

The relationship between entrepreneurial intention and career planning education of college students: an in-depth study based on regression analysis

Yali Hou¹, Haijuan Zhou¹, Xiangge Liu¹ and Bingquan Yin^{1,*}

¹ Hebei Qinhuangdao College of General Education, Qinhuangdao Vocational and Technical College, Qinhuangdao, Hebei, 066100, China

Corresponding authors: (e-mail: yinbingquan7667@163.com).

Abstract In recent years, with the popularization of higher education and changes in the social and economic environment, college students' entrepreneurial intention has become an important social phenomenon. At the same time, career planning education, as an important way to improve college students' career quality and entrepreneurial ability, has attracted increasing attention for its influence on college students' entrepreneurial intention. This study explores the relationship between college students' entrepreneurial intention and career planning education, and analyzes it with multiple linear regression model. Through a questionnaire survey of 952 college students from eight colleges and universities in Guangxi, 908 valid questionnaires were recovered, and it was found that there was a significant positive correlation between college students' entrepreneurial intention and career planning education ($r=0.242$, $p<0.01$). The results of regression analysis showed that the four dimensions of "contribution", "material life", "interpersonal relationship" and "self-development" of entrepreneurial intention had a significant predictive effect on career planning education, and the four factors explained a total of 20.1% of the factor variation ($P<0.001$). These results indicate that career planning education has a positive effect on enhancing the entrepreneurial intention of college students, especially in the areas of career planning knowledge, environmental awareness and career planning implementation. The study suggests that strengthening career planning education can effectively stimulate college students' entrepreneurial intention and provide strong support for their future career development.

Index Terms College students' entrepreneurial intention, career planning education, multiple linear regression, regression analysis, contribution, self-development

I. Introduction

Why do college students want to start their own business? In addition to the social employment pressure, there are many other reasons, such as personal character factor traits, the influence of the surrounding environment, the influence of family background, the influence of various successful people in life entrepreneurial success stories [1]-[3]. The formation of college students' entrepreneurial intention is a complex psychological process, each factor will play a certain role, and the college career planning education on college students' entrepreneurial intention is the most critical of all factors [4]-[6]. In today's competitive social environment, career planning education plays a crucial role in the development and success of college students, which can not only enhance their entrepreneurial intentions, but also provide them with effective strategies and ways to realize entrepreneurship [7]-[10].

Career planning education refers to a kind of education that helps students realize their career planning by formulating reasonable career development goals and plans and providing corresponding educational training and career guidance [11], [12]. In today's society, due to the fierce competition, every student needs to have a clear career plan in order to better develop their career [13], [14]. The purpose of career planning education is to help students discover their interests, skills, and values, clarify their career goals, and formulate corresponding career development plans, as well as to help students understand the characteristics, development prospects, and requirements of different careers, and provide relevant career information and experience sharing to enhance their entrepreneurial intentions and make better career choices [15]-[18].

With the rapid development of social economy, the entrepreneurial intention of college students is getting more and more attention from the academic and social circles. As an important force to promote economic development, entrepreneurship not only provides opportunities for college students to realize their self-worth, but also creates a large number of jobs for society. However, the formation of entrepreneurial intention of college students is influenced by many factors, among which career planning education plays a crucial role in this process. Career planning education helps college students understand their interests and specialties, clarify their career goals, and formulate

practical career plans, which helps to improve their entrepreneurial ability and professionalism. Although studies have explored the impact of career planning education on college students' career development, its specific effect on entrepreneurial intention still lacks in-depth analysis. By systematically studying the relationship between college students' entrepreneurial intention and career planning education, this paper aims to reveal the role mechanism of career planning education in cultivating college students' entrepreneurial intention. The study was conducted through a combination of field survey, data analysis and theoretical modeling. First of all, eight colleges and universities in Guangxi area were selected as the research object, and the data were collected by distributing questionnaires. The questionnaire covers the entrepreneurial intention of college students and the relevant dimensions of career planning education to ensure the multidimensionality and representativeness of the data. Secondly, SPSS statistical software was used to analyze the collected data with descriptive statistics to understand the basic situation of entrepreneurial intention and career planning education of college students. Then, regression analysis was conducted using multiple linear regression model to explore the correlation between the dimensions of entrepreneurial intention and career planning education and its influence mechanism. Finally, based on the results of the study, suggestions for optimizing career planning education are proposed to provide a feasible educational path to enhance the entrepreneurial intention of college students.

