

## Research on Higher School Talent Training Mode Guided by Cluster-Oriented Employment

Quanjie Lin \*

Business College, University of Jinan Quancheng College, Yantai, 265600, China

\* corresponding author: lww092@126.com

**Keywords:** Employment; Post Cluster; Guide; Talent Training

**Abstract:** "Difficulties in employment of higher school students" has become a prominent social problem. On the one hand the employer cannot recruit the right people; on the other hand, higher school students worry about not finding a satisfactory job, and the students have frequently quit jobs or even the phenomenon of nudity. The employment force is a comprehensive accomplishment of individual employment and career development in the new occupational environment. The new occupational ecology requires the individual to update the employment ability to adapt to the frequent change of the occupational environment. As an important platform for cultivating talents, higher schools should face up to the form of serious employment and should actively innovate talents training mode. In addition, in order to carry out the guiding ideology of "Serve as the purpose, employment as the guide, combination of work and study as the foundation, school-enterprise cooperation as the way" by Ministry of Education. To adapt to the trend of global economic integration, the higher schools must reform the talent training mode. With the higher schools continue to transport talent to the community, to prevent the disjoint of talent and market demand, higher schools should adjust the talent training strategy based on market demand and train the talent guided by cluster-oriented employment. To cultivate students' professional ability and quality ability, and to cultivate practical talents with strong anti-risk ability to meet the needs of new forms of social change, so as to improve the employability of higher school students. In this study, empirical research methods are used to study the mode of talent training in higher schools guided by cluster-oriented employment.

### 1. Introduction

Talent training mode refers to the educational goals, teaching content, training methods and comprehensive protection mechanism jointly determined by the school and the employer according to the training objectives. The talent training mode should include three aspects: first is the construction of the target system, which mainly refers to the training objectives and specifications; second is the content system, which mainly refers to the teaching content, teaching methods and means, training methods; third is the security system, which mainly refers to the teaching staff, teaching resources, teaching management and teaching evaluation [1-2]. In the face of rapid changes in the living environment, more and more difficulties occurred in the process of higher school talent training, talent training mode gradually exposed its drawbacks, and it is urgent to optimize the existing higher school talent training mode. Every year a large number of graduates flock to the community, but the real proportion of the needs of the social talent market is not satisfactory. In order to meet the needs of the market demand for social talents, the mode of talent training in higher schools must be guided by market demand, and positively explore the mode of talent training in higher schools [3-4]. After the university has entered the stage of popularization, the talent training mode cannot adapt well to the rapid change environment. The higher schools are facing the pressure of increasing student achievement and employment. Except the training of students, it is more important to target training according to the different characteristics of students. Obviously, the accuracy of the mode of talent training in higher schools directly affects the employment situation of students [5]. Therefore, the higher school talent training mode directly

related to the training of talent, if the training methods have problems, the students cannot meet the needs of the market. Therefore, it is of great significance to promote the transformation of talents in higher schools and to improve the employment rate of talents in higher schools [6-7].

## **2. Literature Review**

From the current situation of university talent training in China, talent training mode is obsolete, the ability to adapt to the market is still relatively weak. The training of talents in vocational education is not connected with the talent demand of the job market, higher school teaching is unscientific, student employment personal expectations target is too high, and the national policy is not like the tilt of higher school talent training, which are leading to higher school students cannot find the right job in the society after graduation [8-9], that does not have any contribution to society. In this case, higher schools have important tasks of education that should be guided by the employment cluster, strengthen the training of talents in higher schools, and promote the employment of higher school students [15].

