On the Construction of the Course of "Smart Policing of Urban Rail Transit"

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Abstract: In the development of modern information technology and the renewal of the concept of police, the information is that "the basic collection is standardized for storage, as well as the application of the system" from the intelligent fusion of multi-directional data sharing, the depth of big data is transformed into. In addition, data association mining analysis, new police working mode and method come out. In line with this trend, the railway police college has developed the "urban intelligent police" course based on application and innovation. Based on the characteristics of various kinds of data generated between the work and work of the existing urban railway traffic police, the stadium is closely related to the work and unity of the urban railway police. Students' creative thinking can not only stimulate the basic theory and application technology of "intelligent police".

1. Introduction

As of December 31, 2017, a total of 34 cities in mainland China have completed railway transportation. In Beijing, Shanghai, Guangzhou, Shenzhen and the first metro cities, public security agencies have been set up to take charge of the security of urban railway transportation[1]. The special characteristics of railway transportation (regional control, narrow space, huge passenger flow, closed car operation, difficult to investigate strongly, the target of strong terrorist attack, etc.), the communities where urban railway traffic police work on the ground are compared and worked by the police. By combining the design and concept of "smart police" and the unique data resources and working mode of urban railway traffic police, the working efficiency of urban railway traffic police can be effectively improved. Therefore, it is necessary to fully understand various basic information systems in urban railway transportation policy, compare nuclear fusion with special data, and improve innovation ability.

2. Overall Concept of the Course

Intelligent police is based on video recording technology, data mining and knowledge management of internet intelligent engine[2]. The high unity of various functional modules of the public security system promotes the adjusted operation, better, more convenient and more accurate completion of the police work, the unity of being merged, and the new concept of the development and Realization of the police with high shared goals. "Deep application" of police intelligence and new model. All informatization of police work cannot be called intelligent police. It is automated and can use some information technology to improve the work of the police. It is information-based and existing police resources, police can use new information. Such police work is known as the sub development of intelligent police in-depth intelligence. The work of the police includes all the contents. The types of work of the police have their own independent procedures and specifications. Police activities in different areas also have unique contents. Therefore, it is unrealistic to count the contents of "smart police" in various routes and regions on one route[3]. From the perspective of course composition, the content of "smart police" course can be started from two aspects: first. The existing "intelligent police" content and working mode, and enumerate the public security use as a common route, the route, the development of all kinds of information systems and application software, students, as far as possible comprehensive overview of the form of display. Second, in

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order to conduct a thorough study of public security work in specific fields, please combine "smart police" with practical work, concentrate on the front-line actual combat, and take this course as a required professional course. Considering the specific work of Urban Railway Transport Police, we believe that compulsory courses are suitable for the current curriculum development objectives of the Ministry of railway traffic safety of the railway police college. The purpose of this study is to carry out information and intelligent analysis on the current situation of urban railway transportation, so that students can actually learn data analysis methods, understand and master the content of urban railway traffic police business. The line development team can also carry out technical cooperation with the actual units in the first line of urban railway to promote research through scientific research[4]. Due to the particularity of the working environment of urban rail transit, the most direct purpose of the construction of "smart policing of urban rail transit" is to strengthen the prevention and control of public security, conveniently and efficiently maintain the public security order in the control area of urban rail transit, through joint control to deter crime, compress the crime space, focus on prevention, and combine prevention and control. The construction of "Urban Rail Transit Intelligent policing" course must also be based on the principle of matching with the first-line actual combat, integrating key elements such as early warning, push, prediction and automatic identification.

Table 1 Comparison of smart policing courses

	Smart policing course	Non intelligent police course
Student role	Active participant	Passive recipient
Learning subject	Students and teachers are the main subjects, but learnMainly	Student
Learning evaluation	Process and results combined, self-evaluation, mutual Evaluation and teacher evaluation	Based on the results evaluation, using a single Evaluation, teacher evaluation
Learning process	Experience - Review (Process) - Share(Experience) - Communication (Feeling) - Integration (Essence) - Promotion - Application...	Teacher explanation - Student exercises - Focus on learning again - Correct wrong actions - Practice again - Teacher summary
learning result	In addition to completing the functions of traditional physical education, it will also affect thoughts, change behaviors, cultivate good psychological quality and social adaptability, apply what they have learned, and improve their quality and ability.	Enhance physical fitness, cultivate the will of quality and exercise the body, but sometimes learn to use disjoint, high scores and low energy

3. Main Contents of the Course

In November 5, 2015, the Internet plus smart police development forum was held in Beijing in 2015. On the forum, the concept of "intelligent police" was investigated in detail, and the proposed eight intelligent application modes of police management, intelligence, instruction, intelligence, investigation, intelligence, collection, intelligent transmission and suggestions of intelligent monitoring were proposed[5]. The course group, the railway traffic police investigation activities in Beijing, Guangzhou, Shenzhen and other cities, the basic theories, various application systems and

several common application forms that should be possessed in the current "intelligent urban railway traffic police" route have been formulated.

