepreneurial leadership have a very important impact on the development of entrepreneurial leadership. In addition, the entrepreneurial leadership practice and entrepreneurial leadership knowledge training provided at the college level will indirectly affect the final level of entrepreneurial leadership (0.588) by affecting the entrepreneurial knowledge, skills, and abilities of college students.

(3) The influence of the government on the entrepreneurial leadership of college students is second only to that of the university level (0.375), which is similar to Li Sha's research that the establishment of reasonable policies and guidelines by local governments can promote the development of entrepreneurial leadership of college students[16]. Therefore, under the background of "mass entrepreneurship and innovation", the strong support of government policies for college students' entrepreneurship, and the recognition and emphasis of government personnel on entrepreneurial leadership can enable college students to have more opportunities to participate in entrepreneurship. Under the policy of entrepreneurship subsidies, it also improves the transformation of college students' ideas and concepts, and they are willing to and try to carry out entrepreneurial practice (0.436), so as to improve entrepreneurial leadership. At the same time, the strong support of government policies makes colleges and universities pay more attention to the development of students' entrepreneurial leadership (0.372). On the other hand, it also makes the society pay more attention to entrepreneurial leadership. Provides more chances (0.234).

(4) The social level also has an impact on the entrepreneurial leadership of college students (0.321), which is consistent with Weng Wenyan's analysis based on the experience of American college students' entrepreneurial leadership and concluded that participating in social practice

activities and serving as student cadres is conducive to the development of college students' entrepreneurial leadership[9].Therefore, whether it is the social and cultural environment that is conducive to entrepreneurial practice, or the willingness of enterprises to provide college students with more information acquisition ability training, social practice opportunities, and public affairs speech opportunities, etc., are all conducive to the development of college students' entrepreneurial leadership. The social level's emphasis on college students' entrepreneurial leadership will indirectly affect the level of college students' entrepreneurial leadership by affecting the individual level (0.333), the university level (0.368), and the family level (0.319).

(5) The influence of family level on entrepreneurial leadership of college students is relatively small (0.252). Among them, the degree of family support will affect the ideology at the personal level (0.217), thus indirectly affecting the level of entrepreneurial leadership.

To sum up, individuals, universities, governments, society, and families all have a direct impact on the entrepreneurial leadership of college students, and their impact paths are 0.562, 0.433, 0.375, 0.321, and 0.252, respectively, and the degree of influence shows a decreasing trend. At the same time, colleges and universities indirectly affect the level of entrepreneurial leadership by affecting individuals (0.588); the government also indirectly affects the level of it by affecting individuals (0.436), colleges and universities (0.372), and society (0.234); 0.333), colleges and universities (0.368), and family (0.319) to indirectly affect the level of entrepreneurial leadership; the family affects the level of entrepreneurial leadership through the indirect impact on individuals (0.217).

#### 4. College students entrepreneurial leadership development suggestions

Based on the empirical results and the perspective of human resource development, a "Training-Experience-Simulation-Practice-Reflection" (T-E-S-P-R Feedback) model for the development of entrepreneurial leadership for college students is constructed. And from the system training, career planning, ethics development and other ways to provide countermeasures for the development of entrepreneurial leadership of college students.

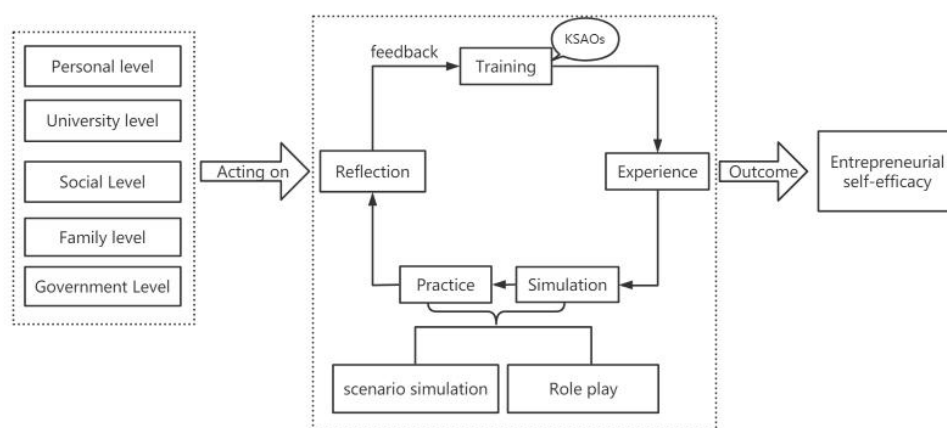


Figure2. "Training-Experience-Simulation-Practice-Reflection" model

Training in the above model refers to the systematic training of college students and the knowledge, skills, and abilities (KSA) related to entrepreneurial leadership. Experience is the acquisition of entrepreneurial experience by observing various situations in actual entrepreneurial activities and interacting with outstanding entrepreneurs. The simulation is the uncertainty and challenge of the virtual entrepreneurial environment, and college students assume corresponding entrepreneurial roles to learn and develop entrepreneurial leadership. Practice is to exercise the entrepreneurial leadership of college students through actual entrepreneurial activities, and finally gain experience and self-reflection through practice to further enhance the entrepreneurial leadership of college students. It can be seen that "training" and "experience" are the prerequisites

