

# Problems and Countermeasures of Computer Network Teaching in Colleges and Universities

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**Abstract:** with the continuous development of social economy, the continuous progress of science and technology and the development speed computer technology and network technology is accelerating, the application of computer network technology is becoming more and more extensive, many colleges and universities have set up computer network courses. However, in the construction of the computer network course system in the field of education, the computer network teaching has become a problem with the wide application of computer network in current education field. How to link curriculum development with the application of computer network technology has become a problem for university teachers to ponder. Starting with the concept of computer network teaching, this paper analyzes the problems of backward teaching system, imperfect practical teaching platform, and the selection of the network platform and software in the teaching of computer network in China, and puts forward a reasonable strategies for the designing of computer network teaching course and the use of network to carry out diversified teaching.

With the rapid development of modern information technology, the application of computer network in the field of education has become more and more extensive, which makes the traditional education concept, educational system and teaching mode have undergone fundamental changes. How to create a computer network education curriculum system which meets the requirements of the current times is particularly important for the practice of computer network teaching in Colleges and universities. In the construction of computer network course system in Colleges and universities, we need to understand the basic concepts of computer network teaching firstly, analyze the existing problems in the current computer network teaching, and find out the countermeasures to solve these problems.

## 1. Basic Concepts of Computer Network Teaching

The computer network teaching means that the main teaching content of the university is computer technology and network technology, which aims to teach the computer network knowledge and improve the professional skills for students. In the computer network teaching, students will be able to understand the computer network knowledge systematically, understand the mature computer network technology, and the basic principles and concepts of computer technology and network technology, which can improve the students' computer network theory knowledge level and raise the practical ability of the students' computer operation. To enable students to master basic network technology and network security knowledge, students can understand the latest computer technology and network technology channels in the computer network teaching by relevant channels. In addition, students can understand the development of the latest computer technology and network technology, build the concept of innovation for computer technology and network technology, and lay a solid foundation for the their future research on computer technology and network technology. However, with the continuous development of computer network technology and the continuous change of social environment, the traditional computer network teaching course has not adapted to the needs of the current computer network personnel training. The methods and contents of computer network teaching can't keep up with the pace of the times. In view of this situation, colleges and universities need to find out the existing problems in the computer network teaching course system, and put forward corresponding measures to solve these problems, and give

full play to the role of computer network teaching to the personal training.

## **2. Problems in Computer Network Teaching**

Computer network teaching has become an important part of China's education management and construction team. With the rapid development of economy and information technology and the environment for educational reform in China, under the joint efforts of education practitioners and theoretical researchers, the development of computer network education in China are quite rich and some lessons have been learned from teaching and accumulated some experience. However, compared with some developed countries, our country's network teaching started late. Teaching models and teaching management are mostly learned from other countries, and the rapid development has also produced many problems.

### **2.1. The idea of teaching management is unscientific**

Scientific and rational concept of computer network teaching management is the prerequisite for healthy development and realistic web-based teaching. The development time of computer network teaching in China is short, and the technical strength has been developed, but there is a great lack in the concept and practice. Most of it is a copy of foreign experience. It has not been applied effectively and not well suited based on the actual situation in our country. The concept of network teaching has not been developed with the times resulting in the diversification of technical standards, teaching ideas and patterns of simplification and other problems. At the same time, there are some misunderstandings about computer network teaching in Colleges and universities. They often treat the network teaching management mechanically and metaphysically, exaggerate the role of the network, and think that the computer teaching and its management have nothing to do with the school and the classroom, and the teaching method is completely separated from the classroom teaching. Therefore, the neglect of computer teaching management is self-evident.

### **2.2. The teaching system is relatively backward**

In view of the construction of computer network teaching system in Colleges and universities, many colleges and universities have shortcomings that the teaching system is backward, the number of courses is few, and the theory of curriculum is light on practice teaching. In the teaching of computer network for Colleges and universities, the backwardness of the curriculum system is mainly reflected in the following: the computer network teaching system in Colleges and universities emphasizes the theory teaching. In the course of teaching, the teachers attach importance to the students' understanding and memory of the theoretical knowledge of the computer network, but they ignore the training of the students' actual operating ability of the computer. The teaching system of the computer network is more important than the practice teaching, in addition some universities only set up the computer practice course and impart the theoretical knowledge in the practice course. This kind of curriculum system makes the students learn more one-sided knowledge and can't guarantee the balance of theoretical knowledge and practical ability. There are still few computer network courses and low classroom efficiency in the computer network teaching, it's not in line with the needs of the computer professionals in the current times. In most colleges and universities, the number of class hours of computer network courses is 72 hours, far from meeting the requirements of computer network teaching hours, which will lead to the tight arrangement of the course task and the fast teaching frequency, and the efficiency of the class will decline once the students can't keep up with the steps of the classroom.

