

# *The Age Characteristics of Teaching Scholarship Ability of Teachers in Chinese Local Colleges and Universities*

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**Abstract:** Since the introduction of teaching scholarship into China in the 21st century, the teaching scholarship ability of full-time teachers in colleges and universities has attracted great attention from experts and scholars, who have studied the teaching scholarship ability of teachers in colleges and universities from different angles and obtained certain results. The author investigated 196 full-time teachers in local colleges and universities in China from the aspects of age, area, major, educational background, title, and teaching scholarship ability and found that the teaching scholarship ability of college teachers with different areas, majors, educational backgrounds and titles has certain age characteristics. The author summarized it for reference for college teachers and administrators.

## 1. Introduction

Since Boyer put forward the concept of teaching scholarship in 1990, teaching scholarship ability has received great attention from scholars worldwide. The influencing factor of teaching scholarship ability is one of the research directions of scholars. Some scholars have found through investigation that there is no significant difference in the level of teaching scholarship ability of university teachers in terms of gender, education background and area, but there are differences in teaching age, professional title and school platform and other factors; Some scholars also conducted a survey on Shanghai university teachers, and the results showed that there was no significant difference in the teaching scholarship ability of Shanghai university teachers in terms of age, professional title, gender, teaching years and other indicators, and that teaching cognition, teaching and scientific research atmosphere, promotion and reward policies were the key factors affecting the development of teaching scholarship ability.

This study is different from the research objects selected by previous scholars. In the past,

scholars either took teachers in “Double First-Class” universities as research objects, or took teachers in universities and colleges in a certain province as research objects, such as Hebei Province, and took teachers of a certain discipline as research objects, such as physical education teachers. Due to the limitations of the research object, the promotion of research results has been affected. The author investigated the teaching scholarship ability of 268 full-time teachers in local colleges and universities in China, and found that the teaching scholarship ability of teachers in local colleges and universities in China is closely related to their age.

## **2. Methodology**

### **2.1 Questionnaire Design**

A random survey on the teaching scholarship ability of teachers in local colleges and universities was conducted nationwide in China utilizing questionnaires. The contents of the questionnaire include personality characteristics (including age, area, professional title, educational background and discipline) and teaching scholarship ability. The content of teaching scholarship ability is designed based on the concept of teaching scholarship ability proposed by scholars [1][2][3], including teaching reflection, teaching community and open communication, teaching Innovation and sharing.

In the design of the questionnaire, a five-level Likert scale [4] was used for the content of teaching scholarship ability. Each question was divided into five options (or similar to the five options), such as very satisfied, satisfied, average, dissatisfied and very dissatisfied. 5, 4, 3, 2, 1 score was attached to the options successively. The lower the score, the weaker the teaching scholarship ability.

### **2.2 Implementation of the Investigation**

The questionnaire survey was carried out in a combination of online and offline. And then, the generated questionnaire was generated into a QR code or website hyperlink [5], which was pushed to the “Chinese University Management Group”, “Chinese University Teacher Resource Sharing and Exchange Group”, QQ groups and WeChat groups of the author's friends, and the relevant WeChat groups of the university, The teacher filled in the questionnaire by identifying the QR code or opening the website hyperlink, and the author obtained the survey data in this way. During the implementation of the questionnaire, there is no specific individual or unit, so the questionnaire can be considered as a random sampling survey. While conducting the survey online, the author took advantage of the opportunity to attend conferences or business trips above the provincial level to issue questionnaires and retrieve survey data.

### **2.3 Data Processing Methods**

Excel and SPSS were mainly used for data analysis. Charts and graphs in Excel were used to display the statistical data obtained, and SPSS was used to analyze the reliability and validity of the questionnaire and the relationship between the obtained data.

## **3. Results and Discussion**

### **3.1 Results**

A total of 196 questionnaires were collected online and 80 offline, among which 72 were valid

and 268 were valid. Local universities in 24 provinces and nearly 70 cities were involved.

Use SPSS26 statistical software to calculate the reliability of 268 data obtained through the survey. The value of Crombacha coefficient alpha is 0.927, and the value of Crombacha based on standardized terms coefficient alpha is 0.932, which is far greater than 0.8, indicating that the data obtained from the questionnaire is reliable.

Calculated the KMO value and significance of 268 data obtained through the survey through factor analysis command, it shows that the significance value is  $.000 < 0.05$ , indicating that the questionnaire data is suitable for factor analysis; KMO sampling suitability quantity is 0.875, greater than 0.8, which indicates that the validity of the surveyed results is high.