At present, the popular international higher school talent training mode include that: Germany is the representative of the "dual system" mode. Canada and the United States are as the representative of the CBE mode, Australia represented TAFE mode [12]. German universities are basically the same in the mode of talent training, mainly complete the teaching content through four links of lectures, links, seminars and internships [10-11]. The British universities emphasize that university education is responsible for economic growth, and university education should be oriented to the development of university education. The university education emphasizes academic freedom, independent thinking and subsidy learning. What's more, the British government emphasizes that university education is responsible for economic growth. Under the influence of these two factors, the contemporary British higher school talent training mode can be formed. Unlike the traditional mode of free academic talents training, it is an open type of talent training mode in the face of economy, industry and commerce, that is, a market-oriented type of talent training mode [13]. American higher school talent training mode to cultivate students' patriotism moral quality as the goal, pay attention to the improvement of comprehensive ability of students, and always stressed the application of knowledge. For example: Stanford University is the world's highest institutions with high-quality talent training mode by the world attention and affirmation; its goal is: high-profile leading talent, training specifications, practical education, flexible curriculum system and teaching plan, and comprehensive of the professional disciplines.

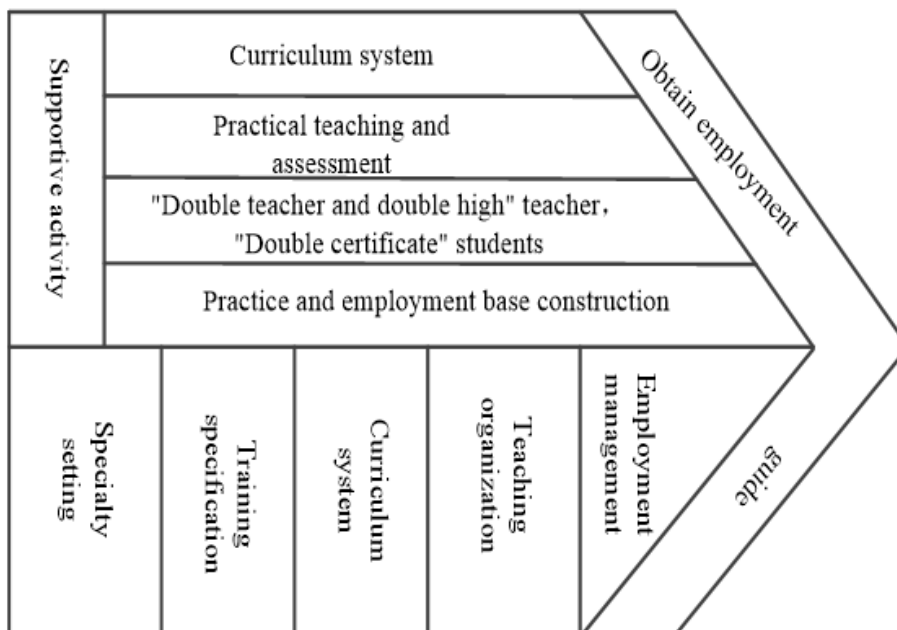
## **3. Methods**

Higher school students, teachers and business executives are the direct participants of higher school talent training mode responsible for the cluster-oriented employment, that is, the most talkative cluster of the talent training mode. They are the main samples to obtain the real idea of the higher school talent training mode situation of current stage, and then found the existence of shortcomings and deficiencies of current talent training mode in China, which is the key of the higher school talent training mode optimization [14].

In this study, the factors influencing the mode of talent training in higher schools are mainly taken as the reference object of the suggestions and satisfaction of higher school teachers, higher school students and business executives. It should be noted that the main perspective taken in this study is based on the employment cluster-oriented employment perspective. Through the use of empirical research methods, some higher school students, teachers and employers were investigated with questionnaire survey, the statistical analysis of the survey data found the problems and shortcomings of higher school talent training at this stage of China, the purpose is to discuss the optimization and suggestions of the talent training mode in China 's higher schools to provide an objective basis.

In the process of analysis, the supply chain management can be applied to the mode of talent training in higher schools. Similarly, the main body of the higher school talent training mode, which

is oriented to the employment cluster, includes: professional setting, curriculum system, teaching organization, employment management and so on. Supportive activities included practical teaching, teacher characteristics, practice employment base construction and so on. We can build a higher school-based talent training mode from the perspective of employment, as shown in Figure 1.



