

Exploring the New Mode of Cooperation between Applied Undergraduate Education and Enterprises-Taking Logistics Engineering Major as an Example



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Abstracts: With the continuous development of the global economy and the rapid growth of the logistics industry, the demand for logistics engineering majors is increasing day by day. The traditional theoretical teaching mode can no longer meet the actual needs of the industry, and students, can not adapt to the complex logistics operation and management tasks with theoretical knowledge alone. Therefore, more and more colleges and universities have begun to explore the innovative path of undergraduate education. This paper explores the application of the new mode of cooperation between applied undergraduate education and enterprises in the logistics engineering specialty. It analyzes the current situation of the education model of logistics engineering, discusses the significance of establishing cooperation between applied undergraduate education and enterprises, elaborates on the challenges faced during the implementation of the model, and puts forward corresponding countermeasure points. It includes practices such as establishing cooperation frameworks and mechanisms, strengthening internships and practical training, integrating curricula with industry needs, promoting the combination of industry, academia, and research, as well as establishing incentive mechanisms and win-win cooperation models, aiming to provide more practice-oriented education and to cultivate professionals adapted to the industry's development.

Keywords: applied undergraduate education; enterprise cooperation; logistics engineering program

Introduction

The cooperation between applied undergraduate education and enterprises is an important trend in today's higher education field, which combines academic theory with practical application and provides students with a cultivation model that is closely aligned with the industry. In this era of rapid change and fierce competition, students' employability and practical experience are crucial to their future career development. Logistics engineering, as a field closely related to modern economic development, has a broad employment prospect and market demand. Therefore, taking logistics engineering as a case study to explore the

new mode of cooperation between applied undergraduate education and enterprises helps to gain a deeper understanding of the importance and implementation methods of this cooperation mode, and provides reference and inspiration for the educational reform of other majors. By strengthening the practical ability of students, cooperating with enterprises in projects and internships, and combining the curriculum content with the needs of the industry, more competitive talents can be cultivated to meet the social demand for the field of logistics engineering and to promote a win-win situation for the development of industry and higher education.

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1. Current situation of education mode of logistics engineering

Logistics engineering is a comprehensive discipline aimed at training professionals with logistics planning, logistics system design, and logistics management capabilities. With the development of global trade and the rapid growth of the logistics industry, there is an increasing demand for logistics engineering majors. However, the traditional education model has some shortcomings in meeting the needs of the logistics industry. Traditional education focuses on the inculcation of theoretical knowledge and lacks close integration with practical application. Students lack practical experience and operational skills and often face the dilemma of not meeting the requirements of actual work after graduation. The curriculum and teaching methods of the current education model are relatively fixed, and it is difficult to keep up with the changes in the development of the logistics industry. Due to the rapid updating of the technology, management mode, and policies and regulations of the logistics industry, the traditional education model often fails to provide timely teaching content that matches the needs of the industry (Gao, 2022). In addition, there is relatively little contact between teachers and students. Students lack communication and cooperation opportunities with actual practitioners and are unable to fully understand the current situation of the industry and actual work requirements. Therefore, to cultivate high-quality talents to meet the needs of the modern logistics industry, it is necessary to explore a new education model that emphasizes the cultivation of practical ability, strengthens cooperation with enterprises, and closely integrates education with the needs of the industry, to meet the cultivation needs of logistics engineering professionals.

2. The significance of the new mode of cooperation between applied undergraduate education and enterprises

The new mode of cooperation between applied undergraduate education and enterprises is of great

significance for logistics engineering majors. First of all, this cooperation mode can make up for the problem of disconnecting theory and practice in the traditional education mode (Xie et al., 2017). Through cooperation with enterprises, students can personally participate in actual logistics engineering projects and practical training activities, apply the theoretical knowledge they have learned in actual operations, and improve their practical ability and problem-solving abilities. Secondly, the new model can make the course content more closely integrated with the industry demand. By inviting industry experts to serve as visiting professors and establishing industry cooperative research projects, the school can better understand the development trends and needs of the industry, incorporate the latest knowledge and technology into the curriculum, and cultivate logistics engineering talents with the ability to keep abreast of the times. In addition, innovative projects combining industry, academia, and research are also an important part of the new model. Students' participation in the actual projects of enterprises can exercise their innovation ability and teamwork spirit, and cultivate them to become creative logistics engineering professionals. In conclusion, the new model of cooperation between applied undergraduate education and enterprises helps to improve students' employment competitiveness, meet the needs of the industry, and promote innovation and development in the field of logistics engineering.

