



## **The Practice of Cyber Public Security Education in the Information Age**

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**Abstract:** In the background of information society, the network is very important to people's lives, also to the public security education. At present, network technology is gradually penetrating into the teaching, learning, management and evaluation in public security education activities, it promotes the sharing of quality educational resources and provides personalized education services for students. Cyber public security education in the information age has many advantages over traditional public security education, but it still has some faults such as strong negativity and weak conductivity, which need further exploration and practice.

**Keywords:** Information age; cyber; public security education; practice.

### **1. Introduction**

Doubtless, the network is melting into people's lives and the integration of the network to traditional industries is advancing at an unprecedented rate. Network technology has become normal in various disciplines, especially in the education industry. It is not a simple connection but a deep integration between network technology and education, on the other hand network technology doesn't change the traditional education fundamentally, only a promotion and transformation.

With the promotion of the concept of "cyber education", network and education are trying to merge, resulting in many new teaching reforms and practices, such as distance education in recent years. In fact, public security education is one kind of services, so we can learn from the combination of Internet and education, and make better use of advanced technology to provide services for students.

Compared to previous years, more universities in China have no substantial changes apart from using PPT to replace the traditional blackboard writing, but some universities are actively carrying out educational reform to integrate advanced

technology with teaching.

It seems to be slow in public security colleges to pursue advanced educational technology because of the heavy curriculum tasks and strict discipline, the students have no free learning time, they are not allowed to use mobile phones in class. While other universities have relatively deep implementation of network, such as using mobile phones as learning tools, even introducing barrage technology in PPT to enhance interaction.

In fact, it is more urgent for public security school to integrate with advanced network technology because police education is much more practical. Therefore, we should explore the application of cyber public security education.

## **2. The Meaning of Cyber Public Security Education**

There are many kinds of network technique, but not all of them can be used for teaching. Multimedia, cloud computing, big data, Internet of things, mobile Internet and so on are the most widely used technologies in the field of education. As is known to all, educational activities include teaching, learning, management and evaluation. Different types of cyber public security education can be obtained by combining different Internet technologies with different stages of educational activities. Some of these scenarios are implemented, but most are still being explored. Now we will describe these application scenarios in detail some of them have been implemented, but most of them are still under exploration.

### **2.1 Multimedia Public Security Education**

Multimedia is the earliest Internet technology used in teaching. That is to say, multimedia technologies such as pictures, audio and video are introduced into traditional education. It is suitable for explaining and practicing abstract and boring theories such as theorems and formulas, making the learning content more vivid and colorful and impresses students more deeply.

The integration of multimedia technology into the teaching process has changed the teaching attitude and presentation skills of teachers, and improved the traditional single teaching method of blackboard writing.[1] This intuitive way is easier to conduct thinking and make the knowledge easy to be understood. The use of multimedia technology to assist learning can realize the entertainment of learning, for example, the after-class exercises of games can not only consolidate theoretical knowledge, but also stimulate students' interest.

With the application of three-dimensional information technology, we can imagine that in the near future, the classroom teaching from two-dimensional plane slide show steps into three-dimensional display time, three-dimensional technology will be used

in virtual reality scene to presentation and interpretation of the practical curriculum, lets the student produce immersive visual feeling, makes the abstract knowledge become more lively and interesting.

## 2.2 Public Security Education with Cloud Computing

Cloud computing is to centralize a large number of servers and provide users with high-performance storage, computing and processing services through the network connection. whose characteristics is low cost, high performance, easy resource sharing and outstanding personalized services. Therefore, in the era of cloud computing, public security colleges can provide teaching services at low cost by connecting with cloud platforms. Similarly, students can enjoy high-quality learning services by connecting with cloud platforms.

The combination of cloud computing and public security education can provide a educational information platform included teaching, management, learning, entertainment, communication, interaction and other services, whose users are teachers, students, teaching managers, parents and so on. It's not necessary for schools to buy expensive servers, teachers can upload learning materials, video tutorials, etc. with browsers, or download materials from the cloud platform to achieve the sharing of teaching resources; students can connect to the cloud platform to watch course videos and other materials, or use online translation software, calculators, dictionary and self-learning services provided by the platform, they also can discuss or question with teachers through interactive service modules; parents can communicate with teachers through the cloud platform to understand children's learning and living conditions; teaching managers can standardize the teaching process through the management module of cloud platform to achieve coordinated and unified informatization, only work in an office.