II. Research Design

II. A. Research themes

The research topic of this paper is the relationship between entrepreneurial intentions and career planning education for college students.

II. B. Research process

This study was conducted in four phases:

Stage 1: Review of literature and identification of topics.

Stage 2: Selection of the scale and implementation of the survey. First, the selected scale was pre-administered to a small sample, and then, certain modifications were made to the applicability of the scale, the reliability and validity of the scale were tested, and the formal scale was determined; finally, the formal scale was used to survey the participants' college students in universities within Guangxi, China.

Stage 3: Analyze the data and draw conclusions. After the questionnaires were recovered, SPSS21.0 statistical software and EpiData3.1. Data analysis software were used to process and analyze the data, and according to the results of the analysis and the discussion with the previous research, the research hypothesis was proved and the conclusion was formed.

II. C. Subjects of study

In this study, college students in their first to fourth year of college from eight institutions of higher education, including Guangxi University, Guangxi Medical University, Guangxi Normal University, Guilin University of Electronic Science and Technology, Lijiang College of Guangxi Normal University, Guilin University of Technology, Bowen Management College of Guilin University of Technology, and Guangxi Vocational and Technical College, are sampled for the survey, and the test is administered using a unified guideline. A total of 1,000 questionnaires were distributed under the principle of random sampling and random assignment, and 952 questionnaires were recovered, with a recovery rate of 95.2%, and 908 questionnaires were valid, with an effective recovery rate of 95.38%.

II. D. Research methodology

II. D. 1) Literature analysis method

Today's research is built on the basis of previous research results. We check Chinese and foreign language databases and academic journals, conduct literature review to understand the current status of domestic and international research on Yali capital and entrepreneurial intention, organize and summarize the results of previous research, and make clear the shortcomings of their research and the places where they can be deepened, so as to come up with the direction of this paper's research.

II. D. 2) Questionnaire method

This study adopts the questionnaire prepared by previous researchers with good reliability and validity of localization to conduct the survey, through the selection of participants, distribution and recovery of questionnaires and analysis of questionnaires and processing of results. It provides tools and data to support the study of the current situation and relationship between career planning education and entrepreneurial intention of college students.

II. D. 3) Mathematical and statistical methods

The information collected by the scale was entered, analyzed, and organized using SPSS 21.0 statistical software and EpiData 3.1 data processing tools, and finally, the data were subjected to descriptive statistical analyses, independent samples t-tests, analysis of variance, correlation analyses, and regression analyses [19].

II. D. 4) Multiple linear regression models

(1) Multiple linear regression mathematical model [20]

We assume that the dependent variable is Y and there are M independent variables x_1, x_2, \dots, x_m , and the intrinsic linkage between Y and these M independent variables is linear, then its multiple linear regression model is as follows:

$$Y = b_0 + \sum_{i=1}^m b_i X_i \quad (1)$$

where b_0, b_1, \dots, b_m , are the $M+1$ parameters to be estimated.

If we have N sets of observations: $(x_{t1}, x_{t2}, \dots, x_{tm}; y_t)$, with $t = 1, 2, \dots, n$, then these N sets of observations have the following structural form:

$$\begin{cases} y_1 = b_0 + b_1 x_{11} + b_2 x_{12} + \dots + b_m x_{1m} \\ y_2 = b_0 + b_1 x_{21} + b_2 x_{22} + \dots + b_m x_{2m} \\ \vdots \\ y_n = b_0 + b_1 x_{n1} + b_2 x_{n2} + \dots + b_m x_{nm} \end{cases} \quad (2)$$

