

# *Research about Improving Practical and Applied Teaching Skills of Teachers in Applied Higher Education Institutions*

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**Keywords:** Application-Oriented Higher Education Institutions, Practical and Applied Teaching Skills, Double-Qualified Teachers, Teaching Reform

**Abstract:** As we all know, the cultivation of applied talents pays more attention to practicality, materiality and technology than academic talents. It is not only necessary to continuously improve and build professional courses with core application skills training as the core, but also need a "double-qualified" teaching team with profound scientific background and strong practical ability. This paper aims to study the improvement of practical and applied teaching skills of teachers in applied higher education institutions. This paper mainly uses the literature research method and the questionnaire survey method to conduct the research. The literature research method mainly collects data on the practical teaching potential of college teachers used in recent years, and seeks scientific support for this research by selecting, analyzing and collecting relevant literature. This paper analyzes and investigates the factors that affect the practical and applied teaching skills of teachers in application-oriented higher education institutions. The factors affecting the development of teachers' practical and applied teaching skills can be summarized into three categories: teachers, schools and society. Considering the above problems and their influencing factors, further research about improving teachers' practical and applied teaching skills is carried out. According to the survey, 58.3% of teachers have relatively insufficient practical and applied teaching skills, but 97.6% of teachers are interested in improving their practical and applied teaching skills. In this way, the practical and applied teaching skills of teachers in application-oriented higher education institutions will become stronger and stronger with development.

## **1. Introduction**

At present, with the popularization of higher education in my country, higher education presents a large amount of ecological diversity. However, very few higher education institutions quickly cultivate academic and research talents. Higher education institutions are based on the material needs of society. As an important part of the higher education system, application-oriented higher education institutions are their "application as the function, knowledge as the depth, and work as the spirit". A key component of the talent development model is knowledge building for students.

Integrate capability and quality, oriented to manufacturing, construction, management, front-line projects or teams and according to their requirements, implement with high-quality positioning, have room for sustainable development, and meet the needs of local and regional economic planning and social development [1-2 ].

In the research about improving practical and applied teaching skills of teachers in applied higher education institutions, many scholars have studied it and achieved good results. For example, Ran W et al. summarized the previous research results, formulated a teacher evaluation plan, and suggested that teaching ability should be Ability to develop educational programs, training activities, school management and knowledge transfer [3]. The Gao Q study summarizes the characteristics of outstanding teachers and proposes competencies that teachers should possess in the classroom, such as flexibility, enthusiasm, self-awareness, test-taking attitude, challenge skills, subject knowledge presentation, standardized testing procedures, student support, and student assessment [ 4].

This paper mainly uses the literature research method and the questionnaire survey method to conduct the research. The literature research method mainly collects data on the practical teaching potential of college teachers used in recent years, and seeks scientific support for this research by selecting, analyzing and collecting relevant literature. This paper analyzes and investigates the factors that affect the practical and applied teaching skills of teachers in application-oriented higher education institutions. The factors affecting the development of teachers' practical and applied teaching skills can be summarized into three categories: teachers, schools and society. Considering the above problems and their influencing factors, further research about improving teachers' practical and applied teaching skills is carried out.

## **2. Research about Improving Practical and Applied Teaching Skills of Teachers in Application-Oriented Higher Education Institutions**

### **2.1 Problems Faced by Application-Oriented Higher Education Institutions to Improve Teachers' Practical and Applied Teaching Skills**

(1) Under the traditional teaching concept, emphasis is placed on theoretical teaching and less practical teaching

Applied higher education institutions are recently promoted colleges, mostly transitioning from high schools and vocational colleges. In the process of formulating the talent training plan, there are problems such as unreasonable curriculum setting and technical class hours being more important than examination class hours. Paying attention to the introduction of practical training activities in the teaching process will not help teachers to improve their effective teaching ability. In addition, due to the profound influence of traditional teaching techniques, teachers pay more attention to the useful science and virtual learning in the teaching process, and the teaching methods are also outdated, and there is no new method [5-6].

(2) The teacher assessment and evaluation system is not perfect

When higher education institutions evaluate teachers, they first evaluate teachers' teaching links and set benchmarks for measurement and evaluation. Although in the process of reform and development, higher education institutions and materials colleges have put forward higher requirements for teachers' effective teaching ability, but the lack of effective evaluation standards and the establishment of corresponding evaluation systems and verification processes has led to the lack of evaluation in the process. Really develop the ability of teachers. form. The control of teachers' teaching ability in high schools and colleges mainly takes the form of classroom listening and training competitions [7].

(3) Lack of platforms and opportunities to exercise practical and applied teaching skills

In the process of laboratory construction, local higher education institutions face problems such

as insufficient funds and insufficient staff in apartments. The lack of examination materials and conditions does not provide enough practical training space for teachers, which is not conducive to the improvement of teachers' training ability and the cultivation of students' performance. Although the first universities accepted applications and encouraged future professors to take up part-time business, they had yet to develop a framework for the development of integrated business. The short-term training of many business teachers may not be able to effectively improve the teaching level [8-9].

