DOI: 10.6918/IJOSSER.202110\_4(10).0060

# Innovative Management of Teaching Ability of Teachers in Vocational Colleges in China

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#### **Abstract**

The innovation and progress of science and technology depend on the gathering of academic talents. This study through six subordinate professional institution under its own education department (court) has a professorship at the teacher as the research object, the teachers of history information as data source, will be engaged in the education of teachers in this Thurber stage of specialized division, will be divided into the trained teachers and a trained teacher, This paper mainly analyzes the differences in growth cycle, scientific research achievements and academic honorary titles between teachers with and without professional training. The results of the study show that both the teachers who are trained and those who are not have certain advantages. On this basis, some suggestions are provided for the recruitment and training of pedagogic teachers in colleges and universities, so as to promote the growth and development of academic talents in pedagogy and contribute to the development of pedagogy.

### **Keywords**

College teachers; Educational background; Affiliated to vocational colleges; Pedagogy teacher.

#### 1. Introduction

In the era of knowledge-based economy, all countries place the innovation of science and technology in an extremely important position, and the innovation and development of various fields depends on the growth and development of top talents. Top talents with profound knowledge foundation and rich innovative ideas are the power source to promote the continuous development of the country and the continuous progress of society. [1] Top-ranking talents include elites from all walks of life, but the most important part is academic talents. The cultivation and growth of academic talents has always been a hot topic of national and social attention, and scholars at home and abroad have also paid extensive and lasting attention to academic talents in different fields.

# 2. Research Objectives of Teachers' Teaching Ability Innovation Management in Vocational Colleges in China

Harriet Zuckerman, an American scientific sociologist, studied the life of 92 Nobel Prize winners from 1901 to 1972, discussed and analyzed the stratification system of the scientific community and the path taken by Nobel Prize winners to grow into the super elite in various fields. Ronthenberg (2005) collected family background information of scientists who won Nobel Prizes in the fields of biology, chemistry and medicine from 1901 to 2003, and discussed the factors affecting talent growth. It was found that the ability of these Nobel Prize winners was more affected by early factors. Bai Chunli (2006) studied the growth experience of 391 outstanding scientific and technological talents in Chinese Academy of Sciences through investigation, and formed a regular understanding of the growth characteristics of contemporary Chinese scientific and technological talents.

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At the same time, many scholars have paid attention to the talent growth in the field of humanities and social sciences. For example, Huang Guoting (2010) investigated the changes in the educational background of principals of higher vocational colleges in China in the past, and discussed the situation of education scholars serving as principals of higher vocational colleges. Wang Fan and Guo Honglin (2015) et al. took 268 special professors of Changjiang Scholars in the field of humanities and social sciences as the research objects, analyzed the basic characteristics and objective environment of the growth of leading talents in humanities and social sciences, and preliminarily analyzed the different growth modes of leading talents in humanities and social sciences and natural sciences. Song Xiaoxin, Ma Luting (2018) and other scholars took 22 Changjiang scholars in education as examples to explore and explain the growth rules of high-level talents in education [2, 3].

On the one hand, the above scholars observe and analyze the law of talent growth from the macro level; on the other hand, they focus on talent cultivation in a certain field. Both of them reflect their concern for the growth of academic talents to a certain extent. Based on this, this study will take education teachers in vocational colleges affiliated to the Ministry as the research object, study the educational background of college teachers, and discuss the background of talent growth in the field of education, in order to provide reference for the education field to cultivate talents, and promote relevant academic talents to drive the development of education in China.

# 3. Research Design of Teaching Ability Innovation Management of Teachers in Vocational Colleges in China

This study in vocational colleges and universities directly under the Ministry of Education (university of A university, the university of B, E, C, D university university and the university of F) of the department of education (school) has (is) professor title teachers as the research object, analyzing data mainly comes from his personal resume information, access mainly comes from their teachers in colleges and universities website information, some missing data to send the E-mail to get to the teachers, the research content mainly includes the education background, growth cycle, scientific research and academic honor.

