

Research on Logistics Talents Cultivation Strategy Against the Background of Artificial Intelligence and Internet of Things

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ABSTRACT

The development of China's logistics industry shows a trend of specialization and intelligentization. The quality of logistics practitioners has become an important factor hindering the development of China's logistics industry. This paper uses the empirical analysis method, through the logistics industry employment demand and logistics personnel training status of research, analysis of the modern logistics industry to adapt to the development of smart logistics talent should have the ability. In order to provide a strong guarantee for the development of modern logistics industry, this paper puts forward some suggestions from two aspects of personnel training mode and personnel training guarantee system, and establishes an improved logistics personnel training system.

Keywords: artificial intelligence and Internet of Things (AIOT), logistics industry, personnel training, strategy

I. INTRODUCTION

In 2018, the total amount of social logistics in China was 283.1 trillion yuan, and the total cost of social logistics was 13.3 trillion yuan, accounting for 14.8 percent of GDP. Scientific and technological progress has had a significant impact on the development of the logistics industry. Artificial intelligence, Internet of Things, 5G, big data, intelligent equipment and other technologies have improved the informatization, specialization and intelligence level of the logistics industry.

II. CURRENT SITUATION OF LOGISTICS TALENTS DEMAND AND TRAINING

High-quality logistics personnel training is the key factor for the healthy, sustainable, efficient and stable development of modern logistics industry. At present, only a few typical large logistics companies have a high level of intelligence and modernization, while other enterprises still prefer to use basic logistics automation equipment, such as barcode technology, Radio Frequency Identification, Geographic Information System and Global Positioning System. Therefore, the factors restricting the development of logistics enterprises are the shortage of logistics professionals.

A. Current situation of logistics talent demand

Currently, logistics talents are required to be familiar with the logistics industry, know the corresponding logistics knowledge and advanced technology, master the basic flow of logistics, and be able to apply them to practice. Logistics planning consultants and researchers featuring solid theoretical basis and the ability to analyze and innovate the logistics system are urgently needed talents in the industry. Logistics personnel are divided into senior, intermediate, junior and general operators based on position level. The development of technology coincides with a shortage of middle and senior logistics talents equipped with management experience and English qualifications, which obstructs the development of logistics industry. For the junior logistics talents, enterprises do not have high requirements on their abilities and experience, and the market demand is close to saturation, so the number of recruitment keeps declining.

B. Current situation of logistics personnel training

1) *The talent structure is unreasonable:* With the development and reform of the logistics industry, the demand for talents in this area is increasing, but the talent structure is obviously unreasonable in this market. At present, the output of logistics talents cannot meet the development needs of logistics industry, especially

under the background of AIOT. The applied technical talents who are proficient in strategic technology and management and familiar with advanced logistics information and operation are extremely scarce in the logistics talent market.

2) *The level of talent training is unreasonable*: The development of logistics education in China has begun to take shape, but still lack of scientificity and rationality. Most of the talent training is still at the basic level, and most people's understanding of logistics is still at the traditional stage of warehousing, handling and distribution, thinking that logistics is physical labor. This is seriously divorced from the modern development of the logistics industry, which is relatively backward, and it is difficult to meet the development needs, especially for the training of middle and senior management, application and technical talents.

3) *The goal of talent training is not clear*: In the process of talent training, the training target is not pertinence and does not form a distinctive feature. The curriculum system of logistics management in colleges and universities is basically the same, it does not really relate to the actual needs of logistics management and is divorced from the reality. In the teaching process, the school only inculcates the corresponding theoretical knowledge to the students, but lacks the practice exercise.

4) *The level of teachers needs to be improved*: The major of logistics in colleges and universities is lack of double-qualified teachers who can not only explain theoretical knowledge, but also have strong professional and practical teachers, thus affecting the level and quality of logistics personnel training.

III. REQUIREMENTS FOR LOGISTICS TALENTS AGAINST THE BACKGROUND OF AIOT

A. Senior logistics personnel capacity requirements

Senior logistics talents should be able to plan the development of the enterprise from a strategic perspective, and they are usually required to have at least 3-5 years of senior management experience. The academic requirements for senior logistics personnel are also constantly improving, the current is bachelor degree or above. In addition, they need to have good English skills, communication skills, computer technology and project management skills, as well as be familiar with the logistics information system of the enterprise.