Cloud education has changed traditional learning concepts and behavior, such as question-and-answer websites, Encyclopedia websites, micro-blogs, micro-letters, forums, professional websites and so on, which can carry out learning activities. In the past, if students have some questions, they must ask the teacher, but now they can find the answer on the network whenever and wherever. It is very convenient and effective, also for teachers to the training and re-learning.

In addition to providing integrated teaching and management services, cloud computing can also provide individual education services, such as building teaching resources sharing database, creating network learning service platform, providing network collaborative office services, and even providing software and hardware services needed for scientific research. Users can customize according to their needs to meet their own personality. It is a very low cost to make services available from

cloud platforms.[2]

### 2.3 Public Security Education with Big Data

So-called big data, that is, with the popularization of Internet application, the activities of the people on the Internet more and more, lead to the accumulated huge amounts of data, that can't be analyzed by the existing conventional tools, we must develop new integration or distributed technology to analyze. With the development of education information, it also produced a huge education data including information of teachers, records of student, interaction between them, management information of school and so on.

Through these massive data, we can track students' learning status and methods, understand students' interests and hobbies, and conduct personalized counseling, help teachers find the most appropriate teaching methods and order, optimize the teaching process, improve curriculum design, so that teaching is more targeted. On the other hand, schools can explore learning rules and predict the educational trends so as to carry out curriculum construction and teach students in accordance with their aptitude, we can also find the internal relationship and logical relationship between teachers and students' various behaviors, and make appropriate teaching decisions.[3]

Generally speaking, big data technology is to make use of massive education-related data to realize the intelligence and automation of education and management. For example, the main effect of the traditional teaching on student achievement which is a major measure, now we can use the transformation of education achievements data, experience to share data, and the students' classroom performance data, homework completion data, teacher coaching data to evaluate the teaching effect, it is a relatively fair evaluation of teaching to use big data to monitor the teaching process.

### 2.4 Public Security Education with IOT

The Internet of things (IOT) is to install sensors on objects, use sensing technology and the interaction between objects to perceive the characteristics of objects, and realize the information exchange and communication between people and things. All objects in the network are interconnected and can realize intelligent identification, positioning, monitoring, tracking and management. Therefore, the IOT is the product of the integration of physical system and information system. "public security education with IOT" is to use the Internet of things technology to exchange information between subjects in the field of education.

In the classroom, sensors are used to monitor students' movements, emotions, answers to questions, etc., so students' interest points and attention change process can be obtained. Teachers will adjust their teaching according to the information. In

addition, sensors can be installed on experimental equipment to collect experimental data, so as to provide students with more intuitive teaching experience. School administrators can create intelligent control learning environment through the installation of sensors to monitor everywhere on campus such as temperature, light, also can install sensors for school equipment and teaching instruments to realize the unified management and automatic dispatching. If we install sensor devices for school books, then we can realize automatic positioning and self-help returning books.[4]

It is closely relative between Public security education with IOT and big data technology. The data collected through the IOT need detailed analysis in order to produce effective decision-making for teaching and management, then we can form transparent and efficient school administration, and students can experience rich and colorful campus culture and convenient and thoughtful campus life.

### 2.5 Public Security Education with Mobile Internet

Mobile Internet is the result of the integration of mobile communication and Internet after their independent development. By using mobile terminal to replace desktop Internet and wireless network to replace wired connection, Internet services can be obtained through mobile network. The core of mobile Internet is the internet, so it is generally considered that mobile Internet is the complement and extension of desktop internet. Therefore, the application of Internet can be transplanted to the mobile Internet to realize the flexibility and randomness of application.

With the help of the mature mobile Internet technology, students and teachers can communicate conveniently and flexibly through the wireless devices, such as mobile phones and IPAD, to achieve interactive teaching activities. For example, the mobile micro-classroom system based on intelligent terminals constructed by Shanghai Open University takes five to ten minutes as an unit of micro-courses. Using mobile terminal to achieve interactive learning curriculum, the main form of media expression is video, so students can make full use of their fragmented time to complete the course learning. By accumulation, on the one hand, it can complete the whole course system teaching purposes, on the other hand, it can improve learning efficiency to achieve better Learning effect.[5] At the same time, educational administrators can monitor the teaching process and manage campus equipment at any time through mobile terminals, so as to find and solve problems in time.

### **3. Advantages of cyber public security education**

There are some faults in traditional education, such as regional imbalance , singleness of classroom teaching and low learning efficiency of students. Similarly, there are other problems such as poor communication and information sharing between police

colleges. Using network technology to reform and update traditional education can change the state of "fixed time and place, fixed teachers and students" to "random time and place, teachers' selection, students' random" state. As long as we have terminals and networks, we can carry out educational activities such as learning or discussion.