Order:

$$Y = \begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_n \end{bmatrix}, X = \begin{bmatrix} 1 & x_{11} & x_{12} & \dots & x_{1m} \\ 1 & x_{21} & x_{22} & \dots & x_{2m} \\ \vdots & \vdots & \vdots & & \vdots \\ 1 & x_{n1} & x_{n2} & \dots & x_{nm} \end{bmatrix}, b = \begin{bmatrix} b_0 \\ b_1 \\ \vdots \\ b_m \end{bmatrix} \quad (3)$$

Then the mathematical model (3) of multiple linear regression can be written in the following form:

$$Y = bX \quad (4)$$

(2) Least squares method of multiple linear regression [21]

Regression solving is to solve for b in equation (4), if we have n sets of independent variable (x_i) data and their corresponding y , inside the regression equation, the best way to solve for the regression coefficients corresponding to the characteristics is to use the sum of squares of the minimization error, which represents the difference between the predicted y values and the actual y value. If the accumulation of errors is simply used, then the positive and negative differences of these errors will cancel each other out, and to avoid this, so it is the sum of squared errors (least squares) that is used. The formula for summing squared errors is as follows:

$$Q(b) = \sum_{i=1}^n (y_i - b_0 - b_1 x_{i1} - \dots - b_m x_{im})^2 \quad (5)$$

Then the above formula is transformed into a mathematical problem, that is, to find a set of b to make the above formula to reach the minimum value, the solution method is commonly used gradient descent method, ordinary least squares and so on. The ordinary least squares method is simpler and more convenient to implement than the gradient descent method. The mathematical formula of ordinary least squares is:

$$b = (X^T X)^{-1} X^T Y \quad (6)$$

The solution b is the coefficients of the multiple linear regression model, X , Y are the matrices defined in Eq. (3), and X^T is the transformation of the X matrix. (The method is applicable when the inverse matrix of $X^T X$ exists).

II. E. Research tools

In terms of career planning, the Career Planning Scale for College Students was selected. In the study of the relationship between college students' career planning and students' career maturity, a career planning model was established on the basis of the process-oriented career development theory, and the Chinese College Students' Career Planning Scale was compiled on the basis of the model, which has good reliability and validity in existing studies. The scale consists of six dimensions: career awareness, i.e., the individual has imagined his/her own career ideal and sketched his/her own career blueprint, or realized the importance of career planning and possessed the motivation to carry out the planning; self-exploration, i.e., the process of recognizing and understanding oneself; environmental exploration, i.e., the process of understanding the relevant information about the industry he/she wants to work in; career decision-making, i.e., the formulation of career goals and various operation procedures on the basis of the previous two; and the development of a career plan. Career decision-making, that is, based on the previous two to formulate career goals and a variety of operational programs; career action, after determining the career goals, the individual seriously study scientific and cultural knowledge, learning a variety of skills to put the goals into practice; career adjustment, in accordance with the requirements of the real world to make reasonable adjustments to the goals, in order to better realize the individual's career aspirations.

The scale consists of 25 questions, and in order to try to avoid the survey respondents from thinking stereotypes in the questionnaire and affecting the measurement results, the scale is set up with reverse scoring questions. This part uses a 7-point scale to take the average value of the items, and the higher the score, the better the career planning.

III. Statistical Analysis of Entrepreneurial Intention and Career Planning Education for College Students

This chapter will statistically analyze the data related to entrepreneurial intention and career planning education of college students collected during the study.

III. A. Descriptive statistical analysis of variables

In order to avoid the impact of the difference in the number of projects in each dimension, the average score of college students' entrepreneurship intention and career planning education and the factors of each dimension was used as statistical indicators to compare the status of college students' entrepreneurial intention, career planning education and the level of each dimension. Table 1 describes the statistics of the metrics in each dimension. In the statistical results of each dimension of the questionnaire, from the perspective of "entrepreneurial intention", the surveyed college students showed the highest score of "self-development" factor of 5.641 points. The surveyed college students showed the lowest score of 3.85 for the "contribution" factor. It can be seen that the average scores of the surveyed college students in each dimension of "entrepreneurial intention" are ranked from high to low: self-development> material life> family > prestige> interpersonal relationship > contribution.

