

# A survey of Factors Influencing College Students Participating in Discipline Competition Based on the questionnaire

# Shuai SU<sup>1</sup>, Fan ZHANG<sup>2</sup>

<sup>1 First Author</sup> Professor, Business School, Shandong University of Political Science and Law, China. E-mail: sush@sdpl.edu.cn

<sup>2</sup> Corresponding Author Professor, Business School, Shandong University of Political Science and Law, China. E-mail: 706453454@gg.com

Received: August 15, 2021. Revised: September 11, 2021. Accepted: September 20, 2021.

## **Abstract**

Purpose - "Higher education of vocational education focuses on Discipline competition" This is the requirement of the education sector in China for the Application-oriented Undergraduate in the 21st century. As an integral part of Higher education vocational education, Discipline competition is not only an effective way to test the higher education reform of the Application-oriented Undergraduate, but also a measure of the level of Application-oriented Undergraduate.

Research design, data, and methodology – The study conducted a survey on SPSS 24.0 Through factor analysis of 192 questionnaires data. After empirically analyzing the data, we found that the factors can be classified into four main factors.

Result - This study shows that in terms of gender, boys are more susceptible to external factors and time factors while girls are more vulnerable to internal factors. And girls are more susceptible to internal factors. In terms of professional categories, non-teacher students are more likely to be hindered by external factors such as missing entry information.

Conclusion - This paper assumes that there are significant differences in internal promotion and barriers in different disciplines competition.

Keywords: Factor analysis, Questionnaires, Discipline Competition, College Students Participating.

JEL Classification Code: I28, I31, J18.

This paper is regarded as "Research on the reform of comprehensive training mode of international trade specialty based on foreign trade skills competition (2014jgb005)" "Research on the implementation path and teaching mode of curriculum ideological and political reform in Applied Undergraduate Colleges – taking customers declaration practice as an example PLE (2020zjgb007)"," Research on the teaching reform of Ideological and political education from the perspective of "great ideological and political education" -- Taking the course of international trade as an example (2020zigb002)

<sup>©</sup> Copyright: The Author(s)

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://Creativecommons.org/licenses/bv-nc/4.0/) which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

#### 1. Introduction

"Higher education of vocational education focuses on Discipline competition" This is the requirement of the education sector in China for the Application-oriented Undergraduate in the 21st century. As an integral part of Higher education vocational education, Discipline competition is not only an effective way to test the higher education reform of the Application-oriented Undergraduate, but also a measure of the level of Application-oriented Undergraduate.

Therefore, Application-oriented Undergraduate of discipline competition is a booster for deepening teaching reform, strengthening school-enterprise cooperation, and Leadership Innovation and Enterprise Skills in the Application-oriented Undergraduate.

The discipline competition of talents is an extremely important part of the talent training system of the Application-oriented Undergraduate.

At present, there are many problems in the process of cultivating talents in the discipline competitions in the Application-oriented Undergraduate in China, such as the lack of a wide audience, low recognition, and imperfect security mechanisms. In view of this, this paper attempts to make a new attempt on how to build a talent training model for discipline competitions in the Application-oriented Undergraduate.

## 2. Literature Review and Hypotheses Development

Higher Educators are faced with challenges of understanding how undergraduates are making their school-to-university transition and becoming inducted into their academic discipline in all university of worldwide.

Beverley J. Webster, Min Yang (2012) suggested that rather than focusing mainly on tackling students' transition difficulties, efforts of promoting a positive first-year experience for Chinese university students and facilitating their goals achievement should be oriented towards constructing a facilitative learning environment.

Miao, et al. (2018) explored the starting with the training needs of applied talents and guided by discipline competition, through multi-dimensional training environment and closed-loop feedback mechanism to improve the effect of discipline competition.

Liu (2017) believes that the discipline competition with special educational functions and puts forward an innovative talent training mode of "integration of competition and learning"

Zhu (2018) explored the innovative talent training mode driven by discipline competition and established a new teaching method of combining virtual and real.

Jiang (2019) analyzes the restrictive factors of the current discipline competition, and puts forward a discipline competition organization and management measure based on OBE concept.

Lu (2018) found the evaluation of discipline competition in Colleges and universities, selects the competition items according to the standards of authority, influence and internationality, and established an evaluation model from the three dimensions.

Hong (2018) analyzes the current situation of discipline competition and points out the key measures to realize multiple principles, so as to promote the sustainable development of discipline competition.

#### 3. Research Methods and Materials

# 3.1. Research Design

The compilation of the initial questionnaire is as follows: the five members of the project team independently put forward the factors affecting college students' participation in discipline competitions and summarized them; Then discuss and supplement the initial questionnaire items.

Firstly, this study preliminarily determines the main influencing factors from college students' participating in discipline competitions through group interview.

Secondly, the project teams organized, distributed and collected in the form of questionnaire, Factor analysis is used to cluster the influencing factors of College Students' participation in discipline competition.

Finally, this study makes a group comparative analysis on the influencing factors of different gender, professional category and discipline category.

### 3.2. Data and methodology

After the completion of the initial questionnaire, we collected the data from the students of Shandong University of political science and law in May 2021.

