

The Situation, Difficulties, and Optimization Path of Overseas Education in Chinese Vocational Colleges

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Abstract: Overseas operation of vocational colleges is an important content and carrier of vocational education opening up to the outside world. In recent years, Chinese vocational colleges have made efforts to explore overseas education models that are compatible with the "going global" of vocational education, playing an important role in promoting international cultural exchanges, expanding education openness to the outside world, and enhancing the international influence of China's vocational education. The overseas education of Chinese vocational colleges is showing a trend of continuously expanding the scale and scope of education, highlighting key areas of educational projects, and gradually diversifying educational models. Due to factors such as the international environment and the competitiveness of vocational colleges, Chinese vocational colleges face challenges in overseas education, including cultural differences and curriculum adaptation, insufficient funding, shortage of teaching staff, inadequate legal system, and inadequate quality assurance system. The article proposes that vocational colleges should optimize their overseas education by formulating differentiated development strategies, enhancing international cooperation levels, strengthening school enterprise cooperation, increasing support and guarantees, and developing blended education, based on the above challenges.

Keywords: China; Vocational Colleges; Overseas Education; Challenge; Optimization Path

1. Introduction

With the continuous deepening of globalization and the increasing international influence of China, the overseas operation of vocational colleges in China has become an

important measure to promote the internationalization of vocational education in China. This article will analyze and explore the current situation, successful experiences, and implementation paths of vocational colleges operating overseas in China, providing reference and suggestions for further promoting the "going global" of vocational education in China.

2. Analysis of the Current Situation of Overseas Vocational Colleges in China

2.1 The Scale and Scope of Vocational Colleges' Overseas Education Continue to Expand

In recent years, vocational colleges in China have actively responded to the national education opening-up strategy and continuously expanded the scale and scope of overseas education. According to statistics from the International Cooperation and Exchange Department of the Ministry of Education, as of the end of 2023, over 300 vocational colleges in China have launched overseas education programs in more than 70 countries and regions worldwide. Both the number of participating universities and the number of countries covered have shown a steady upward trend, reflecting the good momentum of internationalization of vocational education in China.

Some key vocational colleges have played a leading role in carrying out overseas education. For example, Tianjin Vocational and Technical Normal University has successively established the Luban Workshop in Ethiopia in Africa and the Punjab Tianjin Technical University in Pakistan, cultivating a large number of technical and skilled talents for the local area. [1] Shenzhen Vocational and Technical College has established Chinese language, culture, and vocational education training centers in countries such as Malaysia, Bulgaria, and Germany, in the form of setting

up language, culture, and vocational education centers. It has also established vocational education training and research centers with the dual system Applied Technology University of Baden-Württemberg in Germany. [2]Chongqing Electronic Engineering Vocational College has established an interconnected platform, including Chongqing Electric Overseas Branch, Silk Road College, Luban Workshop in Tanzania, and Chang'an Automobile Chinese Workshop in Kazakhstan, to connect talent cultivation with African needs. It has also established an ICT vocational certification center and technical service station in collaboration with MacRae University in Uganda.[3]

These vocational colleges cooperate with foreign educational institutions and enterprises to offer vocational and technical education courses, helping local enterprise employees and students learn advanced skills and technologies. This measure not only expands the influence of vocational education in China, but also provides support for addressing employment and economic development issues in these regions.

2.2 Diversified Overseas Education Programs with Prominent Focus on Key Areas

At present, the projects and scale of overseas education in vocational colleges in China are still growing rapidly, and many vocational colleges and enterprises are jointly carrying out overseas education projects. For example, Chinese enterprises' projects in regions such as Africa require a large number of skilled workers, while vocational colleges provide technical talents to the local area through short-term training, academic education, and other means. [1]

According to statistics from the Ministry of Education, there will be over 500 overseas vocational education cooperation projects in operation in 2023, involving multiple fields such as mechanical manufacturing, electronic information, construction engineering, and agricultural technology. The scale and influence of these projects have been expanding year by year, and some of them have become models for vocational education exchanges between China and partner countries. For example, the China Egypt

Vocational Education Cooperation Project, which serves as a benchmark for vocational education cooperation between China and Africa, is jointly established by Tianjin Light Industry Vocational and Technical College and Tianjin Transportation Vocational College in cooperation with Ain Shams University and Cairo Advanced Maintenance Technology School in Egypt. The project offers majors such as new energy application technology, automotive application and maintenance technology, CNC machining technology, and CNC equipment application and maintenance. The project has trained over 3000 Egyptian students, greatly promoting local employment. [4] China Zambia Vocational and Technical College is a model of cooperation between vocational colleges and industries in overseas education. It is a vocational college jointly established by more than ten vocational colleges in China and China Nonferrous Mining Group Corporation, and officially approved by the Zambia Vocational Education and Training Administration. It provides a large number of localized talents for Chinese funded enterprises' projects in Zambia.[5] From the distribution of overseas education programs of Chinese vocational colleges in different fields, mechanical manufacturing, electronic information, and construction engineering are currently the main areas of overseas education, which is highly in line with the economic development needs of partner countries.

