

Exploration of practical teaching reform of logistics specialty in higher vocational colleges under the background of artificial intelligence

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Abstract: The rapid development of artificial intelligence has promoted the change of logistics industry. Under the background of the new era, higher vocational colleges should actively carry out practical teaching reform to meet the needs of society. Therefore, in the context of smart logistics, higher vocational colleges should timely adjust the teaching plan, strengthen the reform of practical teaching content and mode, and improve the quality of talent training. This paper explores the impact of artificial intelligence on the logistics industry, and puts forward some corresponding suggestions on deepening the reform of practical teaching of logistics, so as to promote the logistics industry to enter a new journey.

Key words: Artificial intelligence; Higher vocational education; Logistics major; Practical teaching; Reform strategy

Introduction: In the 21st century, China's logistics industry is undergoing earth-changing changes, especially the integration of big data, Internet of things, cloud computing and other advanced technologies with the logistics industry is getting deeper and deeper, not only China, the world logistics industry is developing towards the direction of wisdom. As an important output place for professional logistics talents, logistics majors in higher vocational colleges should attach importance to the application of artificial intelligence in professional teaching process, comprehensively improve teaching quality and teaching effect, and effectively inject a steady stream of power for the cultivation of smart logistics talents.

1. The impact of artificial intelligence on the logistics industry

With the rapid development of Internet technology today, artificial intelligence has begun to be widely used in the logistics industry. The development of artificial intelligence can promote the intelligence of the logistics industry and improve the efficiency of logistics. At present, the construction of smart logistics in China is still in its infancy, and some large enterprises have begun to apply artificial intelligence technology to smart logistics systems. At present, the application of artificial intelligence in the field of logistics is mainly reflected in the following aspects: First, unmanned aerial vehicles. Uav can realize autonomous flight, automatic obstacle avoidance, and solve the areas that are difficult to reach by humans; Second, unmanned vehicles. The technology of unmanned vehicles is constantly upgraded. It can realize autonomous driving according to the environment and user instructions. It can automatically drive, turn, avoid obstacles and avoid pedestrians according to the navigation plan. Third, unmanned warehouse. Unmanned warehouse is an intelligent storage system, through automatic identification, automatic control, information technology and other means to achieve the automated management and operation of the storage system; The fourth is the unmanned distribution vehicle. The unmanned delivery vehicle can realize functions such as automatic navigation, intelligent identification, path planning and autonomous obstacle avoidance during transportation.

In the context of the development of artificial intelligence technology, the logistics industry is undergoing digital transformation, and the logistics industry will gradually change from a traditional labor-intensive industry to a technology-intensive one, providing new ideas and new ways for the intelligent development of enterprises. In addition, the logistics industry is in the stage of transformation and upgrading, and the adjustment of industrial structure will have a huge impact on the logistics industry. The logistics industry is in an important period of transformation from traditional manufacturing-oriented to service-oriented. From the perspective of the development trend of the industry, with the continuous development and improvement of information technology and artificial intelligence technology, intelligent logistics will become an important direction and focus of the transformation and upgrading of the logistics industry.

2. Effective strategies for practical teaching reform of logistics specialty in higher vocational colleges under the background of artificial intelligence

(1) Improve teachers' application level of artificial intelligence

As an emerging technology, artificial intelligence has been widely penetrated into the field of education and teaching, affecting teaching models and personnel training methods. In this context, teachers' information technology application ability is particularly important, which is also the key to training application-oriented talents. Therefore, teachers should make use of artificial intelligence technology to enhance their information literacy and constantly improve their information-based teaching ability.

First, create an intelligent education environment. In the context of artificial intelligence, hardware equipment, software tools and digital resources have become the key to support teachers' information-based teaching, and have also brought new opportunities for teachers' personal professional development. First, higher vocational colleges should provide powerful equipment and platform support for teachers to apply artificial intelligence to teaching. While strengthening the construction of digital campus, they should promote the digitalization and intelligent upgrading of teaching, service, experiment and management facilities, strive to provide intelligent and multi-dimensional environmental support for teachers and students, and effectively enable the improvement of teaching quality and efficiency. Second, gather

high-quality teaching resources in various aspects, promote the co-construction and sharing of teaching resources offline and online, and strive to provide intelligent and personalized services for students not only in class, but also outside the classroom.