From the perspective of "career planning education", the scores of "career planning knowledge mastery" and "self-awareness" were the highest and lowest, respectively, with the corresponding scores of 5.678 and 4.927 points. It can be seen that the average scores of the surveyed college students in each dimension of "career planning ability" are ranked from high to low: career planning knowledge mastery> career planning implementation> career planning goals> career planning awareness> environmental awareness> self-awareness.

Table 1: Descriptive statistical results of each dimension index

Dimensions	Indicators	Mean	Standard deviation
Entrepreneurial intention	Interpersonal relationship	5.063	0.707
	Contribution	3.85	0.547
	Self-development	5.641	0.76
	Material life	5.303	0.653
	Prestige	5.293	0.669
	Family	5.299	0.762
Career Planning	Career planning awareness	5.23	0.735
	Mastering career planning knowledge	5.678	0.746
	Self-awareness	4.927	0.688
	Environmental awareness	5.133	0.891
	Career Planning Objectives	5.373	0.698
	Career planning implementation	5.474	0.774

III. B. Analysis of variance in demographic variables

The sample data were analyzed for differences in demographic variables, and the results are shown in Table 2. The results of the analysis of variance of entrepreneurial intention and career planning education on demographic variables can be obtained through independent samples t-test and one-way ANOVA. The demographic variables selected were: gender, grade, school level, nature of place of birth and whether or not the child is an only child.

(1) Gender

In the analysis of the differences in psychological capital and career planning ability of students majoring in tourism management by gender, there is a significant difference between the mean scores of students of different genders only in the dimension of “self-development”, and the probability of the significance test corresponds to the p-value of the significance test is less than the significance level of 0.05.

(2) Grade level

Taking grade as the independent variable, one-way ANOVA shows that there are significant differences in the mean scores of all factors of entrepreneurial intention and career planning education among college students with different grades, because the probability P value of the significance test is less than the significance level of 0.05. Therefore, it can be assumed that the entrepreneurial intention and career planning ability of senior students are generally higher than that of junior students.

(3) School level

In the analysis of the difference between the psychological capital and career planning ability of undergraduates with different school grades, there is a significant difference between the mean scores of the factors of “interpersonal relationship, contribution, self-development, material life, knowledge of career planning, self-awareness, environmental awareness, career planning goals, and implementation of career planning” of the undergraduates majoring in tourism management with different school grades. There is a significant difference between the means of the scores on the factors of “interpersonal relationship, contribution, self-development, material life, knowledge of career planning, self-awareness, environmental awareness, career planning goals, and implementation of career planning”, because the probability of the significance test is less than 0.05. It can be concluded that the students of undergraduate colleges and universities have a higher entrepreneurial intention in total, and have a stronger ability of career planning.

(4) Place of origin

There is a significant difference in the mean scores of “interpersonal relationship, contribution, self-development, awareness of career planning, environmental awareness, career planning goals, and implementation of career planning” among college students with different places of origin. Compared with the rural students, the urban students have a significantly higher level of compliance with the factors of “interpersonal relationship, contribution, self-development, awareness of career planning, awareness of the environment, goals of career planning, and implementation of career planning”.

(5) Only child

In the analysis of the difference between the psychological capital and career planning ability of college students who are only children, the probability p-value corresponding to the test of significance for only children is less than 0.05, and the mean value of the scores on the factors of “self-development, self-knowledge, and environmental awareness” is higher than that of non-only children. Only children have a significantly higher level of compliance with the “self-development, self-knowledge, and environmental awareness” factors than non-only children.

IV. Regression analysis of college students' entrepreneurial intention and career planning education

In this chapter, a multiple regression linear analysis will be conducted to analyze the correlation between entrepreneurial intention and career planning education of college students.

IV. A. Correlation analysis

In order to understand the relationship between entrepreneurial intention and career planning education of college students, the correlation analysis of entrepreneurial intention dimensions and career planning education was conducted, and the results are shown in Table 3. As can be seen from the table, the correlation coefficient between overall entrepreneurial intention and overall career planning education is 0.242 ($p < 0.01$), which indicates that overall entrepreneurial intention is significantly positively correlated with overall career planning education.

