

## THE TRAINING MODE OF INDIVIDUALIZED TALENTS IN FIRST-CLASS UNIVERSITIES

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### ABSTRACT

The purpose of this study is to: (1) Determine the components of the effectiveness of the personalized talent training model of first-class universities (2) Formulate effective guidance methods for personalized talent training in first-class universities.

The research method is a mixed methods research design, including quantitative research and qualitative research. Obtained by stratified random sampling technique. The research results show that: (1) Components of the effectiveness of personalized talent training in first-class universities The effectiveness has eight components, including the concept of talent training, the mode of professional setting, the method of curriculum setting, the teaching system, the teaching organization form, and the teaching management mode, invisible course form, teaching evaluation method. (2) There are 18 guidelines for the effectiveness of personalized talent training in first-class universities, including 4 guidelines for the effectiveness of talent training concepts; 2 guidelines for the effectiveness of professional setting models; guidelines for the effectiveness of curriculum setting methods; There are 2 effectiveness guidelines for the teaching system; 2 effectiveness guidelines for the teaching organization form; 2 effectiveness guidelines for the teaching management model; 1 effectiveness guide for the invisible course form; 3 effectiveness guidelines for teaching evaluation methods.

**Keywords:** First-class Universities, Personalized talent training, constituent elements, effective guidance

## 1. Introduction

Any kind of research is in a certain era background, and is inevitably affected by the era background, reflecting the characteristics and appearance of the era. The function of first-class universities to cultivate individual talents is increasingly valued by countries all over the world. In order to win the initiative and take the lead in the fierce international competition, the cultivation of individual talents and the reform of undergraduate education have been promoted to the national strategic level. When China is actively promoting the reform of the undergraduate talent training model, how to build and improve the personalized talent training model for first-class universities to promote the cultivation of individualized talents is an urgent topic to be studied.

Researches related to personalized talent training in first-class universities include (Cassirer, E. 1985; Jaspers, K. T. 1991; Newman, J. H. 2001; UNESCO, 1996; Zhao, X. L., & Wang, C. X. 1980; Cha, Y. L. 1998; Lu, J. 2001; Jin, Y. J. 2008; Wang, D. J, 2009; Wang, D. J, 2005; Lin, C. D, 1996; Dong, Z. F. 2009; Wang, H. C. 2004; Amabile, T. M. 1983; Anieo, J. A. 2003; Ashby, E. 1958; Bell, R. E. 2005; Bentinek-Smith, W. 1986; Wu Genzhou, 2006; Pan Maoyuan, 2007; Deng Yonghong, 2005; Mike Fulan, 2005; Zhou Guangli, 2009; ; Bruce. Johnstone, 2002; John L. Campbell, 2010; Yuan Zhenguo, 2016; Hu Jianhua, 2013; Liu Gonghui, 2008; Hu Tianyou, 2013;) In addition, the literature also studies the personalized talent cultivation of six first-class universities. (Berlin I, 1991; Boyei, E. L. 1987; Clark, B. 1992; Conant, J. B, 1945; General, 2011; Realising, 22-31; Fanelli A, 1997; General, 1993; Creating Minds, 1992)

The talent team is cultivated by education, and the quality of talents is determined by the training mode. At a time when the country and society are increasingly concerned about the improvement of the quality of undergraduate education and the cultivation of individual talents, and many first-class universities have begun to explore the construction of individualized talent cultivation models for undergraduates, the theoretical research on individualized talent cultivation models in China's first-class universities should be strengthened, and the reform of undergraduate talent cultivation models should be strengthened. Provide practical strategies, with important theoretical significance and practical value. The development of this research offers the possibility to scientifically

answer these two questions: (1) Identify the components of the effectiveness of the personalized talent training model of the top universities. (2) Formulate guidelines for the effectiveness of personalized talent training in first-class universities.

## 2. Method

The research methods, sampling methods, data collection tools, and data analysis techniques are described below.

## 3. Research methods

Research methods are mixed methods, including qualitative and quantitative research. The study population came from first-class universities and was obtained by stratified random sampling technique. The sampling method of random sampling was adopted, and the main subjects of the survey were students in five public colleges and universities. The tools used for data collection were semi-structured interview forms, questionnaire stars and focus group discussion forms.

## 4. Research samples

The sampling method of random sampling is adopted, and the research objects are students in five first-class universities, with a sample size of 550 people.