**Figure 1.** Employment-oriented higher school talent training mode.

(1) The selected sample is representative. First of all, the sample are undergraduate students selected from several Ministry of Education subordinate higher schools and ordinary schools, so that the selected sample is representative and comprehensive. Among them, the sample selection covers the science and engineering higher schools, engineering-oriented institutions, economics-based institutions and liberal arts-based institutions and comprehensive institutions, which is comprehensive. Secondly, in the selection of samples, specifically selected only senior undergraduate students as the sample, because the freshman does not have enough personal experience of the higher school talent training mode. Finally, in the investigation of business managers, the sample covers the power industry, the communications industry, the tobacco industry, the service industry, government agencies, advisory services, banking, manufacturing, medical and other industries, which is comprehensive and representative.

(2) the survey sample is comparable. Higher school teachers and higher school students are the most important participants in the training of university talent. The employing enterprises are the examiners of the undergraduates' employment practice. The three representatives represent different identities, which are the main body of the university talent training. The samples are quite different, and also has a clear comparability, a comparative analysis of the suitable sample data is carried out.

(3) Questionnaire survey implementation and sample data statistics. In the survey, the design of the questionnaire is through the face to fill, send e-mail and other forms issued to the 20 teachers and 50, a total of 18 teachers recovered questionnaire, the recovery rate 90%, of which 17 were valid questionnaires, accounting for 94.4% of the questionnaire; a total of 48 students recovered questionnaires, the recovery rate of 96%, of which 45 were valid questionnaires, accounting for 93.75% of the questionnaire.

In order to facilitate the comparative analysis of two different sample clusters, the effective questionnaires were collected according to the statistics of teachers and students, the number and percentage of the questions for teachers and students to choose was obtained, as shown in Table 1 and Table 2. The data in front of the table is the number of samples that are selected for this option. In parentheses, the percentage of the sample is selected as the percentage of the total number of samples. The statistical results of the sample data are shown in Table 3.

**Table 1.** Sample data statistics (1).

Number	Teachers				Students			
	A	B	C	D	A	B	C	D
1	2(10.5%)	11(10.5%)	5(26.3%)	1(5.3%)	8(19.5%)	27(65.8%)	4(9.8%)	4(4.9%)
2	1(5.3%)	2(10.5%)	4(21.1%)	12(61.1%)	3(7.3%)	5(12.2%)	10(24.4%)	23(56.1%)
8	7(36.8%)	6(31.6%)	2(10.5%)	41(21.1%)	13(31.7%)	17(41.5%)	2(4.9%)	9(21.9%)
9	—	—	—	—	2(4.9%)	19(46.3%)	3(7.3%)	17(41.5%)
10	—	—	—	—	2(4.9%)	19(46.3%)	7(17.1%)	31(75.6%)
11	6(31.7%)	8(42.1%)	4(21%)	1(5.3%)	15(36.6%)	21(51.2%)	3(7.3%)	2(4.9%)
16	12(63.2%)	4(21%)	2(10.5%)	1(5.3%)	20(48.8%)	15(36.6%)	5(12.2%)	12(29.3%)
17	—	—	—	—	1(2.4%)	1(2.4%)	27(65.9%)	12(29.3%)
19	—	—	—	—	16(39.1%)	13(31.7%)	11(26.8%)	1(2.4%)

**Table 2.** Sample data statistics (2).

Number	Teachers				Students			
	A	B	C	D	A	B	C	D
3	0	10(52.6%)	7(36.9%)	2(10.5%)	0	6(14.6%)	21(51.2%)	12(29.3%)
4	3(15.8%)	13(38.4%)	3(15.8%)	0	1(2.4%)	17(41.5%)	20(48.8%)	3(7.3%)
5	0	10(52.6%)	6(31.6%)	3(15.8%)	0	6(14.6%)	19(46.3%)	16(39%)
6	0	6(31.6%)	10(52.6%)	6(31.6%)	0	7(17.1%)	29(70.7%)	5(12%)
7	0	9(47.4%)	8(42.1%)	2(10.5%)	0	5(12.2%)	28(68.3%)	8(19.5%)
12	0	8(42.1%)	4(21%)	1(5.3%)	0	21(51.2%)	3(7.3%)	2(4.9%)
13	3(15.8%)	11(57.9%)	3(15.8%)	2(10.5%)	1(2.4%)	16(39.1%)	6(14.6%)	17(41.5%)
14	1(5.3%)	9(47.4%)	7(36.8%)	2(10.5%)	0	8(19.5%)	17(41.5%)	16(39%)
15	1(5.3%)	7(36.8%)	7(36.8%)	4(21.1%)	0	3(7.3%)	30(73.2%)	8(19.5%)