The interpersonal relationship factor, contribution factor, and self-development factor of entrepreneurial intention are significantly and positively correlated with career planning education in terms of career planning awareness, career planning knowledge acquisition, self-knowledge, environmental awareness, career planning goals, career planning implementation, and their career planning education in general.

Table 2: Differences in demographic variables

Statistical variables : gender					
-	-	Male	Female	T	P
Entrepreneurial intention	Interpersonal relationship	4.946	5.052	-0.623	0.495
	Contribution	4.002	5.551	1.491	0.167
	Self-development	5.449	4.66	-2.278	0.012
	Material life	5.262	4.942	1.232	0.231
	Prestige	5.328	5.445	-0.317	0.776
	Family	5.231	5.394	-0.376	0.772
Career planning	Career planning awareness	5.043	5.298	-1.693	0.087
	Mastering career planning knowledge	5.671	5.828	-1.563	0.14
	Self-awareness	4.624	4.942	-1.888	0.058
	Environmental awareness	5.002	5.048	-0.702	0.537
	Career Planning Objectives	5.363	5.379	-0.991	0.34
	Career planning implementation	5.334	5.515	-0.956	0.347
Statistical Variables : Grade					
-	-	Lower grade	Senior grade	F	P
Entrepreneurial intention	Interpersonal relationship	4.743	5.521	31.354	0.001
	Contribution	4.061	3.537	13.08	0.01
	Self-development	5.276	5.971	30.851	0.008
	Material life	5.058	5.638	22.879	0.005
	Prestige	5.184	5.306	3.18	0.022
	Family	5.251	5.37	3.165	0.031
Career planning	Career planning awareness	4.957	5.534	24.206	0.004
	Mastering career planning knowledge	5.692	5.982	5.386	0
	Self-awareness	4.642	5.115	18.831	0.004
	Environmental awareness	4.853	5.484	24.891	0.018
	Career Planning Objectives	5.272	5.599	6.65	0.007
	Career planning implementation	5.385	5.582	6.648	0.006
Statistical Variables : School Level					
-	-	Regular college course	Junior college course	T	P
Entrepreneurial intention	Interpersonal relationship	5.611	4.561	17.664	0.008
	Contribution	4.113	3.58	8.377	0.014
	Self-development	6.057	5.113	18.104	0.005
	Material life	5.601	6.068	12.095	0.023
	Prestige	5.175	5.212	6.32	0.095
	Family	5.116	5.117	6.279	0.094
Career planning	Career planning awareness	5.709	5.817	16.09	0.218
	Mastering career planning knowledge	6.06	5.441	7.849	0.01
	Self-awareness	5.118	5.493	12.457	0.149
	Environmental awareness	5.536	4.705	16.73	0.004
	Career Planning Objectives	5.923	5.043	14.624	0.003
	Career planning implementation	5.756	5.142	14.505	0.002
Statistical variables : place of origin					
-	-	Town	Rural	T	P
Entrepreneurial intention	Interpersonal relationship	5.313	4.816	4.037	0.003
	Contribution	3.974	3.724	2.973	0.013
	Self-development	5.731	5.503	3.207	0.007
	Material life	5.316	5.469	2.135	0.245
	Prestige	5.181	5.206	-0.35	0.789
	Family	5.278	5.236	-0.193	0.795
Career planning	Career planning awareness	5.362	5.129	2.283	0.018
	Mastering career planning knowledge	5.872	5.744	1.804	0.089
	Self-awareness	4.861	4.716	0.99	0.337
	Environmental awareness	5.237	4.929	2.619	0.001
	Career Planning Objectives	5.641	5.335	3.377	0.007
	Career planning implementation	5.663	5.408	3.342	0.008
Statistical variables : only child					
-	-	Only child	Not-only-child	T	P
Entrepreneurial intention	Interpersonal relationship	5.176	4.987	2.596	0.209
	Contribution	3.807	3.936	-0.85	0.364
	Self-development	5.401	5.743	2.469	0.004
	Material life	5.096	5.857	2.05	0.252
	Prestige	5.264	5.624	-0.222	0.113
	Family	5.337	5.516	-0.054	0.103
Career planning	Career planning awareness	5.116	5.391	2.338	0.217
	Mastering career planning knowledge	5.827	5.643	1.115	0.374
	Self-awareness	5.01	4.734	2.027	0.002
	Environmental awareness	5.21	5.018	1.98	0.046
	Career Planning Objectives	5.261	5.57	2.24	0.314
	Career planning implementation	5.336	5.621	2.392	0.318

