

## Research on the Problems and Countermeasures of Practical Teaching in Independent Colleges

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**Abstract.** The Independent college teacher structure is characterized by a large proportion of young teachers and old teachers, and the proportion of middle-aged teachers is relatively small, therefore the teacher structure should be strengthened by hiring technical backbone to enrich the practical teaching team from enterprise. Teaching management should serve the purpose of cultivating the applied talents, and pay attention to the management of teaching process, especially the management of practical teaching process. In the construction and management of experimental teaching resources, it should try to avoid the prevalence of large and comprehensive in public universities, and avoid the ills of their own, but pay attention to do a good job of resource integration, strengthen the sharing of resources and characteristics of construction, improve resource utilization.

### Introduction

Independent colleges are the carrier of China's higher education new school mechanism. After just a dozen years of development, at present, the country has 322 independent colleges, for the country to cultivate a large number of applied technical personnel [1]. Therefore, the independent college has become an important part of China's higher education. At the same time, there are some general problems that restrict the development of independent colleges. How to solve these problems is related to whether the independent colleges can develop in a more healthy future.

### The Current Situation and Existing Problems of Teaching Staff

The first part is the full-time teachers which constitute the main body of the faculty; the second part is the mother school teachers; the third part of the independent college to hire part-time teachers, mainly from the enterprise. At present, the most prominent problem in the construction of the faculty of independent colleges is that the number of teachers is not in line with the requirements of the Ministry of Education on the "basic school conditions (Trial)" (Tonghua [2004] No.2) Health ratio of not less than 1:18 requirements. In addition, the age structure and title structure is clearly showing the polarization, one pole is the old teachers and the old professor, the other is the young teachers and junior and intermediate titles, middle of the prime of life with senior professional titles of middle-aged teachers less, That is, we usually say the two big, middle small "dumbbell" structure. From the age structure and title structure also reflects the unreasonable structure of knowledge, that is, retired retired old professor of knowledge update speed slowed down, just to participate in the work of young teachers knowledge reserve is relatively inadequate. The direct reflection of this defect in teaching is that most of the old professors teach public basic courses or professional basic courses, part of the professional class had to "catch ducks" by the young teachers. As young teachers engaged in scientific research work time is short, so the professional knowledge of the depth of knowledge and understanding of the degree of restrictions, in this case to speak professional courses will inevitably be more difficult. In addition, due to the limited number of teachers, teachers teaching tasks generally heavier, especially the old teachers are almost no energy to use spare time to organize young teachers to teach, teaching research. In the scientific research on the old professors have been

"fame", in addition to driving the completion of the rated teaching tasks, continue to engage in scientific research work is obviously insufficient, through the research work to promote young teachers to improve business ability to help, The role of the band. And young teachers, scientific research ability is generally weak, most people do not have the ability to apply independently to the provincial, municipal or corporate research projects, thus restricting their own scientific research capabilities and professional quality of the rapid increase, leading to longer knowledge update cycle.

## **And Gradually Solve the Problem of Teachers' Construction**

### **School Policy Support**

We in the independent college in-depth investigation and study process found that some independent colleges from the teaching and research in two areas to increase the intensity of training for young teachers is worth learning from. For example: in the teaching work, some schools have implemented the "Hundred Project" project. Each year, the school chooses a group of outstanding young teachers each year to subsidize 12,000 yuan a year, three years for a cycle, to support young teachers to carry out teaching and research work, to encourage them to participate in various teaching seminars and academic conferences, learning and exchange Teaching outcomes, and provide them with short-term training and training opportunities, and vigorously enhance the teaching level of young teachers. In the research work, some schools set up a "school research project" special fund, as a young teacher training capacity of incubators, each project funding from 14,000 yuan to 4,000 yuan range, through the implementation of "school research project" In the efforts to cultivate young teachers research capacity at the same time will be part of the scientific research results applied to school management, improve the school modern management level. These measures have not only greatly stimulated the young teachers to actively explore the enthusiasm of the business, but also some of the young teachers in public colleges and universities also have a strong attraction. The school has produced great cohesion for young teachers, so that they have a sense of belonging, willing to contribute to the construction and development of the school.

