

Study on the Application of MOOC in the Teaching of Network Security and Law Enforcement

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Abstract: With the rapid development of network information technology and the increase of network crime year by year, the major of network security and law enforcement was officially listed in the catalogue of undergraduate education in 2012. The teaching of this specialty has the characteristics of many knowledge points and great difficulty. The knowledge structure is formed by the integration of multi-disciplines, emphasizing the applicability and practicality. This study analyses the problems existing in the teaching of network security and law enforcement specialty, compares the characteristics of MOOC teaching and traditional teaching, and discusses the complementary advantages of MOOC in the teaching of network security and law enforcement specialty. Finally, it puts forward some suggestions on how to make the teaching effect of network security and law enforcement specialty play a greater advantage under the coexistence mode of traditional and MOOC teaching. The application research of MOOC in the teaching of network security and law enforcement has certain reference significance.

1. Introduction

With the rapid development of network information technology, network security incidents occur from time to time, and network crimes are increasing year by year. The demand for network security management is constantly increasing. How to protect network security and combat network crime is an important task of public security organs. Network security and the training of law enforcement personnel have become an important task of colleges and universities. Therefore, the Ministry of Education formally listed the major of network security and law enforcement in the undergraduate education catalogue in 2012. As of 2017, 17 public security undergraduate colleges and universities have opened the major of network security and law enforcement. The biggest characteristic of the teaching of network security and law enforcement specialty is that it needs to combine practical problems to achieve the best teaching effect. How to teach students about information security and network security, which are closely related in real life, will be a very important research direction.

2. Problems Existing in Current Teaching of Network Security and Law Enforcement Specialty

The knowledge structure of network security and law enforcement specialty is formed by the interdisciplinary integration of law, public security and computer technology, emphasizing the applicability and practicality.

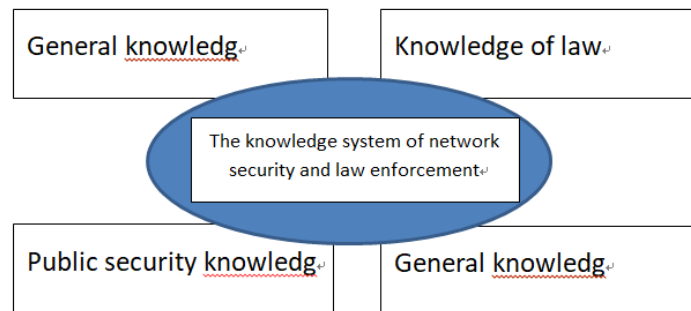


Fig.1 Structural Chart of Network Security and Law Enforcement Professional Knowledge

As shown in Figure 1, the knowledge structure of network security and law enforcement specialty consists of four parts: first, general knowledge consisting of Ideological and political theory courses, natural science courses and Humanities and Social Sciences courses; second, legal knowledge consisting of constitution, criminal law and criminal procedure law; third, public security theory and police literacy courses, police practical combat skills courses, etc. Basic knowledge of public security; Fourth, professional and technical knowledge consisting of computer technology and public security technology. Because of the particularity of network security and law enforcement professional knowledge structure, there are some problems in the traditional teaching process. First, the field of network security covers a wide range of knowledge and is difficult to learn. Relevant theories are often based on a large number of Abstract and complex mathematical models and computer networks, which make students feel dull, obscure and difficult to understand and have no interest in learning. Secondly, the traditional teaching mode is relatively inadequate in the teaching performance of courses that focus on solving practical problems and require high practicality and purpose. Thirdly, teaching resources are scarce, and the implementation of teaching links is difficult because of the human resources and hardware resources environment. These problems will eventually lead to teachers teaching students professional knowledge and skills can not be effectively developed and applied in combat units.

3. The contrast between moocs and traditional teaching

MOOC is a new teaching mode based on the Internet age, that is, large-scale open online courses, which is the product of "Internet + education".