First of all, the author analyzed the normal distribution of the teaching scholarship ability of the respondents in different age groups. The results were shown in the table 1. It can be seen that the teaching scholarship ability of the teachers in the age group of 20-29 does not follow the normal distribution ( $P = .039 < 0.05$ ), and the other age groups all obey the normal distribution. Because the teaching scholarship ability of teachers of all ages does not completely follow the normal distribution, the author adopted the non-parametric K independent sample test method to judge the differences in teaching scholarship ability of teachers of different age groups, and the results were shown in Table 2. There are significant differences in teaching scholarship ability of teachers in different age groups (the asymptotic significance value  $P = .005 < 0.05$ ).

Table 1: Normality Test

Category Category Index	Kolmogorov Smirnov(V)a			Shapiro Wilke		
	Statistics	df	Significance	Statistics	df	Significance
20-29 years old	.215	25	.004	.915	25	.039
30-39 years old	.050	118	.200*	.990	118	.583
40-49 years old	.069	94	.200*	.986	94	.449
50-59 years old	.145	31	.095	.946	31	.120

Table 2: Test Statistics (a,b)

Category Index	Kruskal. wallis H(K)	df	Asymptotic significance
Grouping variable: age group.	12.931	3	.005

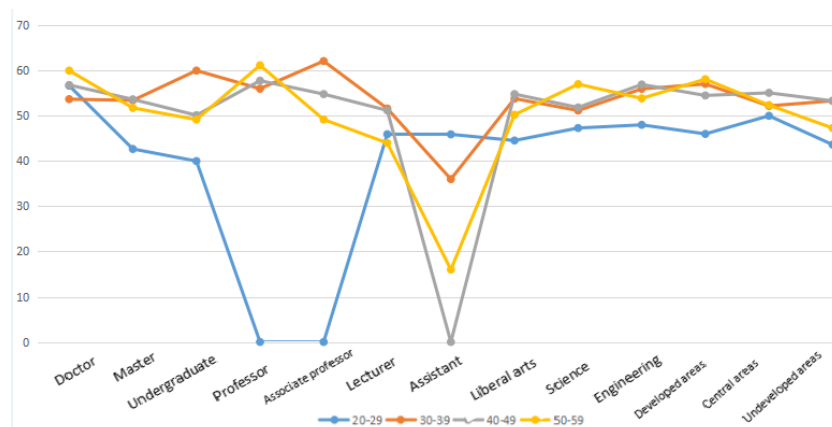


Figure 1: Teaching Scholarship Ability under the Combined Effect of Age and Personality Characteristics

In order to clarify the differences between the teaching scholarship abilities of teachers of different ages, the author made statistics on the teaching scholarship abilities of teachers of different ages, educational backgrounds, professional titles, disciplines and areas, and the results were shown in Figure 1

According to Table 1, 2 and Figure 1, we can see that:

On the whole, the teaching scholarship ability of teachers aged 20-29 is significantly lower than that of teachers in other age groups, and the number of respondents in this age group with the title of professor or associate professor is 0. In the age group of 20-29, the teaching scholarship abilities with doctor's degree are the strongest, while those with only bachelor's degree are the weakest. The abilities of lecturers and assistants are not high, but better than other age groups, especially assistants in this age group; Teachers of this age group are also the weakest in terms of their teaching scholarship abilities, both in terms of their discipline and in the area where they are located.

In the age group of 30-39 years old, the teaching scholarship abilities of teachers with only bachelor's degree or associate professors are very outstanding, while the assistants are weak.

In the age range of 40-49 years, overall, teachers in this age group have a middle position in their teaching scholarship ability. Among them, teachers in liberal arts, engineering, and central areas have slightly better teaching scholarship ability compared to teachers in other disciplines and other areas, but not outstanding.

In the age range of 50 to 59 years, teachers with doctoral degree, or with the title of professor, or majors in science and engineering have relatively good teaching scholarship abilities compared to teachers with other educational background, professional titles, and subject majors, among which the level of teachers in science is the most prominent.

### 3.2 Discussion

The development of teaching scholarship ability of teachers in local universities in China conforms to the law of education development. Young teachers have generally improved their teaching scholarship ability through practice, except for young doctors and those with low professional titles. At present, China is carrying out the “double first-class” construction of colleges and universities, and at the same time, higher requirements are put forward for the conditions of running a doctor's degree and a master's degree. Therefore, when the local colleges and universities vigorously introduce doctor's degree teachers, they also put forward higher requirements for the quality of the introduced doctor's degree. In the early 21st century, local colleges and universities were generally upgraded from low-level junior college to undergraduate college. During the junior college period, some of the introduced teachers lost confidence in the promotion of professional titles and lacked enterprising spirit, resulting in the poor teaching and academic ability of teachers over 30 with low professional titles.