**Table 3.** Sample data statistics (3).

Number	Teachers			Students		
	A	B	C	A	B	C
18	0	8(42.1%)	7(36.8%)	0	8(19.5%)	19(46.4%)
20	2(10.5%)	4(21.1%)	9(47.4%)	8(19.5%)	10(24.4%)	18(43.9%)

#### 4. Results

Experiments using  $\chi^2$  test, which is also called the Chi-square test. It is a widely used count of hypothesis test method, belonging to the category of non-parametric test, mainly to compare two and more than two sample rates and the relevance of the two categorical variables analysis, and the fundamental idea is to compare the theoretical frequency and the actual frequency degree, which is used to test a class of objects or reflect the number of cases and the number of assumptions based on the null hypothesis whether there is a significant difference. In order to verify whether there is a difference between the choice of the teacher and the student, the software SPSS 16.0 is used to test the question results of  $\chi^2$  test that teachers and students need to answer. The final test results are shown in Table 4 and Table 5.

**Table 4.**  $\chi^2$  test results of differences between teachers and enterprises.

Title	$\chi^2$ value	DOF	Significance probability	Test results
2	2.932	3	0.402	Not significant
3	16.898	2	0	Very significant
4	14.068	2	0.001	Very significant
5	14.116	2	0.01	Significant
6	21.341	2	0	Very significant
7	16.733	2	0	Very significant
8	8.637	2	0.013	Significant

Title	$\chi^2$ value	DOF	Significance probability	Test results
9	10.701	2	0.005	Very significant
12	28.803	2	0	Very significant
15	35.891	2	0	Very significant
19	21.526	2	0	Very significant

As shown in Table 4, there are significant differences in the 20 questions answered by higher school teachers and employer managers, and there are very significant differences in many subjects, which shows that there is a difference between teachers and employers' responses to the questionnaire. The factors that have the greatest impact on the quality of talent training in higher schools also believe that the training program is the most influential factor.

**Table 5.**  $\chi^2$  test results of differences between students and enterprises.

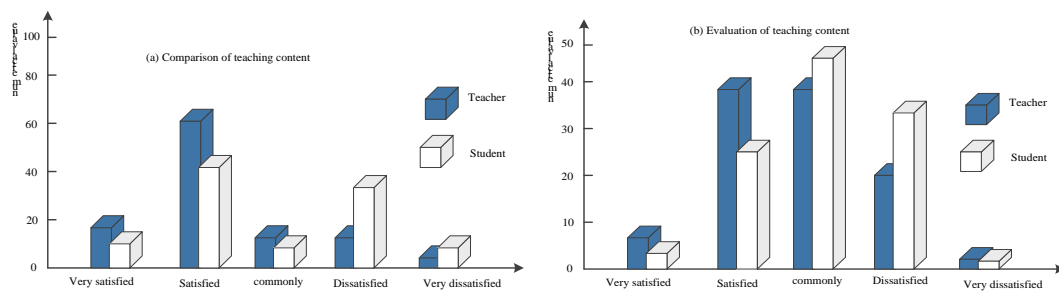
Title	$\chi^2$ value	DOF	Significance probability	Test results
1	6.454	3	0.092	Not significant
10	4.002	2	0.135	Not significant
11	2.227	2	0.358	Not significant
13-1	4.100	2	0.129	Not significant
13-2	1.874	2	0.392	Not significant
13-3	9.570	2	0.008	Very significant
13-4	2.445	2	0.295	Not significant
13-5	0.150	2	0.928	Not significant
14	2.885	2	0.236	Not significant
16	0.899	3	0.827	Not significant
17	13.870	3	0.003	Very significant
18	2.104	3	0.551	Not significant
20	3.628	2	0.163	Not significant

