Quality Management Strategy of Talent Training in Universities under Liaoning Provenience

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Abstract

The objectives of this research were 1)Investigate the constituent factors of talent training quality management in universities under Liaoning Province. 2) Propose on quality management strategy of talent training in universities in liaoning province. This research was a mixed method study. Population were the Population is the Managements、Administrators and Instructors of 20 universities under Liaoning Province who have many years of experience in talent training and quality management. Use Krejcie and Morgan (1970) sampling a total of 270. There are five key informants, namely experts and scholars in talent training and quality management. Obtained by purposeful sampling. The instrument used a semi-structured interview form, questionnaire and focus group discussion form. The research is divided into three processes: research scheme preparation, research procedure and research report. The statistical data used for data analysis are: data analysis includes frequency, percentage, average value, standard deviation and the combination of exploratory factor analysis and content analysis. The results show that: 1) The research object has six components: including the process management of talent training quality, improving teachers' teaching quality and students' learning ability, the evaluation system and achievement management of talent training, perfecting the management system of teachers and students, improving the participation of teachers and students and innovating the quality management system of talent training; And 2) 15 strategies for talent training quality management in Universities under Liaoning Province: there are two strategies for talent training quality process management, three strategies for improving teachers' teaching quality and students' learning ability, three strategies for talent training evaluation system and achievement management, three strategies for improving teachers' and students' management system, two strategies for improving teachers' and students' participation, and two strategies for innovating talent training quality management system.

Keywords: Talent training, Quality Management, Strategy, Liaoning Province

Introductions

Martin Trow first put forward the three-stage theory of higher education development in his article "Problems in the Transformation from Elite to Popular Higher Education" in 1973. Taking the gross enrollment rate of higher education as a quantitative index to measure the scale expansion of a country's higher education and divide its historical development stages, he divided the development process of higher education into three stages: elite, popularization and universalness. He believes that the nature of elite higher education in some countries will not change until its scale is expanded to provide learning opportunities for about 15% of school-age youth. When it reached 15%, the nature of the higher education system began to change and turn to popularization. When the scale reaches 50% or even more, higher education begins to move towards the stage of popularization (Zhenyu Z.& Yuejun. L. (2007)

Since 1991, China's Education Commission has been establishing "national basic science talent training base" and "national basic curriculum teaching base" step by step in a planned and step-by-step manner. In 1995, the former State Education Commission mentioned "the content of cultural quality education" in the "working conference on strengthening the pilot institutions of cultural quality education for college students" held by Huazhong University of Technology at that time. It is believed that quality can include four aspects: first, ideological and moral quality; Second, cultural quality; Third, professional quality; Fourth, physical and psychological quality. It also points out that we hope to explore the reform of our talent training mode, educational concept and educational thought through this work (Shuzi, Y.2015)

Through the analysis and research on the current situation of talent training in universities under Liaoning Province, a typical province of talent training in China, the researchers found that: There are few research results on the quality of talent training in Liaoning Province, so how to measure the quality of talent training and the important factors affecting the quality of talent training have become an important content of concern (Hong, Z.2014)

Therefore, from the perspective of talent training in colleges and universities, exploring the theory and evaluation system of quality management in universities under Liaoning Province has important theoretical and practical significance. Theoretical significance: at present, the quality management of talent training has gradually become an important part of talent training all over the world, and its evaluation system plays an extremely important role in the quality management of talent training in colleges and universities. The research on talent training quality and its evaluation system in this paper is conducive to the innovation of talent training management concept and the improvement of talent training management theory, deepen the theoretical understanding and practical exploration of talent training quality and management in universities under Liaoning Province, promote the rational and scientific development of talent training in colleges and universities, and promote the construction of talent training management evaluation system. Practical significance: studying the quality education of talent training in colleges and universities can provide theoretical and practical help for the quality management of talent training in colleges and universities, and help college students better adapt to social development. Through the research of talent training quality evaluation system, improve the quality of talent training in colleges and universities, improve the employment ratio of college students in Liaoning, and ultimately contribute to economic

development.

