

**RESEARCH ON THE INNOVATION MODE OF INDUSTRY-EDUCATION
INTEGRATION : A CASE STUDY OF AN INDUSTRY-EDUCATION PARK IN
NORTHWEST CHINA**

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ABSTRACT

The integration of industry and education has attracted wide attention from all walks of life since it was proposed. Under the background of the integration of industry and education, some higher vocational colleges aim at training graduates with high comprehensive quality and strong practical ability, serve the local economic development as the orientation, and continuously provide high-skilled talents for various industries. An economic and technological development zone in Northwest China combines industrial characteristics, takes industry-education integration science and technology innovation park as the carrier, vigorously develops industry-education integration, innovates operation mode, collaborates education, and creates a new ecology of industry-education integration.

Keywords: Industry-Education Integration Innovation Model, Northwest China.

1. INTRODUCTION

1.1 Background Overview

The research on "integration of industry and education" was first proposed by Professor Foster of the University of Chicago. Foste (1965) pointed out that under the trend of integration of industry and education, practical teaching completed by school-enterprise cooperation is particularly important. China first put forward the "integration of industry and education" in the report of the Third Plenary Session of the Eighteenth Central Committee in 2013. It was put forward in the report of the Nineteenth National Congress of the Communist Party of China and Several Opinions of the General Office of the State Council on Deepening the Integration of Industry and Education (No.95, 2017), which is an urgent requirement to promote the structural reform of human resources supply side and an important measure to promote the development of higher education and improve the quality of personnel training. Li and Wang (2022) gave the definition in the study. It is believed that the integration of industry and education is a school-running mode that integrates industry and teaching, and is an important measure to develop modern vocational education and promote the supply-side reform of vocational education. Zhang et al. (2023) emphasized that "integration of industry and education" refers to the integration of education and teaching, productive labor, quality cultivation, skills upgrading, scientific and technological research and development through the docking of school education and teaching process with enterprise production process on the basis of school-enterprise cooperation. The act or process of integrating management and social service. He (2019) pointed out that under the background that the coordinated development of "production" (enterprise side) and "education" (school side) has achieved certain results, a development zone in Northwest China takes the production and education city as the carrier to vigorously develop the integration of industry and

education. Huang (2023) pointed out in his research that in view of the lack of international school-running concept of integration of industry and education in vocational education in ethnic minority areas and the lack of innovation in the construction of transnational integration of industry and education, it is necessary to promote high-level opening to the outside world and promote the high-quality development of "one belt and one road". To do a good job in the internationalization of the integration of industry and education, we should also do a good job in exploring innovative models. Taking a university as an example, Zhang et al. (2020) pointed out that in 2018, the university built more than ten new university-level teaching practice bases nationwide, and initially realized the "simultaneous and decentralized" graduation practice in the factory. This shows that colleges and universities attach great importance to the integration of industry and education. He (2022) pointed out in the study that the school's talent training program is in line with the market demand. Through the integration of industry and education, we can further improve the multi-dimensional ability and quality of college students, and steadily help them enhance their confidence in employment.

Current Situation of the Integration of Industry and Education in an Economic and Technological Development Zone in Northwest China

An economic and technological development zone in Northwest China is a large-scale coal, coal, electricity and coal chemical industry demonstration zone based on coal field planning and construction, and is also an important part of the national coal base. It is located in the southeastern edge of Junggar Basin. The economic development of the development zone is advancing rapidly, and its comprehensive economic strength is increasing. However, due to the special geographical location and production and living environment, the supply of industrial talents in the development zone is all from external input, with a high turnover rate and a shortage of skilled industrial workers; the supply of industrial talents is insufficient, and it is difficult for enterprises to recruit employees; vocational education resources are scarce, and it is difficult for enterprises to train and obtain evidence; With the development of development zones, problems such as the limitation of the growth of industrial talents and grass-roots skilled talents are constantly derived.

At present, the development zone has built a science and technology innovation park for the integration of industry and education. The company is responsible for the operation of the park, and takes the industrial and educational park as a platform to introduce relevant institutions, scientific research enterprises and institutions to carry out cooperative education and training, scientific and technological research and development, so as to train marketable technical and skilled personnel for enterprises. At present, under the tripartite co-construction of "Management Committee + Cooperative Colleges + Enterprises", a modern industrial college has been set up to carry out the integration of industry and education of "1 + N" (Modern Industrial College + N Cooperative Colleges), so as to promote the high-quality development of the economy.