It can be seen from Table 5 that higher school undergraduates and employing enterprises in the vast number of questions on the answer is not significant difference, indicating that students and employers on the pattern of higher school training is basically the same. Students are greatly influenced by the employer in the job interview.

## 5. Discussion

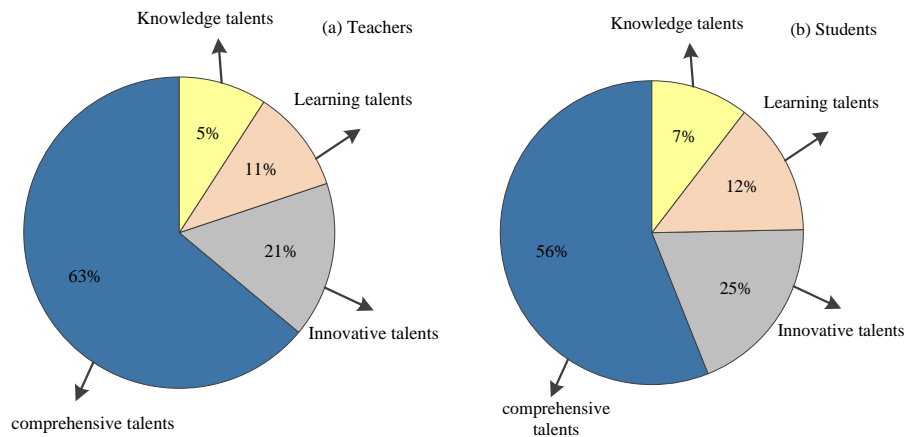
In this study, through the basic data analysis,  $\chi^2$  test and other research methods for further statistical analysis of sample data, conclusions can be summed up below:

According to the statistical results, the satisfaction of teachers in all aspects of the talent training process is higher than that of students. The students are not satisfied with the teaching methods and means, teaching content. The results of chi-square test showed that teachers and students had no significant difference in the evaluation of each link in the process of talent training. The difference was very significant in the training program, and the evaluation of teachers was higher than that of the students. Subjective factors will have some impact, such as questionnaire survey involving teachers had too high evaluation of their own; and students may be not satisfied with some aspects of the status quo of professional education in higher schools are to expand the degree of dissatisfaction.



**Figure 2.** Evaluation analysis on the employment cluster-oriented higher school talent training mode.

In terms of training objectives, for the question of "What kind of talents should be cultivated extensively in the undergraduate course of university", 63.1% of the teachers and 53.1% of the students had the answer of comprehensive talents (Figure 2); for the question of "What is the main talent in cultivating in our country", teachers believe that it is followed by knowledge-based talent, learning talent, comprehensive talents and innovative talents, students believe that it is followed by learning talent, knowledge-based talent, comprehensive talent and innovative talent. What talent students want to be is: learning talent (46.3%), comprehensive talent (41.5%), new talent (7.3%) and knowledgeable talent (4.9%), but those who wants to be a comprehensive talent are accounting for 75.6%, and innovative talents for 17.1%.



**Figure 3.** Comparison of the expectation evaluation of talent training of teachers and students.

## Conclusion

Through the statistical analysis and further study of the questionnaire data, the following conclusions are drawn:

(1) According to the results of the fuzzy comprehensive evaluation of the overall situation and talent training program of higher school teachers, higher school undergraduates and employing enterprises, it is proved that the three types of survey clusters fill in the questionnaires and confirm the authenticity and further verification. The results of this survey are credible.