3. Challenges of creating a new model

The implementation of the new model of cooperation between applied undergraduate education and enterprises faces some challenges. First, there are barriers to cooperation between schools and enterprises. Schools and enterprises have different operational mechanisms, goals, and interests, and communication and understanding between them need to overcome various difficulties. Secondly, it takes time and energy investment to establish cooperation frameworks and mechanisms. Both sides need to clarify the goals of cooperation,

division of responsibilities, and resource inputs, and develop cooperation agreements and management processes to ensure smooth cooperation. In addition, incentives and win-win mechanisms are also a key issue. Both sides need to work together to develop incentives to stimulate the motivation and participation of teachers and enterprise personnel while ensuring that the results of the cooperation are beneficial to both sides. In the process of implementing the new model, it is necessary for multiple parties, such as schools, enterprises, and the government, to combine their efforts to establish a good cooperation platform and mechanism and to solve various challenges to realize a smooth promotion of the new model of cooperation between applied undergraduate education and enterprises.

4. The implementation path of the new mode of cooperation between undergraduate education in logistics engineering and enterprises

4.1 Establishment of cooperation framework and mechanism

To implement the new mode of cooperation between undergraduate education in logistics engineering and enterprises, the establishment of a cooperation framework and mechanism is a crucial step. A specialized cooperation committee or a similar body can be set up, consisting of representatives from schools and enterprises, to jointly formulate the direction, goals, and plans of cooperation. This committee can hold regular meetings to discuss the specific contents, schedule, and division of responsibilities of the cooperation projects to ensure that the cooperation between the two sides is an orderly manner. When formulating the framework and mechanism of cooperation, the content and scope of cooperation need to be clarified, including curriculum development, internship arrangements, mentoring, and other aspects (Fang et al., 2018). Both parties should jointly sign a cooperation agreement to clarify the rights and obligations of both parties and ensure the stability and sustainability of the cooperative relationship. The agreement can stipulate the duration of

cooperation between the two parties, the mode of cooperation, confidentiality clauses, etc., to provide legal protection for the cooperation. In addition, the establishment of cooperation frameworks and mechanisms requires the establishment of effective communication channels and coordination mechanisms. The two sides should maintain regular communication and exchange to solve problems and difficulties in cooperation promptly. Communication can be carried out through regular meetings, work reports, email exchanges, etc. to ensure the consistency of the cooperation goals and progress of both sides. Through the establishment of cooperation frameworks and mechanisms, schools and enterprises can clarify the direction and goals of cooperation and ensure the smooth progress of cooperation. The cooperative relationship between the two sides will be more solid and sustainable, laying a solid foundation for the implementation of the new mode of cooperation between undergraduate education in logistics engineering and enterprises.

4.2 Strengthening internship and practical training

Strengthening internship and practical training is an important part of the new mode of cooperation between undergraduate education in logistics engineering and enterprises. To improve students' practical ability and cultivate professional skills in line with the actual work demand, schools, and logistics enterprises can work closely together to strengthen the internship and practical training. Schools can establish internship bases or cooperative laboratories with logistics enterprises to provide students with real working environments and operating platforms. These practice bases can simulate the business processes and operational scenarios of logistics enterprises so that students can learn and practice in real work. Schools and enterprises can work together to formulate an internship program to clarify the tasks and objectives of students during the internship. The internship program should cover different areas of logistics operation and management practices so that students can have comprehensive exposure to and

understanding of all aspects of the logistics industry. Schools and enterprises can jointly train internship supervisors to guide students' internship activities and provide necessary feedback and assessment. Through regular guidance and assessment, students can keep abreast of their performance and direction of progress, thus continuously improving their practical ability and professionalism. Through enhanced internships and practical training, students can learn and practice in a real working environment, combining classroom knowledge with practical application. They can familiarize themselves with the operational processes, technical tools, and management methods of the logistics industry, and enhance their ability to solve problems and meet challenges (Chen et al., 2023). At the same time, logistics enterprises can identify and cultivate potential talents through internships and practical training to meet the talent needs of the industry.