## 2.2 Paths for Improving Teachers' Practical and Applied Teaching Skills in Application-Oriented Undergraduate Higher Education Institutions

(1) Change the teaching concept and attach importance to practical teaching

Adapt to traditional training methods and techniques, build hands-on training bases, and strengthen laboratory construction. Summarize hands-on training experience in a timely manner, impart internships and manuscripts, and strive to improve the quality of high school research projects and improve the effective teaching ability of undergraduate and undergraduate teachers through changes in teaching strategies and reforms in teaching methods.

(2) Improve the teacher assessment and evaluation mechanism

In order to maximize the effective teaching ability of teachers, it is necessary to improve teachers' evaluation and evaluation process, integrate teachers' practical training into teachers' performance evaluation and professional evaluation and play a role, and make full use of the students' teaching evaluation system. At the same time, make full use of the computer network platform to realize the inter-school integration of undergraduates and colleges, share and exchange useful training strategies and teachers' examination resources, and encourage them to perform experimental tasks and learn from them. Excellent experimental teachers' teaching methods and cases, so as to improve their practical learning.

(3) Promote school-enterprise cooperation and increase on-the-job training for teachers

In order to improve the employment rate and work quality of undergraduates, undergraduate colleges should strengthen cooperation with enterprises, take entrepreneurship as the basis for on-campus practice and training, establish long-term cooperative relations with enterprises, and make full use of them. Real business activity as an example of education. In order to improve the quality of students' graduation, two teaching programs should be effectively implemented, namely, establishing a graduation education program in which faculty members guide students and improving the quality of teachers' practice [10-11].

## 2.3 Questionnaire Algorithm

In the decision-making process, the normalization processing method of indicator data is as follows:

For the "bigger is better" indicator, the following formula is used for processing:

$$x_{ij}' = \frac{x_{ij} - x_{j\min}}{x_{j\max} - x_{j\min}} \quad (1)$$

In the formula,  $x_{ij}'$  is the normative value of the  $j$ -th secondary index at the  $i$ th level, and  $x_{j\max}$  and  $x_{j\min}$  are the maximum and minimum values of the  $j$ -th secondary index, respectively.

For the "bigger is worse" type indicator, it can be calculated as follows :

$$x'_{ij} = \frac{x_{j\max} - x_{ij}}{x_{j\max} - x_{j\min}} \quad (2)$$

For a moderate index or an inverse index, the reciprocal of its index value can be used for forward processing [12].

### 3. Research and Design Experiments about Improving Practical and Applied Teaching Skills of Teachers in Application-Oriented Higher Education Institutions

#### 3.1 Experimental Purpose

The training goal of application-oriented college education is to cultivate high-quality technical talents with high skills and high levels for social and economic development, who can meet the needs of the first line of production. This determines that the most significant feature of application-oriented college education is to highlight the cultivation of students' practical ability. As a result, as a new force in applied college education, the ability of young teachers has gradually attracted widespread attention from all walks of life.

#### 3.2 Survey Objects

In order to fully understand the current situation of the practical and applied teaching skills of young teachers in application-oriented higher education institutions, this paper selected six application-oriented higher education institutions in Yantai City and Qingdao City, Shandong Province as the scope of this investigation, and distributed questionnaires to some young teachers in these six schools. The present situation of young teachers' practical and applied teaching skills is investigated and empirically analyzed. Judging from the nature of the schools surveyed, these six application-oriented universities cover national demonstration, provincial demonstration and general application-oriented universities, both directly under the Ministry of Education and under the supervision of the municipal government. Therefore, the survey in this paper can basically reflect the real situation of the practical and applied teaching skills of young teachers in application-oriented higher education institutions. A total of 300 questionnaires were distributed in this survey, and 247 valid questionnaires were recovered, with a recovery rate of 82.3%. At the same time, according to the needs of the research, an interview outline was compiled, and the management personnel of the school and teaching were visited respectively, and their views on the practical and applied teaching skills of young teachers in application-oriented higher education institutions were obtained.

### 4. Experimental Analysis about Improving Practical and Applied Teaching Skills of Teachers in Applied Higher Education Institutions

#### 4.1 Teacher Education

Table 1: Educational level survey of teachers in six applied universities

	College and below	Undergraduate	master's degree	Dr.B
male	2.1	27.1	13.2	6.1
Female	2.8	28.4	15.1	5.2

This paper conducts a questionnaire survey on the academic qualifications of the teachers of the six application-oriented higher education institutions selected in this paper, which are mainly divided into four levels, college and below, undergraduate, master, and doctorate. The statistics of

the 247 questionnaires collected are shown in Table 1.

