

Several Thoughts on the Training of Transportation Guarantee Talents

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Abstract: Transportation guarantee can provide efficient and reliable transportation results for logistics transportation, but currently, transportation guarantee talents are scarce, and it is necessary to cultivate transportation guarantee talents. This study comprehensively considers the performance of knowledge, skills, and comprehensive abilities, adopts multiple evaluation methods and indicators, and combines practical applications and performance evaluation to evaluate the effectiveness of transportation guarantee talent cultivation. In the evaluation process, there are difficulties such as subjectivity, diversity, applicability, and resource limitations. To overcome these difficulties, a comprehensive evaluation is conducted to better understand the knowledge, skills, and abilities of trainees in the field of transportation support, and targeted feedback and improvement suggestions are provided to further improve the quality and effectiveness of talent cultivation. The results show that the training method in this article can enable students to achieve a maximum of 100 points in transportation professional knowledge, and can also shorten the completion time of students in transportation projects.

1. Introduction

The scarcity of talents in the transportation industry leads to low transportation efficiency. It is a problem that has not been solved. In the field of modern logistics, efficient and reliable transportation security is the key to ensuring the smooth operation of the supply chain. If people want to achieve this goal, they can't do without professionals with relevant knowledge, skills and comprehensive capabilities. Therefore, the training of transportation security personnel has become an important issue of concern to enterprises and organizations. The purpose of this article is to explore how to evaluate the effectiveness of transportation security personnel training and solve the difficulties in the evaluation process. The article comprehensively considers the performance of students in terms of knowledge, skills and comprehensive abilities to comprehensively evaluate their training effect, and adopts a variety of evaluation methods and indicators to ensure the accuracy and comprehensiveness of the evaluation, combined with practical applications and performance evaluation, in order to better evaluate the performance and results of students in actual work.

This article can be divided into three parts for discussion. Firstly, it introduces the background

and significance of evaluating the training of transportation guarantee talents, explains why it is necessary to evaluate its effectiveness, and points out the difficulties that may be encountered during the evaluation process. Next, the research methodology of this article can be elaborated in detail, including the comprehensive consideration of the elements of student performance, the application of various evaluation methods and indicators. Finally, the main points of this article are summarized, and future research directions and suggestions for the evaluation of transportation guarantee talent cultivation are proposed.

2. Related Work

Many scholars have conducted research on transportation security and talent cultivation. Yang Min explored the path of transformation and upgrading of the transportation talent training system. He proposed the reconstruction of the basic core system of talent training programs, the creation of a resource support system for teaching sharing platforms, and the establishment of a quality assurance system for collaborative education between industry and education, based on the construction task of first-class majors in transportation at Southeast University. This provides reference for the transformation and upgrading of talent training systems in transportation colleges [1]. Taking Xihua University as an example, Zhang Shibo proposed the top-level design of the transportation talent training system from the aspects of constraint factor analysis, "2+2" category training mode, professional positioning and training goal setting, and graduation requirement formulation. He constructed the curriculum system from the aspects of knowledge structure model, curriculum structure system, teaching objectives and the supporting relationship with graduation requirements [2]. Qiu Xin has advantages in the world's advanced talent cultivation model, such as setting up curriculum majors and teaching content based on the market, and comprehensively evaluating the quality of talent cultivation. He proposed that the construction of the transportation talent training model in Zhejiang Province should clarify the professional positioning, improve the curriculum, promote the integration of industry and education, and develop an evaluation mechanism based on the current situation of Zhejiang Province [3]. Jiang Huifu conducted research on the current research and development status and trends of emergency transportation support technology and equipment for natural disasters. He analyzed the core theoretical and technical issues from the aspects of specialization level, technical level, guarantee system, delivery speed, etc. [4]. Wang Jianxiong proposed a method for predicting passenger flow during the Winter Olympics, and studied and constructed a passenger transportation guarantee system that matches multiple high-speed railway transportation modes, manages complex and abnormal ticket amounts and seats, and controls and alerts train over stopping. The research conclusions and achievements provide theoretical support for the matching of Winter Olympics transportation and passenger demand, and provide organizational strategies with refined management and non-overlapping flow lines. This effectively reduces the risk of epidemic spread and the cost of social epidemic management [5]. Lv Z has utilized deep learning methods to address some of the safety issues in current intelligent transportation systems [6]. Azmy A investigated the impact of employee engagement and job satisfaction on employee agility in talent management in public transportation companies [7]. Shao H analyzed the spatial network structure and influencing factors of carbon emission efficiency in China's transportation industry [8]. Gupta A reviewed the progress, challenges, and opportunities of future drone transportation [9]. Turaev S A provided a detailed introduction to the innovative management content of passenger transportation systems and passenger transportation automation systems [10]. These literature can provide some assistance for this article, which can provide a review of talent cultivation in transportation security.