B. Intermediate logistics personnel ability requirements

Intermediate logistics talents should be able to plan and command specific issues. They are generally required to have more than 3 years of management experience, and be familiar with the specific business of a logistics field and have strong operability. To this kind of talented person's academic requirement, at present general is junior college or above, and they should have certain English level and good communication ability as well.

C. Junior talent and general operator capacity requirements

Junior logistics personnel are required to be responsible for the operation of specific affairs, mainly physical labor. They are generally required to have more than 1 year of work experience, have good communication skills and team spirit, can skillfully use office software, and have a strength body.

IV. TRAINING METHODS OF LOGISTICS TALENTS AGAINST THE BACKGROUND OF AIOT

A. The colleges and universities should pay attention to the ability and quality of logistics personnel training

In the traditional training process of logistics talents, students passively accept the knowledge of logistics inculcated by teachers, only acquire relevant theoretical knowledge, lack the training of practical and technical ability, and cannot adapt to the development needs of modern logistics industry, thus being out of touch with the society. However, under the background of AIOT, logistics enterprises' demand for talents has changed from quantitative to qualitative. They pay more attention to the cultivation of logistics practitioners' ideological politics, practical ability and innovation ability, and prefer to hire staff with enterprise spirit, sense of responsibility and strong adaptability. Modern logistics talents should not only understand logistics technology, but also management and application. The rapid development of artificial intelligence and the Internet of Things has also accelerated their penetration into the logistics industry. The use of big data has excavated new commercial value, and information technology has been paid attention to by many logistics enterprises. Through the use of information technology, enterprises can appropriately improve labor efficiency, and can put forward feasible and constructive opinions in the use process. At present, "Three to understand and one to practice" has become an important knowledge system of logistics personnel training, that is, understand IT, understand data, understand algorithm AI, and be able to master logistics management.

Therefore, colleges and universities become the main source of logistics personnel training, and strengthening the construction of logistics discipline is an effective way to improve the quality of logistics personnel.

1) Setting up appropriate logistics professional and courses according to the market demand: Colleges and universities should establish an appropriate logistics professional education system and train application-oriented, skill-based and management-oriented logistics talents. Different training methods are adopted for different levels of talent demand. Junior college students should pay attention to skills and practice, undergraduate students should pay attention to quality and knowledge, and master students will pay attention to research and methods.

2) Construction of "double-qualified" faculties: At present, the overall teaching level of logistics majors in colleges and universities is generally not high, and there are few teachers with practical experience. Therefore, each school should introduce a large number of logistics talents with practical experience and invite experts from relevant logistics enterprises to give lectures on the class.

3) Strengthening cooperation among government, industry, academia and research institutes: Colleges and universities should cooperate with the government to study advanced logistics technology and planning. When the project is launched, it can be connected with the industry, so that students can correspond to the actual jobs, so as to enhance students' practical ability.

4) Cultivating students' comprehensive quality: Colleges and universities should encourage students to learn knowledge and skills in different fields, seek practice opportunities in line with the society, and combine professional knowledge with practical fields.

B. Advanced logistics social training system

The comprehensive quality of logistics practitioners can be improved not only through school-enterprise cooperation, but also through social training.

1) Focusing on vocational training and education: Vocational training is the best way to improve the theoretical knowledge and practical ability of logistics practitioners. We should vigorously develop logistics vocational education, so that logistics practitioners can master the corresponding theory and knowledge, and improve professional skills.

2) Leveraging the strengths of logistics associations: Training institutions can take advantage of the social resources of logistics associations to promote the communication among logistics practitioners and provide them with effective training.

3) Improving the professional qualification certification system: At present, the logistics training market is relatively non-standard, there are many logistics professional qualification certificates, but most of them lack of the national recognition. It is one of our current goals to improve the logistics professional qualification certification system and introduce international standard certification to realize the legalization, internationalization and standardization of logistics professional qualification.

