

# Research on Construction of High-level Talents in Colleges and Universities based on Three-dimensional Matrix Model

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**Abstract:** High-level Talents are the core competitiveness of universities and the key to the great-leap-forward development of colleges and universities. Taking Guangdong University of Foreign Studies as an example, this research organically combined talent development and subject category together via the management theory of multidimensional matrix and established a dynamic model of three-dimensional matrix called "Introduction, Employment, Cultivation" system (short for "IEC" system) of high-level talents, so as to promote the movement effectively and cooperatively in terms of introduction, employment and cultivation to high-level talents among colleges and universities and finally to realize the great-leap-forward development of colleges and universities.

## 1 INTRODUCTION

The 21st century is the knowledge-era, which is in the ascendant. The focus of competition is the competition of talents. Under the new situation of knowledge innovation, scientific and technological innovation and industrial innovation, talent resource has become an important strategic resource in the world.

Colleges and universities are the fertile soil on talent growth and development and the fountainhead of knowledge innovation and technological innovation. The sustainable development of talented group demands a reasonable echelon, all ranks of which are essential. Construction of high-level talents has become a constant topic of human resources work.

## 2 THREE-DIMENSION DYNAMIC MODEL OF HIGH-LEVEL TALENTS

According to the national policy and the school development strategy, GDUFS has experienced three stages of talent introduction in the recent 10 years (details on chart one): Gathering Scale (2003-

2006), Adjustment and Transition (2007-2009), Connotation Development (2010-2013). The talents introduction in recent ten years is shown as table 1.

Table 1: Summary of talents introduction in recent ten years.

Stage	Year	No. of Teacher	No. of Returnee	No. of Dr.	No. of Prof.
Gath. Scale	2003-2006	251 (50.8%)	33 (48.5%)	81 (34.5%)	72 (49.3%)
Adjustment and Transition.	2007-2009	152 (30.8%)	18 (26.5%)	87 (37%)	46 (31.5%)
Connotation and Development	2010-2013	91 (18.4%)	17 (25%)	67 (28.5%)	28 (19.2%)
Sum		494	68	235	146

### 2.1 Talent Structure

The elements of talent structure are quality, degree and title. In the recent ten years, the total number of full-time teachers has increased from 820 to 1150, an increase of 40.2%; the number of teachers with Master's degree has increased from 552 to 1025, an increase of 85.7%. The proportion of teachers with doctoral degree has increased from 12.7% to 35.4%; the proportion of teachers in senior positions has increased from 39% (103 senior titles, 217 deputy senior titles) to 53.7% (257 senior titles, 360 deputy

senior titles). The changes of talents structure in recent ten years is shown on table 2.

Table 2: Changes of talents structure in recent ten years.

Year	No. (increasing prop.)	Degree		Title	
		M. (total prop., increasing prop.)	Doc. (total prop., increasing prop.)	Dep. Senior (total prop., increasing prop.)	Senior (total prop., increasing prop.)
2003	820	552 (67.3%)	104 (12.7%)	217 (26.5%)	103 (12.6%)
2013	1150 (40.2%)	1025 (89.1%, 85.7%)	407 (35.4%, 291%)	360 (31.3%, 65.9%)	257 (22.3%, 150%)

## 2.2 Talent Project Construction

As the main carrier of high-level talent introduction and cultivation, talent projects are regarded as one of the marks of teachers' team building. The summary on talent projects construction of GDUFS and the same type of domestic universities are shown on table 3. In the table 3, the 'Four key disciplinary fields' includes English Language and Literature, Germany Language and Literature, Linguistics and Applied Linguistics, Japanese Language and Literature; the 'Three key disciplinary fields' includes English Language and Literature, Russian Language and Literature, Arabic Language and Literature; the 'Two key disciplinary fields' includes International Trade, International Jurisprudence; and the 'One key disciplinary field' includes Linguistics and Applied Linguistics.

Table 3: Summary on talent projects construction of GDUFS and other the same type of domestic universities.

