# A Study on the Relationship between "Five Education" Inputs and Employment Satisfaction of College Students Based on SEM Model Relationship with Employment Satisfaction

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*Abstract:* In recent years, with the increasing popularity of higher education, more and more college students are entering the talent market, and the employment pressure is multiplying, and the overall employment satisfaction is decreasing sharply. Therefore, college students should continuously improve their comprehensive strengths during their school years in order to increase their relative satisfaction during employment. This paper discusses the connection between "five education" and college students' employment satisfaction from the perspective of students' investment in moral, intellectual, physical, aesthetic and labor, so as to put forward specific suggestions for students' cultivation and development.

# **1. Introduction**

The National Education Conference clearly proposed that we should strive to build an education system for the comprehensive cultivation of moral, intellectual, physical, social and aesthetic development, and form a higher level of talent cultivation system. According to Cai Yuanpei, a modern Chinese educator, the "Five Education" concept of education is an outstanding achievement of modern Chinese educational thought and a product of the convergence and exchange of Chinese and Western educational thought, The "Five Education" concept of education includes military education (i.e. physical education), practical education (i.e. intellectual education), civic education (i.e. moral education), worldview education and aesthetic education. In recent years, under the new curriculum reform, classroom teaching no longer focuses only on knowledge transfer, but also on students' problem-solving ability, thinking development, and scientific attitude, aiming to achieve allround development of students. The employment problem of college students is a hot issue in the current society, and research has found that there is a close relationship between students' school experience and college students' employment satisfaction. In addition, the level of employment satisfaction is a test of the talent cultivation level of colleges and universities, as well as a feedback to the employment policy of local government and the current social employment environment. Overseas research on the employability of college students started earlier, and theoretical and empirical researches are very rich. American colleges and universities integrate the concept of improving college students' employability into the curriculum, establish the curriculum goal of adapting the school curriculum to the social life, build a curriculum model that places equal emphasis on cultivating students' cultural foundation and practical ability, and implement the cultivation of employability into the curriculum design of the teaching process throughout the college career. At present, some college students in China have only completed rough learning, practice and accumulation of [1]professional and related knowledge during their school years, but they are not enough to reach the level of self-career goals, meet social needs and realize self-worth, and their abilities are not enough to achieve satisfactory employment results.[2][3][4][5]

To sum up, this paper studies the specific connection between "five education" and college students' employment satisfaction from the perspective of moral, intellectual, physical, aesthetic and labor training system. Taking Liupanshui Normal College as an example, we conducted a questionnaire survey on its undergraduates, screened, processed and analyzed the collected data, and then conducted an empirical analysis to establish a structural equation model. Finally, more appropriate suggestions are made for the coordinated and precise development of college students.

## 2. Research Methodology and Object

The subjects of this study are university graduates of Liupanshui Normal College, upholding the principle of random sampling and voluntary completion. In this study, 500 questionnaires were distributed, and 453 valid questionnaires were collected (with an efficiency rate of 94.30%).

This study used SPSS 21 and AMOS 24.0 statistical software to analyze the questionnaire data by item analysis, factor analysis and structural equation modeling.

#### **3. Scale construction**

## 3.1 Scale design

In terms of the scale design, the initial questionnaire was designed by reviewing previous literature on employment satisfaction and combining it with the purpose of this study. The questionnaire consisted of three parts, namely, personal basic information, "five education" input, and employment satisfaction. Employment satisfaction of college students is the evaluation of college students' satisfaction with the process and results of employment, which is a comprehensive concept reflecting the degree of satisfaction with the availability of employment opportunities, job stability, dignity and safety opportunities in the workplace, equal income, and relevant aspects of personal development. Therefore, the Employment Satisfaction Scale consists of four questions: satisfaction with job income, satisfaction with job burden, satisfaction with job environment, and satisfaction with job social status. The "five education" input scale consists of 20 questions. Each item in the above two scales was assigned a score of 15, with 1 indicating the weakest level of satisfaction or commitment and 5 indicating the strongest level of satisfaction or commitment.[6]

Based on the above initial questionnaire, 100 data were collected through a pre-survey. The 100point data were initially tested to determine whether the scale was suitable for factor analysis. The KMO value of employment satisfaction was 0.671, which was not suitable for factor analysis; the KMO value of "five education" input was 0.800, and the sig.=0.000 of Bartlett's spherical test was suitable for factor analysis. Therefore, an exploratory factor analysis could be conducted on the "Five Education" input scale. The final questionnaire was obtained by removing four items from the "Five Education Inputs" scale through principal component analysis, as follows , as shown in Table 1 and Table 2.

