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# Research on the Training Mode of Rail Transit Talents in Higher Vocational Colleges under the Background of “Internet +”

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**Abstract:** Higher vocational education faces unique opportunities and challenges under the background of Internet +, and needs to pay attention to cultivating students' innovative ability, practical ability and comprehensive quality. The rail transit industry is also facing the challenges and opportunities of rail transit personnel training, which needs to train students' ability and comprehensive quality to adapt to technological update. The existing training mode of rail transit personnel in higher vocational colleges includes theoretical teaching, practical teaching and practical training, and needs to pay attention to innovation requirements and the direction of Internet + change.

**Keywords:** Internet +; Higher vocational rail transit; Talent training mode

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## 1. Introduction

In the context of the Internet + era, the rail transit industry has ushered in unprecedented development opportunities and challenges. The innovation and exploration of the training mode of rail transit personnel in higher vocational colleges has become the key to train high-quality talents to meet the needs of the industry. This paper aims to explore the current situation, problems and reform direction of the rail transit talent training mode in higher vocational colleges under the background of Internet +, as well as innovative teaching content and methods, and through case analysis and evaluation, put forward strategies and suggestions to improve the talent training mode. This will help meet the needs of industry development and train more excellent vocational rail transit talents.

## 2. Higher vocational education and talent training under the background of Internet +

### 2.1 The development and trend of higher vocational education

Higher vocational education is facing unique development opportunities and challenges under the background of Internet +. With the rapid development of Internet technology, great changes have taken place in the way of information exchange and knowledge acquisition, which puts forward new requirements for higher vocational education. With the wide application of Internet technology, all walks of life are constantly innovating and developing, and the demand for higher vocational talents has also changed greatly. Traditional job training has been unable to meet the needs of the industry, higher vocational education needs to pay more attention to cultivating students' innovative ability, practical ability and interdisciplinary comprehensive literacy, so that they have the ability to adapt to changes. The rapid development of Internet technology has given rise to many new industries, and higher vocational education should conduct in-depth cooperation with these industries, understand the needs of the industry and adjust the curriculum, set up professional directions that meet the market demand, and cultivate high-quality talents with The Times. Higher vocational education should also pay attention to the cultivation of students' practical ability, and cooperate closely with enterprises in off-campus internship and practical training. Provide practical opportunities and develop practical problem solving skills. Internet technology provides new teaching means and resources for higher vocational education, such as online course, distance teaching, virtual laboratory and so on. The application of these technologies can greatly broaden the access to educational resources and improve the teaching effect and learning efficiency. Internet technology can also provide personalized learning support and assistance for students to help them better learn and develop independently. With the popularization of Internet technology, the acquisition of professional knowledge is no longer the only goal of education, students also need to have good interpersonal communication skills, teamwork skills, innovative thinking skills and other comprehensive qualities. Higher vocational education should focus on cultivating students' comprehensive quality, and train them to become high-quality talents with both professional knowledge and comprehensive quality. Through cooperation with industry, giving full play to the advantages of Internet technology and focusing on the cultivation of comprehensive quality, higher vocational

education can better adapt to the needs of economic and social development, and make contributions to training high-quality talents to meet the requirements of the new era.

## **2.2 Challenges and opportunities of rail transit personnel training in higher vocational colleges**

Under the background of Internet +, the rail transit industry is facing opportunities for vigorous development. With the acceleration of urbanization, rail transit as an efficient and environmentally friendly mode of transportation has attracted more and more attention, and the demand for rail transit industry is also increasing. The application of Internet technology can improve the intelligence and information level of rail transit, accelerate the construction and operation of rail transit systems, and further promote the development of the industry.