The material life factor of entrepreneurial intention is significantly negatively correlated with the career planning goal factor of career planning education with a correlation coefficient of -0.156 ($p < 0.01$), and there is no correlation between material life and career planning awareness, mastery of career planning knowledge, self-awareness, environmental awareness career planning implementation and its career planning education in general.

The prestige factor of entrepreneurial intention is significantly positively correlated with career planning education of career planning awareness, mastery of career planning knowledge, self-awareness, environmental awareness, career planning implementation and its career planning overall, while it is significantly negatively correlated with career planning goals factor with a correlation coefficient of -0.134 ($p < 0.01$).

Entrepreneurial intentions in general and family factors are positively correlated with career planning education in terms of career planning awareness, career planning knowledge acquisition, self-awareness, environmental awareness, career planning implementation and their career planning in general, and the correlation coefficient with career planning goals is -0.077 ($p > 0.05$), which suggests that the family is not significantly correlated with career planning goals.

Table 3: Correlation between entrepreneurial intention and career planning education

-	Interpersonal relationship	Contribution	Self-development	Material life	Prestige	Family	Total score of professional values
Career planning awareness	0.361***	0.4313** *	0.232***	0.014	0.16***	0.079*	0.264***
Mastering career planning knowledge	0.183***	0.177***	0.099***	0.042	0.148***	0.079*	0.163***
Self-awareness	0.27***	0.361***	0.276***	-0.009	0.128***	0.059*	0.258***
Environmental awareness	0.185***	0.281***	0.26***	0.04	0.155***	0.1234***	0.219***
Career Planning Objectives	0.182***	0.233***	0.141***	-0.156***	-0.134***	-0.077	0.038***
Career planning implementation	0.181***	0.25***	0.23***	0.025	0.156***	0.126***	0.172***
Total score of career planning	0.294***	0.431***	0.295***	-0.041	0.15***	0.091***	0.242***
Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$							

IV. B. Regression analysis

In order to further study the relationship between the dimensions of entrepreneurial intention and career planning education, this study used the dimensions of college students' entrepreneurial intention as the predictor variables, and the total score of career planning education as the dependent variable for the stepwise regression analysis, and the results are shown in Table 4. The results show that the contribution of entrepreneurial intention, material life, interpersonal relationship, and self-development entered the regression equation, and the four factors explained a total of 20.1% of the factor variation, with a significant regression effect ($p < 0.001$).

Table 4: Summary of Stepwise Multiple Regression Analysis

Dependent variable	Model	R	R square	ΔR square	F value	Net F value	B	Regression coefficient (β)
Career Planning Education	Contribution	0.411 ^a	0.179	0.178	166.483***	166.483***	0.278	0.306
	Material life	0.422 ^b	0.181	0.179	88.195***	88.065***	-0.073	-0.156
	Interpersonal relationship	0.435 ^c	0.195	0.192	63.329***	11.507***	0.109	0.141
	Self-development	0.448 ^d	0.201	0.195	49.282***	6.007***	0.063	0.117
Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$								

Multiple stepwise regression analysis was conducted with the dimensions of entrepreneurial intention as independent variables and the dimensions of career planning education as dependent variables, and the results are shown in Table 5. It can be seen that the regression analysis with the six dimensions of career planning education shows that contribution and prestige have a significant predictive effect on it in terms of career planning awareness. Contribution, interpersonal relationship, and material life have a significant predictive effect on the knowledge of career planning. While on self-awareness, contribution, self-development, interpersonal relationship and material life showed significant predictive effect. In terms of career planning implementation and environmental

awareness, it was contribution, self-development that produced significant predictive effects. As for career planning goals, contribution, interpersonal relationships, material life and prestige had a significant predictive effect.