### 3.1 Equity

The sharing character of the network enables the public security education resources to be re-optimized and redistributed through the network, it breaks the original regionality of education, there is not regional differences in education, and it provides an effective way to achieve the ultimate goal of equality.

Cyber public security education puts high-quality educational resources on the Internet, such as courseware, teaching cases, explaining videos, or webcam videos, so as to realize the online synchronous education in different regions, and everyone can enjoy the tutoring of famous teachers of famous schools. It is very important promotion for the Public Security Colleges that have relatively low teaching quality. The teacher in network terminal can provide guidance to students and students are treated equally, which reduces the learning threshold of students, and improves the teaching level and learning effect. In addition, teachers can communicate, discuss and download teaching resources through the network, so as to achieve common lesson preparation, avoid repetitive work and promote the dissemination of high-quality educational resources.

### 3.2 Openness

The universality and openness of the Internet make education from closed to open. In the network, everyone can create and share knowledge, similarly, everyone can acquire and use knowledge. It enriches the existing educational resources, and greatly improves the efficiency of knowledge acquisition.

The openness of cyber public security education enables educational resources to be integrated through the Internet, and it changes the roles of teachers and students. For example, an excellent teacher can only serve dozens of students under the traditional educational system, but online education he can serve thousands or even tens of thousands of students through the Internet. And a student is also faced with a group of teachers who undertake the same course. Perhaps teaching, experiment, problem analysis, counseling and answering may be undertaken by different teacher which strengthens the teaching effect and also improves the learning efficiency.

### 3.3 Flexibility

Firstly the flexibility of cyber public security education is reflected in the randomness of teaching activities. Due to the storage ability of the network, teachers can break the curriculum knowledge points into small segments of video and put them on the Internet, so students can use their fragmented time to learn or send questions to the network platform, and teachers answer to them at leisure time. At present, the students in public security colleges have relatively heavy learning tasks because they need to master the law, investigation and public security technology and other subjects, so the contents of many courses are compressed. In this way of cyber education the teaching activity enables both teachers and students to make full use of their effective time and improve the efficiency of the teaching process, and students can learn as much knowledge as possible by using fragmented time.

Secondly, the flexibility is reflected in the randomness of location because the teaching activities of cyber public security education can be carried out on the Internet, it need no special requirement for the location. Anyone who has the terminal can connect to the Internet and learn or access teaching resources anytime and anywhere. Similarly, teachers' online education is not necessarily in the classroom like traditional education, so that the school can save part of the construction investment to other aspects of the teaching field.

Finally, the diversity of teaching methods is also the reflection of the flexibility of cyber public security education, such as the short course of video, independent participation of students in teaching, the explanation of knowledge points on the Internet, and the flip of classroom. So students can choose the most suitable way to study.

### 3.4 Efficiency

The integration of network technology promotes the automation and intellectualization of public security education. For example, repeated lectures is avoided for teachers because of shared teaching resources, and it can be recorded once for all students to play. Moreover, in traditional education the work of correcting students' paper can now be completed by computer with high speed and accuracy. In addition, cloud computing and big data can record and analyze the whole process of teaching activities to track students' learning status, and provide reference decision for efficient teaching.

For school administrators, the use of Internet technology makes teaching management more efficient and intelligent. Besides routine office automation, it can also monitor the operation of school equipment, realize automatic switching and adjust temperature, which not only improves work efficiency, but also realizes campus low-carbon management.

### 3.5 Innovation

Cyber public security education has created many new models to improve the deficiencies of traditional education, for example, it is difficult to attract students' attention for traditional education restricted by closed classroom and boring theory. While network technique can truly achieve game-based education which can consolidate and practice knowledge through computer game, and students practice their knowledge while playing games.

Micro class, flip classroom, and mobile phone classroom are innovation mode of cyber education. Under the Internet environment, innovation has become normal, and the most distinctive features of cyber education is learning at anytime and anywhere. The development of technology provides unlimited possibilities for innovation, we can imagine that it will produce more miracles in the future.

The teaching mode of cyber public security education makes the boundaries between students and teachers no longer clear. Everyone can be a teacher to publish their ideas on the Internet, also can be a student to acquire knowledge conveniently from the Internet. Besides, the boundaries between educational organizations and non-educational organizations are no longer clear.