**Table 1:** Demographic frequency analysis results

Demographic frequency analysis results

| name                  | Options          | Frequency | Percent (%) | Cumulative percentage (%) |
|-----------------------|------------------|-----------|-------------|---------------------------|
| gender                | A. Male          | 248       | 47.69       | 47.69                     |
|                       | B. female        | 272       | 52.31       | 100.00                    |
| grade                 | A. Freshman      | 128       | 24.62       | 24.62                     |
|                       | B. Sophomore     | 140       | 26.92       | 51.54                     |
|                       | C. Junior year   | 148       | 28.46       | 80.00                     |
|                       | D. senior year   | 104       | 20.00       | 100.00                    |
| Professional category | A. Philosophy    | 16        | 3.08        | 3.08                      |
|                       | B. Legal studies | 24        | 4.62        | 7.69                      |

## Demographic frequency analysis results

| name  | Options                    | Frequency | Percent (%) | Cumulative percentage (%) |
|---|----------------------------|-----------|-------------|---------------------------|
|   | c. medical                 | 52        | 10.00       | 17.69                     |
|   | D. Economics               | 60        | 11.54       | 29.23                     |
|   | E. Literature              | 32        | 6.15        | 35.38                     |
|   | F. Agronomy                | 44        | 8.46        | 43.85                     |
|   | G. Science and Engineering | 188       | 36.15       | 80.00                     |
|   | H. History                 | 40        | 7.69        | 87.69                     |
|   | I. Management              | 24        | 4.62        | 92.31                     |
|   | J. Economics               | 32        | 6.15        | 98.46                     |
|   | K.Other                    | 8         | 1.54        | 100.00                    |
| Whether the school has carried out personalized training of talents | A. Yes                     | 480       | 92.31       | 92.31                     |
|   | B. No                      | 40        | 7.69        | 100.00                    |
| total   |                            | 520       | 100.0       | 100.0                     |

In this survey, after excluding invalid questionnaires, 520 valid samples were finally left. Among them, the number of males in the survey group was 248, accounting for 47.69%, and the number of females was 272, accounting for 52.31%. In the distribution of grades, there are 128 freshmen, accounting for 24.62%, 140 sophomores, accounting for 26.92%, 148 juniors, accounting for 28.46%, and seniors The number of people is 104, accounting for 20%. In the professional category of the surveyed group, the number of science and engineering students is 188, accounting for 36.15%, accounting for the highest proportion, the number of economics is 60, accounting for 11.54%, and the number of medical students is 52, accounting for 52. ratio of 10%. In the survey on whether schools carry out personalized training, 92.31% of them have personalized training, and 7.69% think that there is no personalized training.

## 5. Data collection tools

The author of this paper consulted a large number of literatures, and decided to use a combination of semi-structured interviews and questionnaires to collect data with

reference to previous survey forms on this research. Key informants include 8 key informants from universities with more than 20 years of experience (deans of colleges and universities, heads of departments of various colleges and universities, provincial leaders, directors of academic affairs, and deans of graduate schools). Knowing that the interviewees indicated a total of 90 variable indicators, the researchers used content analysis. As a result, a total of 90 variables were found as research tools, namely the five-point quantitative questionnaire. The quality of the instrument has been validated through content validity and reliability. By combining the data provided by the interviewees with the previous research on talent cultivation in first-class universities, the variables used in this paper are extracted. Taking talent training concept, professional setting mode, curriculum setting method, teaching system system, teaching organization form, teaching management mode, recessive curriculum form, teaching evaluation method as independent variables, and taking training mode satisfaction as dependent variable for linear regression analysis.

## 6. Data Analysis

The data analysis results of the research tool are divided into the following three parts:-

The first part: the effectiveness variables that affect the personalized talent training of first-class universities.

The second part: the elements that affect the effectiveness of individualized talent training in first-class universities.

Part III: Data analysis results of the construction of the personalized talent training model of first-class universities

(1) Factor analysis: Use factor analysis to analyze and screen the initially determined 33 indicators, find out the main influencing factors of talent training in first-class universities, and determine the index structure according to the results of factor analysis. (2) Descriptive statistical analysis: This study uses SPSS 26.0 software to analyze descriptive statistics (mean, standard deviation, skewness, kurtosis, etc.) in order to effectively understand the distribution characteristics of sample data. (3) Model building: This paper studies the impact of talent training methods on satisfaction, and introduces mediating and moderating variables. In order to test the hypothesis, this paper mainly adopts the multiple linear regression model. In the multi-element environmental system, there are also mutual

influences and correlations between multiple (more than two) elements. Therefore, the multiple regression model is more general.

## 7. Discovery

Based on the existing literature at home and abroad, this research combs and analyzes the measurement methods of the key variables of personalized talent training in first-class universities in the existing literature, and redesigns the measurement items based on the actual situation of personalized talent training in colleges and universities. 's first draft. On the basis of the first draft of the questionnaire, semi-structured interviews (open expert interviews) were conducted with experts in the relevant fields. Finally, the wording and content of the questions were further revised to form the second draft of the questionnaire. Combined with the formed questionnaires, the questionnaire consistency (IOC) test was carried out on experts in related fields (8 experts), and the questionnaires were revised to form the third draft questionnaire. The survey object of this study is mainly college students, a total of 550 questionnaires were collected, and 520 valid questionnaires were obtained in the formal analysis stage of the final survey, with a questionnaire effectiveness rate of 94.55%.