2.3 Diversified Cooperation Models for Overseas Education

Overseas education must integrate advantageous resources and rely on mutually beneficial cooperation institutions, platforms, etc. Based on this, the cooperation models of vocational colleges in China for overseas education can be divided into four categories:

2.3.1. School enterprise cooperation model

By collaborating with Chinese companies with local operations overseas, we provide technical training that meets the needs of the enterprise. For example, Zhengzhou Railway Vocational and Technical College has built three overseas Zhan Tianyou colleges in Ethiopia, Uganda and the Philippines, focusing on the actual needs of overseas Chinese enterprises, and trained more than 2400 people for the construction of five overseas railways,

including the Addis Ababa Djibouti Railway, the China Laos Railway, and the Egypt Ramadan 10th City Railway.

2.3.2 School school cooperation model

By jointly offering courses or managing vocational colleges with local educational institutions overseas, both parties can share teaching resources and faculty. Changzhou Information Vocational and Technical College and Kyrgyzstan University of Management Law and Economics jointly established the "Zhenghe College" in the field of cross-border e-commerce, and jointly established the "China Thailand Zhenghe College" with three Thai vocational colleges, namely Chumphon Technical College, Ulongtani Vocational College, and Tengudom Technical College. Chinese and overseas schools jointly train students through course embedding, teacher recruitment, and other methods.[6]

2.3.3 Cooperation model with international organizations

The vocational college collaborates with international organizations such as UNESCO and the International Labour Organization to ensure the internationalization standards and sustainability of its projects. For example, Shaanxi Industrial Vocational and Technical College, relying on the UNESCO International Vocational Education Liaison Center, has established the China Zambia Vocational and Technical College and the Ethiopia Chinese Workshop, providing academic education and job skills training for more than 2900 local youth, promoting youth employment and income growth.

2.3.4 Luban workshop mode

This is an innovative model for vocational colleges in China to operate overseas in recent years, named after the representative of China's "great country craftsmen", "Luban", dedicated to cultivating technical and skilled talents familiar with Chinese technology, products, and standards in cooperating countries. By the end of 2023, more than 50 Luban workshops have been established in over 30 countries worldwide, becoming an important brand for the internationalization of vocational education in China. [7]

These diversified cooperation models provide flexible and diverse implementation paths for overseas education of vocational colleges in China, effectively promoting the internationalization of vocational education in

China.

3. Analysis of Problems and Reasons for Overseas Education of Chinese Vocational Colleges

Although in recent years, vocational colleges in China have formed a scale and established a brand of "vocational education going global", more and more overseas education institutions have shown a trend of following the principle of "adapting to local conditions" and accurately serving the needs of overseas Chinese enterprises and local economic development, which has also achieved significant results to a certain extent. However, due to factors such as the international environment, cultural differences between countries, overseas teaching costs and management services, as well as the core competitiveness of vocational colleges, more than 60% of vocational colleges face some challenges and difficulties in running schools overseas.

3.1 Problems and Challenges in Overseas Education of Chinese Vocational Colleges

3.1.1 Inappropriate curriculum design caused by cultural differences

78% of vocational colleges believe that cultural differences are the biggest challenge faced by overseas education, reflecting the importance of cross-cultural communication and adaptation in overseas education. Due to a lack of in-depth understanding of local culture, customs, and educational traditions, some course content and teaching methods are difficult to adapt to the learning habits and needs of local students.

3.1.2 Insufficient funds and resources

Overseas education requires a large amount of capital investment, including hardware facility construction, teacher dispatch, textbook development, etc. However, 65% of vocational colleges face financial and resource pressures, and many overseas education projects are difficult to sustain investment.

3.1.3 Insufficient teaching staff

Among the teaching staff of 60% of vocational colleges, there is a lack of teachers who are familiar with Chinese technology, standards, and products, as well as have an international perspective and cross-cultural teaching ability. [8]The shortage of expatriate personnel seriously affects the teaching quality and

effectiveness of educational programs.

3.1.4 Lack of transparency in laws and regulations

Overseas education requires understanding and adapting to the education regulations and legal environment of partner countries, but the education regulations and legal systems of some countries are not sound or transparent enough, which increases the uncertainty and risks of vocational colleges operating overseas.

