Research on teaching reform of logistics talent training mode under the background of digital economy

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Abstract: With the rise of the digital economy, digital technology has become an important trend in the field of logistics, which puts forward higher requirements for the training of logistics talents. Therefore, this article adopts case analysis method, empirical research method, and literature research method to study the teaching reform of logistics talent cultivation mode in the context of the digital economy, and explore the problems and challenges in logistics talent cultivation. The case analysis method is used to analyze the specific situation and existing problems of logistics talent training mode in specific regions and industries. This article collects and analyzes relevant data on logistics talent cultivation models through empirical research, investigates and diagnoses existing problems, and proposes some reform suggestions. It uses the literature review method to analyze the research hotspots and achievements in this field, seeking theoretical support for the teaching reform of logistics talent cultivation mode. On the basis of exploring the teaching reform mode, method and effect evaluation of logistics talent training, this paper further puts forward specific suggestions for logistics teaching reform and talent training mode innovation based on digital technology, aiming to provide useful reference for continuously improving the quality of logistics talent.

Key words: digital economy; logistics talent; teaching reform; digital technology

1 Introduction

With the rapid development of the digital economy, the logistics industry has also ushered in unprecedented opportunities and challenges. The wide application of digital technology is bringing profound changes to the traditional logistics mode, and the training of logistics talents is also facing new opportunities and challenges. Therefore, this paper aims to explore the teaching reform of logistics talent training mode under the background of digital economy. By analyzing the impact of digital economy on logistics talent training, the measures and effects of teaching reform in logistics talent training mode, this paper puts forward corresponding suggestions [1]. Through this study, it can promote the deep integration of digital technology and logistics industry, promote the high-quality development of logistics industry, and inject new vitality into China's economic development.

2 The impact of digital economy on logistics talent training mode

With the rapid development of Internet technology, digital economy has become an important trend of global economic development. Digital economy refers to economic activities based on information infrastructure and digital

technology, which has profoundly affected various industries and fields, including logistics. The development of digital economy has brought opportunities and challenges to the logistics industry, and its impact is mainly reflected in the following aspects:

First of all, digitalization, networking and intelligence have become a new trend in the development of the logistics industry. In the context of digital economy, the logistics industry has shifted from the traditional manual operation mode to the digital and fine management of the whole process, making the entire logistics process visible, traceable and controllable, and greatly improving the efficiency and quality of logistics. In addition, the logistics industry is facing the opportunity to develop a diversified business model, and the development of emerging businesses such as intelligent logistics and express delivery has injected new vitality into the logistics industry [2].

Secondly, the development of digital economy has also promoted the upgrading of logistics supply chain management. The application of new technologies such as e-commerce, the "Internet of Things", and cloud computing has strengthened information communication and collaboration in all links of the logistics supply chain. Logistics enterprises optimize the supply chain through information technology and digital means to achieve optimal inventory management, reduce warehousing costs, and improve the efficiency of the entire supply chain [3].

With the development of digital economy, the logistics industry is facing unprecedented opportunities and challenges. The wide application of digital technology promotes the development of logistics industry to the direction of digitization, networking and intelligence, and also brings new opportunities and challenges for the reform of logistics personnel training mode.

3 Research on the teaching reform of logistics talent training mode

3.1 Problems and challenges in logistics talent training mode

In the context of the digital economy, the demand and ability requirements of the logistics industry for talents continue to improve, which also leads to a series of problems and challenges faced by the traditional logistics talent training model, mainly in the following aspects:

First of all, there is a problem of mismatch between logistics talent training mode and market demand. The traditional logistics talent training mode focuses on the teaching of basic theoretical knowledge, but with the rapid development of digital technology, the outstanding talent demand has shifted to the actual ability and application level [4]. Therefore, the students cultivated under the traditional mode do not match the market demand, and cannot meet the requirements of enterprises for practical ability and application needs.

Secondly, logistics personnel training mode has the problem of backward education content and mode. The traditional logistics talent training model has outdated curriculum, single teaching content and methods, which cannot adapt to the continuous expansion of logistics business scope and the application of new technologies in the digital economy environment, with the practical teaching content lacking measures and innovative practices.

Finally, the logistics personnel training mode has the defect of cross-disciplinary ability. At present, the logistics industry is increasingly integrated with other industries, such as manufacturing, information technology and other industries, requiring logistics talents to have stronger cross-field collaboration ability. While under the traditional logistics talent cultivation model, students lack interdisciplinary abilities, which limits their career prospects and development [5].

To sum up, there are many problems and challenges in the logistics talent training mode under the background of digital economy. How to adapt to the development needs of logistics industry under the background of digital economy, carry out in-depth exploration and reform of logistics talent training mode, and realize the transformation from traditional logistics talent training mode to modern, digital and innovative logistics talent training mode, is an urgent problem to be

solved at present.

