

Construction and Research of Diversified Environment for Computer Practice Teaching

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Abstract: Computer is a science and technology that pays attention to practical operation. It is far from enough to stay in the teaching of written theoretical knowledge. Only in practice can students really grasp the operation and use of computer and realize a deeper understanding of computer theoretical knowledge. Practice teaching is an important part of professional talent training program and one of the main teaching methods to achieve the goal of education talent training. Diversified teaching methods are integrated into computer practice teaching, and diversified practical teaching methods are established by simulating the corporate environment, diversified teaching content design and reform assessment methods. Incorporate into the digital practice teaching resources and management platform to serve computer practice teaching. The diversified environment of computer practice teaching will make students' practical ability to improve steadily. Practical teaching can provide students with personalized education, guide students to explore new knowledge, develop students' potential, and provide new talents in the computer field for the development of society.

1. Introduction

Computer practical teaching is the most important part of curriculum system construction. Among them, the concept of practice teaching diversification is also being absorbed by universities. Practice teaching diversification can not only provide students with a good opportunity to explore new things, but also provide students with a good platform to show their self-ability [1]. The Ministry of Education has pointed out that strengthening the reform of practical teaching methods and personnel training mode should be an important part of professional construction. Computer science is different from other disciplines. It has fast updating speed of knowledge, high updating speed of equipment, and large and uneven number of schools offering this subject [2]. Make full use of the teaching resources provided by cooperative enterprises to develop practical projects in the real environment. At the same time, we introduce, digest and absorb teaching videos and technical manuals of cooperative enterprises [3]. The process of knowledge transfer needs to change from “static” to “dynamic”. The learning in the new era emphasizes the relevance and practicality of each subject and the advanced learning process of autonomy and innovation [4]. Promote the diversification of education and teaching, so that educational resources can be presented in a more comprehensive, vivid and concrete way, thus achieving the perfect integration of computer technology and education. The ultimate goal of reasonable reform of existing practical teaching content is to strengthen students' understanding of basic knowledge and improve their comprehensive application ability, so as to better stimulate the initiative and creativity of learning [5].

After the implementation of practical teaching, students can acquire relevant professional knowledge and skills through practical operation and learning, and can obtain relevant professional certificates, such as network management engineer, CCNA, CCNP and other qualification certificates [6]. With the development of modern education technology, we have been able to build a variety of types and modes of multimedia classrooms, which are satisfied with different teaching content or for different teaching methods [7]. Diversified practical teaching methods can provide students with different personalities with a platform for exploring new knowledge, showing their self-ability, and realizing more professional personalized education [8]. Diversified teaching can enable students to better adapt to the new requirements of the development of social informatization, enhance students' innovative ability in computer applications, and maximize students' ability and

quality in the application of computer networks [9]. As the core of the "information society" and the supporting computer science, its knowledge and technology are characterized by rapid growth and renewal, while the traditional experimental teaching conditions and experimental equipment always lag behind the development speed and teaching requirements of computer hardware. With ability as the main line, student training is the mainstay, keeping up with the real (or simulation) training environment of market and technology development. This paper has carried out research on the construction of diversified environment for computer practice teaching [10].

2. Target of Training Center Construction

2.1. The Orientation and Objectives of Talented Personnel Training

Schools should actively improve the teaching mode of computer practice, teach students in accordance with their aptitude according to their different practical contents and interests in computers. Through purposeful and targeted teaching, students' practical operation ability must be strengthened in this process, and the former teaching mode of teaching students to listen should be broken. The practical teaching environment must be based on the professional needs of computer network professionals, and the orientation and goal of computer network technology professionals training must be clearly defined. A single person with strong specialty can no longer meet the needs of the society. What the society needs is a person with certain technical expertise, but with fairly comprehensive abilities. In the practical teaching process, students can conduct practical work simulations in the enterprise, apply the knowledge learned in the classroom to the production practice, create value for the enterprise, and feedback the students' practical ability and work quality. Pay attention to the actual participation and interaction of students, make teaching full of vitality, update teaching content in time, and improve the teaching system. Transform the resources provided by the company into school-based resources that meet the requirements of the talent development program.