3.1.5 Imperfect quality assurance system

Establishing a sound quality assessment and supervision mechanism is crucial for ensuring the quality of overseas education, but 45% of vocational colleges lack a relatively systematic quality assessment system, making it difficult to ensure the sustained quality of overseas education projects.

3.2 Analysis of the Reasons for the Problems in Overseas Education of Chinese Vocational Colleges

3.2.1 Differences in educational models and needs between china and foreign countries

The vocational education model in China is not entirely applicable to all countries and needs to be adjusted according to local conditions.

3.2.2 Poor coordination between schools and enterprises

In some projects, the cooperation between vocational colleges and enterprises is not deep enough, resulting in a disconnect between talent cultivation and market demand.

3.2.3 Insufficient research on local economic, legal, and cultural environment

Before launching overseas programs, some universities failed to fully understand the local situation, resulting in difficulties in project implementation.

3.2.4 Insufficient reserve of international talents

Vocational colleges need to maintain normal teaching needs domestically, but there is a shortage of management personnel and teachers stationed overseas.

3.2.5 Inadequate support mechanism and funding guarantee mechanism

The support mechanism and funding guarantee mechanism at the national level need to be further improved to assist vocational colleges in better carrying out overseas education.

Therefore, vocational colleges must closely integrate with local needs, pay attention to

cultural integration, prioritize quality assurance, and emphasize sustainable development in order to enable overseas education to play an important role in promoting international cultural exchanges, expanding education openness, and enhancing the international influence of vocational education in China.

4. Optimization Path for Overseas Education of Vocational Colleges in China

4.1 Conduct in-depth Research and Develop Differentiated Development Strategies

Chinese vocational colleges should develop differentiated development strategies based on the actual needs of different countries and regions. Specific measures can be taken from the following aspects:

(1) Industry demand analysis: Conduct in-depth research on the industrial structure and development plans of cooperating countries, and determine key areas of cooperation. [9] For example, in countries such as Southeast Asia and Africa, there is a high demand for manufacturing and infrastructure construction technologies, so it is important to focus on cultivating talents in fields such as machinery, electronics, and construction; In Central Asia and Eastern Europe, the demand for information technology and emerging industries is gradually increasing, and vocational colleges should follow this trend and provide education in related fields.

(2) Connecting with the education system: Understand the education system and vocational education regulations of partner countries, and develop talent training plans that are in line with local realities. In countries such as Germany that implement dual vocational education, we can learn from their model of deep integration between schools and enterprises; In Commonwealth countries, it may be considered to integrate with the local skills certification system.

(3) Cultural adaptability research: Conduct in-depth research on the cultural traditions, religious beliefs, values, etc. of partner countries, and make corresponding adjustments in curriculum design and teaching methods. For example, when conducting vocational education in Muslim countries, it is necessary to consider the impact of religious

customs on curriculum arrangements and practical training content.

(4) Partner selection: Choose appropriate cooperation models and partners based on the situation in different countries. In countries with relatively mature education systems, it is possible to choose to cooperate with well-known vocational colleges in the local area; In countries where the vocational education system is not yet sound, cooperation with government departments or industry associations can be considered to jointly establish vocational education institutions. Through in-depth research and differentiation strategies, vocational colleges in China can better adapt to the needs of different countries and regions, and improve the pertinence and effectiveness of overseas education.

4.2 Enhancing the Ability of International Education

Promoting the internationalization of vocational colleges is a crucial step towards achieving success in overseas education. Specific approaches can be taken from the following aspects:

(1) Introducing international curriculum standards: Actively introducing internationally recognized vocational education standards and curriculum systems, such as the European Qualifications Framework (EQF) of the European Union and the Vocational Education and Training (VET) system of Australia, to enhance the international recognition of courses.

(2) Establish a cross-border exchange mechanism: Establish long-term cooperative relationships with well-known vocational colleges abroad, carry out activities such as student exchanges, teacher visits, and joint research, and broaden international perspectives.

(3) Encourage international teacher mobility: Attract foreign teachers to teach in China, while encouraging our teachers to study or teach abroad to enhance the internationalization level of the teaching staff.

(4) Develop international textbooks: Develop bilingual textbooks that integrate Chinese experience with international standards, reflecting both Chinese characteristics and international standards.

(5) Participate in international vocational education organizations: actively join

international organizations such as the International Vocational Education and Training Association (IVETA) and the World Federation of Vocational Colleges, and participate in international standard setting and experience exchange.

Through these measures, vocational colleges in China can continuously improve their internationalization level and lay a solid foundation for overseas education.

4.3 School Enterprise Linkage, Integration of Industry and Education

School enterprise cooperation plays an important role in overseas education. Vocational colleges can take the following measures to strengthen school enterprise cooperation:

(1) Co building Overseas Training Bases: Collaborating with Chinese companies investing overseas to establish training bases locally, providing students with authentic working environments and practical opportunities.