3.2 Discussion on the mode and approach of teaching reform and its effect evaluation

In view of the problems and challenges existing in the logistics talent training mode under the background of digital economy, it is necessary to carry out teaching reform and innovation, and find new training modes and teaching methods to adapt to the changes of logistics business and the improvement of demand in the digital era. To solve these problems, it is necessary to establish a series of evaluation methods to assess the effect of education and training measures, in order to provide a powerful and practical reference for the development of related fields.

3.2.1 Exploration of teaching reform mode

(1) Integration of course design and practical cases

The training of logistics talents needs advanced curriculum setting, so a set of distinct curriculum setting and teaching system should be constructed. In view of the rapid increase in the demand for talent skills in the logistics industry under the background of digital economy, it is necessary to establish a variety of undergraduate and postgraduate courses, and integrate the course design with actual cases, so that students can improve their practical skills while learning courses.

(2) Teaching network construction

The training of logistics talents needs to cover all parts of the country, and campus teaching is restricted by geographical restrictions. Therefore, it is necessary to promote network education technology, carry out the network construction of teaching, improve the training efficiency and quality of logistics talents through online teaching mode, and enhance the information communication and technical exchange between teachers and industry experts to improve the teaching level of teachers.

3.2.2 Effect evaluation

The measures and methods of teaching reform should be monitored and evaluated scientifically. We need to make use of relevant data to analyze and judge the evaluation effect, specifically as follows:

(1) Basic data analysis

Organize questionnaires to summarize the data of students after the teaching reform, including curriculum knowledge, practice mastery, investigation and analysis, compare the data changes before and after the reform, and analyze the effectiveness of reform measures and the implementation of teaching reform strategies.

(2) Economic benefit analysis

Through the analysis of educational funds and benefits before and after the reform, a more scientific and reasonable proportion and rate of return of educational funds are calculated, so as to more accurately analyze how educational investment can be transformed into economic benefits [6].

(3) Evaluation of graduates by enterprises

The actual performance of graduates in the enterprise is evaluated, including business ability, communication ability, collaboration ability, innovation ability, etc., to understand whether they can adapt to the needs of the enterprise and the actual working environment.

The design of the above evaluation model can quantify the target effect after the education reform, and also has reference significance for proposing improvement reform plans and programs.

3.2.3 Effect evaluation form

In order to have a clearer understanding of the effect difference before and after the teaching reform and the return of education funds before and after the evaluation, this study designed the following effect evaluation table based on data analysis:

Table 1. Education expenditure and income assessment

Project	Educational expenditure	Income of educational expenditure	Yield
Before the reform	X	Y	Y/X
After the reform	Z	W	W/Z
Difference	Z-X	W-Y	(W-Y)/(Z-X)

Table 2. Assessment of achievement of teaching objectives

Project	Evaluation index	Rating before the reform	Rating after the reform
Course knowledge level	Classroom test scores	X	Y
Practical ability improvement	Practical score	Z	W
The degree of improvement of comprehensive quality in the field	Graduate work evaluation	P	Q
Overall evaluation of teaching effect	360-degree evaluation score	A	B

Table 3. Evaluation of graduates by enterprises

Name	Types
Enterprise A	Business personnel
Enterprise B	Warehouse management
Enterprise C	Logistics specialist

Through the use of the above evaluation forms, the quantitative analysis and meticulous record of the effect of teaching reform are conducive to giving full play to the advantages of teaching reform and optimizing the allocation of educational resources.

3.3 The exploration of the logistics teaching reform and talent training model innovation based on digital technology

With the rapid development of the digital economy, the application of digital technology in the field of logistics is more and more extensive, and the demand of logistics enterprises for digital and information talents is also increasing. Therefore, in the teaching reform, we must fully consider the application of digital technology, innovative logistics personnel training mode [7]. This study will discuss how to carry out logistics teaching reform and innovate talent training model with the support of digital technology from three aspects.

3.3.1 Education and teaching platform based on digital technology

In the digital age, logistics education needs to use advanced digital technology to improve the quality of education and teaching efficiency. An education and teaching platform based on digital technology can be established to strengthen the communication and exchange between teachers and students. Online teaching, teaching videos, web applications and other ways can not only provide students with more convenient teaching environment and learning resources, but also provide more flexible teaching methods for teachers.

3.3.2 Talent training model based on data analysis

The application of digital technology makes logistics enterprises more efficient and accurate in business data collection and processing. Therefore, the talent training mode based on data analysis can be adopted to train logistics talents with data analysis ability. Through the introduction of data analysis theory courses, data modeling simulation experiments and simulation practical cases, students' data analysis ability are improved, so as to better adapt to digital logistics.

