

Discussion on the Optimization of the Professional Curriculum System of Urban Rail Operation in Higher Vocational Colleges

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Keywords: Higher Vocational Colleges, Urban Rail Operation, Professional Courses, Optimization Strategy

Abstract: At present, the urban rail operation specialty is developing rapidly, but there are also many difficulties. The teaching of urban rail operation specialty course system is the key link to train the highly skilled personnel in higher vocational colleges. This paper probes into the dilemma of the city regulation operation specialty, analyzes the effective teaching method of its operation specialty course, and then cultivates the high-skilled talents suitable for the city rail enterprises.

1. Problems in Higher Vocational College Urban Rail Operation Professional Curriculum System

With the rapid development of socialist market economy, the development of urban rail transit has also increased. In view of the fact that the city rail operation specialty is not like the name of the city rail operation specialty, it simply carries out the operation and supervision of the subway. Nowadays, the education mode of the city rail operation specialty in most cities of our country is relatively backward and can not meet the needs of the enterprise. To this end, how to effectively train the urban rail operation professional vocational students, how to make it with urban rail operation management skills, become the current urban rail operation professional development needs to be discussed.

1.1. The Curriculum System is not Aligned with Professional Standards

At present, there are mostly two-center problems in the curriculum system of urban rail operation, so the curriculum system can not be connected with the professional standard. On the one hand, the curriculum follows the traditional undergraduate college subject education system, teaching using the previous undergraduate teaching model, the emergence of the theory-based practice supplemented teaching; on the other hand, the curriculum from the training hardware conditions, the status of teachers, so that its professional curriculum system is not complete, the curriculum and students vocational skills training is separated.

1.2. Professional Practice Courses and the Practical Work Process of the Enterprise

Professional practice curriculum system, the establishment of practical training projects, the lack of industry, enterprise experts to participate, professional teachers and lack of enterprise practical work basis, resulting in the professional practice curriculum of the whole link from the actual work of the enterprise, and professional post skills need to be separated from each other. This kind of professional practice course which is not established according to the enterprise's post ability and actual work process can not meet the enterprise's demand for talents and skills, and the graduates' quality can not reach the satisfaction required by the enterprise.

1.3. There are Problems in the Implementation of the Lack of Curriculum Standards in Professional Practice Courses

In the practical teaching of urban rail operation, many practical courses lack the implementation standard, some practical training items only replace the standard with outline, and the teacher can

still change the content at will in the teaching. Teachers, in particular, who do not have the experience of the enterprise, do not carry out the teaching simulation according to the needs of the post skills of the enterprise [1]. In addition, by the school's practical conditions, teachers can not be based on the needs of the post skills training project simulation.

2. The Quandary of the Professional Course of Urban Rail Operation in Higher Vocational Colleges

2.1 Lack of necessary professional communication between higher vocational colleges

In view of the emergence of the urban rail operation management major in recent years, there is a slight shortage of professional teachers and conditions, many colleges and universities are even replaced by other professional teachers to teach urban rail operation professional courses [2]. The teaching of professional teachers has always been aimed at the city's urban rail enterprises should work alone, the use of existing resources coupled with some of the Internet expertise to supplement, self-learning, or now learning to sell. As time goes on, most of the teachers lack the communication with their peers, and the state lacks the specialized training of the professional teachers, which makes it difficult for teachers to communicate with each other in the new and updated teaching mode of the urban rail operation and management specialty. More can not reach today's society on the operation of urban rail professional type of high-skilled talent demand.

2.2 It is difficult to standardize the teaching of urban rail operation specialty

Urban rail management enterprises have strong local characteristics, the city subway companies have their own operating equipment, incompatible, so they have their own operation process and management rules and regulations. The major of urban rail operation in colleges and universities is to carry out applied teaching according to the actual work of employees of local urban rail management enterprises, so that the professional knowledge of urban rail operation can not be fully integrated and applied in other cities, and even some knowledge points will lead to wrong operation behavior in practical work. Therefore, it will also make the local urban rail operation colleges and universities can only be in the "separate government ", teaching is not a unified standard, it is difficult to compare, so the teaching effect can not be guaranteed.

2.3 Lack of practical training strategies for professional courses in urban rail operations

The core courses of city rail operation include "city rail ticket management and safety management ", " city rail station equipment ", " city rail train organization " and so on. On the one hand, in view of the current development of this major is not very mature, lack of practical training equipment research and development; on the other hand, the current research and development of practical training projects, such as station control room training equipment, track sand table training equipment, signal switch training equipment, most of the teaching can only carry out simple model structure explanation, action demonstration, or rely on the teacher's imagination to design some simulation operation, but the equipment is insufficient, students too much, short hours, not practical training ability, but there is still a certain gap with the actual work of the enterprise; In addition, because most colleges and universities of urban rail operation management professional courses only as a supplement to theoretical courses, the number of training hours is small, teachers also lack of practical training program design strategy, so that the training class into higher vocational students just fancy browsing equipment.