With the increase of age, the teaching scholarship ability of teachers with associate professor titles shows a declining trend. The teaching scholarship ability of associate professors at the age of 30-39 is very outstanding, while the teaching scholarship ability of associate professors over 50 is weak. The main reason for this is the current promotion system of professional titles in China. Most of the young teachers between 30 and 39 years old are in the period of promotion to associate professors. In order to be promoted to associate professors, young teachers actively participate in teaching reform, participate in academic exchanges and carry out scientific research, and accumulate a large amount of experience and academic achievements. However, due to the limited indicators of professor promotion (taking Hunan University of Science and Engineering as an example, the indicators of associate professor promotion range from 20 to 30 per year, while the indicators of professor promotion are only about 5), quite a few teachers have lost the motivation of

teaching reform and academic research, resulting in the stagnation of teaching scholarship ability and decline with the development of information technology.

The teaching scholarship ability of teachers with low professional titles is poor, especially assistants aged 30-39 years old or over 50 years old, the teaching scholarship ability is the worst. This shows that the evaluation system of teaching scholarship ability in local colleges and universities is not perfect, and there is a lack of targeted evaluation system for teachers who lack the development of teaching scholarship ability. The age of 30-39 is the most important period for promotion to associate professor, and the age of 50 is the time when they are about to retire. In these two important periods, teachers whose titles are still assistant or lecturer are not interested in promotion, and they have not accumulated certain teaching scholarship ability in the early stage, so the teaching scholarship ability is extremely short. Schools should strengthen the supervision of such teachers, stratified and classified evaluation, strictly implement the last place elimination system, and activate the teaching scholarship development motivation of all teachers.

The teaching scholarship ability of science teachers in different age groups is significantly different. Teachers over 50 years old are the strongest, 20-29 years old are the worst, and 30-39 years old or 40-49 years old are not significantly different. It can be seen that the accumulation period of teaching scholarship ability of science major is long, so schools should strengthen the incentive of teaching scholarship ability development of science major teachers.

The teaching scholarship ability of engineering teachers is stable. With the exception of 20-29 years old, the teaching scholarship abilities of teachers in other age groups are very close to each other and at a high level, which indicates that young teachers majoring in engineering have a strong ability to develop their teaching scholarship abilities. They can quickly improve their teaching scholarship abilities in teaching practice and maintain a good level.

There are still problems in the introduction of young teachers and the supervision of the teaching scholarship ability of older teachers in underdeveloped areas, which is shown in the low teaching scholarship ability of teachers in lower age groups and senior age groups. On the one hand, the author calls on the government to strengthen the support for local colleges and universities in underdeveloped areas, improve the conditions of running schools and the treatment of teachers. On the other hand, schools should strive to improve the teaching scholarship ability evaluation system and improve the quality of supervision.

#### **4. Conclusion and Implications**

It can be seen from the survey data that the teaching scholarship ability of the “three low” teachers (low age, low professional title, low education backgrounds) is at a low level, but different areas and different majors are different. For example, in developed areas, young and middle-aged teachers with low education background and engineering majors are at a high level of teaching scholarship ability; however, teachers with high age and low professional titles have lower levels of teaching scholarship abilities. In order to comprehensively and effectively improve the teaching scholarship ability of local college teachers in China, the author puts forward three suggestions. First, local colleges and universities should fully consider the actual ability and expectation of teachers, and establish a comprehensive two-level training system, incentive mechanism and elimination mechanism [6]. The second is to strengthen the publicity and guidance of teaching scholarship ability [7]. By carrying out various forms of teaching activities, it provides a platform for full-time teachers to learn and display. Teachers with strong teaching scholarship ability can show and share their own innovation and experience in the teaching activities carried out by the school. Teachers who lack the ability of teaching scholarship can learn and accumulate experience in the activity as bystanders. To actively carry out excellent training, young and middle-aged

teachers with low education and engineering majors have strong teaching scholarship ability. Especially in developed areas, they are young and have low professional titles, but their teaching scholarship ability is at the highest level. Schools should carry out targeted training. Third, colleges and universities in different areas have clear priorities.[8] Colleges and universities in developed areas should pay attention to the overall improvement of teachers' teaching scholarship ability and achieve demonstration and guidance throughout the country, while local colleges and universities in less developed areas should strive to improve teachers' teaching scholarship ability.

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