3. Method

3.1 Talent Demand

The rise of e-commerce has led to the rapid development of economic globalization and e-commerce, and the logistics industry has grown rapidly. The demand for efficient, safe, and reliable transportation services by enterprises is increasing [11-12], which requires a large number of transportation support talents to meet market demand. Safety and risk management are important considerations during transportation. Enterprises are increasingly valuing the safety and risk management of goods, thus there is a growing demand for transportation security personnel with relevant professional knowledge and skills. As a result, the modern logistics industry increasingly relies on information technology and logistics management systems, requiring professional talents to manage and operate these technologies and systems to improve transportation efficiency and management level. Due to the aging population and increasing talent mobility, the logistics industry needs to recruit new talents to fill job vacancies. As an indispensable part of the logistics industry, transportation guarantee talents have good employment prospects and development space.

3.2 Significance of Transportation Guarantee

Transportation guarantee refers to a series of activities that provide various support and guarantee measures during the transportation process to ensure the safe and timely arrival of goods at the destination. It is a key link in ensuring the safety and timely arrival of goods at the destination, and its significance lies in providing important support for the economic development of modern society [13-14]. So how can transportation security be carried out? This requires optimizing transportation planning, improving transportation efficiency and reducing transportation costs, providing enterprises with efficient and reliable logistics services, and promoting product circulation and market exchanges. At the same time, transportation guarantee is also an important part of ensuring the smooth supply chain, ensuring the timely supply of raw materials, components, and commodities, and maintaining the normal operation of production and sales. It is equally important for environmental protection and sustainable development. By optimizing transportation routes and modes, reducing energy consumption and emissions, the impact on the environment can be reduced. The cultivation and development of transportation support talents are crucial for improving the level of transportation support. They possess professional knowledge and skills to plan transportation networks, coordinate transportation scheduling, manage warehousing, and implement safety measures, ensuring the safety and efficiency of goods during transportation [15-16]. Therefore, the significance of transportation security lies in promoting economic development, maintaining supply chain stability, protecting the environment, and improving social welfare, making important contributions to the sustained prosperity and sustainable development of modern society.

3.3 Training Objectives for Transportation Support Talents

Why should transportation security personnel be trained? Because of cultivating those with relevant skills and knowledge [17-18], they need to have transportation planning and optimization capabilities, be able to perform various tasks in the field of logistics and transportation, choose the best routes and methods for goods, improve transportation efficiency and reduce costs. Transportation security personnel need to be able to develop safety regulations, assess risks, and take corresponding measures to ensure the safety and reliability of the transportation process [19-20]. It needs to have data analysis and decision support capabilities, be able to use data for

analysis, provide decision support and suggestions for optimizing transportation plans. It also needs to be familiar with information technology and system applications, able to operate logistics information systems, ensure the normal operation of the system and the security of data. During this process, it is essential to understand international trade and cross-border transportation, master relevant procedures and regulations, and be able to handle cross-border logistics issues. By cultivating the aforementioned abilities and knowledge, it can be possible to effectively organize and manage the transportation of goods, improve transportation efficiency, reduce costs, ensure the safety of goods and smooth supply chain, and provide high-quality logistics services for enterprises. Good transportation scheduling and coordination skills help to arrange the loading of goods and the scheduling of transportation vehicles in a reasonable manner, ensuring that goods arrive at their destination on time.