### 4. Sources of Research Information on Teaching Ability Innovation Management of Teachers in Vocational Colleges in China

According to the Ministry of Education degree and graduate education development center of the latest revision in the catalog of degree granting and talent training subjects to the division of disciplines, at present a total of 13 disciplines such as philosophy, law, economics, and each of the disciplines, there are a number of first-level discipline, first-level discipline consists of a number of secondary discipline (professional), under the education disciplines respectively three level 1 subject pedagogy, psychology and sports science, the education level of discipline has principle of pedagogy, curriculum and teaching theory, education and other 10 secondary discipline (specialty). Will education background of this research is classified into trained teachers and a trained teacher, trained teachers is to point to in the stage of undergraduate, master and doctor professional school are in education under the disciplines of pedagogy first-level discipline (professional), rather than by trained teachers refers to the any one stage of undergraduate, master and doctor is not under education disciplines of learning within the education level of discipline (professional) is a professional inconsistencies, it is not trained.

The screening criteria are mainly teachers with professors' titles in the School of Education (Department), and 152 effective research subjects are obtained after the absence of data on resume information is removed.

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**Table 1.** Statistics of research objects selected by the six vocational colleges affiliated to the Ministry

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School name	The number of
The university of A	69
The university of B	8
The university of C	17
The university of D	15
The university of E	25
The university of F	18

Data source: teachers' information can be obtained from the teachers' official website or by sending e-mails to teachers. The selected research objects are all teachers who can obtain complete research data.

# 5. The Research Results and Analysis of Teachers' Teaching Ability Innovation Management in Vocational Colleges in China

### 5.1. The Growth Cycle of Professional Teachers Is Shorter Than That of Nonprofessional Teachers

The results show that the professional education of teachers with training background is shorter than that of teachers without training background, and the career promotion cycle of teachers without training background is higher than that of teachers with training background. This study will from entering the university to obtain hire professor growth cycle time is defined as a teacher, and teacher's growth cycle is divided into two phases, the first stage to the doctor is undergraduate course graduation phase, this phase is a teacher at school learning scientific knowledge and methods, to lay a good foundation for further research and development, in this stage, Because a large proportion of teachers take the form of in-service study in the process of obtaining a degree, the types of teachers can be divided into the directstudy type and the discontinuous type. The second stage is from lecturer to professor, namely the career promotion stage. At this stage, teachers begin to formally step into their career and take improving their professional title as their career development goal. Among the 152 subjects, only 93 subjects could accurately obtain relatively clear information, so in this growth cycle study, the background information of 93 teachers was taken as the research data. First of all, we can see from table 2 trained with the trained teachers to the doctor in the undergraduate course graduation up time in the phase contrast, whether trained or not trained, read the professional degree of success in the form of uninterrupted time, and compare with on-the-job read way or for other reasons choose discrete read professional qualifications of teachers, The time of becoming a teacher is obviously shorter than that of non-professional teachers [4].

This is because the trained teachers is in the initial stages of learning education major had certain knowledge base, rather than by trained teachers need to use more time to find their own interest at the same time also need to take the time to learn related discipline knowledge and methods, this will make the trained teachers to some extent become longer. The undergraduate stage is the stage of knowledge accumulation and interest germination, while the master's and doctor's degrees are the important stage of scientific research talent development, so the consistency of master's and doctor's degrees has a more significant impact on the growth cycle [7]. In my opinion, undergraduate education and master's and doctoral education are equally important. No matter which stage they are, they play a vital role in the growth of academic talents.

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	Average time to success	Intermittent type (Number of students)	Average time to success	Undergraduate, Master and Doctoral direct education (Number of students)	
trained	10.12	31	16.32	8	
Not trained	10	49	18.57	5	

Data source: from the official website of the university where the teacher works, or by sending E-mail to the teacher.

