Application of Network Technology on Computer Aided Education

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Abstract: With the advent of the information age, modern science and technology such as computer technology and network technology have been widely used in all walks of life, and it appears as computer-assisted education in the education industry. Among them, network technology, as an important part of computer-assisted education, has great advantages in the development of modern education. It plays a positive role in improving classroom teaching efficiency, optimizing teaching models, and enhancing educational effects. This article first analyzes the application advantages of network technology in computer-assisted education, and then proposes several implementation strategies for the application of network technology in computer-assisted education.

1. Introduction

The popularization of computer network technology has brought great convenience to people's lives. For school teaching, computer education has become more and more important. With the development of the times and science and technology, the use of computers has become very extensive. The new generation of students must master a solid computer foundation in order to not be eliminated in the social competition. Computer network technology provides a wealth of learning resources for computer-assisted education, so that students can learn more knowledge in an interactive environment. When students encounter problems that they do not understand in the process of learning, they can use powerful the network fetches the answers they want. Although computer network technology has brought many benefits to students' computer education, it also has some unfavorable influence factors, so the main task at present is to make full use of its advantages and avoid or eliminate those unfavorable influences as much as possible. Give full play to the role of network technology in computer-assisted education.

2. The Advantages of Computer Network Technology in Computer-Assisted Education

Because the Internet provides a lot of information, students can use this information platform to obtain the latest knowledge and information. If students encounter some unsolvable problems in the classroom, they can search for answers to the questions completely through the Internet. At the same time, students can use e-mail and MSN and other communication network tools to further realize good communication and exchanges with the outside world. Students can even enter some famous schools or foreign campus websites to directly listen to famous professors' explanations of courses, which greatly enriches learning resources, expands students' horizons, and plays a role of enlightening and guiding students' thinking.

With the power of the Internet, the ways of learning can also be varied, and students can choose according to their actual conditions. Nowadays, many schools have placed their classrooms directly on the Internet, and the opening of online classrooms has provided great convenience to students' learning. If some students occasionally encounter special circumstances and cannot go to the classroom normally, in the online classroom, they can make up the missing courses when they have time. The traditional teaching model cannot achieve this. In addition, compared with the rigid and outdated traditional classroom teaching, the knowledge of the online classroom has always been in a process of change, the content is updated in a timely and rapid manner, and the amount of learning content covered is large, and traditional teaching can only provide limited information. the amount.

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Through the online classroom, students' enthusiasm and interest in learning can be stimulated, and the ability of students to learn independently can be cultivated. This method can greatly improve the efficiency of learning. Network teaching can also allow students to choose test questions of different difficulty according to their own learning situation, realize students' independent examination, and create a flexible and creative learning mode based on the differences of individual students.

Under the application of computer network technology to assist teaching, the entire teaching can form an intuitive interactive environment. Teachers and students can communicate and communicate most directly in the environment provided. At the same time, students and students They can also learn and talk to each other, so that the whole school is in a good atmosphere of communication and interaction, which is conducive to better learning for students.

3. Common Problems in Network Technology Experiment Teaching

Computer network technology has strong practicality, but now most colleges and universities in my country have fewer experimental courses of network technology, generally only 16 class hours. Computer network technology has a lot of practical content, but there are few experimental courses, which makes it difficult to arrange the experimental content reasonably. It is even more difficult if you want to use practice to deepen theoretical knowledge.

The experiment content is monotonous and lacks systemicity. Many colleges and universities have the problem that the experiment content is too one-sided when conducting computer network technology experiment teaching because of some factors. Often only experiments such as network software application, network configuration, network system operating system use, and network cable production are offered. Although these experiments can improve students' hands-on practical ability, experiments such as network protocol analysis, network security, network system testing, network system construction, router and switch configuration are rarely opened. This leads to poor correlation between experiment and theory, and a serious disconnect between theory and practice.

The student's subjective initiative is poor. The students' enthusiasm for experimentation has not been fully mobilized, and there are often problems with the instructor as the center in the process of unskilled experiments. Generally speaking, the instructor will demonstrate and introduce the experiment first, and then let the students operate it by themselves. Because the instructor has to instruct a variety of students, it is difficult to thoroughly analyze the causes of the problems in the experiment with the students, causing these problems to be either ignored or solved by the teacher. This has led to the neglect of students’ cognitive subjective role and lack of good interaction, making it difficult to stimulate students’ learning enthusiasm and initiative, which is not conducive to the cultivation of innovative thinking.