Dimension	Item	Content		
	Q5X11	Ideology and morality		
Moral	Q6X12	Discipline and Cultivation		
	Q7X13	Membership in the Party		
	Q8X21	Grade examination		
Windom	Q9X22	Professionalism		
wisdom	Q10X23	Qualification examinations		
	Q11X24	Academic competitions		
	Q15X41	Physical Health Knowledge		
Physical	Q16X42	Physical health status		
	Q17X43	Personal exercise habits		
	Q12X31	Knowledge of literature and art		
Beauty	Q13X32	Literary activities		
	Q14X33	Literary hobbies		
	Q18X51	Social practice for public welfare		
labor	Q19X52	Daily life labor		
	Q20X53	Student leaders serving		

Table 1 Index system of the survey of university students' input to five education in school

Table 2 College students' employment satisfaction

Dimension	Item number	Item content	
	Q1Y1	Job income satisfaction	
Employment of college	Q2Y2	Satisfaction with work burden	
Satisfaction	Q3Y3	Satisfaction with work environment	
Satisfaction	Q4Y4	Satisfaction with work social status	

# 3.2 Reliability test of the scale

In this study, we used SPSS 21.0 reliability analysis and selected Cronbach's coefficient as the support for evaluating the internal consistency of the scale, and the reliability level was evaluated with reference to the standard proposed by De Vellis, that is, the reliability coefficient of the scale should be greater than 0.8. After analysis, the overall Cronbach's coefficient of the scale was 0.936 and greater than 0.8, so the consistency, stability and reliability of the scale were very satisfactory. Therefore, the consistency, stability, and reliability of the scale are very satisfactory.[7]

# **3.3 Validation factor analysis**

To discuss the convergent validity and structural validity, Amos 26.0 was used to conduct validation factor analysis on the four dimensions of moral, intellectual, physical, aesthetic, and labor, as shown in Table 3.

1) Convergent validity

Factor	Average variance extracted AVE value	Combined Reliability CR Value
De	0.678	0.863
Chi	0.603	0.857
body	0.487	0.738
beauty	0.638	0.84
labor	0.688	0.868

Table 3 Convergent validity

By showing Table 3 Convergent the results of AVE and CR indicators, the results based on the average common factor variance extracted (AVE) and the combined reliability (CR) can be used to

indicate the convergent validity of the pair of variables within the factor. Generally speaking, AVE higher than 0.5 or CR higher than 0.7 indicates higher convergent validity, and the CR values in the above table are all higher than 0.7, which indicates that the extraction degree of the measurement indicators of the factor is better and the convergent validity is more desirable.

2) Structural validity

To explore the structural validity of the questionnaire data, the cardinality-to-freedom ratio of the selected indicator, the closer its value to 0, the better the fit of the model to the data, generally considered less than 5 is acceptable. gfi (goodness-of-fit index), to test the degree of fit of the model to the sample observations, generally considered CFI  $\geq$  0.9, the model is considered a good fit. rmsea (root mean squared error of approximation), in general, the RMR (root mean square residual), which measures the degree of model fit by measuring the average residuals of the predicted correlation and the actual observed correlation, is generally considered a better model fit if RMR < 0.1. CFI (comparative fit index), whose value is between 01 and closer to 1 indicates a better fit, and CFI  $\geq$  0.9 is considered a better model fit. NNFI (non-normed fit coefficient) and CFI (comparative fit index), the larger the value, the better the fit. Considering the above indicators, the data and the model fit are good , as shown in Table 4.[8]

X2/df	GFI	RMSEA	RMR	CFI	NFI	NNFI
<3	>0.9	< 0.10	< 0.1	>0.9	>0.9	>0.9
3.093	0.889	0.096	0.064	0.908	0.889	0.883
Good	Excellent	Good	Excellent	Excellent	Good	Good

Table 4 Structural validity table

# 4. Final model

The structural equation model can be obtained by establishing only the structural model of the influence relationship between each latent variable, and thus a structural equation model containing the relationship of all variables can be obtained. In this paper, a structural equation model containing 5 latent variables, 20 observed variables and 24 residual variables is obtained.

# 4.1 Path analysis among latent variables

Factor(latent variable)	$\rightarrow$	Analysis term (revealed variable)	Non- standardized coefficient	Standardized coefficient	Standard error	Р
de	$\rightarrow$	Satisfaction	0.271	0.310	0.052	0.000***
wisdom	$\rightarrow$	Satisfaction	0.401	0.283	0.092	0.000***
Body	$\rightarrow$	Satisfaction	0.252	0.151	0.052	0.000***
beauty	$\rightarrow$	Satisfaction	0.009	0.007	0.104	0.930
labor	$\rightarrow$	Satisfaction	0.447	0.469	0.053	0.000***

Table 5 Path analysis among latent variables

The structural equation model is mainly used to represent the structural relationship between variables, combined with Table 3, we can see the hypothesis testing of the relationship between some variables of the structural equation model. The latent variable "moral" has a significant positive effect on the latent variable "employment satisfaction", indicating that moral education influences employment satisfaction to a greater extent. The latent variable "intelligence" has a significant positive effect on the latent variable "employment satisfaction", indicating that intelligence education influences employment satisfaction to a greater extent. The latent variable "body" also has a significant positive effect on the latent variable "employment satisfaction". The latent variable "body" also has a significant positive effect on the latent variable "employment satisfaction". The latent variable "body" also has a significant positive effect on the latent variable "employment satisfaction".