Table 5: Summary of multiple regression analysis

-	Model	R	R square	ΔR square	F value	Net F value	B	Regression coefficient(β)
Career planning awareness	Contribution	0.468	0.191	0.228	205.56***	205.56***	0.447	0.364
	Interpersonal relationship	0.47	0.206	0.04	113.301***	16.881***	0.268	0.233
	Material life	0.505	0.255	0.039	82.381***	16.262***	-0.133	-0.109
Mastering career planning knowledge	Contribution	0.166	0.009	0.031	29.217***	29.217***	0.228	0.135
	Prestige	0.195	0.031	0.012	17.449***	5.454***	0.188	0.156
	Material life	0.211	0.061	0.017	13.479***	5.413***	-0.123	-0.088
Self-awareness	Contribution	0.37	0.118	0.109	114.998***	114.998***	0.373	0.234
	Self-development	0.384	0.149	0.026	61.846***	7.738***	0.172	0.119
	Material life	0.389	0.152	0.081	44.929***	9.674***	-0.114	-0.146
	Interpersonal relationship	0.397	0.157	0.011	35.026***	4.854***	0.161	0.072
Environmental awareness	Contribution	0.268	0.052	0.065	65.232***	65.232***	0.247	0.211
	Self-development	0.313	0.099	0.028	40.8***	15.23***	0.186	0.177
Career Planning Objectives	Contribution	0.341	0.12	0.108	95.61***	95.61***	0.282	0.313
	Material life	0.396	0.153	0.068	78.763***	55.498***	-0.104	-0.185
	Prestige	0.408	0.172	0.021	55.203***	6.804***	-0.137	-0.167
	Interpersonal relationship	0.417	0.185	0.02	43.434***	7.021***	0.117	0.135
Career planning implementation	Contribution	0.236	0.035	0.042	42.165***	42.165***	0.226	0.164
	Self-development	0.239	0.043	0.002	25.927***	9.217***	0.139	0.098

V. Conclusion

The analysis of the relationship between entrepreneurial intention and career planning education of college students shows that there is a significant positive correlation between entrepreneurial intention of college students in general and career planning education, with a correlation coefficient of 0.242 ($p < 0.01$). In the regression analysis, the “contribution” dimension of entrepreneurial intention, material life, self-development and interpersonal relationship have the most significant predictive effect on career planning education, among which the “contribution” factor has a strong influence on the mastery of knowledge of career planning and the implementation of career planning. The “contribution” factor has a strong influence on the knowledge of career planning and the implementation of career planning. In addition, the material life factor of entrepreneurial intention has a significant negative correlation with career planning goals ($r = -0.156$, $p < 0.01$). The study shows that career planning education can not only improve college students' career planning ability, but also effectively promote their entrepreneurial intention. Therefore, it is recommended that colleges and universities strengthen career planning education, especially in the areas of interpersonal relationship, contribution, and material life, to further stimulate the entrepreneurial intention of college students.