As a front-line teacher in Colleges and universities, through research, I hope to realize the expected effects of the innovation of the concept of quality management of talent training in universities under Liaoning Province, the improvement of talent training management theory, the innovation of talent training management practice mode, the determination and verification of the influencing factors of the quality management evaluation system of talent training in universities under Liaoning Province, and the promotion of the development of quality management of talent training in universities under Liaoning Province. Provide reference for the practice of quality management of talent training in universities under Liaoning Province, fundamentally solve the problems in the quality management of talent training in universities under Liaoning Province, and establish an effective evaluation system.

Methods

The research will discuss the methodology used to conduct the study. Research purposes: (1) investigate the composition of talent training quality management strategy in universities under Liaoning Province. (2) Verify the quality management strategy of talent training in universities under Liaoning Province. The research method is mixed research method, including qualitative research and quantitative research. The research process is divided into three stages: preparation of research scheme, research procedure and research report. The research process includes three steps: (1) Research on the variables of talent training quality management in universities under Liaoning Province. (2) Research on the quality management elements of talent training in universities under Liaoning Province. (3) Propose on quality management strategy of talent training in universities in liaoning province. The details are as follows:

Step (1) Research on the quality management variables of talent training in universities under Liaoning Province.

Based on the semi-structured interview with key informants, the variables affecting the quality management variables of talent training are preliminarily consisted:

(1)Target Management of Talent Training in Higher Education; (2) Organizational management; (3) The path of implementing talent training management; (4) Teaching quality management; (5) Management of faculty building (team building management); (6) Course construction management; (7) Student management; (8) Management of talent training quality and achievements.

Step (2) Research on the quality management elements of talent training in universities under Liaoning Province.

The population includes 20 colleges and universities in different regions in Liaoning Province, and 600 Managements, Administrators and Teachers with experience in talent training and quality management in universities under Liaoning Province. The researchers used

Krejcie & Morgan's table (1970) to determine the sample size. The sample size is about 270 Managements, Administrators and Teachers using stratified sampling technology. In order to improve the accuracy of exploratory factor analysis, the researchers increased the sample size to 270 samples. The population and samples are shown in the following table 1.

Tabel 1 The population and samples (n=270)

Name of institution	Sample			
	Managements	Administrators	Teachers	Total
Dalian University of Technology	4	7	7	18
Northeastern University	1	5	8	14
Dalian Maritime University	3	4	7	14
Liaoning University	4	4	6	14
Dalian Jiaotong University	3	5	3	11
Dongbei University of Finance and Economics	1	6	6	13
Shenyang Ligong University	3	7	6	16
China Medical University	3	5	7	15
Dalian University of Foreign Languages	4	4	7	15
Shenyang Aerospace University	4	6	11	21
Lu Xun Academy of Fine Arts	3	4	7	14
BOHAI University	2	8	6	16
Shenyang University	1	5	10	16
Shenyang University of Technology	2	4	4	10
Shenyang Normal University	4	7	6	17
Liaoning University of science and technology	2	4	5	11
Dalian Vocational Technical College	1	5	5	11
Liaoning Vocational College	4	4	3	11
Liaoning Medical Vocational College	3	3	2	8
Chaoyang Teachers College	3	1	1	5
	55	98	117	270

Step (3) Propose the strategy of talent training quality management in universities under Liaoning Province.

Qualitative research: in step (2), researchers use various components of talent training quality management to verify the components of talent training quality management evaluation system in universities under Liaoning Province through focus group discussion; 7 key

informants (Vice Dean of teaching, Dean of department and relevant managers of Liaoning talent training and quality education college).

Results

Section 1: Data analysis results based on research objective 1

The researchers conducted exploratory factor analysis on the quality management of talent cultivation in colleges and universities in Liaoning Province according to the following procedures:

The variable analysis of the quality management of talent training in colleges and universities in liaoning province. The researchers analyzed the arithmetic mean () and standard deviation (S.D.) by comparing the derived arithmetic mean with the standard based on the Best concept.