"beauty" does not have a significant positive effect on the latent variable "employment satisfaction", and the effect of beauty education on employment satisfaction cannot be seen in this method, so we will not discuss it for now. The latent variable "labor" has a significant positive effect on the latent variable "satisfaction", indicating that labor education influences employment satisfaction to a greater extent, as shown in Table 5.

### 4.2 Path analysis between latent variables and observed variables

The relationship between the five dimensions and the 20 observed variables can be seen from the structural equation model. This relationship can directly reflect the factor loadings of an observed variable on the latent variable. The smaller the factor loadings of an observed variable on its corresponding latent variable, the less the college students invest in that specific ability, i.e., they do not fully possess that ability, and conversely, the more the college students invest in a certain ability, the stronger the ability is. According to the model, the influence of 20 observed variables on the development of college students is discussed in five dimensions: moral education, intellectual education, physical education, aesthetic education and labor education.

1) Moral education dimension analysis

"Virtue" sets the direction and knows good and evil. The most influential observed variable on moral education is morality, with a factor loading of 0.87. When choosing talents, enterprises do not only focus on students' academic ability but also on their morality. University is an important stage for the gradual formation of outlook on life, values and worldview, and ideology and morality are not only the internal value scale of an individual but also another reflection of one's comprehensive ability, and it is only by establishing a good ideological and moral foundation that one can become a qualified person. In the education under the condition of knowledge economy, college students are not only to be people with knowledge and know how to do things, but more importantly, to be people with excellent ideological and moral cultivation.

2) Analysis of intellectual education dimension

"Intelligence" grows talents and knows the truth. The observed variable with the greatest degree of influence on intellectual education is the ability of professional literacy, with a factor loading of 0.86, which indicates that as students should not just go to numerous competitions or certain other useless exams, but focus more on professional learning. There is a sequence of inquiry and specialization. The purpose of professional education in university is to help students quickly grasp the basic knowledge structure of the profession. Learning the knowledge of the major is the basis of life, and having a skill is the only way to get the opportunity to develop in the field of the major. In addition, it is possible to acquire the ability of knowledge structure of a certain type of subject through serious study of professional courses, and to have scientific and effective learning ability. In the subsequent development, this learning ability will no longer be limited to the profession, but will help the individual to master other fields of knowledge more rapidly and achieve comprehensive personal development.

3) Analysis of the sports dimension

The observed variable that has the greatest influence on the degree of sports is personal exercise habit, whose factor loading is 0.87. The physical and psychological quality of some college students are not enough to support them to face the heavy academic and social pressure, and the good exercise habit and healthy body developed during college can face the defeat more openly and have the foundation to do it again. Long-term exercise of individuals helps them to cultivate optimistic and strong qualities, and moreover helps them to strengthen their confidence and ability to resist negative emotions.

4) Aesthetic education dimension analysis

The observed variable with the greatest degree of influence on aesthetic education is knowledge related to literature and art, with a factor loading of 0.77. Appropriately broadened knowledge areas enrich students' knowledge reserves. The process of discovering beauty, feeling beauty, appreciating beauty and creating beauty in life helps to mitigate the bad mood of college students. In addition, students can use their basic knowledge of literature and arts to create unique works with their own subjective initiative, which helps to stimulate the potential creative ability of college students.

5) Analysis of the dimension of labor education

"Labor" helps to dream and create wealth. The most influential observed variable on labor education is social practice public welfare, with a factor loading of 0.85. Labor education aims to cultivate students' concept of independent labor and basic labor skills, and social practice activities help promote college students' career, and social practice is a prelude to college students' career planning. It can directly and effectively help students get in touch with social labor to understand the current situation of social labor, broaden their horizons, learn new this is from concrete practice, tap their potential skills and discover their own defects.

## 4.3 Model fit test

Model fit results Table 4 shows that GFI= 0.913, AGFI= 0.889, PGFI= 0.718 and CMIN/DF = 2.655, all of which meet the requirements according to the criteria of the measurement index, indicating that the model is well constructed, and therefore the structural equation model fit is ideal, as shown in Table 6.