### trust level analysis

In basic research, the reliability should be at least 0.80 to be acceptable, and in exploratory research, the reliability should be acceptable as long as 0.70, between 0.70-0.98 is high reliability, and less than 0.35 is low reliability,

**Table 2:** Tables and Research Scales

| variable name                 | item | Correction Term<br>Total Correlation<br>(CITC coefficient) | after item has<br>been deleted<br>Cronbach's<br>alpha coefficient | Cronbach's<br>alpha<br>coefficient |
|-------------------------------|------|--|---|------------------------------------|
| Talent<br>training<br>concept | Q1   | 0.970  | 0.857   | 0.927                              |
|                               | Q2   | 0.793  | 0.916   |                                    |
|                               | Q3   | 0.770  | 0.924   |                                    |

| variable name                   | item | Correction Term<br>Total Correlation<br>(CITC coefficient) | after item has<br>been deleted<br>Cronbach's<br>alpha coefficient | Cronbach's<br>alpha<br>coefficient |
|---------------------------------|------|--|---|------------------------------------|
| Professional<br>setting<br>mode | Q4   | 0.793  | 0.916   | 0.935                              |
|                                 | Q5   | 0.958  | 0.878   |                                    |
|                                 | Q6   | 0.812  | 0.925   |                                    |
|                                 | Q7   | 0.815  | 0.925   |                                    |
| Course<br>setting<br>method     | Q8   | 0.804  | 0.928   | 0.927                              |
|                                 | Q9   | 0.961  | 0.860   |                                    |
|                                 | Q10  | 0.811  | 0.911   |                                    |
| teaching<br>system              | Q11  | 0.794  | 0.917   | 0.911                              |
|                                 | Q12  | 0.763  | 0.929   |                                    |
|                                 | Q13  | 0.951  | 0.830   |                                    |
|                                 | 14   | 0.771  | 0.895   |                                    |
| teaching<br>organization        | Q15  | 0.728  | 0.908   | 0.906                              |
|                                 | Q16  | 0.751  | 0.900   |                                    |
|                                 | Q17  | 0.950  | 0.821   |                                    |
| Teaching<br>managemen<br>t mode | Q18  | 0.767  | 0.886   | 0.908                              |
|                                 | Q19  | 0.740  | 0.896   |                                    |
|                                 | Q20  | 0.709  | 0.906   |                                    |
|                                 | Q21  | 0.955  | 0.822   |                                    |
|                                 | Q22  | 0.760  | 0.893   |                                    |
| Hidden                          | Q23  | 0.762  | 0.892   | 0.928                              |
|                                 | Q24  | 0.706  | 0.913   |                                    |
|                                 | Q25  | 0.866  | -   |                                    |

| variable name                     | item | Correction Term<br>Total Correlation<br>(CITC coefficient) | after item has<br>been deleted<br>Cronbach's<br>alpha coefficient | Cronbach's<br>alpha<br>coefficient |
|-----------------------------------|------|--|---|------------------------------------|
| Course Form                       |      |  |   |                                    |
|                                   | Q26  | 0.866  | -   |                                    |
| Teaching<br>evaluation<br>methods |      |  |   | 0.938                              |
|                                   | Q27  | 0.972  | 0.880   |                                    |
|                                   | Q28  | 0.831  | 0.926   |                                    |
|                                   | Q29  | 0.817  | 0.930   |                                    |
|                                   | Q30  | 0.797  | 0.937   |                                    |

### Exploratory factor analysis

The validity of the measured data is the validity. Generally speaking, the validity is related to the results obtained by the measurement. The more consistent the results, the higher the validity. This paper uses SPSS26.0 to conduct KMO and Bartlett sphericity tests on the structural variables of the questionnaire: According to the research analysis, when the KMO value is less than 0.6, it is not suitable for factor analysis, and if it is greater than 0.6, it is suitable for factor analysis. It can be seen that the KMO value is 0.702, the approximate chi-square value is 16659.258, and the degree of freedom is 435. The validity test is reasonable, so the data collected in this survey is suitable for subsequent analysis.

**Table 3:** KMO and Bartlett's test

| KMO and Bartlett's test            |   |
|------------------------------------|---|
| KMO Sampling Suitability Quantity. | .702  |
| Bartlett's sphericity test         | approximate<br>chi-square<br>degrees of freedom<br>salience |
|                                    | 16659.258<br>435<br>.000                                    |

The following table analyzes the factor extraction and the amount of information

extracted from the factors. It can be seen from the above table that a total of 8 factors are extracted from the factor analysis, and the eigenvalues are all greater than 1. The variance explanation rates after the rotation of these 8 factors are 11.443%, 11.203%, 11.188%, 11.085%, 10.775%, 10.749%, 10.743%, 6.130%, the cumulative variance explanation rate after rotation is 83.317%.