Secondly, we should innovate the teacher training model. In order to deepen the application of artificial intelligence in the teaching process of logistics major, it is the key to improve the level of teachers' application of artificial intelligence. First, strengthen the training of teachers in the field of artificial intelligence. Schools should attach importance to the training and improvement of teachers' ability to apply artificial intelligence, encourage them to actively participate in various examinations and training, and provide teachers with opportunities for further study. In addition, schools should provide teachers with rich learning resources and continuously improve their information literacy and AI skills, so that more teachers can receive training and study in advanced technologies and apply their knowledge to practical teaching. Secondly, industry experts or technicians should be invited to give lectures in schools; Employ the logistics enterprise personnel with rich practical experience to teach the school; Encourage logistics professional teachers to take root in the teaching research and development in the field of artificial intelligence, and the school level should give strong support and create favorable conditions for it in terms of funds, funds and spirit. On the one hand, it can provide more opportunities for teachers to exchange and learn, so that they can truly understand the development trend of artificial intelligence and the application of cutting-edge technology in the teaching of logistics. On the other hand, it is convenient for teachers to truly transform the acquired artificial intelligence resources into the motivation and productivity required for the actual teaching of logistics majors, which is the key to ensure the overall quality of practical teaching of logistics majors.

(2) Construct task-based practical teaching mode

With the wide application of artificial intelligence in the field of logistics, the competition in the logistics industry is becoming increasingly fierce, and the traditional practical teaching mode of logistics professional can no longer meet the needs of the development of the industry, and it must be reformed. Logistics majors in higher vocational colleges should change the previous teaching mode of "classroom indoctrination + practical operation" and adopt task-based practical teaching mode to stimulate students' interest in learning, so that students can actively participate in practice and improve their comprehensive quality and ability. Design practical teaching links with "task" as the core, so that students can improve their professional ability by completing tasks.

First, determine the project tasks according to the teaching objectives. Logistics majors in higher vocational colleges should aim at cultivating application-oriented talents. The first step is to determine the task objectives and clarify the vocational abilities that students should have. The second step is to design the task contents according to the talent training objectives, and integrate and present these contents through certain resource means. In the teaching process, teachers should guide and instruct students so that they can learn, explore, discover, analyze and solve problems independently. To be specific, teachers should design a series of teaching tasks such as intelligent transportation and intelligent storage around artificial intelligence. With the support and assistance of teachers, students should focus on one task and actively apply their knowledge and skills to solve practical problems, so that they can immerse themselves in the task practice, which is more conducive to the overall improvement of students' comprehensive ability.

Secondly, real scenes and situations should be provided to improve students' practical ability. Real scenes and situations refer to real situations such as enterprises or logistics bases, as well as simulated environments such as virtual simulation systems. Vocational colleges should introduce these real scenes and virtual simulation systems into practical training courses, so that students can learn and practice in real scenes or simulation systems to meet the development trend of increasingly intelligent logistics industry. When designing specific teaching projects, teachers should take artificial intelligence as the core and design a variety of teaching content based on this, such as case studies, group discussions, classroom tests, etc. At the same time, teachers should also provide students with a variety of practical opportunities to promote the close integration of artificial intelligence and logistics teaching, such as data mining, predictive modeling, etc. Help students flexibly apply intelligent technology to solve various problems existing in the real logistics industry.

Task-based practical teaching mode can help students convert theoretical knowledge into skills and apply them in practice, so that they can truly master professional knowledge and skills. At the same time, it can also allow students to participate in the real environment of enterprises to exercise practical operation ability, professional awareness, social adaptability and other professional qualities. This is an effective way to improve students' teamwork ability, problem-solving ability and other comprehensive qualities.

(3) Introduce rich professional competitions

Logistics professional competition is an important way to cultivate students' comprehensive ability and innovation ability, and also an effective means to test students' mastery of knowledge, skills and application ability. In order to meet the development requirements of vocational education, cultivate students' practical innovation ability and improve students' comprehensive quality, schools should constantly introduce and enrich logistics professional competitions.