References

- [1] Pauceanu, A. M., Alpenidze, O., Edu, T., & Zaharia, R. M. (2018). What determinants influence students to start their own business? Empirical evidence from United Arab Emirates universities. *Sustainability*, 11(1), 92.
- [2] Kadiyono, A., Sulistiobudi, R., & Zulhijah, A. (2019, July). Why College Students Have Big Motivation to Start Their Own Business, but Not Continuing The Business After Graduate?. In 5th Bandung Creative Movement International Conference on Creative Industries 2018 (5th BCM 2018) (pp. 54-61). Atlantis Press.
- [3] Li, Y. Y., Wang, R. X., & Chi, C. Y. (2022). Who is more likely to start a business? Analysis of the factors influencing undergraduates' entrepreneurial intentions. *Frontiers in Psychology*, 13, 829955.
- [4] Al-Jubari, I. (2019). College students' entrepreneurial intention: Testing an integrated model of SDT and TPB. *Sage Open*, 9(2), 2158244019853467.
- [5] Mensah, I. K., Zeng, G., Luo, C., Xiao, Z., & Lu, M. (2021). Exploring the predictors of Chinese college students' entrepreneurial intention. *Sage Open*, 11(3), 21582440211029941.
- [6] Lu, G., Song, Y., & Pan, B. (2021). How university entrepreneurship support affects college students' entrepreneurial intentions: An empirical analysis from China. *Sustainability*, 13(6), 3224.
- [7] Zhang, N., & Wu, C. (2024). Application of deep learning in career planning and entrepreneurship of college students. *Journal of Computational Methods in Science and Engineering*, 24(4-5), 2927-2942.
- [8] Ahn, T. U., & Park, J. W. (2018). The effect of entrepreneurship education on the career path of university students. *Asia-Pacific Journal of Business Venturing and Entrepreneurship*, 13(2), 177-192.

- [9] Ndofirepi, T. M., & Rambe, P. (2017). Entrepreneurship education and its impact on the entrepreneurship career intentions of vocational education students. *Problems and perspectives in management*, (15, Iss. 1 (cont.)), 191-199
- [10] Duval-Couetil, N., & Long, Z. (2014). Career impacts of entrepreneurship education: How and when students intend to utilize entrepreneurship in their professional lives. *Journal of Business and Entrepreneurship*, 26(1), 63.
- [11] Mikacic, M. T. (2015). The effects of career planning education. *RUO. Revija za Univerzalno Odlicnost*, 4(3), 92.
- [12] Shofwan, I., Sunardi, S., Gunarhadi, G., & Rahman, A. (2023). Entrepreneurship education: Encouraging entrepreneurial intentions for equality education students in Semarang. *International Journal of Learning, Teaching and Educational Research*, 22(6), 175-194.
- [13] Yang, Y. (2025). Research on College Students' Career Planning and Employment Guidance Strategies from the Perspective of New Quality Productivity. *Contemporary Education Frontiers*, 3(2), 121-131.
- [14] Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2018). Entrepreneurial intention among engineering students: The role of entrepreneurship education. *European research on management and business economics*, 24(1), 53-61.
- [15] Valencia-Arias, A., Arango-Botero, D., & Sánchez-Torres, J. A. (2022). Promoting entrepreneurship based on university students' perceptions of entrepreneurial attitude, university environment, entrepreneurial culture and entrepreneurial training. *Higher Education, Skills and Work-Based Learning*, 12(2), 328-345.
- [16] Qwabe, T., Ngibe, M., & Bingwa, L. L. (2025). Entrepreneurship Education Key in Promoting Entrepreneurial Intent: Undergraduate Students Perspectives. *Open Journal of Business and Management*, 13(2), 1065-1092.
- [17] Zhang, Y., Duysters, G., & Cloudt, M. (2014). The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *International entrepreneurship and management journal*, 10, 623-641.
- [18] Iwu, C. G., Muresherwa, G., Nchu, R., & Eresia-Eke, C. E. (2020). University students' perception of entrepreneurship as a career option. *Academia*, (20-21), 177-201.
- [19] Chatzi Anna V. (2025). Understanding the independent samples t test in nursing research. *British Journal of Nursing*, 34(1), 56-62.
- [20] Xinyi Lu, Su Yean Teh, Chai Jian Tay, Nur Faeza Abu Kassim, Pei Shan Fam & Edy Soewono. (2025). Application of multiple linear regression model and long short-term memory with compartmental model to forecast dengue cases in Selangor, Malaysia based on climate variables. *Infectious Disease Modelling*, 10(1), 240-256.
- [21] Marius Giuclea & Costin Ciprian Popescu. (2025). An Approach to the Total Least Squares Method for Symmetric Triangular Fuzzy Numbers. *Mathematics*, 13(8), 1224-1224.