Table 2 Questionnaire data analysis results: exploratory factor analysis(n=270)

Item	Variables	Arithmetic Mean ($\bar{x}$)	Standard Deviation (S.D.)	Level
1	Promote students to have an international perspective	4.26	0.696	High
2	Establish a scientific quality policy	4.25	0.696	High
3	Establish scientific quality objectives	4.12	0.654	High
4	Pursue high-quality talent training	4.16	0.646	High
5	Cultivate students' innovative spirit	4.21	0.73	High
6	Enhance students' professional practice ability	4.18	0.74	High
7	Have the ability to engage in scientific research and independently undertake specialized technical work	4.03	0.648	High
8	Pay attention to the cultivation of basic theoretical knowledge, professional skills, basic literacy and scientific research literacy	4.17	0.715	High
9	Establish scientific quality management concept	4.14	0.731	High
10	Design advanced management system	4.05	0.786	High
11	Establish a more scientific operation mechanism	4.21	0.675	High
12	Establish teaching quality assurance system	4.03	0.723	High
13	Establish a reasonable resource management system	4.25	0.712	High
14	Establish a clear assessment system	4.26	0.689	High
15	The organization has clear goals and vision	4.3	0.676	High
16	The organization has good social influence	3.98	0.912	High
17	Evaluation system of teachers' satisfaction with school	4.2	0.792	High

Item	Variables	Arithmetic Mean	Standard Deviation	Level
	organization and management			
18	Evaluation system of students' satisfaction with school organization and management	4.24	0.726	High

Table 2 Questionnaire data analysis results (Next)

Item	Variables	Arithmetic Mean	Standard Deviation	Level
19	Build a high-quality student practice platform	4.23	0.746	High
20	Large scale foreign cooperation and exchange of colleges and Universities	4.16	0.881	High
21	International teaching quality evaluation system	4.07	0.749	High
22	Construction and evaluation system of industry university research collaborative education mechanism	4.08	0.843	High
23	Establish a scientific, effective and operable talent training mode	4.21	0.743	High
24	Set up a reasonable teaching plan	4.39	0.691	High
25	Building high-quality teaching resources	4.38	0.694	High
26	Rational allocation of teaching resources	4.34	0.676	High
27	Rationality and scientificity of curriculum	4.29	0.688	High
28	Teaching project declaration and implementation management	4.32	0.676	High
29	Evaluation system of students' satisfaction with teaching effect	4.11	0.699	High
30	Rationality of teachers' knowledge structure, professional title structure, age structure and educational background structure	4.31	0.71	High
31	Teachers' professional skills and abilities	4.43	0.634	High
32	Evaluation and management of teachers' teaching quality	4.41	0.631	High
33	Teacher recruitment system based on Teacher Incentive System	4.24	0.699	High
34	Further education and training system of teachers based on Teacher Incentive System	4.2	0.735	High
35	Teachers' seriousness in lesson preparation and teaching	4.22	0.664	High
36	Evaluation system of teachers' morality and style based on Network	4.16	0.824	High
37	Teacher performance appraisal management based on Network	4.26	0.751	High
38	System of improving teachers' practical ability	4.2	0.589	High
39	Evaluation system of students' satisfaction with teachers	3.79	1.076	High

Item	Variables	Arithmetic Mean	Standard Deviation	Level
40	Research and management of curriculum objectives	4.31	0.688	High
41	Course content planning and management	4.38	0.627	High
42	Curriculum structure and organization	4.09	0.748	High

Table 2 Questionnaire data analysis results (Next)