According to the characteristics of logistics courses, schools can introduce several professional competitions, such as "supply chain management", "logistics simulation" and so on. These competitions do not require much theoretical knowledge, but mainly test students' mastery of theoretical knowledge through hands-on operation. In the training process of these projects, students can not only learn relevant theoretical knowledge, but also learn basic skills and enrich practical experience, so as to improve their practical innovation ability. More importantly, enterprises and schools need to participate in, implement and complete these projects together, which can not only promote school-enterprise cooperation and the combination of production, learning and research, but also improve students' practical innovation ability. For example, the logistics robot design scheme in the "logistics simulation" competition can not only train students' hands-on ability and innovation ability, but also improve their cognition of new technologies, new processes, new equipment and new tools in the field of logistics; The supply chain optimization scheme design project in the "Supply chain Management" competition can not only improve

students' practical innovation ability and team cooperation ability, but also let them experience the real "artificial intelligence + logistics" service model.

(4) Build a new logistics curriculum system

Higher vocational colleges should build a "one body and two wings" curriculum system guided by social and economic development and the demand for logistics professionals from industrial enterprises. The content of the curriculum system matches the vocational positions, including three dimensions of knowledge, ability and quality. "One body" refers to the core course group, which is composed of public basic courses, professional core courses and elective courses. Public basic courses include public basic courses such as political theory, laws and regulations, and physical education; Core professional courses include modern logistics management, warehousing and distribution management and other core professional courses; Elective courses include logistics information technology, smart logistics training, supply chain and logistics information and other elective courses. One of the "two wings" refers to innovation and entrepreneurship education, and the other is practical teaching. Innovation and entrepreneurship education aims to cultivate students' innovative spirit and entrepreneurial ability, and with the support of modern information technology, it guides students to improve their comprehensive quality and innovative ability by carrying out extracurricular scientific and technological activities and professional competitions. Practical teaching is based on project teaching method, and students' practical ability and innovative spirit are cultivated through various forms of practical teaching activities such as on-campus practical training and enterprise practical training. In addition, schools should reasonably arrange artificial intelligence courses for students. On the one hand, more basic knowledge of artificial intelligence should be popularized for students. On the other hand, more teaching resources should be collected and integrated for students. At the same time, various teaching modes such as case teaching, group teaching, project teaching and mixed teaching should be introduced. For example, to build a self-learning platform for students or teachers can complete online + offline modern teaching with the help of various intelligent apps, so as to lay a solid foundation for students to be fully competent for intelligent logistics work in the future.

Conclusion: To sum up, under the new situation, it has become imperative for higher vocational colleges to train logistics talents for modern service industries. This requires higher vocational colleges to strengthen the cultivation of students' practical ability. Practical teaching is an important way and link of personnel training in higher vocational colleges. Through practical teaching, students' professional skills and comprehensive quality can be improved, and application-oriented talents can be cultivated to meet the development needs of modern service industry. The improvement of the overall teaching quality in this link should be paid attention to by teachers, schools and even cooperative enterprises.

References:

- [1] Qi Yuan, Xia He. Research on practical teaching of logistics specialty based on Artificial intelligence [J]. *Modern Vocational Education*, 2018(28):76.
- [2] Xuanmei Luo. Discussion on the construction of logistics training Room in the era of Intelligent Logistics -- A case study of Y Vocational School in Heshan City [J]. *Guangdong Education (Vocational Education Edition)*, 2021(11):93-94.
- [3] Yun Wang, Yuanyuan Zhao. [J]. *Modern Vocational Education*, 2019(30):232-233.
- [4] Zhaoyang Lin. Research on the cultivation of Innovation ability of Port Logistics Major in Higher Vocational Colleges under the background of Artificial Intelligence [J]. *Science and Technology Economic Market*, 2021(10):132-133.
- [5] Xuan Zhang. Exploration on Cultivation of innovation ability of logistics Specialty under Artificial Intelligence [J]. *Market Modernization*, 2021(15):19-21.