Secondly, in terms of career promotion, the career promotion cycle can be regarded as the embodiment of teachers' scientific research achievements to some extent. According to the research results, 67% of teachers with professional training experience a career promotion cycle of 7 to 13 years, while 57% of teachers without professional training experience a career promotion cycle of 12 to 17 years. That is to say, the career promotion cycle of teachers without professional training is higher than that of teachers with professional training. Which the trained teacher's career advancement shortest cycle for 4 years, up to 20 years, the average promotion time is about 10 years, rather than a regular teacher career advancement training cycle shortest for six years, the longest for 22 years, average promotion time is about 14 years, visible trained teachers in professional growth stage is easier to find out about the rules of the development of the education subject, On this basis, I can find a foothold in the subject I am interested in and develop my career.

### 5.2. The Citation Rate of the Paper Achievements of Teachers Without Training Was Higher Than That of Teachers with Training

Published papers, writing books and textbooks are academic workers show important ways of scientific research achievements, as of September 10, 2019 online from China know this study screened 152 achievements of the research object of thesis, because of selecting books, textbooks, scientific research awards standard is hard to agree, so this study each scholar's paper as the representative of the scientific research achievements. The criteria for each teacher's paper selected on CNKIS is whether it is the first author or not, and the source category is SCI and CSSCI source journals. SCI and CSSCI represent the highest level at home and abroad, and their recognition and authority can represent the quality of scientific research results to the greatest extent. On this basis, the data in Table 3 are obtained. It can be seen from Table 3 that the citation rate of the paper results published by teachers of non-professional training is higher than that of teachers of professional training, in which the average citation number of papers published by teachers of professional training is 21.978, while that of teachers of non-professional training is 31.904. It can be seen that the paper achievements of non-professional teachers can use multidisciplinary knowledge to break the barriers between the development of different disciplines to a greater extent, and use different ways of thinking to carry out scientific research and paper writing, so that their scientific research achievements can be more easily cited by people in the field of education and other fields. At present, it has been a general trend for knowledge intersection and integration in various fields. Interdisciplinary knowledge intersection and integration is often a new growth point of science. People with different knowledge backgrounds in different disciplines are more likely to produce innovative scientific research results. As early as 2001, hao Fengxia and other scholars studied Nobel Prize winners in natural sciences and found that the number of winners with interdisciplinary knowledge was increasing, and that these scientists would also play an important role in future development [5, 6].

The intersection and integration of different campus cultures, ways of thinking and educational concepts brought by higher education experience can effectively promote the growth and

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development of academic talents. A trained teacher compared to the trained teachers, their access to the area and content will be more rich and colorful, they can break through the inherent mode of thinking education discipline and make full use of various methods and resources in the field of discipline, to overcome a single research methods and contents of education discipline and from a new perspective on the development of education, Uncover the mysterious veil of the development of the field of education. It is not only the requirement of their own development, but also the requirement of the development of The Times for the teachers who are trained or not.

**Table 3.** Comparison of thesis results between teachers with and without training background

Type of teacher background	Number of citations per paper	
trained	21.978	
Not trained	31.904	

Data source: CnKI.

### 5.3. Teachers with Professional Training and Teachers Without Professional Training Are Equally Entitled to Academic Honors

In recent years, in order to cultivate leading talents in various fields and drive innovation and development in various fields, the country has successively launched various outstanding talent award programs, and honorary titles represent outstanding achievements made by scholars in various fields. As can be seen from Table 4, there are 5 teachers who have won the title of "Cheungkong Scholars", 31 teachers who have won the title of "New Century Excellent Talents", and 5 teachers who have won the title of "Millions of Talents Project". Overall, academic honors are equally shared between teachers with and without training.