The Likert 5-point system is adopted for evaluation, in which "1" indicates no impact and "5" indicates great impact. The questionnaire was answered online on the questionnaire platform of APP. the total of 192 valid questionnaires were collected, including 77 boys and 115 girls.

The study conducted a survey on SPSS 24.0 Through factor analysis of 192 questionnaires data. After empirically analyzing the data, we found that the factors can be classified into four main factors.

## 4. Results and Discussions

This paper analyzed the main factors affecting college students' participation in discipline competition from the perspectives of questionnaire.

The data were tested for suitability, reliability and exploratory factor analysis.

The SPSS of results show that the KMO measure of the "a" factor is 0.878 and the KMO measure of "b" factor is 0.927. The statistical significance probability of Bartlett spherical test is less than 0.000. The results show that the data is very suitable for factor analysis.

The Reliability Analysis of result showed that the Cronbach was used in this study  $\alpha$  Coefficient to judge the reliability of each factor item. The reliability of the questionnaire is 0.937, indicating that the data is very reliable and the internal consistency is high.

The factor analysis of results showed that we extract the factors according to the standard that the eigenvalue is greater than 1, and use the maximum variance method to rotate the factors In the process of exploratory factors.

In terms of obstacles, we extract three factors, the three eigenvalues explain the total variance by 63.46%, in terms of promotion factors, we extract two factors, and the two eigenvalues explain the total variance by 70.18%. The final scale is shown in Table 1.

Table 1: The result of factor analysis for rotate the factors

	Factor 1	Factor 2	Factor 3	Factor 4
A1	0.772			
A2	0.745			
A3	0.785			
B1		0.684		
B2		0.678		
В3		0.722		
C1			0.895	
C2			0.852	
C3			0.841	
D1				0.754
D2				0.726
D3				0.738

Data source: Obtained through analysis and sorting

# 5. Discussion

Through the above analysis, the conclusions are as follows:

First. There are four main factors affecting college students' participation in discipline competition, including two obstacles: external obstacles and internal obstacles; There are two aspects of promoting factors, namely external promoting factors and internal promoting factors.

Second. There are differences in the impact of four factors on College Students' participation in discipline competitions. According to the degree of importance (according to the variance contribution rate), they are: external promotion, external hindrance, internal promotion and internal hindrance.

Third. The external promoting factor is the most influential factor among the positive and negative obstacles. This factor includes not only the school's rigid requirements for students to participate in discipline competitions, the school's publicity and guidance, the influence of the group, but also the school awards and class awards.

The conclusions of this study have good practical significance for the organization and management of discipline competition, as follows:

It provides a reference for the organizers of discipline competition to improve the project design. It provides improvement direction for school organizers to organize students to participate in the competition more scientifically and reasonably. It provides theoretical help for instructors to better understand and guide students.

In this study, we can find that there are significant differences in the perception of promoting and hindering factors of participating in discipline competition among students of different gender, discipline category and major category. Instructors can understand the factors that such students pay more attention to when participating in discipline competitions according to their different gender and discipline categories, and start with the leading factors to improve the guidance effect.

#### References

- Wei, C. X., Liang, X. Y., & Wang, R. (2020). Research on Management and Operation Mechanism of Four-in-one Discipline competition Based on Talent Training. *Journal of Simulation*, 6(1), 25-33.
- Xu, F., Wang, J. G., Zhao, L., & Zhang, Y. B. (2018). College Students' Creative Ability Training Based on Discipline Competition Platform. (eds.) Proceedings of 2018 Asia-Pacific Social Science and Modern Education Conference (SSME2018), 39-45.
- Zhu, J. M., Li, A. N., Sun, N., & Wang, C. L. (2020). The Cultivation of Innovation Ability of New Economic and Management Talents in Discipline Competitions under the Background of Big Data. *Frontiers in Educational Research*, 11(1),11-27.
- Wang, L. Y., & Ye. Y. (2018). Practical Research on Logistics Engineering Specialty Combining Discipline Competition with Project Teaching. *International Journal of Education and Economics*, 2018(1), 21-25.
- Lian, Q. (2018). Study on the Cultivation of College Students' Innovation Ability by Subject Competition and Its Countermeasures(eds.), Proceedings of the 5th International Conference on Social Science and Higher Education (ICSSHE-19), 342-345.
- Sonya E. V., Victoria A., Wilson, R. T., & Daniel J. B. (2018). Head to head: The role of academic competition in undergraduate anatomical education. *Anatomical Sciences Education*, 5(1), 14-28.
- Zhang, X. J., & Li L. (2019). Study and Exploration on Cultivation Mode of Innovative Practical Ability of College Students of Emerging Engineer Supported by Chenglong Valley Incubation Park. (eds.), Proceedings of 2nd International Conference on Contemporary Education, Social Sciences and Ecological Studies (CESSES), 256-258.
- Dong, Z., & Zhang, D. J. (2015). The Relationship Between Class Environment and Psychological Suzhi of Minority Middle School Students in Yunnan. *Cross-Cultural Communication*, 11(2), 55-64.