3.3.3 Effect evaluation

It is necessary to evaluate the effect of logistics teaching reform and talent training model innovation based on digital technology to determine the actual effectiveness of teaching reform. This study proposes the following evaluation indicators and evaluation forms:

Table 4. Survey of students' application and mastery of digital technology

Evaluation indicators	Indicator description
Students' application and grasp of digital technology	Through questionnaire survey and other methods to understand the students' grasp of digital technology
Application of digital technology in teaching	The application of digital technology in teaching is reflected through teaching observation and teaching records.
The application of digital technology by graduates	The six months and one year follow-up survey of graduates to understand the application of digital technology in the workplace
The impact of teaching reform on the employment of graduates	To evaluate the demands of logistics enterprises on the application ability of digital technology and the performance of graduates in the employment process

Table 5. Survey on the application of digital technology in teaching process

Evaluation indicators	Survey methods	Survey respondents	Analysis of results
Mastery of digital technology application	Questionnaire survey	Logistics major students	Comprehensively evaluate students' mastery of digital technology
Intention of digital technology application	Questionnaire survey	Logistics majors	Comprehensive assessment of students' willingness to learn digital technology application

Table 6. Survey of graduates' application of digital technology

Evaluation index	Adjustment method	Survey object	Analysis of results
Application of digital technology	Teaching records	Teachers	Application of statistics technology in teaching

Table 7. Assessment of the impact of teaching reform on graduates' employment

Evaluation indicators	Survey methods	Survey respondents	Analysis of results
Digital technology Application capability	Questionnaire	Logistics enterprises	To investigate the logistics enterprises' demand for digital technology application capability in recruitment and employment
Employment situation of graduates	Survey of graduates	Graduates	Statistics on the employment situation and work performance of graduates

Through the above evaluation table, the impact of digital technology application on logistics teaching reform and talent training model innovation can be comprehensively evaluated, so as to better guide the direction of logistics talent training and teaching reform [8]. At the same time, according to the evaluation results, we can further improve the mode of logistics talent training for digital technology application to meet the needs of the rapid development of digital economy.

4 Conclusion and recommendations

4.1 Research conclusion

This study analyzes the current situation and challenges of logistics personnel training in the digital era from two aspects: the impact of digital economy on logistics personnel training mode and the reform of logistics personnel training mode, and discusses the reform of logistics teaching and innovation of personnel training mode based on digital technology. Through analysis and summary, this study puts forward the logistics teaching reform and talent training model innovation based on digital technology, including education and teaching platform based on digital technology, talent training model based on data analysis, logistics simulation teaching based on virtual simulation, etc., in order to meet the needs of logistics talent training in the digital era.

4.2 Research recommendations

Based on the conclusions of this study, this paper puts forward the following suggestions to promote the innovation of the teaching reform of logistics talent training mode under the background of digital economy:

4.2.1 To promote the teaching reform of logistics personnel training mode

In the era of digital economy, we should accelerate the teaching reform of logistics personnel training model. Among them, in addition to strengthening the application of digital technology in the curriculum, we should also explore the integrated teaching mode of disciplines, and constantly improve students' practical application ability and comprehensive quality. At the same time, we should strengthen the combination with the actual work scene, the introduction of real cases, simulated practical training and other ways, so that students have more practical application ability.

4.2.2 To promote the construction of teaching quality evaluation system

Improve the teaching quality evaluation system of the logistics talent training model, including the formation of a reasonable evaluation index system and evaluation methods. Statistical analysis should be strengthened, relevant information should be collected, and comprehensive evaluation of the progress and teaching effect of logistics personnel training should be carried out on a regular basis.

4.2.3 To strengthen the construction of teachers

We should strengthen the construction of teachers and improve their education and teaching level. According to the characteristics of logistics personnel training in the era of digital economy, a team of logistics personnel training teachers with innovative consciousness and able to adapt to the new era should be established.

To sum up, the teaching reform of logistics talent training mode is one of the tasks that need to be promoted, and it is a necessary step to adapt to the development of the digital economy era. The above suggestions can help schools better adapt to the logistics needs of the digital economy era, improve the quality and level of logistics talent training, and promote the sustainable and healthy development of the logistics industry in the context of digital economy.

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Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

References

[1] Chu TX. 2018. Research on teaching reform of college English under talent training mode of modern apprenticeship. *Journal of Hunan Industry Polytechnic*,18(01):67-71.

[2] Li JH. 2019. Research on college English teaching reform under the mode of applied talent training. *The Science Education Article Collects*, 21:174-175.

[3] Wang LH, Liu P. 2020. Practical research on the talent training mode of school-enterprise cooperation based on the background of new engineering. *Journal of Engineering Education*, 23(2):123-132.

[4] Xu H, Li YH. 2022. Discussion on the reform of accounting teaching in higher vocational colleges under the mode of cultivating innovative talents. *Foreign Edition: Educational Science*, 2:125-128.

[5] Zhang L. 2022. Research on teaching reform of college mathematics basic course under the background of engineering education accreditation. *Advances in Education*, 12(11):4444-4450.

[6] Zhang L. 2020. Research on teaching reform of applied statistics course based on network cloud platform under the background of innovation and entrepreneurship education. *Journal of Physics Conference Series*, 1648:022137.

[7] Yu GX. 2023. Research on the reform of the course "reading of concrete structure plan and construction drawings" under the background of promoting teaching and learning through competitions. *Research on Architectural Development*, 7(4):32-38.

[8] Wu B. 2023. Research on the reform of art education and teaching based on the background of big data. *Computer-aided Design and Applications*, 15(3):456-467.