**Table 4:** Total variance explained

| Total variance explained |                         |                  |               |         |                  |               |                                |                  |               |
|--------------------------|-------------------------|------------------|---------------|---------|------------------|---------------|--------------------------------|------------------|---------------|
| Element                  | Extract the load sum of |                  |               |         |                  |               |                                |                  |               |
|                          | initial eigenvalues     |                  |               | squares |                  |               | Rotational load sum of squares |                  |               |
|                          | total                   | percent variance | accumulation% | total   | percent variance | accumulation% | total                          | percent variance | accumulation% |
| 1                        | 7.729                   | 25.764           | 25.764        | 7.729   | 25.764           | 25.764        | 3.433                          | 11.443           | 11.443        |
| 2                        | 3.069                   | 10.230           | 35.994        | 3.069   | 10.230           | 35.994        | 3.361                          | 11.203           | 22.646        |
| 3                        | 2.925                   | 9.749            | 45.744        | 2.925   | 9.749            | 45.744        | 3.356                          | 11.188           | 33.834        |
| 4                        | 2.867                   | 9.558            | 55.301        | 2.867   | 9.558            | 55.301        | 3.326                          | 11.085           | 44.919        |
| 5                        | 2.634                   | 8.780            | 64.081        | 2.634   | 8.780            | 64.081        | 3.233                          | 10.775           | 55.694        |
| 6                        | 2.420                   | 8.066            | 72.147        | 2.420   | 8.066            | 72.147        | 3.225                          | 10.749           | 66.444        |
| 7                        | 1.895                   | 6.317            | 78.465        | 1.895   | 6.317            | 78.465        | 3.223                          | 10.743           | 77.186        |
| 8                        | 1.456                   | 4.852            | 83.317        | 1.456   | 4.852            | 83.317        | 1.839                          | 6.130            | 83.317        |
| 9                        | .517                    | 1.725            | 85.042        |         |                  |               |                                |                  |               |
| 10                       | .500                    | 1.667            | 86.709        |         |                  |               |                                |                  |               |
| 11                       | .449                    | 1.497            | 88.205        |         |                  |               |                                |                  |               |
| 12                       | .394                    | 1.314            | 89.520        |         |                  |               |                                |                  |               |
| 13                       | .381                    | 1.270            | 90.790        |         |                  |               |                                |                  |               |
| 14                       | .359                    | 1.197            | 91.987        |         |                  |               |                                |                  |               |
| 15                       | .340                    | 1.134            | 93.121        |         |                  |               |                                |                  |               |
| 16                       | .309                    | 1.030            | 94.151        |         |                  |               |                                |                  |               |
| 17                       | .274                    | .912             | 95.063        |         |                  |               |                                |                  |               |
| 18                       | .266                    | .888             | 95.951        |         |                  |               |                                |                  |               |
| 19                       | .244                    | .815             | 96.766        |         |                  |               |                                |                  |               |
| 20                       | .218                    | .726             | 97.491        |         |                  |               |                                |                  |               |
| 21                       | .198                    | .659             | 98.150        |         |                  |               |                                |                  |               |
| 22                       | .143                    | .476             | 98.626        |         |                  |               |                                |                  |               |
| 23                       | .100                    | .334             | 98.960        |         |                  |               |                                |                  |               |
| 24                       | .073                    | .243             | 99.203        |         |                  |               |                                |                  |               |

| Total variance explained |                         |                  |               |         |                  |               |                                |                  |               |
|--------------------------|-------------------------|------------------|---------------|---------|------------------|---------------|--------------------------------|------------------|---------------|
| Element                  | Extract the load sum of |                  |               |         |                  |               |                                |                  |               |
|                          | initial eigenvalues     |                  |               | squares |                  |               | Rotational load sum of squares |                  |               |
|                          | total                   | percent variance | accumulation% | total   | percent variance | accumulation% | total                          | percent variance | accumulation% |
| 25                       | .059                    | .195             | 99.398        |         |                  |               |                                |                  |               |
| 26                       | .051                    | .168             | 99.566        |         |                  |               |                                |                  |               |
| 27                       | .040                    | .134             | 99.700        |         |                  |               |                                |                  |               |
| 28                       | .034                    | .113             | 99.813        |         |                  |               |                                |                  |               |
| 29                       | .030                    | .102             | 99.915        |         |                  |               |                                |                  |               |
| 30                       | .026                    | .085             | 100.000       |         |                  |               |                                |                  |               |

Extraction method: principal component analysis.

According to the rotation factor analysis of the maximum variance method on the variable relationship, the eight factors of the questionnaire rotation can be named as talent training concept, professional setting mode, curriculum setting method, teaching system, teaching organization form, teaching management mode, implicit Course format and teaching evaluation method.