V. LOGISTICS PERSONNEL TRAINING GUARANTEE SYSTEM AGAINST THE BACKGROUND OF AIOT

China's logistics industry started late, in many aspects there are shortcomings, especially the lack of logistics personnel. At present, China's logistics talent market has not formed a sound logistics technology innovation and knowledge-based logistics talent training system, and only a handful of professionals are truly proficient in modern logistics industry, which seriously restricts the development and internationalization of the logistics industry under the background of AIOT. In order to meet the development needs of modern logistics industry, the sustainable development and training of logistics talents can be guaranteed from the following aspects.

A. Improving the talent introduction channels

The development of any enterprise is inseparable from talents, and the competition among enterprises is the competition among talents in the final analysis.

1) Introducing top logistics professionals: In order to improve the core competitiveness and significant economic benefits of logistics enterprises, each enterprise should propose corresponding incentive measures according to the quality of top logistics talents, so as to solve the worries about the scientific research and talent training of logistics professionals.

2) Implementing the program for outstanding students of prestigious universities: Enterprises should cooperate with institutions of higher learning with the advantages of logistics education, so as to complement each other through the combination of production, learning and research, and make long-term reserves of logistics professionals.

3) Increasing efforts to introduce more flexible talents: For the senior talents with abundant achievements and professional technical knowledge who are in short supply, the enterprise should not be confined to a certain form, but adopt the flexible introduction method which is actively explored, so as to realize the introduction of professional talents.

B. Improving the policy on nurturing talents to achieve success

According to Maslow's hierarchy of needs theory, physiological needs are the most basic needs of talents, so employees can only have the energy and time to make positive contributions to the corresponding positions after their basic life is guaranteed. In the hierarchy of needs theory, the highest level of needs is the realization of personal value, so employees also need to achieve success in the corresponding positions and get recognition from others to meet the needs of personal value.

1) Carrying out a program to cultivate entrepreneurs: Entrepreneurs influence the strategic development direction, talent cultivation strategy and corporate culture of an enterprise, so the entrepreneurs' management level and talent concept are particularly important. First of all, we should encourage and support qualified entrepreneurs to actively participate in the competition and cooperation in the domestic and foreign markets, constantly cultivate and update management concepts, master new technologies and improve the level of strategic management. Secondly, we should continue to educate entrepreneurs, improve their professional quality and professional ability, and provide them with a business atmosphere of free innovation.

2) Accelerating the training of logistics personnel with high academic degrees and professional titles: The development of social economy cannot be separated from the promotion of talents. Talents with high academic qualifications and professional titles play a very important role in the formulation of relevant strategic plans in the development of social economy. In order to meet the development needs of modern logistics industry, we should pay more attention to the cultivation of interdisciplinary talents and actively encourage on-the-job employees to further their studies. The government or the enterprise should according to the implementation effect, give different degrees of rewards, and constantly expand the channels for training talents with higher education and professional fields. Meanwhile, government should cooperate with colleges and universities to promote the development and training of high-level logistics talents.

3) Strengthening the training of professionals: In order to promote the training of logistics professionals, the government should give different degrees of rewards or subsidies to vocational colleges and high-skilled personnel training institutions, so as to provide strong financial guarantee for the training of logistics professionals.

4) Promoting the construction of logistics personnel training carrier: In addition to universities and scientific research institutions, the training of logistics professionals also needs to create some links of practice testing. In order to respond to the national call and build an innovation-oriented logistics park, the government should provide corresponding capital and policy support for the innovation and entrepreneurship of logistics professionals. In addition, we should establish a public logistics information platform, speed up the construction of scientific research infrastructure, strengthen the sharing of resources, encourage international cooperation and exchanges, and deeply integrate into the development and application of the global innovative logistics network.

5) Improving the system of continuous education and training: In the period of knowledge economy, enterprises should establish a learning organization. With the changes of the progress of technology, everyone has limited knowledge in the corresponding time and scope. Only by constantly strengthening their own learning can they keep up with the needs of social development. In order to improve the life-long education and training system of logistics industry and fully integrate all kinds of training resources, enterprises should first establish school-enterprise cooperation with various colleges and universities that offer logistics management majors, and establish internship bases for graduates, so as to improve their work skills and employment competitiveness. In addition, enterprises should also make full use of the advantages of institutions of higher learning, scientific research institutions, vocational colleges and universities to carry out continuing education and training, and encourage logistics practitioners to accept academic training and knowledge update. By training and self-study, enterprises can carry out skills training, establish the combining innovation and improving education training system, content, methods and means, use of network resources for remote education, improve the staff's cultural quality and professional skills, in order to promote the development of the logistics industry.