Test index	Reference standard	Test result	Fit effect
$\chi^{2}$	The smaller the better	458.766	Yes
RMSEA	<0.05 good adaptation, <0.08 suitable adaptation	0.069	Suitable fit
CFI	>0.9	0.913	Excellent
AGFI	>0.8 acceptable, >0.9 good fit	0.889	Acceptable
NFI	>0.9	0.903	Excellent
IFI	>0.9	0.948	Excellent
RFI	>0.9	0.89	Good
PGFI	>0.5	0.718	Good
PNFI	>0.5	0.78	Good
CMIN/DF	<3 excellent, <5 acceptable	2.655	Excellent

Table 6 Results of the overall goodness-of-fit test of the measurement model

#### **5. Recommendation**

To sum up, the inputs of the five educations work together in the comprehensive development of college students, and the specific inputs in the five educations affect the employment satisfaction of college students to different degrees. In this regard, we make the following suggestions.

First, ideology and morality should be strengthened. Colleges and universities should close the distance between teachers and students, correctly understand the overall ideological and moral situation of college students nowadays, and deeply understand the moral cultivation of each student. It should be noted that academic achievement does not directly represent students' ideological and moral cultivation, nor should we use the excuse that we are all adults to avoid the responsibility of cultivating and guiding the correct ideology and morality of college students. As for the students themselves, they should also pay more attention to the cultivation of their own moral quality, study ideological and political courses seriously, and establish the correct three views. They should not be blindly confident, and should not follow the bad value guidance on the society and the network at

will, and need to have their own thinking when facing different comments.

Second, pay attention to professional ability to learn, not to put the cart before the horse. A strong professional ability to meet the basic requirements of the position, to improve the suitability of employment. College students should pay more attention to the improvement of professional knowledge during their school years, solidify their theoretical knowledge base, get employment entrance certificate, prepare for high-quality professional certificates, so that these become their future employment knockers. Without employment, we cannot talk about employment satisfaction, and only by doing the first entry and employment can we better improve employment satisfaction.

Third, develop the habit of physical exercise. Physical exercise has a positive impact on a person's stress resistance, interpersonal relationship and mental health. Sports is the best tool to cultivate a sound personality, and college students should strengthen physical exercise, which can strengthen their will and promote physical and mental development. College students studying in school face various kinds of pressure, which causes them to become fatigued, nervous and have a reduced ability to resist stress. In serious cases, they can also develop undesirable symptoms and dangerous ideas such as depression. For college students who are about to graduate not only face the pressure of employment, but also face various important choices. It is more important for college students in school to make appropriate adjustments every day, relax and exercise after study, and use the school sports equipment reasonably.

Fourth, actively participate in social practice services. The society provides suitable practice positions, and colleges and universities promote it vigorously and adopt reasonable competition and merit evaluation mechanism. College students can use their summer and winter vacations to participate in more social practice services, seize the existing resources and opportunities in society, make reasonable practice plans to go into the countryside and industrial parks to conduct social surveys, carry out three rural volunteer services, and use the hometown platform to carry out hometown services. Improve their social experience, enhance their insight and cultivate social responsibility. Secondly, colleges and universities should reasonably set up effective selection mechanisms to promote students' passion for practice, provide effective motivation for college students to take action, make outstanding students become role models for learning, and drive the learning atmosphere. Finally, the government should moreover strive to expand students' service channels by conducting exchanges with communities and enterprises, so that students' social practice services can be diversified and colorful, and provide social experience for future employment.

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#### **References**

- [1] Zeng Chengdong, On Cai Yuanpei's "Five Education" concept of education. 2015, Hunan Normal University. 2.
- [2] Li Chunyan, Fu Chunxiang, Study on the relationship between college students' school experience and employment satisfaction. China Student Employment, 2019(01): p. 40-45.
- [3] Hohhe, Research on the mechanism and operation mechanism of social practice education for college students. 2018, University of Science and Technology Beijing.
- [4] Wang Xinjun, Sun Baicai, Current status and progress of research on the employability of foreign university students in the past 30 years. Education and Economics, 2018(05): p. 57-64+72.
- [5] Chen Juntu, College students' employability and the curriculum of colleges and universities Insights from American colleges and universities. China Higher Education Research, 2012(03): p. 75-78.
- [6] Cao Falang, Research on the effect and optimization of employment promotion policies for college graduates in Guizhou Province. 2022, Guizhou University.
- [7] Wei Wenyuan, Study on the strategy to improve the satisfaction of learning support service of FN Open University.

2022, Hebei University of Technology.

[8] Gu Yuandong, Study on the relationship between job satisfaction and positive-negative emotions. 2005, Soochow University. Translated with www.DeepL.com/Translator (free version)