(2) Using the  $\chi^2$  test method, it is found that the view of teachers on the higher school talents training mode is different from that of the undergraduates and the employing enterprises. The view of talent training mode of undergraduates and the employing enterprises are more consistent. Higher school teachers are satisfied with the current pattern of talent training in higher schools, and students and employers mostly expressed partial satisfaction, the differences between three types of survey clusters on the pattern of talent training mode indicated that there existed problems in the current higher school talent training mode.

## Acknowledgements

Research Project of Teaching Reform in Undergraduate Colleges and Universities in Shandong Province - Research on the Reform of Applied Talents Training Model of Economics Major in Independent College (No.M2018X034.); Project on education and teaching research in shandong province: research on reform of applied talents training model in economics of local universities (No. 2018JXY3064).

## References

- [1]. Chen, W. (2015). Exploration and Innovation of Talent Training Mode Based on Textile Engineering. *Theory Research*, 64(3), 314-318.
- [2]. Dang, C.Y. (2015). The Research on Vocational Higher School Tourism Major Talents

Training from the Perspective of Employment Quality - Taking Qiong Tai Teachers Higher school for example. *Journal of Hubei Correspondence University*, 37(6), 394-401.

[3]. Jiang, R., Yan, J., Wu, W., et al. (2016). Research on the Talent Training for Project Management Based on Employability. *Science & Technology Progress & Policy*, 34(12), 346-350.

[4]. Jin, Y. (2015). Research on the Talents Training Mode as Guidance with the Employment of Information Security in Higher Vocational Higher schools. *Office Informatization*, 23(6), 15-21.

[5]. Meng, Q., Liu, Y., Yang, K. (2017). Boredom proneness and eating behavior among higher school students: mediating role of impulsivity. *Chinese Journal of School Health*, 38(2), 224-227.

[6]. Shen, W., Fang, Z.H.E., Zhang, Q., et al. (2015). Practice and Research on the Optimization of Talent Training Scheme of TCM Major based on Employment. *Chinese Medicine Modern Distance Education of China*, 38(1), 15-19.

[7]. Su, Y.Q. (2016). The Exploration of Computer Talent Training Mode Driven by Competition on the Applied Undergraduate Higher schools. *Computer Engineering & Software*, 35(1), 26-31.

[8]. Wang, J.Q. (2013). Simulation Research on the Training Mode of sports Talents Based on System Dynamics. *Computer Simulation*, 30(6), 257-260.

[9]. Wang, R., Chen, W., Yang, X. (2017). Research on the Education Mode of Talents Training in Higher Vocational Higher school. *Chinese Medicine Modern Distance Education of China*, 28(5), 164-169.

[10]. Wu, Y. (2015). Research on Training Mode for Higher School Students' Career-creating Talents in Luzhou City——Taking Luzhou Vocational and Technical Higher school as an Example. *Journal of Luzhou Vocational Technical Higher school*, 34(6), 21-26.

[11]. Xu, J.M. (2016). The Principles and Countermeasures to Optimize the Talent Training Mode of Higher Vocational Professional Clusters: A Case Study. *Jiangsu Education Research*, 26(8), 245-249.

[12]. Yang, L.Q., Zhang, Y.P. (2017). Research on the Talent Training and the Industrialization of Social Sports Specialty in Gansu Province - On Employment Demands of Fitness and Health Specialty. *Journal of Gansu Normal Higher schools*, 36(7), 26-31.

[13]. Yu, Z., Liu, H., Yue, J., et al. (2015). On the Manufacturing 2025 Strategy in China and Technical Skills Talents Training. *Vocational and Technical Education*, 20(21), 10-24.

[14]. Zhang, X, Liu, H., Zhao, Y., et al. (2016). Research of the Reform of Application Oriented Talent Training Mode in Mining Mechanical Engineering Teaching. *Metallurgical & Mining Industry*, 39(7), 67-72.

[15]. Zhang, X.Y., Xi, T.T. (2015). Approaches to Innovation and Entrepreneurship Training. *Heilongjiang Researches on Higher Education*, 30(1), 147-149.