2.4 It is difficult to cooperate effectively between schools and enterprises

First, since urban rail traffic control enterprises are state-owned enterprises, local higher vocational colleges often can only cater to local enterprises, implement one-way communication to complete the push of graduates.

Second, at present, most of the urban rail traffic control staff and experts are not from the class, but from other professional transfer to work, so it is difficult for enterprises to put forward practical opinions on the reform of college urban rail operation professional curriculum construction [3]. In

the course design, the enterprise participates little, sometimes can only rely on the enterprise staff to come to the university to attend the open class for the higher vocational students, which will make the cooperation effect not ideal, the graduates are very difficult to meet the needs of the enterprise.

Third, the city rail operation of the corresponding work are mostly station attendants, directly facing passengers, and for the safety of transportation, urban rail transport enterprises are very difficult to arrange higher vocational students into the site to carry out practical manipulation, but the cooperation between schools and enterprises can only stay in the form of volunteers to implement the subway simple service level, higher vocational students practice through their professional course knowledge to implement on-site practice.

3. Discussion on Optimizing the Practice Teaching Method of Urban Rail Operation in Higher Vocational Colleges

3.1 Higher vocational students taking photos on the subway scene

For example, in "equipment management" class, the teacher can arrange homework after class, let the higher vocational students walk into the real subway station, find the relevant equipment involved in the professional course of urban rail operation, take pictures of its operation mode and style, as shown in figure 1. The teacher summarizes and evaluates the completion of the work of the higher vocational students, and then deepens the learning related equipment in combination with the case study [4]. This method lies in the initial exploration of the active problems of the higher vocational students before the classroom, and the higher vocational students enter the classroom with the knowledge of the basic conditions and problems, the teacher's teaching avoids the mechanical passive learning, but has the aim of intensively speaking, so that the classroom becomes interesting, and the learning effect will be improved obviously.



Figure 1 Exit pictures

3.2 Video production of passenger affairs simulation exercise

Urban rail transit automatic ticketing system training equipment includes a mobile ticket vending machine TVM ,4-6 automatic ticket checking machine AG and so on as shown in Figure 2. For example, in ticket management class, the teacher can put the hands-on operation of the higher vocational students after class, make them group, assign the corresponding tasks, according to the subway station passenger ticket card invalid, refund and so on, use the AFC training equipment to make the higher vocational students carry out the work flow arrangement exercise, take photos of the exercise process, and then make the video on the network for more higher vocational students to learn, the teacher analyze the video of the higher vocational students in the classroom to evaluate the score, and carry out the deep analysis and explanation [5]. Using this kind of autonomous inquiry learning method, in addition, the teacher's explanation can improve the higher vocational students' learning enthusiasm and learning efficiency.



Figure 2 Ticket machines

3.3 Introduction of equipment and regulations for urban rail operators

Higher vocational colleges should introduce equipment consistent with the actual use of enterprises, such as driving scheduling system, automatic ticket checking machine, automatic ticket machine, shielding door and so on as shown in figure 3, put into practical teaching. At the same time, it introduces all kinds of work rules and regulations, examination question bank and examination method, and demands higher vocational students according to enterprise standard in actual teaching. This would reduce or avoid the gap between college and corporate work.



Figure 3 Automatic ticket machine

3.4 Modern education and teaching

The teachers of urban rail operation need to use modern information technology as much as possible to carry out education and teaching, to make up for the shortage of urban rail operation teaching equipment to a certain extent, so that higher vocational students can complete practical training ability with the help of new media. For example, by using the mode of intensive autonomous learning and the mode of micro-class flipping classroom teaching, AR augmented reality technology, VR augmented reality technology can be introduced to open up practical training operation, equipment and so on under the permission of teachers in colleges and universities.

4. Conclusion

Urban rail operation professional education is the product of transportation development and economic development, urban rail transit operation in the domestic start time is shorter, the domestic urban rail operation professional establishment time is shorter, therefore, the professional

development of this major must be distinguished from other skills specialty, by discussing the various problems of urban rail operation specialty at present, the urban rail operation specialty optimizes the teaching method, it is helpful for colleges and universities to cultivate many high-tech talents suitable for urban rail enterprises, better serve the society and serve the human being.

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