Application Practice of Computer Network Technology in Education Industry

Limei Wang1,*

1Dongying Vocational Institute, Dongying, Shandong, 257091, China

*Corresponding author e-mail: wanglimei290@dyxy.edu.cn

Abstract. With the advancement and development of science and technology in our country, computer networks have spread across the country at a fierce rate. It brings opportunities and challenges to all walks of life, and its advantages have made our country pay more and more attention to the application of computer network technology. This paper mainly elaborates the application principles of computer network technology in educational practice, and this paper also proposes some measures to strengthen its application in the education field.

Keywords: Computer Network Technology, Educational Practice, Educational Practice

1. Introduction
With the development of our country’s economy and technology, network information technology has also developed rapidly. While making people’s lives more convenient, it also improves people’s work efficiency. People have gradually accepted the networked and informationized lifestyle. In the education field, the Internet has also brought about tremendous changes. It enriches education and teaching methods, and it also improves teaching efficiency and teaching quality.

2. Computer network technology
Computer network technology is a very broad concept, it mainly refers to the use of network technology to connect multiple computers in different geographical locations, and at the same time to achieve data communication between multiple computers through network protocols, so as to achieve between different computers Collaboration can ultimately achieve the purpose of resource sharing.7

With the rapid development of modern economy, computer network technology has also been rapidly developed, and it has been applied in more and more fields. Through this technology, the performance of the original single computer can be greatly improved, and at the same time, different geographical locations [1]. The computer realizes a high degree of resource sharing and integration. The function of computer network technology is shown in Figure 1, and the main content of computer network technology is shown in Table 1.
### Table 1. Main content of Internet network technology

| computer network Technology | main feature |
|-----------------------------|-------------|
| Internet network technology | The Internet is a very mature computer network technology. Through the Internet, operations such as information query, email sending and file downloading can be realized on the computer. Since the emergence of the Internet, it has been widely used all over the world, and its performance and stability have also been greatly improved. |
| LAN network technology      | LAN technology has the advantages of high confidentiality, easy maintenance and management. On the basis of the LAN technology, there is also a WLAN technology, which enables users to conveniently use the local area network functions within a certain range by using wireless communication technology in the local area network. |
| ATM network technology      | ATM network technology is characterized by fast data transmission speed and can be connected to other networks such as LAN networks. After years of development, ATM network technology has become very mature. |
| Wireless network technology | It mainly realizes the transmission of data and information through non-contact methods, and the most widely used ones are general wireless networks and wireless LANs. |

### Figure 1. Functions of computer network technology

3. **Overview of the application of computer network technology in educational practice**

With the development of computer network technology, the effect of human-computer interaction and multi-machine linkage has been realized. Using optical fibers, microwaves, cables and other materials to connect the scattered and independent computers on the earth with each other, the distance between people is instantly reduced, and everyone can share resources and data such as software and hardware. The computer network includes the hardware part, which is a computer, and the software part can be regarded as network technology [2]. After the computer is installed with software and hardware, multiple machines are combined into a chain through the network, so as to realize resource sharing and real-time online. Through this instant and convenience, the effect of rapid information transmission and resource sharing is achieved. It is precisely because of the advantages of network technology that it is widely used in educational practice. As an auxiliary teaching method, it has played a great role in the realization of teaching effects. In the traditional teaching mode, students generally learn knowledge through passive listening to lectures, which is also referred to as "cracking duck teaching". However, with the use of
computer network technology, students no longer have to be restricted by time and place, and students can learn independently and master knowledge points by repeatedly listening to classes. Among them, distance education is a clear manifestation of network technology in education. Resources can be shared through the network, which can improve the lack of educational resources in remote areas of the department. For example, the lack of teachers in remote mountainous areas and the lack of teaching materials can be achieved through a computer and network. To share teaching resources with good schools in other urban areas to improve the imbalance of education. In addition, the currently advocated flipped classroom teaching model can also be used in online classroom teaching methods of online courseware to allow students to study by themselves before class and review after class. Teachers' teaching in the classroom becomes discussion and consolidation, which greatly improves teaching efficiency. In the MOOC learning mode of the flipped classroom, students can now study online in advance, and they can consult the teacher online if they have any questions, complete the homework assigned by the teacher online, and take an online exam. Therefore, through network technology, the autonomy of education is promoted, and students are more conscious in this process, which breaks the traditional education model, expands the scope of education, and improves the efficiency of students' autonomous learning. Regardless of the age, in the educational practice of primary and secondary schools and universities, computer network technology can be effectively used to serve teaching [3,4].