3.4 Curriculum Design and Training Methods

In terms of course design, basic theoretical courses, practical courses, technical application courses, and interdisciplinary courses can be selected. Basic theories include courses on logistics management principles, transportation planning and optimization, warehousing management, transportation safety and risk management, etc., providing students with basic theoretical knowledge in the field of logistics transportation. Table 1 shows the specific course offerings for basic theoretical courses:

Table 1: Specific courses for basic theory courses

Course Name	Course Description	Teaching Method	Hours
Principles of Logistics Management	Introduces the basic principles and concepts of logistics management	Lectures, case studies	40
Transport Planning and Optimization	Learn how to effectively plan and optimize transportation	Lectures, simulations	30
Warehouse Management	Explores the principles and techniques of warehouse management	Lectures, site visits	35
Transport Security and Risk Management	Discusses the importance of transport security and risk management, and learn strategies and measures to address transportation risks	Lectures, case studies	25

Through practical courses such as field investigations, case analysis, and simulation experiments, students are able to apply theoretical knowledge to practical situations and cultivate the ability to solve practical problems. The technical application courses include logistics information system application, data analysis technology, transportation scheduling system and other technical application courses, cultivating the ability of students to use information technology and system tools for transportation support work. Interdisciplinary courses involve interdisciplinary courses such as supply chain management, international trade, and laws and regulations, enabling students to comprehensively understand the position and role of transportation security work in the entire supply chain, as well as the requirements of relevant laws and regulations.

In terms of training methods, team project training can be chosen, which enables students to face practical problems in real or simulated environments and solve these problems through teamwork. Such practical experience can cultivate students' practical operation ability and problem-solving ability. Transportation support work usually requires teamwork to complete, and team project development can cultivate students' teamwork and collaboration abilities. Students can learn to collaborate, divide tasks, coordinate, and communicate with others, all of which are essential elements of teamwork.

4. Results and Discussion

4.1 Evaluation of Talent Training Effectiveness

The training methods in this article can be applied to students majoring in transportation. One class is recorded as one class using the training method designed in this article, while the other class is recorded as two classes according to normal learning methods to complete the course of this semester. There are a total of 30 students in each class. After one semester, the effectiveness of talent cultivation can be evaluated to understand the knowledge, skills, and abilities of students in the field of transportation support, as well as the effectiveness of the training program and the need for improvement. Firstly, a competency assessment can be conducted to assess the professional knowledge and ability level of the trainees through testing and comprehensive assessment. Then, the performance and outcomes of the trainees in the team project can be evaluated, including the quality of project outcomes and actual application effects. At the same time, feedback and opinions from students can be collected to understand their evaluation of the training process and learning experience. This article sets the evaluation indicators as transportation capacity professional score test, transportation project completion time, and student evaluation of training methods, and visualizes the evaluation results using mathematical analysis tools.

4.2 Evaluation Results

4.2.1 Professional Testing of Transportation Capacity

Professional tests can evaluate the professional knowledge level of students in the field of transportation capacity, including theoretical knowledge related to transportation management, logistics planning, transportation optimization, transportation safety, etc. Through the test results, it is possible to understand the theoretical mastery of transportation capacity by the trainees, evaluate their learning achievements and mastery level in the knowledge field. Figure 1 shows the results of two classes:

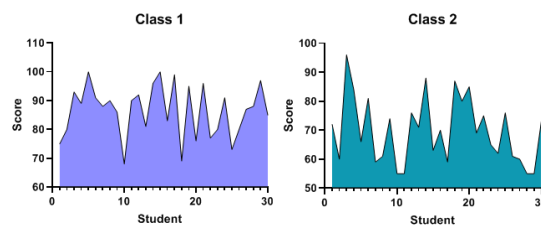


Figure 1: Performance test

In the professional ability test, the highest score for students in Class 1 is 100 points, and the lowest is 68 points, with 24 students scoring above 80 points. The highest score for Class 2 students is 96, and the lowest score is 55. Among them, there are 7 students with scores above 80. In terms of grades, it can be seen that the training program in this article has had a significant positive impact on students' grades, with the upper limit and average score higher than those of Class 2 students.