for improving college students' entrepreneurial leadership; "simulation" and "practice" are the keys to improving college students' entrepreneurial leadership; "summarization" and "reflection" are the keys to continuously improve college students' entrepreneurial leadership The essential.

"Training" and "experience" are the prerequisites for improving the entrepreneurial leadership of college students. Individuals must learn to change their ideas and actively participate in innovation and entrepreneurship activities. Universities and community entities should have a correct understanding of entrepreneurial leadership and actively provide theoretical courses and opportunities for interaction. The government should achieve macro control in terms of policies and regulate its own leadership behavior. Under the entrepreneurship subsidy policy advocated by the state, local governments can also formulate more reasonable resource allocation plans.

"Simulation" and "practice" are the key to improving the entrepreneurial leadership. The theoretical knowledge acquisition and course practice of individual students through course training are not enough to support the leadership level required for actual entrepreneurship. It can be seen that it is the key to advocate the entrepreneurial subjects of college students to actively carry out entrepreneurial simulation practice. Individuals should actively grasp practical opportunities, strengthen information collection and integration capabilities, and always pay attention to entrepreneurial activities that can be participated in, such as entrepreneurial activities held by universities, communities, enterprises, participate in actual entrepreneurship through entrepreneurial competitions, and take responsibility for their own play an entrepreneurial role, develop experience and knowledge of social interaction into personal entrepreneurial opportunities, and promote the development of entrepreneurial leadership for college students through experiential learning, social interaction, opportunity identification, and network accumulation. As far as universities and communities are concerned, as the main provider of simulated practice opportunities for college students' entrepreneurs, they should not only actively provide practical opportunities for college students' entrepreneurial subjects, but also actively connect with available resources to build a bridge for college students to obtain entrepreneurial practice opportunities .

"Summary" and "reflection" are the keys to continuously improve the entrepreneurial leadership of college students for a long time. In addition to relying on the learning and development opportunities provided by external subjects, the improvement of entrepreneurial leadership of college students is particularly important for the self-development and cultivation of their personal qualities and abilities. Therefore, college students' entrepreneurial subjects should consciously cultivate their own innovation consciousness, and summarize and reflect on entrepreneurial practice activities, in order to effectively avoid the problems encountered in the next entrepreneurial practice. Educators in universities and communities need to provide opportunities for college students to be optimized and reflective through a comprehensive approach to entrepreneurship education.

Finally, from the perspective of ethical development, the development of human resources should vigorously promote advanced culture, pioneering ideas and innovative consciousness. A positive social and public opinion environment can better drive the development and improvement of college students' entrepreneurial leadership.

## 5. Discussion

This study combines and modifies the scales with reference to the existing measurement scales of domestic and foreign scholars combined with the characteristics of the research objects, and finally determines the entrepreneurial leadership measurement scales and influencing factors scales suitable for Chinese college students, and based on this, to college students The survey was carried out, and Smart PLS 3 was used to analyze the PLS path. It was found that individuals, universities, families, society, and the government all have a direct impact on the entrepreneurial leadership of college students. The impact paths are 0.562, 0.433, 0.252, 0.321, and 0.375, respectively. Finally, according to the empirical results, combined with the theoretical basis, from the perspective of human resources development, starting from the five major subjects that affect the entrepreneurial

leadership of college students, a "training-experience-simulation-practice-reflection" (T-E-S-P-R Feedback) college student entrepreneurial leadership development model is constructed.

This study also has limitations. On the one hand, the research on the development of college students' entrepreneurial leadership is limited to the development model, and it does not explore the differences in the development of college students' entrepreneurial leadership at different stages from the development stage of college students. Future research can be further explored The best stage and the most suitable method for the development of entrepreneurial leadership of college students. On the other hand, due to the limitation of research time, cost and ability, the samples studied in this paper are limited. In the future, we can consider expanding the sample size, and at the same time, we can consider regional research, and combine the characteristics of each region to draw conclusions that are more in line with the development status of each region.

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