(2) Order based talent cultivation: Tailored talent cultivation plans based on the specific needs of the enterprise, ensuring that the cultivated talents can directly meet the needs of the enterprise.

(3) Enterprise participation in course development: Invite enterprise technical experts to participate in course design and textbook writing, ensuring that the teaching content is closely integrated with the actual needs of the industry.

(4) Establish a platform for collaboration between industry, academia, and research: set up technology research and development centers or innovation laboratories overseas, promote school enterprise cooperation research, and solve technical problems for enterprises.

(5) Jointly develop professional standards: collaborate with industry-leading enterprises to develop professional competency standards that meet international standards, and enhance the quality and recognition of talent cultivation.

By deepening school enterprise cooperation, vocational colleges can better meet market demand and improve the pertinence and effectiveness of talent cultivation.

4.4 Increase Support and Cooperation for

Legal Norms

Government support is an important guarantee for promoting vocational colleges to operate overseas. The Chinese government can provide support through the following measures:

(1) Improve laws and regulations: Develop specialized regulations for overseas education, providing clear legal basis and guidance for vocational colleges to operate overseas. [7]

(2) Establish a special fund: Establish a special fund for "vocational education going global" to provide necessary financial support for overseas education projects.

(3) Building an international cooperation platform: Creating favorable conditions for vocational colleges to operate overseas through intergovernmental agreements, such as mutual recognition of academic qualifications and exchange of teaching staff.

(4) Promote the construction of platforms such as "Luban Workshop": Continue to promote the "Luban Workshop" educational model and build it into a brand project for the internationalization of vocational education in China.

(5) Establish an information service platform: Establish a dedicated information service platform to provide vocational colleges with overseas education market information, policy and regulatory consulting services.

At the same time, vocational colleges should also strengthen cooperation with international organizations and institutions, such as UNESCO, the International Labour Organization, regional organizations, etc., to obtain resources and financial support and enhance the influence of overseas education projects.

4.5 Innovate Educational Models and Develop Blended Education

With the rapid development of information technology, vocational colleges should actively explore innovative educational models, especially blended learning models:

(1) Combining online and offline: Utilizing online education platforms to combine online theoretical learning with offline practical training, improving teaching efficiency and coverage.

(2) Application of Virtual Simulation Technology: Introducing VR/AR and other virtual simulation technologies to provide

students with realistic training experiences and solve the difficulties of some high cost and high-risk training projects.

(3) Intelligent Learning System: Develop a personalized learning system based on artificial intelligence, providing customized learning content and paths according to students' learning progress and characteristics.

(4) Cross border collaboration project: Utilizing network technology to carry out cross-border remote collaboration projects, cultivating students' international perspectives and cross-cultural cooperation abilities.

(5) Micro Certificate Project: Develop short-term, modular online courses and micro certificate projects to meet the flexible and diverse needs of learners.[10]

By innovating educational models and developing blended education, vocational colleges in China can break through geographical and resource limitations, provide high-quality vocational education resources for more overseas students, and further expand the international influence of Chinese vocational education.

5. Conclusion

The overseas operation of vocational colleges in China has important strategic significance in the context of globalization. By analyzing the current situation, summarizing successful experiences, formulating response strategies, and exploring innovative paths, the internationalization of vocational education in China is steadily advancing. However, we should also be aware that overseas education is a long-term and complex systematic project that requires joint efforts from the government, universities, enterprises, and international organizations.

In the future, vocational colleges in China should focus on the following aspects when operating overseas:

(1) Deepen the integration of industry and education: further strengthen cooperation with multinational enterprises, jointly develop curriculum systems and professional standards that meet international standards, and enhance the international competitiveness of talent cultivation.

(2) Strengthening cultural exchanges: Combining traditional Chinese culture with vocational education, creating an international vocational education brand with Chinese

characteristics, and enhancing cultural soft power.

(3) Promote digital transformation: Actively apply new technologies such as 5G, artificial intelligence, and big data to promote the digital transformation of vocational education, improve educational efficiency and quality.

(4) Building an international ecosystem: Establishing an international vocational education ecosystem involving multiple parties such as government, universities, enterprises, and international organizations, forming a collaborative pattern of resource sharing and complementary advantages.

(5) Improve the quality assurance system: Establish a sound international quality assessment and certification system, including teaching management system, monitoring and management of teaching process, teaching evaluation and feedback, etc., to ensure the sustained high-quality development of overseas education projects.

Through these efforts, the overseas education of vocational colleges in China can not only cultivate more high-quality technical talents for the world, but also make important contributions to promoting global economic development and cultural exchanges. In the context of globalization, the internationalization of vocational education in China is bound to become increasingly broad.

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