**Table 5:** The rotated component matrix

|  | The rotated component matrix |   |      |   |   |   |   |   |
|--|------------------------------|---|------|---|---|---|---|---|
|  | Element                      |   |      |   |   |   |   |   |
|  | 1                            | 2 | 3    | 4 | 5 | 6 | 7 | 8 |
| Your school adheres to the people-oriented philosophy  |                              |   | .969 |   |   |   |   |   |
| Your school places a high value on the individual ideas and individual development of students |                              |   | .869 |   |   |   |   |   |
| Your school values the innovative ability of students  |                              |   | .846 |   |   |   |   |   |

The rotated component matrix

|   | Element |      |      |   |   |   |   |   |
|---|---------|------|------|---|---|---|---|---|
|   | 1       | 2    | 3    | 4 | 5 | 6 | 7 | 8 |
| Your school emphasizes the comprehensive development of students        |         |      | .874 |   |   |   |   |   |
| The professional curriculum of your school is reasonable                | .958    |      |      |   |   |   |   |   |
| Your school's professional stream can meet student needs)               | .883    |      |      |   |   |   |   |   |
| Your school respects students' personal wishes in the choice of majors  | .876    |      |      |   |   |   |   |   |
| The major of your school can fully cover the needs of students          | .868    |      |      |   |   |   |   |   |
| The curriculum of your school matches your learning needs)              |         | .951 |      |   |   |   |   |   |
| The curriculum at your school focuses on combining theory with practice |         | .874 |      |   |   |   |   |   |
| The curriculum at your school is rich in content                        |         | .862 |      |   |   |   |   |   |







|   |       |       |       |       |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | .356  | .355  | .341  | .482  | .290  | .339  | .384  | .227  |
| 2 | .682  | .034  | -.132 | -.181 | .234  | -.645 | .007  | .112  |
| 3 | -.345 | -.441 | .059  | -.005 | .809  | -.098 | .138  | .033  |
| 4 | .115  | -.412 | .827  | .037  | -.215 | -.150 | -.246 | .058  |
| 5 | -.425 | .674  | .374  | -.228 | .106  | -.398 | .032  | -.056 |
| 6 | .112  | .234  | -.024 | .056  | .353  | .243  | -.863 | .024  |
| 7 | .160  | .011  | .142  | -.815 | .079  | .444  | .132  | .262  |
| 8 | .238  | .018  | .139  | -.117 | .140  | .148  | .098  | -.927 |

Extraction method: principal component analysis.

Rotation method: Caesar's normalized maximum variance method.

### Analysis of Means

**Table 7:** Talent training concept

| name   | Average | S.D.  | Sort_ |
|--|---------|-------|-------|
| Your school places a high value on the individual ideas and individual development of students | 3.375   | 1.353 | 1     |
| Your school adheres to the people-oriented philosophy  | 3.327   | 1.302 | 2     |
| Your school values the innovative ability of students  | 3.319   | 1.355 | 3     |
| Your school emphasizes the comprehensive development of students                               | 3.252   | 1.336 | 4     |

**Table 8:** Professional etting mode

| name   | Average | S.D.  | Sort |
|--|---------|-------|------|
| The professional curriculum of your school is reasonable               | 3.394   | 1.301 | 1    |
| Your school's professional stream can meet student needs               | 3.373   | 1.321 | 2    |
| The major of your school can fully cover the needs of students         | 3.348   | 1.341 | 3    |
| Your school respects students' personal wishes in the choice of majors | 3.317   | 1.376 | 4    |

**Table 9:** Course setting method

| name   | Average | S.D.  | Sort |
|--|---------|-------|------|
| The development of your school's curriculum significantly improves students' humanistic quality and professional knowledge | 3.408   | 1.358 | 1    |
| The curriculum at your school is rich in content   | 3.365   | 1.214 | 2    |
| The curriculum at your school matches your learning needs  | 3.363   | 1.281 | 3    |
| The curriculum at your school focuses on combining theory with practice  | 3.279   | 1.271 | 4    |

**Table 10:** Teaching system

| name  | Average | S.D.  | Sort |
|---|---------|-------|------|
| Your school develops a teacher's teaching effect evaluation system)   | 3.265   | 1.270 | 1    |
| Students in your school can participate in the formulation of the teaching system)                              | 3.250   | 1.285 | 2    |
| The teaching system of your school can be changed at any time according to the basic situation of the students) | 3.233   | 1.271 | 3    |
| Your school regularly develops a feedback system for students on the quality of teaching)                       | 3.231   | 1.342 | 4    |

**Table 11:** Teaching organization

| name  | Average | S.D.  | Sort |
|---|---------|-------|------|
| Your school often invites celebrities to give lectures on learning mode                             | 3.312   | 1.195 | 1    |
| Your primary school often cooperates with social organizations to carry out social practice courses | 3.273   | 1.269 | 2    |
| Your school is rich in community activities   | 3.246   | 1.265 | 3    |
| Your school often uses Internet devices for teaching  | 3.231   | 1.236 | 4    |