The quality of the experimental teachers needs to be improved, and the construction needs to be strengthened. Generally, students experiment in groups, and the instructors of experiments are often theoretical teachers. In fewer experimental courses, it is difficult to achieve the goal of better organization of experimental teaching and meticulous guidance of students with a single teacher. There will certainly be some students who are unable to successfully complete the experiment. Even if some students complete the experiment under the guidance of the teacher, it is difficult to digest the knowledge of the experiment, which makes the experiment unable to achieve the desired effect. Therefore, it is necessary to strengthen the training of experimental teachers.

The experimental assessment is not strong enough. At present, online courses have the problem of emphasizing theoretical assessment and neglecting practical assessment. The lack of strength in experimental assessment will cause students to pay more attention to the study of theory and ignore the learning of experiments, which leads to the lack of enthusiasm and initiative of students in experiments, so it is necessary to strengthen the strength of experimental assessment.

4. Application Strategies of Network Technology in Computer-Assisted Education

The application of network technology in computer-assisted education is mainly reflected in the

auxiliary classroom teaching. Schools can use campus networks and computer information technology to establish subject websites and resource databases, strengthen the integration of teaching content and subject courses, and use the network information environment to provide students with learning resources and auxiliary learning tools. For example, teachers should be able to use network technology to find teaching-related learning resources, and use these materials to make exquisite teaching courseware for students' learning reference; they can also use software information systems to compile and manage students' grades, teaching design, teaching plans, etc.; Through the subject website to achieve student online testing, online homework submission and evaluation; at the same time, teachers should also improve their own level of application of related technical software, such as some abstract knowledge teaching, some knowledge, theories, images, etc. The process of change is difficult to express in words and texts. For example, when learning the configuration of the computer metropolitan area network, the construction of the line and the working mode of the server, the teacher can use 3Dmax to make a three-dimensional demonstration animation to help students better understand the teaching content.

An important issue facing the application of computer information technology and network technology in modern education is network security. Schools and teachers should increase the application of network security technology to improve the security of the online education learning environment. First of all, in the process of using network technology to carry out computer-assisted education, teachers should increase their efforts to identify and filter information. For example, they can install anti-virus software to prevent viruses and hacker attacks to ensure that students can learn independently. The network environment is safe and healthy. Secondly, the school should strengthen the construction of campus network security, increase the application of network security technology in the campus network, and effectively combine the firewall with NAT technology to effectively block viruses and illegal access from the outside world and improve the security of the campus network the coefficient and operating efficiency make the campus network and computer equipment more efficient to serve the education and teaching work.

With the rapid development of modern educational technology, virtual technology has been widely used in education and teaching. When developing computer-assisted education, schools and teachers can make full use of modern virtual network technology to establish open online courses, use rich online learning resources to encourage students to study independently in their spare time, and use the interactivity and sharing of the Internet to strengthen teachers and students. The exchange and interaction between the two can effectively enrich the teaching content and teaching methods, break the time and space limitations in the traditional teaching process, and greatly contribute to the improvement of the efficiency of computer-assisted teaching.

In computer-assisted teaching, in view of the important influence of teachers' own computer application ability on teaching quality, teachers should be required to have professional computer technology. Schools can require teachers to further study, conduct unified computer training, and make teachers deeply aware of the impact of their own comprehensive quality on teaching results, so that teachers' computer skills can be more professional, and students can create a strong teaching force. . Because the computer network is connected to a vast world, there will be all kinds of information. For harmful information, students must learn to filter, exercise self-control, and choose information that is helpful for learning. In the computer-assisted teaching class, teachers should especially emphasize this point, so that students can deeply realize the harm of bad information in their ideology, so that they can correctly screen information resources. Computer network security issues cannot be ignored and must be taken seriously. When using computer network technology to assist in education, we must beware of dangerous factors from the outside world to protect the security of information. You can install anti-virus software to prevent virus intrusion. And hacker attacks. At the same time, students should also be educated on network security, and students must be educated to develop good Internet habits and not to open unfamiliar e-mails at will, so as to prevent the occurrence of computer poisoning.

5. Conclusion

With the development and progress of network technology, the role of the network in computer-assisted education has become more and more prominent, and the country has paid more and more attention to computer-assisted education. Many modern colleges and universities have opened computer majors, but computer-assisted education still exists in my country. The phenomenon of emphasizing theory and neglecting experiment. This article briefly introduces the advantages of applying network technology to assist education, and then analyzes the problems existing in network technology experimental teaching, and puts forward some educational reform suggestions, hoping to provide relevant people with certain Draw on.

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