Scientific research results will make teachers give some extra points in the selection of academic honorary titles, but teachers' professional titles, academic innovation level and organizational and coordination ability will also affect the selection of academic honorary titles. On the one hand, due to the accumulation of knowledge for a long time, the teachers from professional training have unique opinions on the development prospects of pedagogy in the past, present and future. [7] To a certain extent, they are inclined to make pedagogy catch up with or maintain the international advanced level, which makes them have some advantages in the selection of academic honorary titles. On the other hand, on the basis of the existing knowledge structure, teachers who are not trained can generate new ideas of academic research through academic training of cross-knowledge, so as to carry out innovation of scientific research results in the field of pedagogy and discover new educational phenomena and laws. In general, the unique advantages of the two make the teachers equal in academic honors.

**Table 4.** Comparison of honorary titles of teachers with and without professional training

Type of teacher	The Changjiang	New Century Excellent	Millions of talents
background	Scholar	talent	project
trained	5	17	1
Not trained	2	14	4

Data source: from the official website of teachers' colleges

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#### 6. Conclusions and Suggestions

This study through six subordinate professional institution under its own education department (court) has a professorship at the teacher as the research object, the teachers of history information as data source, will be engaged in the education of teachers in this Thurber stage of specialized division, will be divided into the trained teachers and a trained teacher, This paper mainly analyzes the differences in growth cycle, scientific research achievements and academic honorary titles between teachers with and without professional training. The results of the study show that both the teachers who are trained and those who are not have certain advantages. On this basis, some suggestions are provided for the recruitment and training of pedagogic teachers in colleges and universities, so as to promote the growth and development of academic talents in pedagogy and contribute to the development of pedagogy.

### 6.1. Change Traditional Ideas and Encourage Teachers to Conduct Interdisciplinary Learning, Communication and Research

On the one hand, a single discipline is far from being able to meet the needs of solving practical problems. Interdisciplinary communication and cooperation is not only the trend of the development of discipline knowledge, but also one of the inevitable trends of social development. On the other hand, the intersection of knowledge is often the growth point of new subjects. As the bearer of subject knowledge, the communication between academic talents is conducive to the development and innovation of knowledge. From the results of the study, trained teachers in up time is shorter than a trained teacher, not a trained teacher's scientific research cited rate than trained teachers, but both tied in terms of access to academic title of honor, the advocacy of college teachers in interdisciplinary communication, learning and study more at ordinary times, at the same time of widely with other domain knowledge, Break the thinking pattern and transfer the knowledge methods of other disciplines to the development process of this discipline. From the perspective of the development process of China's pedagogy, the development of pedagogy will be relatively isolated and closed, with less contact with other disciplines. Therefore, it is necessary to change the concept. The development of educational discipline needs not only certain discipline independence, but also the establishment of close contact with other related disciplines. For example, higher education can obtain fresh blood from philosophy, economics, history and other disciplines, integrate multi-disciplinary resources, and view its development process from a different disciplinary perspective. At the same time, colleges and universities should also take certain measures to provide teachers with interdisciplinary communication platform, create space and conditions so that teachers of different disciplines in the daily life of informal contact and communication opportunities increase, obtain inspiration for scientific research, scientific research creation and practice [8].

### 6.2. Encourage Teachers to Keep Their Beginner's Mind and Continue Professional Learning

No matter the teachers who are trained or not, they all need to keep their original intention of devoting themselves to the research of pedagogy. With the changes of society and the internal environment of colleges and universities, the faith, work and life style of teachers are confronted with huge impact, and they are under more and more professional pressure. And this will cause the teachers' job burnout, the teaching activity and scientific research and creative is greatly reduced, at the same time the key is to keep in mind that in confusion, irritability, or feel stressful when I thought I was initially how to step into the threshold of the field of pedagogy, beginner's mind from the strength, the ongoing professional learning, pay attention to the current event hot spot, Accept frontier knowledge in the field of education, it is essential for teachers in colleges and universities as the carrier of knowledge with a kind of ability, we are in this era of rapid development, the impact of all sorts of multifarious knowledge

DOI: 10.6918/IJOSSER.202110\_4(10).0060

makes some teachers, college teachers should learn to follow the pace of The Times, the old knowledge upgrading and equip themselves with the new knowledge, Have a unique view of the development of pedagogy.

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