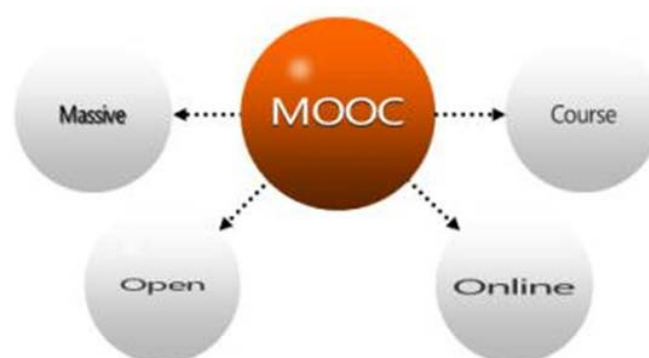


Fig.2 Conceptual Map of MOOC Teaching

As shown in FIG. 2, the "M" in MOOC stands for Massive(Massive). Compared with the traditional course with only dozens or hundreds of students, a MOOCs course can easily attract tens of thousands of people. The second letter "O" stands for Open. The third letter "O" stands for "Online". Learning is done Online without time limitation. The fourth letter "C" stands for Course. The important core of MOOC teaching is its large scale and openness. After using modern technology and methods to make traditional classes vivid and intuitive, MOOC can be transferred to

the network platform. Students' learning methods become flexible and diversified, which are not limited by time and place, and increase students' learning interest. Students' learning is changed from passive to active, and students can choose the appropriate teachers to communicate and discuss online or offline according to their own preferences. The resources provided in MOOC courses can be Shared through the network platform, providing a good platform for communication, facilitating students' learning and discussion, and broadening their ideas.

Traditional teaching firstly improves students'ability to achieve a certain aspect by defining corresponding teaching objectives; secondly, according to students' state, it determines the differences of the preparatory knowledge and students'personality characteristics; secondly, it determines the corresponding teaching content, teaches students in accordance with their aptitude and determines its own teaching mode according to teaching objectives; and thirdly, it determines its own teaching mode according to teaching objectives. According to the requirements of standards and contents, appropriate teaching media should be selected. Finally, the evaluation of teaching system should be carried out to check the achievement of students'learning goals. According to the feedback information of evaluation, corresponding adjustment or modification measures should be taken for some links in the teaching process.

4. Complementary Advantages of MOOC in the Teaching of Network Security and Law Enforcement Specialty

There are many knowledge points and difficulties involved in the teaching of network security and law enforcement specialty. The traditional teaching is dull and difficult to arouse students'interest in learning. The selectivity of MOOC teaching enables students to study a certain content in depth. This kind of teaching mode enables students to have more autonomy, so their interest in learning is strong. At the same time, it can combine the requirements of professional knowledge structure and students'interest points, reasonably select, organize and supplement learning content, and improve students' professional knowledge structure.

The traditional teaching is mainly to arrange the teaching time and place for students to go to class. There are many students in a class and only one teacher. Teachers can not take into account the progress of each student's learning, but can only teach according to the progress of most students, which will cause some students to fail to keep up with the curriculum. With MOOC teaching, teachers record the teaching content in advance, students study by themselves. Teachers can see the progress of each student's learning. Students can also watch videos repeatedly, and the platform will provide students with well-set questions. Teachers can understand students'learning efficiency according to the situation of students' answers to questions. On the communication platform of MOOC, students can ask questions at any time. Teachers can also promptly urge students with low learning efficiency to make communication between teachers and students more convenient.



Fig.3 The Diversity of the Teaching Forms of MOOC

As shown in Figure 3, the diversity of teaching forms of MOOC makes the professional courses

of network security and law enforcement more relaxed and free. As long as the students have a computer or mobile phone on hand, they can learn at any time and anywhere, even if there is only a short break, they can arrange their study independently. When students listen to teachers' on-site teaching in class, they come with problems. They can communicate with teachers on-site, solve problems on-site and improve students' learning efficiency.

5. Conclusion

As a new undergraduate education specialty, network security and law enforcement specialty has many knowledge points and great difficulty. Its knowledge structure is formed by interdisciplinary integration. It emphasizes the characteristics of application and actual combat. In order to enable students to obtain more information, acquire more professional knowledge and master relevant professional skills, it is necessary to make full use of the MOOC teaching of the course on network security and law enforcement specialty teaching. The traditional teaching mode is limited by time and space. The amount of information acquired in the same time is less than the amount of information admired. Students at different levels learn at the same pace, which is not conducive to students' acquisition of knowledge. However, some difficult problems can be solved in time. The teaching mode of MOOC is not limited by time and place. The teaching mode is flexible and diverse. Students take self-learning as their goal. It is a kind of active learning. It can obtain a large amount of information in a limited time. The teaching content is full of pictures and texts, vivid and vivid. It effectively improves the efficiency of learning. In a word, under the coexistence mode of traditional and MOOC teaching, the teaching effect of network security and law enforcement specialty will play a greater advantage.

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