**Table 12:** Teaching management mode

| name   | Average | S.D.  | Sort |
|--|---------|-------|------|
| Your school's teaching management system is reasonable   | 3.367   | 1.256 | 1    |
| The decision-making power of teaching management in your school is concentrated in the hands of school leaders | 3.358   | 1.294 | 2    |
| You believe that your school has a high level of overall professional knowledge competency                     | 3.296   | 1.317 | 3    |
| You think your school's teacher recruitment meets student development requirements                             | 3.269   | 1.234 | 4    |

**Table 13:** Hidden Course Form

| name   | Average | S.D.  | sort |
|--|---------|-------|------|
| The overall cultural atmosphere of your school is good and promotes your enthusiasm for learning | 3.331   | 1.318 | 1    |
| Your school often has some extracurricular activities  | 3.312   | 1.322 | 2    |

**Table 14:** Teaching evaluation methods

| name   | Average | S.D.  | sort |
|--|---------|-------|------|
| The teaching evaluation of your school focuses on the opinions of students | 3.262   | 1.335 | 1    |
| Your school's teaching evaluation is in the form of anonymity              | 3.258   | 1.344 | 2    |

| name  | Average | S.D.  | sort |
|---|---------|-------|------|
| Your school's teaching evaluation method is consistent with most schools, nothing new | 3.208   | 1.324 | 3    |
| You are satisfied with how your school's teaching is evaluated                        | 3.196   | 1.370 | 4    |

**Table 15:** Gender t-test analysis results

|                                | Sex (mean ± SD)         |                | t      | p       |
|--------------------------------|-------------------------|----------------|--------|---------|
|                                | Male (n=248)            | Female (n=272) |        |         |
|                                | Talent training concept | 3.23±1.24      |        |         |
| Professional setting mode      | 3.43±1.29               | 3.30±1.16      | 1.230  | 0.219   |
| Course setting method          | 3.45±1.20               | 3.27±1.12      | 1.813  | 0.071   |
| teaching system                | 3.39±1.21               | 3.11±1.08      | 2.722  | 0.007** |
| teaching organization          | 3.33±0.97               | 3.20±1.20      | 1.390  | 0.165   |
| Teaching management mode       | 3.45±1.04               | 3.20±1.19      | 2.514  | 0.012*  |
| Hidden Course Form             | 3.41±1.23               | 3.24±1.31      | 1.507  | 0.133   |
| Teaching evaluation methods    | 3.26±1.23               | 3.20±1.24      | 0.553  | 0.581   |
| Cultivation model satisfaction | 3.38±1.13               | 3.56±1.16      | -1.800 | 0.072   |

\*p&lt;0.05 \*\*p&lt;0.01

**Table 16:** Grade Anova Results

|                           | Grade ANOVA Results |                   |                     |                     | F     | p     |
|---------------------------|---------------------|-------------------|---------------------|---------------------|-------|-------|
|                           | Grade (mean ± SD)   |                   |                     |                     |       |       |
|                           | Freshman (n=128)    | Sophomore (n=140) | Junior year (n=148) | Senior year (n=104) |       |       |
| Talent training concept   | 3.43±1.29           | 3.38±1.23         | 3.26±1.17           | 3.18±1.14           | 1.087 | 0.354 |
| Professional setting mode | 3.42±1.22           | 3.33±1.11         | 3.38±1.22           | 3.29±1.37           | 0.228 | 0.877 |

## Grade ANOVA Results

| Course                                  | Grade (mean ± SD)   |                   |                           |                           | F      | p       |
|---|---------------------|-------------------|---------------------------|---------------------------|--------|---------|
|   | Freshman<br>(n=128) | Sophomore (n=140) | Junior<br>year<br>(n=148) | Senior<br>year<br>(n=104) |        |         |
| setting<br>method<br>teaching<br>system | 3.46±1.05           | 3.27±1.25         | 3.12±1.24                 | 3.67±0.97                 | 5.327  | 0.001** |
| teaching<br>organization                | 3.52±1.06           | 3.08±1.09         | 3.15±1.22                 | 3.25±1.18                 | 3.845  | 0.010** |
| Teaching<br>management<br>mode          | 3.18±1.15           | 3.17±1.10         | 3.39±0.97                 | 3.33±1.17                 | 1.332  | 0.263   |
| Hidden<br>Course Form                   | 3.36±1.26           | 3.62±1.17         | 3.35±0.91                 | 2.84±1.04                 | 10.241 | 0.000** |
| Teaching<br>evaluation<br>methods       | 3.48±1.24           | 3.11±1.14         | 3.30±1.27                 | 3.43±1.45                 | 2.226  | 0.084   |
| Cultivation<br>model<br>satisfaction    | 3.19±1.35           | 3.08±1.23         | 3.55±1.06                 | 3.03±1.24                 | 4.989  | 0.002** |
|   | 3.73±1.05           | 3.50±1.16         | 3.48±1.07                 | 3.10±1.26                 | 6.098  | 0.000** |