Item	Variables	Arithmetic Mean	Standard Deviation	Level
43	Management of curriculum implementation	4.13	0.696	High
44	Rationality of curriculum	4.27	0.789	High
45	Reform in teaching methods	4.24	0.648	High
46	Textbook selection	3.77	0.891	High
47	Management of curriculum quality	4.1	0.791	High
48	Curriculum achievement and evaluation management	4.27	0.756	High
49	Student management mode based on big data platform	4.25	0.758	High
50	Student management operation mechanism based on big data platform	4.23	0.772	High
51	Professional student management team	4.25	0.772	High
52	Regular management of students during school	4.3	0.701	High
53	Routine management of students during non-school period	4.49	0.608	High
54	Student moral education management	4.45	0.676	High
55	Student learning management	4.3	0.722	High
56	Construction of student evaluation system	4.33	0.69	High
57	Student participation in student management	3.86	1.03	High
58	Management of teachers' publishing teaching materials, project approval and other achievements	4.4	0.692	High
59	Management of students' participation in practical activities and other achievements	4.43	0.668	High
60	Graduation thesis (Design) quality management	4.5	0.655	High
61	Postgraduate entrance examination and other enrollment rates	4.41	0.73	High
62	Innovation and entrepreneurship achievement management	4.31	0.711	High
63	Employment rate	4.54	0.659	High
64	Feedback from employers on students' working ability	4.54	0.659	High
65	Evaluation of employers on students' diligence and assiduous spirit	4.5	0.661	High
66	Evaluation of employers on students' physical, mental and psychological quality	4.47	0.672	High
67	Evaluation of students' morality by employers	4.53	0.614	High
68	Social group recognition	4.56	0.664	High
69	Social popularity of colleges and Universities	4.53	0.698	High

70	Improve teachers' job satisfaction	4.27	0.708	High
	Average	4.26	0.72	High

Tabel 3 KMO-Meyer-Olkin and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.914
Bartlett's Test of Sphericity	Approx. Chi-Square	17082.15
	Df	2415
	Sig.	0

It can be seen from table 3 that the KMO test result of the data collected in this study is. 914 Kaiser and rice studied KMO (Kaiser Meyer Olkin measure of sampling) to measure whether the data is suitable for using factor analysis technology. They concluded that if the KMO value is ≥ 0.8, the data set can use factor analysis well. Therefore, this set of data is suitable for good factor analysis.

2. The factor loading, variables described in each of the main components after rotating the axis. As shown in Table 4

Table 4 Shows Components of the quality management of talent training

Order	Components	Number of Variables	Factor Loading
1	Component 1	19	0.401-0.809
2	Component 2	18	0.415-0.772
3	Component 3	12	0.435-0.855
4	Component 4	8	0.463-0.731
5	Component 5	7	0.482-0.809
6	Component 6	3	0.502-0.66
	Total	67	0.401-0.855

As can be seen from table 4, based on the criteria for selecting components. There are 6 components in total. In the first part, there are 19 variables, and the factor load is 0.401-0.809; In the second part, there are 18 variables, and the factor load is 0.415-0.772; In the third part, there are 12 variables, and the factor load is 0.435-0.855; In part 4, there are 8 variables, and the factor load is 0.463-0.731; In the fifth part, there are 7 variables, and the factor load is 0.482-0.809; In the sixth part, there are three variables, and the factor load is 0.502-0.66 The total number of variables describing the six components is 67, and the factor load is 0.401-0.855.

There were 6 components as follows: Component 1,the researcher named it" Process management of talent training quality." Component 2,the researcher   named it "Improving teachers' teaching quality and students' learning ability." Component 3, the researcher named it "Evaluation system and achievement management of talent training." Component 4, the

researcher named it "Improving the management system of teachers and students". Component 5, the researcher named it "Improving teacher and student participation. "Component 6, the researcher named it "Innovative talent training quality management system."

