

Construction of Computer Teaching and Training Platform in Higher Vocational Education Based on Cloud Computing Technology

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Abstract: With the continuous promotion of information technology in Higher Vocational colleges, computer teaching has become an indispensable modern teaching means in the teaching of various specialties in Higher Vocational colleges. The traditional management mode of computer laboratories has gradually fallen behind. The construction of cloud computing training platform in higher vocational colleges can solve the problems existing in the management of traditional computer laboratories. There are many problems, such as miscellaneous, cumbersome maintenance, high energy consumption, time-consuming and energy-consuming, and inflexible resource allocation. At the same time, it provides a training environment for cloud computing personnel training and scientific research.

1. Introduction

Due to the continuous development of science and technology information in China, the information technology in some higher vocational colleges in China is also rapidly improving. The traditional teaching content has been updated and replaced. Various kinds of information technology software have been used and launched, which requires the computer to improve its hardware configuration, but this will lead to maintenance and management time. To compress or occupy, this kind of problem causes managers to be exhausted, not burdened and under increasing pressure, so the traditional management mode and method can not adapt to the current technological development ^[1]. Due to the emergence and development of cloud technology and science and technology, different computer management modes have been provided to mature. It can quickly deal with some problems arising from computers, and provide a new management mode. It provides a practical training environment for scientific research in China and trains a number of cloud computing science and technology talents ^[2].

2. What are the problems and reasons of computer professional training teaching in Higher Vocational Colleges in China nowadays

2.1. Overemphasizing the teaching concept of theory without paying attention to practical training

Faced with the rapid development of computers, many computer majors in higher vocational colleges do not add ever-changing contents to the computer classroom when educating students. Teachers of computer majors still use the previous teaching ideas and methods, traditional teaching system and teacher's listening mode, which lead to many problems. Students either really understand or propagate knowledge according to the texts, talk about military affairs on paper, do not understand the importance of practice, maintenance of some computer problems is very difficult, facing some production websites is more difficult, this model and concept makes students uneven development, theory is too heavy, for future employment work is even more disadvantageous ^[3].

2.2. The computer equipment in teaching is too backward

In some higher vocational colleges, because of the limited funds of the school, the computer

teaching equipment of the school can not be updated in time. In order to save money, some colleges choose obsolete computer teaching materials, which results in the lack of practical operation and systematic learning of students majoring in computer. Because the computer specialty is an information specialty with fast updating, if students can not keep up with the development of the teaching equipment used in their study, the students will inevitably lack the knowledge of the new computer information technology and the prospective professional direction when they use the teaching equipment, which will lead to the students' lack of professional direction in the future. There are differences in the knowledge and content of learning from the developing computer information. Students can't develop and improve their computer ability. What's more, in the future employment, students will cause technical difficulties and can't solve them.

2.3. Computer majors lack the ability to innovate independently

For the computer information industry, it is a process of continuous development and accumulation of knowledge. For the computer industry in our country, there is a rapid change. Various new software and equipment languages are changing. At this time, if students have no rational knowledge, it will be impossible. If the process of learning and accumulating oneself and renewing knowledge is not able to improve the ability of innovation in practical operation, then he will not be able to adapt to and meet the requirements of the society for computer technology specialty, thus being abandoned by the computer industry^[5].

3. The Main Significance and Purpose of Cloud Computing Training Platform Construction

Because of many problems in traditional computer information management, many higher vocational colleges in our country are studying cloud computing technology. They have conducted in-depth research and experiments on cloud computing teaching resources construction, cloud experimental platform design, cloud computing assistant teaching and other issues, so as to promote higher vocational colleges in our country in computing. The teaching of mechanical specialty is developing and innovating constantly. But nowadays, the teaching mode of computer specialty in higher vocational colleges is not very reasonable and mature, which leads to a serious waste of resources [6]. What are the main purposes of cloud computing training platform construction? The first is to create an interactive and functional equipment complete and fast platform. The second is to build a comprehensive training platform for our teachers and some professional experimental training bases. The third is to promote and enhance the computer majors in our country to turn to comprehensive application-oriented talents, promote innovation and practical ability.

