

# Constructing an integrated practical teaching system to strengthen cultivation of students' ability

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**Abstract:** Practical teaching provides an important channel for cultivating students' ability. It has become an important link for adult higher education, but also a weak link, where plenty of complicated problems exist. Merely solving several of these problems cannot achieve complete reform and smooth development of practical teaching. By statistical analysis of the problems therein, an integrated practical teaching system composed of "one main line, two combinations, four platforms and four guarantees" is established as go-between to reasonably connect the various links and elements of practical teaching. In this way, we can coordinate and solve all kinds of problems, successfully achieve the talent training goals of adult higher education, ensure continuous improvement of teaching quality in campus, and fully meet market demand off campus.

## I. Introduction

With the rapid development of cotemporary economy and society, the demand for talents in the entire society is changing with each passing day. At present, adult higher education graduates cannot gain a firm foothold in society solely by theoretical knowledge. "Application-oriented", "skill-based" and "innovative" talents are more and more welcomed and praised by the society, and individuals' practical skills have played an increasingly important role in determining the level of employability. Practical teaching is an important platform for training students to apply what they have learned and improve their practical ability. Most adult universities have attached continuously increased importance to practical teaching, actively carrying out reform and innovation. However, judging from the current development status and graduates' practical ability, practical teaching still develops slowly and graduates' employability is not greatly improved, which becomes a weak link in adult higher education. Practical teaching needs to deepen reforms and create a perfect practical teaching system, which carries great significance for improving teaching quality and talent training ability of adult universities.

## II. Main problems present in practical teaching

1. Practical teaching is not highly valued. Although colleges and universities have already clearly attached importance to practical teaching, strengthened practical teaching links and improved employment & entrepreneurship education and employment guidance services, the wrong ideology of "emphasizing theory while neglecting practice" is still deeply rooted in everyone's minds, which is difficult to eliminate. The behavior route has not changed much, affecting the smooth development of practical teaching [1].

2. Institutions and mechanisms are imperfect. The management system lacks completeness and care, resulting in loose management. As a result, various behavior measures in practical teaching are not standardized, and various links are not running smoothly. There is no specialized management department. Most adult universities affiliate practical teaching departments to theoretical teaching units, so there is no specialized manager and management ability is not high. Moreover, practical teaching assessment is perfunctory, the evaluation scope is incomplete and the standard is not high, which has little effect on improving practical teaching quality.

3. Teaching content and teaching methods are outdated. Practical course content and teaching

materials are not highly relevant with students' actual work, so the knowledge and skills acquired by students after graduation cannot find real application. The teaching method still features "injection type" teaching, and lacks "heuristic" teaching, so students just serve as knowledge container and lack learning initiative.

4. Teaching resources are insufficient. Despite the increasing funding, it is not applied reasonably. The utilization rate of purchased experimental equipment is not high, the hardware and software resources cannot meet the demand for practical teaching. There is no full-time practical teaching teacher, and part-time teachers have low practical teaching proficiency, whose ability to cultivate students cannot reach the requirement. There are few contacts with off-campus enterprises and very few off-campus resources are introduced. Due to lack of sufficient practice bases, practical teaching cannot be implemented.

### **III. Thoughts on the Construction of Integrated Practical Teaching System**

The practical teaching system is an organic whole with the function of cultivating students' ability [2], which is composed of the various elements in practical teaching activities. The integrated practical teaching system is to create a reasonable structured practical teaching system model, clarify the interrelationship and role of the various links and elements in practical teaching, strengthen the coordination and integration of the various links and the infusion of the various elements so that practical teaching management system can be effective, flexible and smooth, ensuring the realization of the goal of training practical talents. According to the characteristics of adult higher education teaching, in view of current problems existing in practical teaching, it is possible to construct an integrated practical teaching system characterized by "one main line, two combinations, four platforms and four guarantees", so that unified reform and improvement can be carried out in practical teaching. In this way, the basic behavior of constructing a practical teaching system coincides with the special purpose action of dealing with existing problems in practical teaching, and many problems are easily resolved.

### **IV. The specific construction of integrated practical teaching system**

#### **(I) One main line**

Adult universities should start from the needs of the social talent market and their own teaching advantages, determine their practical talent training goals according to the school's overall talent training goals and practical teaching positioning, carry out practical teaching with practical talent training goal as the main line. Adult higher education targets at adults who are already employed or unemployed. The ultimate goal of their studies is to obtain or improve their work ability or social employability through re-learning. Adult universities must set talent training goals based on talent requirements in various sectors of society and their own development status, clarify students' job needs and employment requirement, and train students' various practical abilities in a targeted and effective manner [3-4].

#### **(II) Two combinations**

1. Combination of practical teaching with theoretical teaching. Change the traditional teaching mode characterized by "theory-based teaching supplemented by practical teaching", establish a reasonable teaching mode in which "theoretical teaching and practical teaching are equally emphasized", and explore the innovative teaching mode of "practical-based teaching supplemented by theoretical teaching". Theoretical teaching serves as the foundation and guidance of practical teaching. Practical teaching consolidates and deepens theoretical teaching. The two complement each other. Adult universities should pay attention to the combination of the two in the teaching process, strengthen the integration of the two in the teaching content, and promote the two to go neck to neck in talent training [5]. According to students' learning purpose, adult universities should gradually shift the teaching focus to serving practical teaching with theoretical teaching, determine the relevant theoretical courses and teaching periods based on theoretical knowledge required for

practical courses, avoid doctrinairism and useless learning.