4. Application principles of computer network technology in educational practice

4.1. Normative principles
The application of computer network technology in education practice should pay attention to standardization, which is the basic principle of network technology application.

4.2. Convenience principle
With the rapid development of computer network technology, it does bring a lot of convenience to people's life and work, and this convenient principle is also reflected in educational practice. During the computer training, teachers can teach in the training room, or through the MOOC, etc., on the Internet. It is very simple and convenient. Teachers can also follow the principle of convenience when choosing network software. This is not only convenient for teachers, but also Students can also easily master and operate. And people’s continuous research and improvement of computer technology let us see the rapid dissemination of information by computer network technology. Its virtual network openness can ensure the integrity and timeliness of user information under the premise of information security dissemination. This can be used well in teaching. Compared with traditional information dissemination technology, the safety factor of network technology is significantly higher than that of traditional technology. Therefore, it is suitable for educational practice with higher security and can be widely used in teaching of various subjects. Therefore, network technology managers should pay attention to encrypting information in teaching, avoiding the loss of information, and maintaining the platform to serve the educational practice in an orderly manner [5]. In short, computer network technology has its own advantages. It does not exist in education and teaching, but it has great practical significance. In addition, it has independence and can effectively protect the information security of computer network virtual platforms. When using network technology to teach, you need to pay attention to this work.

4.3. Educational intuitive and interactive principles
Computer network technology is used in teaching, and the teaching content can be displayed in front of students intuitively through the network and multimedia, and is not limited to a certain place and time. Students can repeatedly play and search for the knowledge points they need to learn. In addition, it can be broadcast live in the online classroom or after class teachers interact with students for discussion, and teachers can answer students’ questions online. These can all be achieved through computer network technology, so it has educational intuition and interactivity [6].
5. Measures to strengthen the application of computer network technology in educational practice

5.1. Strengthen the promotion and popularization of distance education
At present, the main focus of using computer network technology is distance education, which is one of the ways of network teaching. With the development of network technology, schools have gradually begun to choose distance education because of the development of network technology, in-school teaching and students’ autonomous learning in various schools. The time is flexible, and the intuitive interaction is obvious. However, the promotion and popularization of distance education lags behind the development of network technology and needs to be further strengthened. Learners of some subjects are still accustomed to learning in traditional classrooms, and teachers are also accustomed to teaching in classrooms, but in fact, online distance education can expand the scope of teachers' teaching and the knowledge of students' learning. Many subjects are suitable for distance education [7].

5.2. Schools should strongly support the application and development of mobile teaching platforms
At present, Internet access through mobile platforms is an important way for netizens to access the Internet. At present, almost everyone has a mobile phone. As long as they make full use of the advantages of mobile networks and schools use mobile clients for teaching, they can truly achieve breakthroughs in time and space. Restrictions to receive education anytime, anywhere. Schools can invest part of the funds to build a network mobile teaching platform, and encourage teachers to design a mobile public platform for the courses they teach, and provide financial support and rewards for teachers developed. From the current mobile interactive platform, mobile phones are For items that everyone has, teaching can use the WeChat platform or Weibo on the mobile phone to teach. For example, teachers can create a WeChat official account to push subject knowledge and other information to students at any time, and they can also answer questions online and do quizzes. Wait, students often use WeChat to chat, so the operation of WeChat is very convenient and easy to understand [8]. However, WeChat is not a dedicated mobile teaching platform after all. To make better use of the mobile network platform to implement teaching, schools have a dedicated website. The development of systematic teaching courseware for each subject on this platform is the last step to achieve.