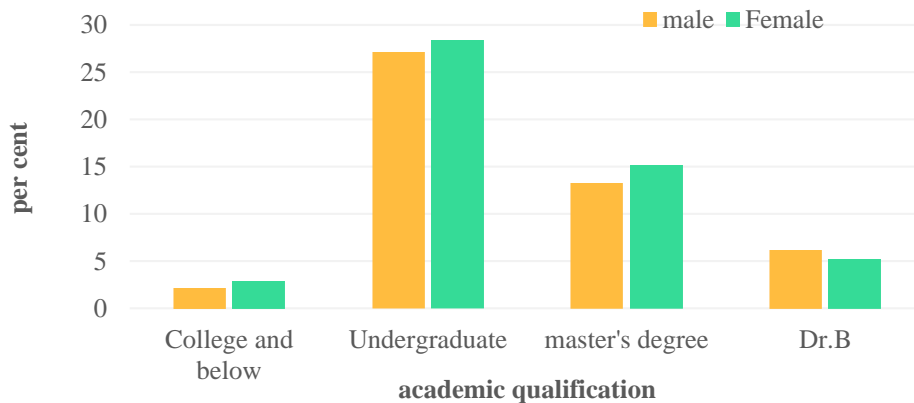


Figure 1: The proportion of teachers with different educational levels in applied higher education institutions

As can be seen from Figure 1, teachers with a college degree or below accounted for only 4.9% of the valid questionnaires. Teachers' educational level is mainly concentrated in the undergraduate and master's level, accounting for 55.5% and 28.3% of the valid questionnaires respectively, while the doctoral degree only accounts for 11.3%. Therefore, in general, compared with teachers in academic universities, teachers in applied universities have a lower educational level, and it is recommended to raise the threshold for talent introduction.

#### 4.2 Analysis of the Current Situation of Practical Ability

People's cognition is obtained in practice and is closely related to practice. This paper analyzes the data of teachers' judgment of their own practical and applied teaching skills in the questionnaire. The experimental data is shown in Table 2.

Table 2: Application-oriented higher education institutions' understanding of their own practical and applied teaching skills.

	Interest in hands-on teaching	Existing practical and applied teaching skills	Practical Instructional Design Ability
excellent	50.2	15.8	17.4
ordinary	47.4	41.7	32
poor	2.4	42.5	50.6

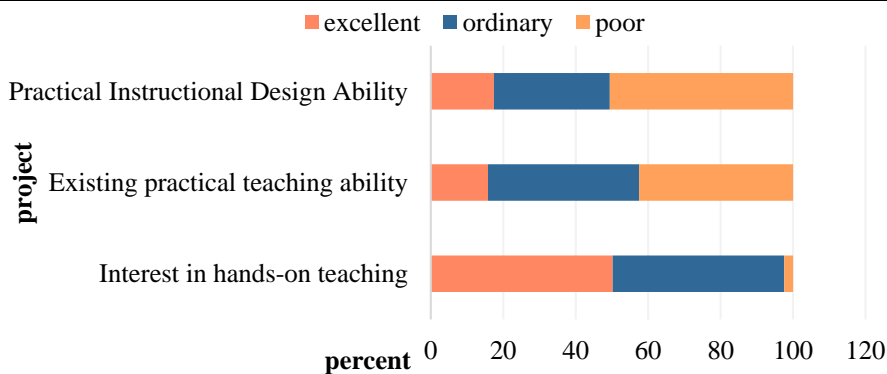


Figure 2: Analysis of practical and applied teaching skills of teachers in applied higher education institutions

As can be seen from Figure 2, in the survey questions on whether their practical and applied teaching skills is competent for education and teaching, 41.7% of the people chose "basically satisfied", 39.3% chose "generally not suitable", and even 3.2 % chose "totally incompetent". It can be seen that teachers have generally realized that there are problems in their practical and applied teaching skills, which has affected the effect of practical teaching, and also reflects that teachers' practical and applied teaching skills needs to be improved. Interest has a great influence on behavior, and young teachers' interest in improving their practical and applied teaching skills can also prompt young teachers to invest enough energy in this aspect, thereby improving their practical and applied teaching skills. Through questionnaires, 50.2% of teachers expressed their interest in improving practical and applied teaching skills, 47.4% expressed some interest, and only 2.4% chose "no interest". This means that young teachers have certain expectations for the improvement of their own practical and applied teaching skills, hoping to improve their practical and applied teaching skills through various means and realize their own value of young teachers.

## 5. Conclusions

The rapid development of society and economy has put forward higher requirements for the quality of personnel training. Higher education is an important base for supplying a large number of highly skilled personnel to the country. As the main force of the teaching team in higher education institutions, teachers' practical and applied teaching skills affects the quality of personnel training in higher education institutions and the development of college education. How to improve the practical and applied teaching skills of teachers in higher education institutions is an important problem facing the society, higher education institutions and teachers, and it needs to be solved urgently. This paper takes the practical and applied teaching skills of college teachers as the research object, and uses two forms of questionnaire survey and interview to conduct an extensive investigation on the current situation of college teachers' practical and applied teaching skills. There are problems such as the lag in practical teaching design, the lack of practical and applied teaching skills, the low evaluation of practical and applied teaching skills and the obstruction of self-development. And from the three aspects of teachers, schools and society itself, it analyzes the factors that affect the improvement of teachers' practical and applied teaching skills. In view of these influencing factors, this paper puts forward feasible suggestions to promote the improvement of teachers' practical and applied teaching skills.

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