2.2. Practice Environment Simulates Enterprise Working Environment

In computer practice teaching, teachers should also fully combine multimedia technology to improve the vividness of teaching content. Therefore, teachers should play a good guiding role in computer practice teaching and give full play to their professional expertise. Through on-the-job internship in enterprises, students can quickly integrate into their posts. At the same time, this cooperation mechanism also solves the problem of insufficient investment in network teaching environment caused by the rapid development of current frontier network technology. The overall teaching experiment environment is harmonious. The experimental technicians can dare to put forward new ideas and ideas, exchange and interact actively, strengthen inter-school exchanges and international exchanges, maintain communication with world-class famous schools, and grasp the development trend of the industry. It will play an active role in improving the teaching conditions and system of computer experiment and practice, cultivating students' spirit of exploring new knowledge and daring to innovate, and alleviating the financial pressure of laboratory construction. Clarify the duties of teachers and students, enhance the sense of participation of students, and ask students to submit experimental reports after the end of the experiment to enhance students' ability to apply knowledge theory to practical operations. In general, it should be classified according to the professional characteristics of students. In the process of teaching, it should be closely integrated with specific professions, and the specific teaching contents should be refined to form a teaching system that is conducive to the professional development of students.

Practice teaching is more to let students and enterprises zero distance contact, more understanding of the enterprise environment and enterprise workflow. So we need to simulate the actual working environment of enterprises in the process of practical teaching, and make the laboratory company layout. The network training center is divided into six functional modules: integrated wiring, enterprise campus network, enterprise remote network, enterprise network management center, enterprise data center and enterprise extranet. They are integrated into a complete simulation enterprise network engineering system training environment. Expansion and modularization of

professional curriculum practice syllabus, which can be carried out in stages in the practice of multiple courses, can effectively solve the contradiction between limited hours and teaching content, but also greatly improve the proportion of design-based practice. It is also necessary to integrate relevant vocational skills into practical teaching courses purposefully and strengthen students' vocational skills training. While completing the credits, the students are familiar with the content of professional skills certification and lay a solid foundation for the subsequent professional skills certification. It is also necessary to intentionally integrate relevant vocational skills into practical teaching courses and strengthen students' vocational skills training. The whole teaching mode is student-centered, and the teacher only plays a guiding role, allowing students to complete the state change from passive acceptance to active learning. Students can not only learn the relevant knowledge of computer courses from the task process, but also the students complete the credits. Familiar with the content of professional skills certification, laying a solid foundation for the subsequent professional skills certification.

3. Specific Implementation Scheme of Diversified Teaching Method

3.1. Construction of Open Innovation Laboratory

Practice teaching system should increase the proportion of designing and comprehensive experiments to stimulate students' imagination and creativity. Many innovative experiments need to be completed in a better experimental environment. Assessment and evaluation is the last and most important part of computer practical teaching activities. How to better improve the assessment method of computer practice teaching is a favorable guarantee to improve the quality of computer practice teaching. The teaching and practice of simulation and other aspects are very useful, and can also be used in computer operation exercises and so on. Keeping up with the latest level of technology development and application, we have the ability to expand and update relevant modules at any time as needed without major adjustments to the overall framework. Comprehensive design experiment is mainly aimed at the knowledge learnt by students before and after the penetration, not only to review the previous knowledge, but also to use and grasp the new knowledge. At the same time as the teaching experiment system combining curriculum teaching and scientific research practice, we actively hold various forms of competition to promote the reform of teaching experiment. Innovative training is shown in Table 1. Add a variety of evaluation methods, such as task completion, innovation level, practice report analysis, group discussion evaluation, etc. Each evaluation option has different weights, and finally the student's evaluation results are obtained through comprehensive calculation.