C. Establishing a good employment mechanism

Only by putting the right talents in the right position can the role of talents be brought into full play. Logistics enterprises should perfect the system of employing and retaining personnel, carry out effective incentives, and realize the maximum development of logistics talents.

1) Establishing effective talent evaluation mechanism: Based on the principle of ability and performance, enterprises should evaluate logistics

personnel in specific analysis of specific problems. First of all logistics talents of different levels play different roles in enterprises. Therefore, enterprises should formulate different evaluation and assessment standards to give objective and fair evaluation to logistics talents. Secondly, enterprises should focus on the evaluation of logistics personnel, supplemented by their academic qualifications, and examine the actual performance of the staff. Finally, enterprises should be scientific, systematic and reasonable in the evaluation, and establish a scientific and reasonable evaluation mechanism for logistics talents, so as to promote the long-term development of logistics talents.

2) *Using the mechanism to establish scientific talented person:* Only by giving full play to one's talents can an enterprise improve its competitiveness. First, enterprises should adhere to the principle of both ability and integrity, in the work of logistics personnel to test the ability and level of work, put the right talent on the right position, through the reasonable allocation of resources, so that each person to play their strengths to reflect personal value. Secondly, enterprises should also pay attention to the timeliness of talent utilization, and reasonably arrange the career of new talents so as to give full play to their individual talents. In the end, enterprises should introduce talents from all aspects and break through the narrow social restrictions.

3) *Establishing a reasonable incentive mechanism for talent distribution:* In order to mobilize the enthusiasm of talents and establish a reasonable salary system, enterprises should establish corresponding salary systems for different types of talents. For managerial talents, enterprises should establish a diversified distribution system with performance as the core. For operational talents, enterprises should implement hierarchical salary structure according to their professional skills and working proficiency. For professional talents, enterprises should reward them according to their achievements in scientific research and their contributions, give full play to the dual incentives of economic interests and social honor, and fully respect the value of talents, so as to ensure the training of logistics talents.

D. Creating a good environment for the development of logistics talents

We should establish a free, harmonious and relaxing environment for the training of logistics professionals to improve the level of logistics personnel training.

1) *Strengthening government leadership over the work of logistics professionals:* We should constantly improve the government's leadership over the logistics talent work, strengthen the government's work planning,

policy formulation and policy implementation, and timely solve the problems in the logistics talent training and take corresponding measures to solve them.

2) *Creating a favorable legal environment for the growth and development of logistics talents:* With the continuous improvement of China's legal system construction, the relevant laws on logistics have been constantly supplemented and revised. A good legal environment is a strong guarantee for the smooth development of logistics. Relevant departments should carefully review the current logistics personnel policies and regulations, constantly modify and improve, so that the logistics personnel policies and regulations can meet the needs of personnel training to stimulate the enthusiasm of logistics personnel. At the same time, we also need to further improve the logistics personnel rule of law supervision and management mechanism, to protect the legitimate rights and interests of logistics practitioners.

3) *Creating an efficient public service environment:* We should strive to develop public service products, strengthen the standardization of public service products for logistics talents, and improve the working efficiency. The government should establish a public service information platform for logistics talents, absorb outstanding talents into the platform, and realize resource sharing, so as to improve the dual selection of public service, improve the guarantee mechanism, and meet the diversified needs of logistics talents.

4) *Creating a favorable public opinion environment:* The whole society should strive to form a good atmosphere of respecting, serving and valuing talents, and stimulate the innovation and creation ability of logistics talents to the greatest extent, to attract more logistics professionals to contribute to the development of modern logistics industry.

VI. CONCLUSION

In recent years, artificial intelligence and the Internet of Things technology has been paid more attention in the logistics industry, and has been well applied, but the corresponding logistics personnel are very scarce. We should study the current situation of logistics industry talent demand, establish a reasonable logistics talent training system and formulate reasonable safeguard measures, so as to meet the needs of the development of the logistics industry and promote the healthy, orderly and rapid development of this industry.

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