\* p&lt;0.05 \*\* p&lt;0.01

**Related analysis**

Correlation refers to the consistency of the change trend between two variables. If the change trend of the two variables is consistent, then it can be considered that there is a certain relationship between the two variables. If the correlation coefficient of the two variables is positive, it indicates that there is a positive correlation between the two variables, and if it is negative, it proves that there is a negative correlation between the two variables. In this study, the pearson coefficient was used to verify the correlation between variables.

**Table 17:** Pearson related

|                                | Pearson related |                    |                         |                           |                       |                 |                       |                          |                    |                             |                                |
|--------------------------------|-----------------|--------------------|-------------------------|---------------------------|-----------------------|-----------------|-----------------------|--------------------------|--------------------|-----------------------------|--------------------------------|
|                                | average value   | standard deviation | Talent training concept | Professional setting mode | Course setting method | teaching system | teaching organization | Teaching management mode | Hidden Course Form | Teaching evaluation methods | Cultivation model satisfaction |
| Talent training concept        | 3.318           | 1.210              | 1                       |                           |                       |                 |                       |                          |                    |                             |                                |
| Professional setting mode      | 3.358           | 1.221              | 0.154**                 | 1                         |                       |                 |                       |                          |                    |                             |                                |
| Course setting method          | 3.354           | 1.161              | 0.151**                 | 0.188**                   | 1                     |                 |                       |                          |                    |                             |                                |
| teaching system                | 3.245           | 1.148              | 0.126**                 | 0.121**                   | 0.118**               | 1               |                       |                          |                    |                             |                                |
| teaching organization          | 3.265           | 1.096              | 0.171**                 | 0.190**                   | 0.223**               | 0.197**         | 1                     |                          |                    |                             |                                |
| Teaching management mode       | 3.323           | 1.130              | 0.157**                 | 0.092*                    | 0.185**               | 0.103*          | 0.199**               | 1                        |                    |                             |                                |
| Hidden Course Form             | 3.321           | 1.275              | 0.222**                 | 0.294**                   | 0.192**               | 0.217**         | 0.229**               | 0.201**                  | 1                  |                             |                                |
| Teaching evaluation methods    | 3.231           | 1.233              | 0.290**                 | 0.285**                   | 0.261**               | 0.234**         | 0.331**               | 0.360**                  | 0.280**            | 1                           |                                |
| Cultivation model satisfaction | 3.471           | 1.150              | 0.409**                 | 0.374**                   | 0.368**               | 0.407**         | 0.418**               | 0.366**                  | 0.440**            | 0.584*                      | 1                              |

\*p<0.05\*\*p<0.01

Among them, the teaching evaluation method has the highest degree of correlation, with a correlation coefficient of 0.584, followed by the implicit curriculum form, with a correlation coefficient of 0.440. The correlation coefficient between the concept of talent training and the teaching system is also above 0.4.

### Regression analysis

Regression analysis is a widely used quantitative analysis method, which is used to analyze the statistical relationship between things, focusing on the change of quantitative relationship. This paper uses data analysis software to carry out regression analysis on the influencing factors of different talents' personalized training, and explores the influencing factors of talent training satisfaction.

**Table 18:** Linear regression analysis results

| Linear regression analysis results |                           |                 |       |
|------------------------------------|---------------------------|-----------------|-------|
|                                    | Regression coefficients   | 95% CI          | VIF   |
| constant                           | -0.848**<br>(-4.876)      | -1.189 ~ -0.507 | -     |
| Talent training concept            | 0.176**<br>(6.159)        | 0.120 ~ 0.231   | 1.130 |
| Professional setting mode          | 0.125**<br>(4.356)        | 0.069 ~ 0.182   | 1.171 |
| Course setting method              | 0.134**<br>(4.511)        | 0.076 ~ 0.192   | 1.131 |
| teaching system                    | 0.214**<br>(7.226)        | 0.156 ~ 0.272   | 1.101 |
| teaching organization              | 0.145**<br>(4.497)        | 0.082 ~ 0.209   | 1.195 |
| Teaching management mode           | 0.122**<br>(3.914)        | 0.061 ~ 0.183   | 1.182 |
| Hidden Course Form                 | 0.139**<br>(4.933)        | 0.084 ~ 0.194   | 1.227 |
| Teaching evaluation methods        | 0.256**<br>(8.131)        | 0.195 ~ 0.318   | 1.435 |
| sample size                        |                           | 520             |       |
| R <sup>2</sup>                     |                           | 0.593           |       |
| Adjust R <sup>2</sup>              |                           | 0.586           |       |
| F value                            | F (8,511)= 93.001,p=0.000 |                 |       |

Dependent variable: training mode satisfaction

DW value: 1.860

\* p<0.05 \*\* p<0.01 t value in parentheses

**The final analysis shows that:**

The regression coefficient value of the talent training concept is 0.176 ( $t=6.159$ ,  $p=0.000<0.01$ ), which means that the talent training concept has a significant positive impact on the satisfaction of the training model.