4. Construction of Practical Training Platform for Computer Major in Higher Vocational Colleges

What is the training platform under cloud computing technology? It mainly aims at providing a series of complete, comprehensive, unified and professional teaching and training platform for people in the teaching and financing industry to solve the problem. The teaching and training platform under cloud computing technology mainly uses virtual information resources to centralize information, so as to achieve the storage and utilization of resources and adjust scheduling. Through the overall centralized cloud computing technology training platform, the unified use and management of teaching and teaching resources and experimental environment of teaching environment are completed.

4.1. What is the deployment of laboratories?

The training room mainly uses the centralized management of computer terminals and resources through the combination of opening and room testing. The first point is that the computer servers are managed in a cluster way through the cloud computing technology platform; the second point is that the terminal meets the advanced cloud shared desktop while supporting the previous computer

mode^[7].

4.2. Training Cloud Resource Management Platform

Cloud resource management platform is based on the latest cloud computing technology system, mainly using a variety of core mainstream information technology, including reasonable scheduling, supply and service schemes, using cloud computing resources to transform into services, creating a flexible use of IT architecture, so as to meet the management and delivery of services. Pay for service. At the same time, the cloud platform mainly adopts the information software architecture of SOA, using the theory of ML management service method, so that cloud computing services can achieve the integration of cloud resource management and use, and get use more quickly and accurately^[8].

4.3. Main Architecture of Cloud Resource Management Platform

Cloud resource management platform includes many units and various institutions, government departments and other scenarios. At the same time, it can be used in complex changes and different scales of IT. Cloud resource management platform mainly includes: first, cloud computing layer: for the use of users' information and data security and system network security issues. The second is how to manage resources intelligently and how to calculate, measure and dispatch the main platform. The third is the cloud service layer: mainly to support the operation and management of cloud computing platform, the primary service layer providing services based on the management framework. Fourthly, cloud operation and maintenance layer is a portal to provide a large cloud platform for overall and long-term operation and maintenance. Fifth, Cloud Application layer: make full use of the resources of virtual space provided by cloud platform to build and deploy application systems such as enterprise, education and learning.

4.4. Cloud Resource Management System for Teaching and Training

Cloud resource management system mainly uses the "Trinity" information design criteria, simulates three different roles, namely students, teachers and computer administrators, and provides a complete information service management training platform for higher vocational computer teaching and training under cloud computing technology, among which teaching funds are mainly provided. Source management, course training management, user safety management, training audit management, etc.^[9].

5. Cloud Computing Application Training Platform

The main purpose of cloud computing technology teaching and training platform is to satisfy the requirements of physical and intellectual virtues of national education, and to require students to have a good sense of innovation and professional accomplishment and morality, comprehensive talents skilled in computer information technology and network technology, and have large data security and virtual data. And cloud computing technology. The training platform system under cloud computing technology includes practice and theory, which includes the courses of computer professional technical ability and basic courses of computer specialty.

5.1. Better meet the industry's teacher training and provide a base

The computer teaching and training platform under cloud computing technology can better let enterprises and units recognize the huge business prospects and value brought by cloud computing, at the same time, it can better improve the enterprise's management awareness of cloud computing, help everyone learn and quickly use the framework and theoretical system of cloud computing^[10].

5.2. Can provide professional training teaching

The construction of the teaching and training room of cloud computing technology has put forward the service and infrastructure applied in cloud computing, and also involved the whole industry chain, aiming at the training of students, building the overall framework of teaching and

training. Students can design new experiments independently in addition to the original project. Teachers can guide students to find problems and answer them in the process of doing experiments by themselves. Teachers can provide opinions. Building a computer teaching and training platform of cloud computing technology in higher vocational colleges can meet the requirements of single subject and comprehensive training of multiple subjects. Students can design and use a variety of information technologies individually, so as to carry out experimental innovation and training.

6. Conclusion

Through the construction of computer teaching and training platform in Higher Vocational Colleges under cloud computing technology, we can achieve the training courses in information technology, such as intelligent database, cloud computing security, network virtualization framework, which can not only ensure that the training requirements of computer teaching specialty are met, but also meet the graduation design of students. And the practical training requirements of various disciplines^[11]. Through the use of a variety of modular knowledge, students integrate and adopt their own unique design technology, innovative experiments and project design training. In this way, we can enhance students'innovative ability, consciousness and practical operation ability in their career after employment, so as to build cloud computing technology teaching and training platform into a comprehensive, technical and practical training school.

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