4.2.2 Project Completion Time

The completion time of the project can reflect the student's ability in time management. Being able to complete the project on time indicates that the trainees have effective time planning and organizational skills, are able to arrange tasks and manage work progress reasonably. This shows whether students are able to effectively utilize their time and have good time management skills in

the talent development process. Figure 2 shows a time comparison:

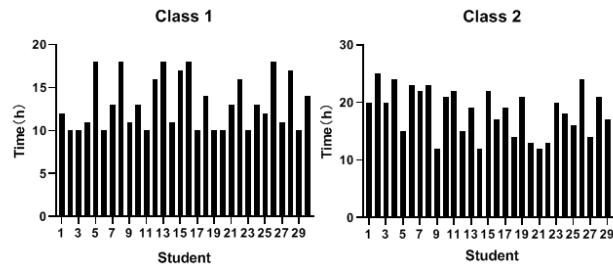


Figure 2: Project completion time

In project testing, the same project can be distributed to all students in two classes, and the time required for each person to submit the project can be calculated. The shortest time for students in Class 1 to complete the project is 10 hours, and the slowest is 18 hours. The fastest time for Class 2 students to complete the project is 12 hours, and the slowest time is 25 hours. It can be seen that after training, students in Class 1 can complete the project in a shorter amount of time.

4.2.3 Evaluation of Cultivation Methods

After one semester, a survey was conducted on students in Class 1, and their evaluation opinions on the training methods were recorded. The results are shown in Figure 3:

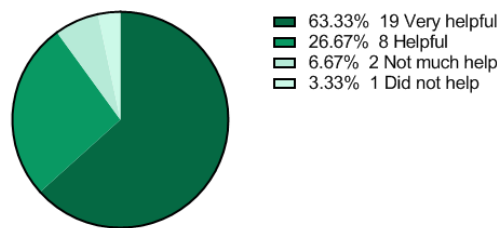


Figure 3: Views on cultivation methods

A survey showed that 19 students in Class 1 gave positive support to the training method in this article, with 8 believing it was helpful, 2 believing it was not helpful, and 1 believing it was not helpful. Overall, 90% have affirmed the cultivation method in this article.

4.3 Difficulties of this Evaluation

(1) During the evaluation process, the subjective judgment and bias of the evaluator may affect the evaluation results. Different evaluators may have different interpretations and evaluations of student performance, leading to subjectivity in the evaluation results.

(2) Talent cultivation involves multiple aspects, such as knowledge, skills, attitudes, and values, making it difficult to comprehensively evaluate the training effectiveness of students using a unified evaluation method. Different training objectives and contents require the use of multiple evaluation methods and indicators, increasing the complexity of evaluation.

5. Conclusions

If people want to improve transportation efficiency and stability, then the training of transportation security personnel is a key strategic initiative, which is essential to ensure efficient and reliable logistics and transportation. When evaluating the effectiveness of talent cultivation, it is necessary to comprehensively consider the performance of knowledge, skills, and comprehensive abilities, and combine practical application and performance evaluation. However, the evaluation

process may face difficulties such as subjectivity, diversity, applicability, and resource limitations. To overcome these difficulties, it is necessary to ensure the objectivity and impartiality of the evaluation, adopt multiple evaluation methods and indicators, combine with the actual work environment for evaluation, and allocate evaluation resources reasonably. Continuous monitoring and feedback mechanisms are also crucial for timely adjustment of training programs and improvement of training methods.

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