### **2.3. The practical teaching platform is not perfect**

In the computer network teaching, the speed of teaching content renewing is slow, however the speed of computer network technology renewing is relatively fast, therefore, it will cause the lag of teaching. Computer network teaching needs to bring the latest achievements of computer network technology into the teaching system as far as possible, so as to achieve the synchronization of teaching and computer network technology. It requires that in the process of computer network

teaching, the use of routers, memory switches and other equipment need to be kept up to date. Through the update of the hardware equipment and the software equipment, thus building a practical teaching platform for students to ensure the effect of the computer network practice teaching. However, in view of the hardware equipment of computer network courses in most colleges and universities, the computer network equipment is still more obsolete, and the teaching platform of practice course is not perfect, which can't meet the current practical teaching needs.

#### **2.4. The selection of the course network platform and software**

In the choice of university curriculum network platform and software, schools need to consider the choice of students' employment and employment orientation. For example, in the construction of the teaching environment of the computer network course, there are two kinds of construction environment, one is based on the Microsoft.NET platform as the building environment, the software programming and related teaching activities in the.NET platform, and one is to build the JAVA platform based on SUN as the building environment, software programming and related teaching activities are carried out. For example, in the selection of the server platform, the UNIX server and the Windows server are the most widely used servers, and the universities need to choose different servers to set up according to the students' different employment guidance. The establishment of the teaching environment and the construction of the server will have a great impact on the employment of students after graduation. To ensure that computer network teaching keeps pace with the development of the times, we need to carefully choose the teaching environment and the construction of servers.

### **3. Countermeasures to the Problem of Computer Network Teaching**

#### **3.1. Reasonable design of computer network teaching course**

In computer network teaching, teachers should focus on the basic principles and practical operations of computer networks. The basic principle of computer network mainly refers to the theory system of computer network. Therefore, in the design of computer network course teaching, it is necessary to set up the content of the computer network course system reasonably, and cover the framework of the basic computer network theory knowledge system. In the course of computer network course teaching, college teachers should pay attention to the teaching of the basic theory about computer network and make full use of the teaching methods such as analysis and comparison so that students can clearly understand the differences between different computer concepts. In the design of computer network course content, it is necessary to change the outdated teaching outline properly according to the development of computer network, delete the difficult teaching content appropriately, simplify the teaching content, and also highlight the emphasis of computer network teaching. The content of teaching needs to cover the whole computer network as far as possible, so as to ensure that the system of basic knowledge theory guaranteeing the key teaching contents. For example, in the computer network teaching, the author requires students not only to understand the use of computers, but also to grasp the core theory of computer networks. At the same time, the author transfer the knowledge of computer network teaching to the latest theoretical research frontiers, and make corresponding teaching plans before the course teaching. Through the rational design of computer network teaching courses, we can improve the efficiency of computer network teaching and achieve better teaching results.

#### **3.2. Using network to carry out diversified teaching**

In computer teaching, in order to cope with the problems of backward teaching system and imperfect practice platform, colleges and universities should pay more attention to the reform of the educational system, make full use of the network technology, promote a variety of network teaching methods, and realize the synchronization of theoretical knowledge education. In Colleges and universities, it is necessary to break the traditional teaching mode first, explore new teaching mode actively, realize the combination of theoretical knowledge imparting and practice, and improve the

learning efficiency for students. At the same time, teachers should pay attention to the stimulation of students' learning enthusiasm and enhance the effectiveness of computer network teaching by mobilizing the enthusiasm of students. In traditional teaching mode, the same educational method is adopted for all students of different knowledge levels, which is not conducive to the cultivation of excellent computer network professionals. Developing diversified network teaching can focus on students with poor computer network knowledge, so that students can keep learning enthusiasm. For example, using computer distance teaching, the teacher sends teaching video to the student's computer, students can choose the key and difficult points of the courses according to their knowledge acceptance, so as to improve the learning efficiency.

#### **4. Conclusion**

In the teaching of computer network in Colleges and universities, in order to improve the teaching efficiency, firstly, it is necessary to improve the computer network course system and the practical teaching platform. Secondly, the university needs to design the computer network teaching course reasonably and highlight the key point of the computer network teaching. Finally, the university can use the network to carry out diversified teaching and improve the teaching quality. It is believed that the efficiency and quality of computer network teaching will be improved effectively from the above aspects, and it will lay a solid foundation for the overall optimization and development of the teaching work in Colleges and universities.

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