Section 2: Data analysis results based on research objective 2

There were total 15 managerial guidelines: consisted of (1) Constructing the Quality Process Management Mechanism of Innovative Talents Training;(2) Implementation and effect of quality management mechanism in the process of innovative talent training；(3) Improve the curriculum system and integrate the teaching content；(4)Actively study the reform of education and teaching；(5)Optimize classroom teaching and improve students' self-study ability；(6) Based on the scientific concept of talents, innovate the concept of talent training in colleges and universities；(7)Clarify the specific standards of talent evaluation and point out the direction for talent training；（8）Establish professional management team；（9）Change teaching methods and improve teaching effectiveness；（10）Improve the selection and management of students and improve the quality of students；（11）Optimize the teaching staff and strengthen assessment and incentive ；（12）Improve teacher participation；（13）Improve student participation；（14） Improve the quality improvement work and improve the quality of talent training ；（15） Implement the people-oriented management concept.

Discussion

1. Discussion based on research objective：

The six components of the talent training management strategy of universities under Liaoning Province include the process management of talent training quality, improving teachers' teaching quality and students' learning ability, talent training evaluation system and achievement management, improving the management system of teachers and students, improving the participation of teachers and students and innovating the talent training quality management system.

The 21st century is called the era of knowledge economy. Facing the new situation, higher requirements are put forward for the quality of talent training, and the talent quality of colleges and universities in China is also facing great challenges.

Talent training mode is the structure of knowledge, ability and quality built by the school for students in a certain education period, following the laws of education and teaching and combined with the actual situation of the school, as well as the teaching operation mechanism to realize this structure.

The diversification of talent training mode in Colleges and universities refers to that each university constructs and combines its own talent training mode according to its own positioning, characteristics and talent training objectives, organically combines people's all-round development with social needs, and realizes the diversification of talent training in terms of specifications, schemes, plans, methods and ways, so as to create a teaching mode more suitable for different individual students' own development needs.

The emergence and development of diversified talent training modes in colleges and universities are closely related to the purpose of China's higher education, the reform and development of contemporary higher education, and the needs of social and economic development for higher education.

In the process of talent training quality management, should we establish clear organizational objectives, pay attention to the management of its process, and improve the effectiveness of talent training quality management; Innovate the quality management system of talent training and keep pace with the times; Improve the management system of teachers and students and improve the quality of personnel management; Improve teachers' teaching quality and students' learning ability, improve teachers' and students' participation, and cultivate innovative talents to adapt to social development.

It can be seen that the six parts of the research results are important elements of constructing talent training quality strategy and important measures to improve talent training quality management.

Component 1: Process management of talent training quality

The findings of this study are consistent with the theory or research of Xiao xiaocong & Wenwen Z. (2020). It is found that by analyzing the current quality situation and combing all links of teaching and learning in the training process of top-notch innovative talents, the quality management mechanism of talent training process is formed, implemented and tested from the perspective of quality process control management. The research results and practical experience are expected to be popularized in similar colleges and universities. In addition, the research results are consistent with those of Bo Li.,et al (2019) and Xiaozhan L.(2019). In addition, the research of Zhangke, X. et al (2016) found that measures to strengthen the management of teaching process through the implementation of system construction, improving teachers' teaching ability, strengthening students' learning investment, and promoting the reform of teaching methods and teaching means. Strengthening teaching process management is of great significance for colleges and universities to build teaching quality standards, establish effective teaching quality guarantee and monitoring system, and finally improve the quality of local talent training. Corresponding to the research findings of Guoping L. (2016), Maoni, W. & Bo X. (2015), Jinfeng W. (2011) and Fangkui X.(2010:5).

Component 2: Improving teachers' teaching quality and students' learning ability

The findings of this study are consistent with the theory or research of Nan L.(2012). The study found that teaching quality is the foundation of colleges and universities and the lifeline of the survival and development of colleges and universities. To improve teaching quality, teachers' teaching work must be evaluated. In addition, the research results are consistent with those of Wulong, L. et al(2016) and Feng G. (2008). In addition, the research of Haixue P. (2004) found that only by changing the teaching concept, optimizing the psychological quality and strengthening the cultivation of students' autonomous learning ability, can we achieve better teaching results, which corresponds to the research findings of Xue Y.(2019)