3.1. Cooperative Battle Command Platform

The coordination work of urban railway transport police is not only the resource sharing and information fusion among various types of police, but also the sharing and information fusion of urban railway transport police resources, local police resources and activity company information resources. The existing access data of cooperative combat platform are as follows: surveillance video, intrusion detection system, three-dimensional station map, Internet of things police road condition, PGIS, station police equipment and other data. When the emergency of railway transportation needs emergency evacuation, the commander can see the situation on the command platform on the premise of access to video resources, and then can immediately assess the incident[6]. Then, the police can real-time monitor the current distribution of the scene of the police online and offline. For convenience, it is the operation data of the track, which is used through the combination of real-time data of bus operation and real-time comprehensive shelter according to the road conditions. The city's PGIS was used to quickly adjust the ground police force.

3.2. Terminal and System for Information Collection and Comparison Such as Check, Record and Check

The background support of various public security intranet information systems is a big data system in itself. Part of the core data comes from the inspection and collection of daily police work. The existing verification devices and mobile information collection terminals are basically offline devices. Before use, first update the corresponding application software data of the public security intranet, and compare the conflicts in the use process[7]. After use, check the data, record through the corresponding data software of the public security intranet, and complete the data upload and depth comparison. Due to the enhancement of the core computing function of the embedded device, the comparison of fingerprint, portrait and other information has been applied to the handheld device. Due to the increase of network speed and the application of VPN technology, real-time data comparison can be carried out during verification. However, in this stage, no matter how the level of face recognition and RFID technology develops, human-computer comparison can be carried out.

4. Electronic Patrol Control System

Video patrol, various PTZ control operations and erecting positions, not only through 360 degree panoramic camera, infrared laser ultra long focus camera, feifeifeifeifeifeiduoqiu technology, image stitching, track technology action recognition technology, etc., through the overall environment, we realize that you can not exceed the level of traditional patrol control[8]. Remote video voice, on-site alarm and other technology applications make up for the lack of on-site maintenance and deterrence. For City railway police, video is a good helper in work. With the development of electronic defense technology, infrared, radio frequency, sensor and video must provide four kinds of technology for urban railway transportation police.

5. Early Warning Management System

In contrast, the early warning control system of urban railway transportation is still in its infancy. There are many reasons for this: incomplete real name system for bills, inadequate real-time data push and short processing time for staff maintenance[9]. However, urban railway transportation has the advantages of early warning control, such as greatly improving the face recognition rate in narrow space, the big data characteristics of IC card brush record, and the regularity of public transportation. Some researchers used data mining technology to process the travel data of 6 million traffic cards in Beijing from April to June 2014, and finally found some traffic cards that may be used by thieves. This reuse and data mining is the direction of police information in the future. This part must focus on the route design of "intelligent strategy for urban railway transportation".

6. Convenience Service System

All information-based convenience service platforms can use wechat public account, microblog, station multimedia and online media[10]. These platforms can push safety precautions and emergency response methods to each passenger. By improving GPS data of vehicles, big data analysis of stations can push traffic flow in real time to avoid congestion and even provide travel plans for specific groups.

7. Conclusion

The construction of curriculum should be based on practice, not practice. According to the characteristics of intelligent police in urban railway transportation, there are two ways to choose route construction. The second is to design the curriculum according to the characteristics of the general curriculum and the theory, theory and practice. The second idea is adopted in the route construction of the project. Starting from the basic theory, students first master the basic data of police information and its sources, learn to integrate data, analysis methods and judgment methods, and understand the operation mechanism of police management and intelligent command. In recent years, with the development of information technology, a wide range of image patrol police control methods in urban railway transportation are suitable for the special environmental problems of urban railway transportation. The existing investigation methods have been combined, and the new methods of intelligent investigation war are being recorded. Since then, the introduction of basic knowledge of big data and data mining analysis, the integration of data of Urban Railway Transport Police, new data to obtain relevant information and analysis results, in order to further develop the actual combat combination of the front desk of the new system. Finally, based on new technologies and methods of big data analysis, data correlation, network, and 3D modeling, the future of urban railway

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