5.3. Online multimedia teaching platform
For distance education, the most common one is online video education, also called asynchronous teaching. In addition to the aforementioned online courseware, teachers can record videos for online teaching. Teachers can weave the teaching content into Hypertext Markup Language (HTML) files and store them on a web server. Students can browse the pages of people, people, services, email services (Email), file transfer services (FTP), etc. on the Internet. Study, or download the file on the network to the local view and study. The advantage of this kind of video teaching is that students can watch it through mobile phones anytime and anywhere, fast forward and playback. The disadvantage is that teachers record videos first, and lack of interaction with students, so they cannot grasp the students’ acceptance in time. Therefore, it is necessary to rely on a multimedia platform, which has both video playback and interactive teaching answering. The above-mentioned mobile platform and the multimedia platform can be used at the same time to achieve teaching work. After the school invests funds, teachers can develop their own online courseware, which will be gradually improved in future teaching, so that every teacher has its own online teaching resources for every course [9]. At present, some test training institutions have developed platforms, which can be used as reference for primary and secondary schools and universities. Because through the online multimedia teaching platform, students can choose courses online, and teachers can also interact on the website, but the platform construction is not perfect, for example, there is no effective screening and management mechanism for students’ questions and other information. Therefore, it is recommended that while online video teaching is carried out, a dedicated person should be arranged to filter, screen, classify and sort the students' questions, and select more typical questions for teachers to answer online to improve teaching efficiency and quality.
5.4. Continuously improve the level of educators
Teachers are the pioneers of teaching and the direct leaders of teaching effects. The quality of a team of teachers is directly related to teaching results. Therefore, the management and professional teaching level of educators is getting higher and higher, and the use of network technology has become one of the professional quality requirements. As a teacher, he should master this teaching tool well in order to improve the quality of class teaching. And efficiency increase. At present, some teachers are still relatively unfamiliar with computer network technology. Although there are some training courses in the school, some teachers think that traditional classroom teaching time is too much, and it is better to prepare the lessons well and prepare for the class. Some teachers have learned network technology and developed micro-courses and network courseware, but because they are not commonly used, they quickly forget how to operate them, so they don’t waste time on this in the future [10]. Therefore, in the future, schools need to pay attention to improving their network technology level in the construction of teachers.

6. Conclusion
Although network technology has improved the teaching quality effectively, the development of the education industry also needs to improve the education level of teachers and network technology. This can further improve teaching efficiency and quality. At the same time, other relevant technical personnel must continue to innovate and make full use of the advantages of computer network technology to develop a distance education platform that is more suitable for education.

References
[1] LI Sheng. Analysis of computer network technology and its application in practice [J]. Science and Technology Innovation and Application, 2016(15):87.
[2] LIU Zhan-shan. Analysis of computer network technology and its application in practice [J]. Science Research, 2016(8):181.
[3] LI Xin. Analysis of Computer Network Technology and Its Application in Practice [J]. Architecture and Decoration, 2016(7):56-67.
[4] DONG Guang-shun, WANG Peng-cheng. Computer Network Technology and Its Application in Practice [J]. Information Systems Engineering, 2014.
[5] FENG Wei-gang, XU Ke-le. Computer Network Technology and Its Application in Practice [J]. Electronics Review, 2014.
[6] WANG Peng-cheng. Brief Analysis of Computer Network Technology and Its Application in Practice [J]. Academic Forum, 2015(11):166.
[7] LIN Xiang. Research on Application of Computer Network Technology in Educational Practice [J]. Computer Products and Circulation, 2018:22+38.
[8] Ju Wei. Research on Application of Computer Network Technology in Continuing Education [J]. Computer Knowledge and Technology: Academic Exchange, 2017.
[9] Wang Yufen. Application of Computer Technology in Network Education [J]. Information and Computer (Theory Edition), 2017:231-232.
[10] YU Mia. Computer Network Technology and Its Application in Practice [J]. Digital Technology and Application, 2015:86.