Component 3: Evaluation system and achievement management of talent training

The findings of this study are consistent with the theory or research of Hui G.(2020). It is

found that the municipal government has vigorously promoted the construction of new think tanks, and gradually established a think tank development pattern with sound organization, wide coverage and scientific operation by building platforms, establishing mechanisms, attracting talents and promoting implementation. In addition, the research results are consistent with those of Yumin J.(2019) and Yuhui W.(2017). In addition, the research of Wei, F.(2014) found that from the aspects of scientific research projects, scientific research achievements, scientific research awards and scientific research achievements transformation, colleges and universities can adopt the combination of qualitative and quantitative methods to establish scientific and technological R & D talent training quality evaluation organization, determine the content of talent training system construction, and determine the weights of various indicators for fair and accurate evaluation of talent training quality, Then gradually build a feasible talent training evaluation index system. Corresponding to the research findings of Xueping, Y. et al(2022) and Pingsheng   G..(2009).

Component 4: Improve the management system of teachers and students

The findings of this study are consistent with the theory or research of Ping G.(2021). Guo Ping believes that managers should standardize the system in terms of teaching quality and mode, and improve the online teaching management system of colleges and universities. In addition, the research results are consistent with those of Bangwei   Z.(2005) and jiebin, Y. (2016). In addition, Haixin W. (2021) found that the concept of people-oriented education management needs to think from the perspective of teachers and students, use new thinking to solve the new problems faced in China's education reform, and is of great significance to promote China's education development and students' comprehensive implementation of quality education, corresponding to Jiakui L.(2019), Hongbo L. (2003) Research findings of Min H.(2001) and Xuanzhi S. (2019).

Component 5: Improve the participation of teachers and students

The findings of this study are consistent with the theory or research of Zhuwen T.(2008). The study found that the introduction of participatory management mode in college student management can effectively motivate students, cultivate their subject participation consciousness, give full play to the active role of students, make college student management truly get the support and positive response of students, and achieve the purpose of "student-oriented". In addition, the research results are consistent with those of Yuxue,H. et al (2019) and Fang N. (2016). In addition, the research of Taizhong   C.(2009) found that teachers, as the main body of school education and teaching activities, participate in school management activities, which is the demand of school management system reform. It has both rich conceptual basis and important practical value. Corresponding to the findings of Wei Lin (2014), Houming H. (2014), and Lihui   S.(2007).

Component 6: Innovative talent training quality management system

The findings of this study are consistent with the theory or research of Xinhua, D. et al (2016). It is found that colleges and universities in China should pay enough attention to the education of innovative talents and establish a total quality management system to cultivate and bring up a large number of high-level innovative talents.In addition, the research results

are consistent with those of Hong Z. (2015) and Haoxiang H. (2019). In addition, Ma Xiuzhi's research also found that in the context of innovative talent training, efforts should be made to promote the reform and development of higher education management and form a new management model conducive to the training and development of innovative talents, which corresponds to the research findings of Yiting L. (2021), Shuilan Z.(2021), Xin K.(2009) and Qing P. (2017).

Recommendations

Recommendation for Policies Formulation

1).Process management of talent training quality and establish scientific training objectives

2).Improve teachers' teaching quality and students' learning ability, and comprehensively use a variety of teaching means

3).Talent training evaluation system and achievement management, and establish an innovative mechanism for achievement transformation

4).Improve the management system of teachers and students and stimulate the innovative power of teachers and students

5).Improve the participation of teachers and students, and establish an organizational system for teachers and students to participate in management

6).The quality evaluation system of talent training in colleges and universities should keep pace with the times

Recommendations for Further Research

1).Further improve the theoretical system of talent training quality management in universities under Liaoning Province

2).Innovating the practical mode of talent training and management in universities under Liaoning Province

3).Establish a set of effective strategies for talent training quality management in universities under Liaoning Province

4).Promoting and implementing the quality management strategy of talent training in universities under Liaoning Province

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