### **Make Full Use of Social Resources**

Training young teachers, after all, need a process, the so-called "ten years tree tree, a hundred years tree", in the short term is also very difficult to completely reverse the shortage of independent college teachers. How to alleviate the shortage of teachers in independent colleges in the short term, we found through the survey, between teachers in the way through the use of spare time to other colleges and universities and the situation is more common, most of these people are public colleges and universities Young teachers. Especially in the public colleges and universities are more concentrated urban teachers "take the hole" phenomenon is even more prominent, since this phenomenon can exist for a long time to prove that there is social demand. It is understood that "take the hole" teachers often teaching effect is very good, some teaching ineffective teachers in their group within the formation of the competition mechanism will naturally be eliminated. This gives us a revelation, whether by the local university campus or the education administration department introduced the corresponding management policy, this part of the people organized to standardize the management, so that their "take the hole" from the "underground" to "ground". In addition, this part of the teachers can also take the student curriculum design and graduation thesis guidance work. According to the independent college assessment policy, part-time teachers are allowed to guide students through the network curriculum design and graduation thesis, provided that there is a complete guidance process record, which is conducive to strengthening the practice of teaching links, but also conducive to ease in the short term independent college teachers Shortages, but also can reduce the employment costs of independent colleges, improve the economic and social value of human resources, to achieve win in one fell swoop.

### **Emancipate the Minds of the School**

Independent college in the experimental technical staff to participate in experimental teaching issues, school administrators should have a more open management awareness, dare to break through the public college experimental technical staff cannot teach experimental classes alone can only act as "supplementary" role of rigid thinking, Have pioneering spirit, always try new teaching management, from the policy level to encourage experimental technical staff to help, for the teaching effect of good experimental technical staff through the school's teaching assessment can take a separate experimental class. In the calculation of the workload should be treated with the same course teachers, treated equally. To the experimental technical staff, especially young experimental technicians to enhance their ability to business opportunities, so that they feel more than the public college experimental technical staff have more room for development and more development opportunities. This will not only alleviate the problem of teacher resource constraints, and the school can also train a number of well-used, to stay the experimental teaching team.

In short, independent colleges from the training of innovative talents to develop a strategic height, and constantly explore the scientific planning of the construction of new ideas for teachers. And gradually build a team of talent, education level, knowledge structure, title structure and age structure and school development goals to match the teachers, and provide them with a good space for development, and fully mobilize their work enthusiasm and consciousness for the independent college The development of accumulated stamina [2-3].

### **Current Situation and Existing Problems of Experimental Teaching Resources Construction**

#### **Clear the Experimental Teaching Resources to Optimize the Allocation of Standards**

All along, independent colleges have different criteria for judging the optimal allocation of experimental teaching resources. Some of the actual allocation of experimental resources and the amount of investment as a judge whether it is optimized configuration; also some are conducive to the development of teaching and research activities as a basis; and some to the pursuit of configuration integrity and facilities, equipment, advanced standards as a standard , In fact, reflects the independent college of experimental teaching resources to optimize the allocation of understanding is not clear enough, but also highlights the independent college in the experimental teaching resources management is still in the extensive management stage. As the independent college of experimental teaching resources allocation, the basic criteria for judging should be both to save resources, but also conducive to the practice of teaching and training of applied talents, the balance between the two is the best allocation of its optimal standards [4 -5].

#### **Problems in the Construction of Experimental Teaching Resources**

Independent college after ten years of development Many school students in the scale of more than 10,000 people, the vast majority of schools have reached the scheduled size of the school, professional settings are basically stable, large-scale laboratory construction work has been completed. As a result of the early school, many schools in the laboratory construction is imperative to complete as soon as possible to meet the basic teaching requirements of the experimental environment, according to the requirements of the syllabus on time, as from the discipline construction, professional construction and student scale and other aspects of the overall planning laboratory construction ill-considered, the laboratory is based on professional, curriculum-based established. Therefore, the lack of long-term planning and co-ordination of laboratory construction, resulting in similar professional laboratory duplication, repeated purchase of equipment, low utilization of resources and other issues. At the same time there are some instruments and equipment less, the use of high frequency, shortened life expectancy, seriously affected the normal function of the laboratory [6-7]. On the one hand the laboratory duplication construction makes part of the experimental teaching resources surplus, resulting in a waste. On the other hand, the decentralized

construction, decentralized use and decentralized management of the laboratory caused some unreasonable allocation of experimental resources or the lack of equipment and equipment.