2. Combination of practical teaching with production activities. Production is the most basic social practice activity of mankind. The main content of practical teaching is the various skills required in production. The combination of the two not only is the essential requirement for carrying out practical teaching, but also meets the positioning criteria and development direction of practical teaching. Moreover, it can promote the integration of practical teaching and social practice, broaden the ways and methods of practical teaching, improve practical teaching quality and school-running effect [6-7].

### **(III) Four platforms**

1. Experiment. Experiment is a practical teaching platform aimed at cultivating students' knowledge application ability and hands-on operation ability by teaching students basic experimental skills and methods. Construction of the platform is relatively easy. By organizing students to study at fixed points in a focused manner, or arranging students to study independently through online teaching, the experimental courses can be carried out smoothly and the expected results can be achieved, which is now widely seen in adult universities.

2. Practical training. Practical training means simulation training aimed at students' specific technical skills or comprehensive technical application ability. Construction of the platform is mainly completed through joint construction of training bases via school-enterprise cooperation. By simulating real productive labor projects or simulating real working environment, students' basic operation skills in actual work can be trained to improve students' comprehensive application ability to solve practical problems.

3. Internship. Internship is an important teaching link for students to understand their careers and clarify their behaviors in the actual working environment, which trains students to apply the acquired knowledge and skills to real occupation posts. Construction of internship platform is convenient for adult universities, because most students are already on the job and can take advantage of their own job opportunities and work units to actively participate in internships. Even students who have no job can find real workplaces by leveraging various social relationships.

4. Graduation design (thesis). Graduation design (thesis) is the last important link for students to combine their knowledge, skills acquired during university and social practice to further improve their innovating ability, entrepreneurial ability and ability in analyzing and solving practical problems [8]. Considering training target of adult higher education, there should be special requirements for this teaching link. Students' graduation design (thesis) must not only meet the requirements of their major, but also follow the principles of reality and practicality. Students should select thesis topic based on their actual needs and future development, demonstrate real feelings and experiences from personal practical experience, actual work experience and entrepreneurial experience, thus truly giving play to the powerful role of this link.

### **(IV) Four guarantees**

1. Teaching staff team guarantee. Strengthening the construction of "double-type" teaching staff is an important guarantee for improving practical teaching level and quality. First, regularly select employed teachers to receive front-line learning in counterpart enterprises and institutions, so that they directly participate in professional and technical training to continuously improve the practical teaching ability. Second, actively introduce professionals with high operating skills and rich corporate practical experiences as external part-time teachers, continuously enlarge the scope and number of "double-type" teaching staff to meet the demand for quality and quantity of teachers in practice teaching.

2. Practice base guarantee. Practice base represents site resource ensuring the orderly and smooth operation of all links of practical teaching, which is a key construction project to solve the problem of lacking practice places and equipment and promote the deep integration of practical teaching with production activity [9]. First, improve the utilization rate of in-campus laboratories, rectify and optimize the laboratories according to the actual needs in the major and school size, and try to build the laboratories into general laboratories that support multiple courses. Second, start

school-enterprise cooperation, which is mutual beneficial and reciprocal. Select a batch of enterprises related to the majors set in the school as off-campus practice base, establish a long-term and stable cooperative relationship, so that enterprises provide students with real production environment and workplace, while students can assist enterprises in accomplishing professional work tasks.

3. Information resource guarantee. Allocation of information resources is a key step for guaranteeing realization of education informationization, integrated optimization and enhancement of various resources in practical teaching. First, create virtual simulation practical teaching resources using high technologies such as cloud computing, big data, multimedia, build a software and hardware environment that can supplement and replace the traditional operating links, so that the operation steps, operation flow and experimental effect of the simulation experiments conducted by teachers and students completely coincide with real experiments. Second, create a distance education platform using Internet and information and communication technology. With the flexibility and interactivity of online education, the limitation of time and space can be eliminated, teachers and students can communicate at anytime, anywhere, thus realizing opening and sharing of practical teaching resources [10-11].

4. Evaluation system guarantee. Constructing a sound and perfect practical teaching evaluation system is the key to guaranteeing the quality and efficacy of practical teaching. First, the evaluation subject should be diversified, which should not only include school teaching institutions, teachers and students, but also include external counterpart enterprises and institutions. In adult higher education, students are social members themselves. Social evaluation provides the ultimate reflection of the quality and efficacy of school practical teaching. Second, evaluation contents should be comprehensive. Practical teaching evaluation content should include the constituent elements of practical teaching system. The assessment and evaluation should take all links of practical teaching as the entry point. The implementation plan, curriculum setting, teaching environment, teacher allocation, teaching quality, teaching effect of practical teaching should be checked item by item. Third, the evaluation methods should be diversified. Quantitative evaluation should be combined with qualitative evaluation, process evaluation should be combined with final evaluation. According to the characteristics of practical teaching, emphasis should be given to the establishment and implementation of qualitative evaluation and process evaluation to guarantee true and effective evaluation results.

## **V. Conclusion**

The reform and improvement of practical teaching is a long and complicated systematic project. The particularity of training objects of adult higher education makes this project ever more complicated and difficult. It is of great significance to correctly learn from the experience and programs of constructing practical teaching systems in ordinary colleges and universities, accurately grasp the advantages and strengths of practical teaching of adult higher education, learn from each other's strengths, and build an integrated practical teaching system for adult higher education that can incorporate all links and all elements of practical teaching in smooth operation and have powerful functions in cultivating students' practical skills.

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