## **3. Research on the training mode of rail transit talents in higher vocational colleges**

### **3.1 Overview of the training mode of rail transit talents in higher vocational colleges**

At present, the training mode of rail transit personnel in higher vocational colleges mainly includes three aspects: theoretical teaching, practical teaching and practical training. Students systematically learn the theoretical knowledge related to rail transit, including the introduction of rail transit, track engineering, train operation control, signal and communication. Theoretical teaching aims to cultivate students' basic cognition and understanding of the rail transit industry, so that they have professional quality and theoretical foundation. Practical teaching mainly includes the forms of experiment, practical training and project practice. Through practical teaching, students can apply the theoretical knowledge they have learned to practical operation and deepen their understanding and mastery of knowledge. For example, students can carry out measurement and design experiments of track engineering, debugging of train operation control system and operational practical training. Practice training is an important content of railway transit personnel training in higher vocational colleges. Students have practice training in off-campus rail transit enterprises and institutions. Through contact with the actual working environment, they can understand the operation mechanism of the industry, master practical operation skills, and apply the theoretical knowledge they have learned to practice. Practice training can improve students' practical work ability and comprehensive quality, and lay a foundation for their employment after graduation. Vocational rail transit personnel training mode also pays attention to the cultivation of students' comprehensive quality and innovative ability. Through offering courses such as humanistic quality education and innovation and entrepreneurship education, students are trained in communication skills, teamwork skills, innovative thinking and entrepreneurial awareness, so that they have the ability to adapt to the needs of the industry. There are also some problems in the existing training mode of rail transit personnel in higher vocational colleges. First of all, the industry technology update fast, the current teaching content and methods need to keep pace with The Times, pay attention to the introduction and application of new technologies. Secondly, practical teaching and practical training resources are limited, and it is necessary to strengthen cooperation with enterprises to provide more practical opportunities and practical projects. In addition, it is also necessary to strengthen the professional quality and teaching ability of teachers, improve the practical experience and industry background of teachers. The existing training mode of rail transit personnel in higher vocational colleges is based on theoretical teaching, practical teaching and practical training, and focuses on cultivating students' professional knowledge and practical operation ability. However, it is also necessary to continuously improve and perfect the model to meet the requirements of industry development and student needs.

### **3.2 Innovation requirements and direction of change in the context of Internet +**

The Internet + era requires talents with innovative thinking and entrepreneurial ability. The traditional training mode of rail transit talents in higher vocational colleges focuses on the cultivation of theoretical knowledge and practical skills, while under the background of Internet +, it is necessary to cultivate students' innovative consciousness, divergent thinking and problem-solving ability. Schools can offer innovation and entrepreneurship education courses to encourage students to participate in project practice and entrepreneurial activities to cultivate their innovative and entrepreneurial spirit. Vocational rail transit personnel need to master the basic knowledge and application ability of information technology, such as big data analysis, artificial intelligence, cloud computing and so on. Schools can adjust the curriculum, increase the content of information technology-related courses, and provide corresponding practical opportunities, so that students can flexibly use information technology to solve practical problems. Higher vocational rail transit talents need to have the ability of cross-border coordination, and can effectively communicate and cooperate with talents in information technology, e-commerce, logistics and other fields. The school can set up interdisciplinary courses, organize cross-field project practice, and cultivate students' comprehensive quality and teamwork ability. With the rapid update of knowledge in the Internet + era, vocational rail transit talents need to have the ability of independent learning and lifelong learning, and constantly follow up the new trends and technological development of the industry. Schools can develop students' ability to learn actively, teach learning methods and access to information, and encourage students to participate in continuing education activities such as industry seminars and technical training. Under the background of Internet +, rail transit talents in higher vocational colleges need to have practical experience and practical operation ability. Schools should strengthen practical teaching and provide more opportunities for experiments,

practical training and internships, so that students can practice and apply their knowledge in a real working environment.

#### 4. Peroration

With the advent of the Internet + era, the training mode of rail transit personnel in higher vocational colleges is facing unprecedented opportunities and challenges. Through the exploration and innovation of the existing model in this paper, we deeply analyze the reform needs of teaching content, practice and training methods. At the same time, through case analysis and evaluation, we put forward strategies and suggestions such as education resource integration, career orientation and industry cooperation. This will provide valuable reference for the training of rail transit talents in higher vocational colleges.

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