### **An Effective Way to Solve the Problem of Experimental Teaching Resource Allocation**

How to make the allocation of experimental teaching resources in the framework of its overall optimal allocation, the formation of a reasonable architecture, shared resource model, centralized and decentralized combination of resource allocation. A more practical approach is to set up a school management center on behalf of the school on the decentralized construction of the Department of the Department of public experimental teaching resources integration, and is responsible for management, to take special management, the use of separation approach. Professional laboratories should be in the Department of common use of common equipment. For example: oscilloscopes, computers, multimeters and so on.

#### **Unify the Construction of Public Experimental Teaching Resources**

For the public experimental teaching resources must be unified construction by the school, centralized management, the school common use. For example: computer public laboratories should be unified by the school building, laboratory management center is responsible for management, commitment to all the school on the machine class experimental class on the machine security work. To take this model not only save construction funds, to achieve resource sharing, and relatively decentralized management to save human resources. Therefore, it is conducive to improving the utilization of the laboratory, but also help reduce the cost of running a school, but also to facilitate the standardization of management, and thus extend the life of equipment.

#### **Integrate the Experimental Teaching Resources of Science and Engineering**

For the construction of the Polytechnic professional laboratory on the basis of resource integration, commissioned by the discipline construction or professional construction depends on the laboratory weight of the largest department responsible for the construction and daily management, resource sharing. For example: some schools of electronic professional and computer science are based on their own curriculum requirements and the number of students were built SCM, computer principle, computer composition and embedded and other laboratory. The common feature of these labs is that the lab box is added to the computer, that is to say different experimental classes use different experimental cases, but all need to configure the computer. As each department repeats the construction of laboratories, it is necessary to set up the same or similar experimental classes in different departments to purchase their own experimental cases and computers. If the experimental teaching resources can be combined into a comprehensive laboratory in accordance with the highest requirements of a professional course and the maximum number of students, the Office of Academic Affairs will make appropriate adjustments in the curriculum schedule, not only to achieve resource sharing, to improve the laboratory and Equipment and equipment utilization, and can be the remaining computer and experimental box used in other aspects of experimental teaching, to avoid further duplication in the future. More importantly, to other laboratory planning, construction and management work can play a role model. It is very important to do a good job in optimizing the allocation of experimental teaching resources, so that the limited laboratory construction funds of independent colleges can play a greater role.

#### **Scientific Planning, Liberal Arts, Experimental Teaching Resources Construction**

The construction of liberal arts laboratory should be based on similar disciplines or similar courses group to focus on the construction. This kind of construction thought embodies the same discipline, the same course of different professions or the relevance of similar courses [8-11]. In recent years, liberal arts experimental teaching has shown a lot of use of computer simulation software features, teachers through the use of simulation software to use new teaching methods and means to carry out "case teaching, scenario simulation, role play" and other practical teaching activities, the use of virtual reality technology to show students "Real" scene. Students in the study of professional

knowledge at the same time to strengthen the workplace adaptability and practical ability of training. According to the simulation simulation teaching software in the computer and network platform to run the characteristics of the school in accordance with the discipline group or course group construction of integrated, multi-functional network laboratory. On the one hand, teachers can use different computer simulation simulation teaching software to teach different professional courses. For example: logistics, warehousing, stocks, futures, electronic sandbox and so on. On the other hand, the laboratory can be used as electronic reading room and ordinary room in the spare time to open to students, help to improve the utilization of experimental teaching resources and sharing rate.

With the progress of science and technology, the penetration and cross between disciplines are getting closer and closer, and the disadvantages of decentralized construction and management are becoming more and more obvious. In fact, the sharing of experimental resources is not only a technical problem, but also a knowledge and management issues, but also a systematic project. On the one hand, managers of independent colleges need to really understand the nature and importance of optimal allocation of resources, and establish a correct concept of resource sharing. On the other hand, we must scientifically define the boundaries of the sharing of experimental resources, and should not be mixed with some of the experimental resources that cannot be shared in the name of resource sharing, affecting the use of professional experimental resources [12-16].

### **Concluding Remarks**

Independent college after a short period of ten years of development has become an important part of China's higher education. At present, despite the course of the course due to various objective reasons in some aspects of the constraints still exist, but adhere to the overall development of applied talents is the correct direction. As long as you find an effective way to solve the problem persist in going through, through their own efforts can overcome the shortcomings of the existence. At present, China's economic construction is in the labor-intensive to technology-intensive transition of the critical period, the community needs a large number of application-oriented technical personnel, which is undoubtedly the independent college from big to strong once again to provide development opportunities.

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