Table 1 Innovative training

	Assessment	Evaluate
International Programming	12.39	15.08
Computer Works	17.13	16.12
electronic design	15.22	15.37

3.2. Developing the characteristic practice of specific student groups

The use of the Internet to establish online learning system, micro-courses, live classroom and other diversified teaching platforms, change the "static" situation of traditional multimedia teaching, increase the online interaction between students and teachers, and truly use the Internet to realize the "teaching-learning" system transformation of computer courses in Colleges and universities. Place a complex laboratory rack into a high performance computer. In the construction of practical teaching environment, we can consider introducing the following technologies to build a practical teaching environment for routing switching and network security. Learn from foreign advanced teaching experiment experience, provide students with a wide range of information access channels and experimental platform, so that the overall level of the experimental platform has been greatly improved. Let students learn how to operate and configure the operating system in the virtual

environment, so as to achieve the goal of multiplying the effort with half the effort. In the construction of network engineering professional laboratories expensive, you can consider the introduction of virtual technology to build a routing exchange and network security practice teaching environment. When arranging training programs, we will highlight the following professional skills: computer network building capabilities, management and maintenance capabilities, server configuration and management capabilities, security capabilities, and system integration capabilities. In the process of designing practical projects, there should be some basic experiments that fully embody the experimental operation methods and operational skills, but they are more important than the important ones, mainly increasing the proportion of comprehensive, design and innovative experiments, thus stimulating students' autonomy. Sex, innovation and enthusiasm for learning.

At the end of the course, the students should write the experiment report according to the case and the conclusion report according to the project. This kind of simulated enterprise management system, working environment and changing the roles of teachers and students in practical teaching content can make students accumulate work experience, thus greatly improving their professional skills and quality of the workplace. A comprehensive simulation design is carried out between floors and equipment of each training function module, which reflects the authenticity of the training from each link. In terms of teaching content, hardware and software are allocated. Case or project-based teaching is the main method. After the course is over, students should write analysis reports based on cases and final reports based on projects. Actively rely on the working environment and resources of the cooperative enterprise to enable students to see and touch these high-end large-scale computer hardware and equipment; to be an off-campus practical teacher with experienced technical backbone, to train students in system analysis, design and integration capabilities, and professional Enterprise experience that should be available. When the computer major graduates, it is not possible to evaluate the computer practice teaching by the quality of the graduation thesis. Graduation design should give full play to the professional skills in practical teaching through the students' own ideas and designs, and best show the results of practical teaching. Cultivate their own practical application ability and problem-solving ability, and at the same time, they can gain a sense of accomplishment when the task is completed, greatly enhance the enthusiasm and initiative of students' learning, and improve the learning efficiency, and better complete the teaching objectives of the computer course.

4. Conclusion

This paper studies the construction of diversified environment for computer practical teaching. The application of diversified teaching methods in computer practice teaching is conducive to cultivating students' practical ability, enhancing their innovative ability and practical application ability of computer technology. Diversified forms of computer curriculum setting, teaching content reform, the establishment of evaluation system, create a diversified computer curriculum reform teaching path. Construct and reform teaching practice platform according to local conditions. The diversified practice teaching method can integrate the traditional knowledge transfer process and the student's innovation ability into the teaching content. The network training center pays special attention to the professional quality training while paying attention to the professional knowledge of the students. The network project example allows students to consolidate the basic knowledge of the network in the process of completing the network project to avoid the flow of form, and truly provide students with advanced, scientific and practical platform for improving students' practical ability. In the early stage of the construction of the practical teaching environment, the investment is large and the construction time is long. Therefore, it is necessary to fully consider the relevant comprehensive experiments, open applications and the field widening and sustainable development of the laboratory itself. Standardizing and appraising the teaching methods and results of computer professional practice teaching, so as to provide reference for the improvement and reform of computer practice teaching, so that the computer professional practice teaching can be improved step by step, and more innovative professional high-quality computer application type can be cultivated. Talent.

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