### 3.6 Strong Communication

Network platform makes communication between school and parents become faster and smoother. In traditional education, students are the overlapping point of school and family, the two usually rely on students to transmit information, such communication may be delayed or even omitted. On the contrary, relying on Internet platform or mobile Internet technology parents can timely obtain all the performance of students in school, and schools can also know student performance at home, so that communication becomes efficient.

In addition, because these complete data of communication can be collected and stored, the analysis source of big data technology can cover all the learning activities of students at home and school without any missing. It can help teachers find problems in time and provide more accurate basis for making pertinent decisions.

### 3.7 Individualization

Cyber public security education has created favorable conditions for individualized teaching. Both cloud computing and big data technology can track users to analyze them, get their characteristics to provide personalized services for students, that has achieved targeted educational effect. It can be said that the integration of network technology makes education truly student-centered rather than teacher-centered.

Cyber public security education has many advantages over traditional public security education. With the development of technology, these advantages will continue to enlarge and provide strong support for the sustainable development of education.

#### **4. The Challenge of Cyber Public Security Education**

Network technology can bring great changes to education and make traditional education more efficient and open. However, we have to admit it that the technology can't replace traditional education. Even if network technology is only used in traditional classroom teaching, such as slides, videos, bullet curtain, etc., it still has some shortcomings. After all, what teachers know through close contact with students is very beneficial to students' targeted education, which can't be achieved and compared with network technology.

##### 4.1 Confusing Priorities

The use of multimedia technology can enliven the classroom atmosphere and enhance students' interest, but sometimes it is too fancy to make students focus on the teacher's lecture, without thinking about the connotation of these forms and distinguishing between primary and secondary, which not only can't achieve the purpose of assisting teaching, and may even affect the normal teaching effect. Moreover, due to the substitution of slides, we may miss the time of traditional blackboard writing which is enough useful to deepen students' impression and make them have time to think deeply, also not conducive to the understanding and mastery of knowledge.

##### 4.2 Lack of Interaction

Education is a social activity, students establish social relations through common learning, they also acquire intuitive experience of knowledge through classroom interaction in traditional education. While in modern online education because of using of network technology, students can not directly participate in the interaction between teachers and classmates that resulting in a sense of belonging and direct emotional experience without learning. It would affect the effect of educational communication, and lack the classroom atmosphere of competition to promote among students, so cyber public security education need higher self-control ability for students.

It is randomness in traditional education, that is, teachers can adjust the teaching process timely according to the specific reaction of students, while the way of cyber public security education is easy to form a fixed mode, so that teachers and students may be imprisoned in preset teaching. For online education on the Internet, students can't put forward questions and be solved in time because they can't interact directly

with teachers face to face.

#### 4.3 Passivity in Learning

Education is essentially to provide services, and students are a group of special customers, whose consumption is learning activities that have more passive nature, so teachers' work is not only simple teaching, but also guide and supervise students' learning. Many of the new models of cyber public security education rely on autonomous learning without supervised learning. So, learners' attention is easily dispersed, and it is difficult to guarantee the quality and efficiency of learning.

The way of fragmental learning generated by cyber public security education is very flexible, but at the same time, it will also reduce learners' concentration and learning depth, which leads learners to form a bad habit of lazy thinking and deep knowledge processing. Moreover, the relationship between fragmented knowledge is difficult to establish, and it is difficult to form a whole knowledge network.

#### 4.4 Poor Ideological Guidance

The new model of cyber education which breaks away from the traditional classroom is faced with a wide range of students, covering all ages and strata of society. The task of teachers and students are more focus on the knowledge and information not educating people. Especially, the lack of guidance of ideas and the cultivation of habits make young learners be affected badly in the context of cyber education.

Although the network can provide high-quality resources and education, at the same time, there are a lot of false information and bad news on the Internet. Therefore, students should have the ability to distinguish right from wrong when using the platform of Internet education, and use the Internet scientifically, reasonably and civilly.

### 5. Conclusion

At present, cyber public security education is still in the stage of practice and exploration, and there has not been a recognized effective mode and successful case. Therefore, Cyber public security education will be a long process, and we still have a long way to explore and try it.

Only by understanding for the pain points of traditional industries and survey the application scenarios of cyber technology, we can deeply integrate the network and public security education, so as to optimize the allocation of resources and make public security education more advantageous and charming. Teachers can easily access resources and provide more quality services for more students. Students can learn more happily and master knowledge more effectively.

Traditional public security education and the existing network education have their

advantages and disadvantages. Only by integrating the two technologies, cyber public security education can play its technical characteristics and serve the teachers and students better.

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