4.3 Integration of curriculum and industry demand

Integrating curriculum and industry demand is an important aspect of the new mode of cooperation between undergraduate education and enterprises in logistics engineering. To ensure that the teaching content matches the actual industry demand, schools need to work closely with logistics enterprises to constantly adjust and update the curriculum. Schools can invite industry experts to serve as visiting professors or provide professional guidance. These experts can share their practical experience and professional knowledge in the field of logistics and help students understand the latest industry dynamics and technology trends (Gao, 2023). They can participate in course design and teaching activities to ensure that the course content is closely aligned with actual industry needs. In the process, schools can learn about the specific needs and challenges of the industry and incorporate this information into course design and teaching programs. Schools can also work with logistics companies to conduct field trips, company visits, and practical activities. Through personal visits and practice, students can gain an in-depth understanding of the operation mode,

technical equipment, and management methods of logistics enterprises, combine theoretical knowledge with actual operation, and enhance their practical and application skills. Integrating the curriculum with industry needs not only helps students' learning and development but also meets the needs of logistics enterprises for professional talents. After graduation, students can better adapt to the work requirements of the industry and provide strong support for the development and innovation of enterprises.

4.4 Promote the combination of industry, academia, and research

Promoting the combination of industry, academia, and research is the key element of the new mode of cooperation between undergraduate education in logistics engineering and enterprises. By strengthening the cooperation among schools, enterprises, and research institutions, the organic combination of teaching, practice, and scientific research can be realized to promote innovation and development. Schools can encourage students to participate in research projects in cooperation with enterprises. By conducting research with logistics enterprises, students can gain a deeper understanding of the actual problems and challenges in the industry and actively participate in the exploration and implementation of solutions. Such participation helps develop students' research ability, innovative thinking, and teamwork spirit. Schools and enterprises can jointly apply for research project funding to conduct applied research related to logistics engineering. Through cooperative research, schools can combine academic research with practical needs, solve practical problems in the industry, and propose innovative solutions (Xiao, 2012). At the same time, enterprises can utilize the research capabilities and resources of the school to promote their technological innovation and development. Meanwhile, organizing activities such as science and technology exhibitions and innovation competitions is also an effective way to promote the combination of industry, university, and research. These activities can provide a platform for students and enterprises to display their innovative achievements and promote

communication and cooperation among schools, enterprises, and research organizations (Yang, 2023). Students can present their innovative projects and solutions, which are continuously improved and enhanced from the feedback of enterprises and experts. By promoting the integration of industry, universities and research institutes, schools, enterprises, and research institutes can jointly promote innovation and development in the field of logistics. Students can apply what they have learned to real-world problems and enhance their problem-solving ability and sense of innovation. Enterprises can acquire new technologies and solutions to enhance their competitiveness and innovation ability. At the same time, the close cooperation between schools and enterprises also promotes the sharing of knowledge and the progress of the industry, realizing the benign interaction and cooperation between industry, academia, and research.

4.5 Establishing incentive mechanism and win-win cooperation mode

Establishing an incentive mechanism and win-win cooperation mode is the key initiative of the new mode of cooperation between undergraduate education in logistics engineering and enterprises. By providing incentives for students, schools, and enterprises, the enthusiasm and outcome benefits of cooperation can be enhanced and a win-win situation can be realized. For students, incentives such as scholarships and internship allowances can be established. By rewarding outstanding students and encouraging them to actively participate in practical projects with enterprises, their learning motivation and innovation potential will be stimulated. At the same time, providing students with material incentives such as internship stipends can not only help them reduce their financial burden but also enhance their enthusiasm and commitment to internships. For schools and enterprises, a win-win cooperation model can be established. Schools can support enterprises such as research and development services and talent training to give back to the enterprises' investment in the education process

(Huang & Qu, 2020). Through this cooperation model, schools can increase the opportunities for cooperation with enterprises, enhance their influence and social reputation, and at the same time obtain resource support and cooperation opportunities. Establishing an incentive mechanism and win-win cooperation model, can stimulate the enthusiasm of students, schools, and enterprises and enhance the effect and results of cooperation. Such a cooperation model not only realizes the organic connection between education and employment but also promotes the common progress of industrial development and higher education.

Summarize

In summary, the new mode of cooperation between applied undergraduate education and enterprises provides a more practical and employment-oriented cultivation method for the education of logistics engineering majors. By strengthening internships and practical training, students can gain practical experience and improve their problem-solving ability and practical skills. By integrating the curriculum with industry demands, the teaching content matches the actual work requirements and improves the employment competitiveness of students. Promote innovation and development by facilitating the integration of industry, academia, and research, bringing more opportunities and benefits to students and enterprises. The establishment of an incentive mechanism and a win-win cooperation mode stimulates the enthusiasm and outcome benefits of cooperation and realizes a win-win situation. This new model meets the higher requirements of society for talent cultivation and promotes the benign interaction between higher education and industrial development.

Conflict of Interest

The authors declare that they have no conflicts of interest to this work.

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