No.	1	2	3	4
College Name	A	B	C	GDUFS
College Category	Foreign languages category, directly under MOE, "Project 211" universities	Foreign languages category, directly under MOE, "Project 211" universities	Economics and trade category, directly under MOE, "Project 211" universities	Provincial university
Subject Construction	Four key disciplinary fields	Three key disciplinary fields	Two key disciplinary fields	One key disciplinary field
Engineering Talents from Overseas (Unit: Thousand)	0	0	1	0
Yangtze River Scholar	2	1	2	0
Candidates by the New Century Talents	3	0	3	3
Members selected for the New Century Excellent Talents	24	14	36	13

## 2.3 Construction of IEC System based on Three-dimensional Matrix Model of High-level Talents

High-level talents system in colleges is a dynamic management matrix model, which takes the way of fully analyzing the current situation towards the existing talent teams as the starting point, the construction plan of talent teams as the entry point and the construction target of talent teams as the foothold, mainly including three dimensions – development stages, subject categories, construction measures. According to the disciplinary planning and the development strategy of GDUFS, the subject categories, which is regarded as the first dimension of high-level talents construction system in GDUFS, are divided into three parts –languages, economics and management, and other categories; the construction process, as the second dimension, is divided into three stages –initial stage, development stage, and stable stage; based on the first two dimensions, the third dimension divides high-level talents team of GDUFS into three aspects – introduction, Employment, and Cultivation. These three dimensions construct the IEC system of high-level talents, as shown in figure 1.

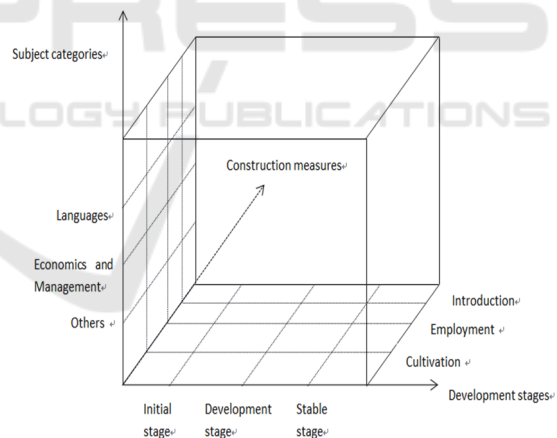


Figure 1: Structure of the IEC system of high-level talents.

## 2.4 Success of High-Level Talents Construction

This part will introduce how to improve the constructive system for high-level talents team based on three-dimensional matrix dynamic model by some cases.

- a. The effect of multi-channel and overseas approach to introduce high-level talents has

gradually been enhanced; its attraction to high-level talents has gradually improved.

As shown in table 1, among the talents introduced by GDUFS from the year 2003 to 2013, except for the liner increasing stage proportion of the number of doctors, the stage proportion of the number of returnees and above professional titles almost keeps unchanged, especially that of returnees, which takes a low ratio. At the gathering scale stage, the stage proportion of the number of returnees only takes 13.1% although the total proportion of them in recent ten years is 48.5%.

b. To cultivate talents in multi-mode ways; talent structure tends to be reasonable; talents majoring in each subject achieve balanced development.

From table 2 we can see that the total proportion and the increasing proportion of degrees and titles have improved from the year 2003 to 2013, and the increasing proportion is higher than quantitative increasing proportion, especially that of doctoral degrees and senior titles, which has grown substantially.

c. To employ talents in multi-form ways; the talents project is in initial success; the talents support system gradually becomes perfect.

GDUFS still does not make a break in national great talent projects such as Thousands of Supporting Engineering Talents from Overseas and Yangtze River Scholar, as shown in table 3.

### 3 SUGGESTION TO COMSTRUCT A BETTER HIGH-LEVEL TALENTS SYSTEM IN COLLEGES

The following will present a suggestion on how to construct a better system of high-level talents in colleges, which consists of three stages.

#### 3.1 Initial Stage

At the beginning of the construction of high-level talents system, GDUFS should take the resource advantage of the school's traditional subject, and have a key introduction to the talents of languages and economics and management, and give consideration to the talents of other subjects.

#### 3.2 Development Stage

At the stage of development, the platform of talents'

accumulation, the construction of talent system and the introduction work of high-level talents have got initial results; however, the system in terms of "introduction, employment, cultivation" has not been formed. In this stage, the working focus is to carry out the work of high-level introduction and a system of responsibility for work, so as to further expand the channel of high-level talents introduction work. To build the system of "Permanent Career Teacher" so as to attract overseas high-level talents to take the full-time job. To implement the way of "Global Recruiting, Contract Management" and the management mode of "Employment System plus Annual Salary System". To set up the working platform that is helpful to the high-level talents introduction and cultivation work. To normalize the management of talent projects and to establish the funded system for talent projects.

#### 3.3 Stable Stage

After the first two stages of accumulation, GDUFS has established IEC system covering languages, economics and management and other subjects such as the three disciplines. The project of introduction has got remarkable results, the structure of talents team has got obvious improvement and the supporting measures have got a gradual perfection. Specific measures are as follows.

First, to set up a scientific evaluating mechanism of talents and an incentive and guarantee mechanism.

Second, to carry out the performance evaluation of talent projects so that they can be dynamically adjusted.

Third, to complete the distribution mechanism of high-level talent performance.

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