Innovative operation mode of production and education park

Under the co-construction and co-management of government, school and enterprise, according to the needs of coal, coal, electricity and coal chemical industry in the development zone, the industrial and educational park introduces students of relevant majors to carry out theoretical and practical courses in the park. In order to ensure the study and life of teachers and students in the park, provide more available talents for enterprises, and boost the economic development of the

development zone, the three parties have established a contact meeting system, jointly negotiated the operation and management of the park, established a consultation mechanism for "major issues", and timely communicated and solved the unexpected and temporary major problems in the process of cooperation.

The competent department shall formulate policies and conduct assessment and evaluation

The administrative committee of the development zone shall give full play to the functions of the competent departments, coordinate all resources in the development zone, and formulate preferential policies to support the integration of industry and education, cooperation in running schools and training, and scientific and technological innovation and development. The relevant subsidy policies shall be implemented on the basis of the assessment of the graduates eventually delivered by the cooperative colleges and universities entering the park to the enterprises in the development zone. Create a good employment environment, guide more graduates to stay in employment, and provide skilled talents for enterprises in development area, so as to solve the current problems of difficult employment and retention of enterprises.

Modern Industry College coordinates daily teaching and student management

Modern Industrial College coordinates the operation of teaching resources and facilities such as teaching, training, dormitories and sports venues in the park. Teachers and student managers are selected according to the students' majors, and relevant rules and regulations of modern industrial colleges are formulated according to the "1 + N" management mode, so as to carry out student management in the mode of unified policies, unified standards, unified requirements and unified management. Responsible for the teaching and daily management of students in the park, the implementation of school-enterprise cooperation, school-school cooperation, order classes, agreement classes and other work, to provide different levels of talents for enterprises in the development zone. At the same time, Modern Industrial College relies on its own teachers and relevant qualifications to do a good job in vocational skills training, student 1 + X certificate training and academic upgrading education in the development zone.

The company provides security and services

As the operator of the production and education park, the company is responsible for the accommodation, security, fire protection, information construction and other security work of teachers, students and staff in the park. Timely handle the maintenance of office area, classroom, dormitory, training room, gymnasium and other resources in the park. In the process of continuous operation, we should improve the quality of service and ensure the normal operation of catering, supermarkets, clinics, barber shops and express collection points.

Thinking and countermeasures of practical exploration

In the process of the integration of industry and education, we found the existing problems, which made us realize that only by giving full play to the role of government, school and enterprise, can the integration platform of industry and education park play the role of integration and achieve win-win situation. With the support of the competent authorities, the "customized" talents of colleges and universities, and the joint efforts of the company to improve its service level, the three parties will work together to promote industrial development with the driving force of the new model.

Existing problems

First of all, the development zone is limited by its geographical location, surrounding hardware conditions and supporting facilities, and can not achieve convenient urban life. Based on the objective reality, the staff of enterprises are highly mobile, and all enterprises are facing difficulties in employing and retaining people. Secondly, students and college students lack knowledge of the Gobi Desert in Northwest China, do not understand the future development prospects of the development zone, and leave behind a weak desire for employment. Thirdly, the ability and level of the company responsible for security need to be further improved.

Countermeasures to solve

In view of the actual operation of the industry-education park, it can be summarized that the industry-education park connects the two ends of "production" and "education", integrates the advantages and disadvantages of both ends, summarizes the common driving force of both sides in time, promotes integration, and achieves win-win situation among government, school, enterprise and students. Zhang et al. (2023) emphasized that measures should be taken from both ends of education and production: coordinating common needs, smoothing communication channels, improving incentive mechanism, and meeting the common driving force of both ends of industry and education, so as to fundamentally realize the implementation of the long-term mechanism of integration of industry and education. So as to provide a solid foundation for the training of high-end engineering talents in this major. In this study, the appropriate solution is proposed based on the actual situation. Firstly, the competent departments of development zones have issued scientific and reasonable policies to strengthen the construction and publicity of internal software and hardware, so as to attract more talents to stay. Secondly, for the cooperative industrial colleges, we should improve the awareness of serving the local economic development, adjust the training objectives according to the employment needs of the development zones, provide high-level talents for enterprises and society, and improve the employment rate of students with high quality. Thirdly, the logistics support work of the education company is the foundation, which needs to do a good job in team building, improve the professional level of relevant personnel and the satisfaction of teachers and students in the kindergarten. The establishment of Modern Industrial College is a major breakthrough in the integration of industry and education in the development zone. The orderly development of all kinds of work is an important affirmation of exploring innovative models. The work of the seven sections of "cooperation in running schools, practical training, training appraisal, continuing education, recruitment and employment, scientific and technological innovation, and cultural and sports competitions and exhibitions" will continue to advance and develop under this innovative mode. To build and develop a distinctive industrial and educational park, the company needs to play a bridge role, take a proactive attitude of integration, unite the resources of government, school and enterprise, and coordinate development.

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