The regression coefficient value of the professional setting mode is 0.125 ( $t=4.356$ ,  $p=0.000<0.01$ ), which means that the professional setting mode has a significant positive impact on the satisfaction of the training mode.

The regression coefficient value of the curriculum setting method is 0.134 ( $t=4.511$ ,  $p=0.000<0.01$ ), which means that the curriculum setting method has a significant positive impact on the satisfaction of the training mode.

The regression coefficient value of the teaching system is 0.214 ( $t=7.226$ ,  $p=0.000<0.01$ ), which means that the teaching system has a significant positive impact on the satisfaction of the training model.

The regression coefficient value of the teaching organization form is 0.145 ( $t=4.497$ ,  $p=0.000<0.01$ ), which means that the teaching organization form has a significant positive impact on the satisfaction of the training mode.

The regression coefficient value of the teaching management model is 0.122 ( $t=3.914$ ,  $p=0.000<0.01$ ), which means that the teaching management model will have a significant positive impact on the satisfaction of the training model.

The regression coefficient value of the implicit curriculum form is 0.139 ( $t=4.933$ ,  $p=0.000<0.01$ ), which means that the implicit curriculum form has a significant positive impact on the satisfaction of the training model.

The regression coefficient value of the teaching evaluation method is 0.256 ( $t=8.131$ ,  $p=0.000<0.01$ ), which means that the teaching evaluation method has a significant positive impact on the satisfaction of the training model.

## **8. Results, Conclusions and Recommendations**

This article explores the components of effectiveness and development guidelines that influence individualized talent training in first-class universities. The research shows: the factors influencing the effectiveness of individualized talent training in first-class universities

According to the semi-structured interviews and questionnaires used in this research, the collected data results show that the current situation of the personalized talent training

policies of first-class universities is described, and relative suggestions for improvement are put forward. From the perspective of research objectives, first-class universities Personalized talent training methods mainly include eight aspects: talent training concept, professional setting mode, curriculum setting method, teaching system, teaching organization form, teaching management mode, implicit course form, and teaching evaluation method.

There are a total of 18 guidelines for the effectiveness of personalized talent training in first-class universities, including: (2) adhere to the "people-oriented" concept; (2) attach importance to students' personalized development; (3) cultivate students' innovative ability; (4) emphasize comprehensive development; ( 5) Reasonable setting of majors and clear division of majors; (6) Pay attention to the personal wishes of students. ;(7) Reasonably set up courses; (8) Enrich course content and form; (9) Improve teaching management system; (10) Enrich teaching rating methods; (11) Carry out social practice; (12) Improve basic intelligent equipment; (13) ) Introducing high-quality talents; (14) Streamlining administration and delegating power (15) Enriching hidden courses and promoting cultural atmosphere; (16) Evaluation of curriculum knowledge (17) Evaluation of innovative research findings (18) Evaluation of learning practice.

### **Policy and Practice Recommendations**

1. Give full play to its own positioning and characteristics, and condense the concept of talent training
2. Interdisciplinary and inter-professional learning, broaden students' professional adaptability, and improve the professional setting model.
3. Increase the proportion of general education courses to achieve personalized development
4. Establish a working group, build a top-level design, and improve the teaching system
5. Expand the proportion and quality of small-class courses, and improve the personality of college students
6. Improve the management system of departments and guide students to participate in some management modes
7. Improve the functional status of hidden courses and form the cultural self-confidence of colleges and universities
8. Pay attention to process evaluation, and evaluate a reasonable combination of

basic knowledge, innovative thinking and practical ability.

## 9. Outlook

In the future, colleges and universities should further strengthen the relevant theories and research on the cultivation of personalized talents in first-class universities, sort out relevant domestic and foreign literature and successful cases, and conduct more accurate and in-depth research on the elements and influencing factors of the effectiveness of personalized talent cultivation in first-class universities; further improve the questionnaire design. and data collection. The valid sample size for this study was 520. In the future research, we will expand the number and scope of the population sample of the questionnaire survey to make the research more convincing, build an effective first-class university personalized talent training system, and improve the constituent elements. To verify the influencing factors and structure of the effectiveness of personalized talent training in first-class universities; in future research, on the basis of existing research methods and research results, using CIPP theoretical model and relevant theories such as effective education and teaching, through AHP and empirical research methods and build a scientific, rational, systematic and effective talent training system.

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