

Mechanism Construction and Path Selection for the Internationalization of Hainan Vocational Education under the Free Trade Port Context

Yuxin Li, Mingyang Yuan*, Song Chen

Hainan College of Economics and Business, Hainan, China

Corresponding Author, Email: mingyang9798@163.com

Abstract:

The ongoing development of the Free Trade Port provides Hainan with an unparalleled opportunity to attract, accumulate, and cultivate world-class educational resources, thereby promoting the international integration of Hainan's vocational education. Based on the context of the Free Trade Port construction and anchored in the continuous guidance of policy discourse, the accelerated empowerment of industrial development, and the growing demand for vocational education development, this paper constructs a mechanism for the internationalization of Hainan's vocational education. This mechanism encompasses aspects such as administrative supervision, internal and external interactions, and quality assurance. Furthermore, the paper proposes strategies to enhance the internationalization of Hainan's vocational education by increasing policy support, participating in the construction of international think tanks for vocational education, and leveraging technology to empower the internationalization of vocational education. These efforts aim to drive profound reforms in Hainan's vocational education system.

Keywords:

Free Trade Port, Hainan Vocational Education, Internationalization

1. Introduction

The internationalization of vocational education is a pressing demand and inherent force driving the modernization of China's education system. It represents an inevitable trend in the deep reform of the modern vocational education system. Currently, vocational education in China is characterized by its diverse education types, multi-stakeholder participation, and the enhancement of its substance and quality[1]. Against the backdrop of the Hainan Free Trade Port construction, vocational colleges in Hainan are continuously fostering the vitality of international development. They are incorporating the cultivation of international thinking and skills into their training systems to build a comprehensive vocational education framework. This ensures that professional settings, discipline development, talent cultivation, and the alignment of industrial supply and demand meet the evolving needs of the times. Such efforts are aimed at transforming potential productive factors into actual productivity to meet the requirements of regional industrial transformation and upgrading, thereby ensuring the sustainability and effectiveness of vocational education development in Hainan.

Based on the construction of the Hainan Free Trade Port, this paper will explore the practical foundations of the internationalization of Hainan's vocational education. It will analyze the key points in constructing the internationalization development mechanism of Hainan's vocational education under the Free Trade Port context. Finally, it will propose the path choices for the internationalization of Hainan's vocational education, providing references for enhancing the international development of vocational education in Hainan.

2. The Practical Foundation of the Internationalization of Hainan's Vocational Education

2.1 Policy Discourse as a Guiding Force

Policy discourse reflects the national development trajectory, providing guidance, regulation, and constraints on the internationalization of vocational education. Influenced by international trends, particularly since the 1990s, the internationalization of higher education has become a significant policy issue globally. In China, the focus of policy discourse on the internationalization of higher education has shifted from promoting economic competitiveness to enhancing international stature[2]. Within the context of Free Trade Port construction, Hainan enjoys unique policy advantages, offering greater opportunities for the internationalization of its vocational education. Therefore, it is essential to align the institutional objectives and orientations conveyed through policy discourse with the value recognition of various stakeholders.

From the perspective of internationalization-related institutional rules, Hainan has introduced several educational policies since it embarked on the development of a Free Trade Port. These include the "Implementation Plan for Supporting Hainan's Deepening Education Reform and Opening-Up," the "14th Five-Year Plan for Education Modernization in Hainan Province," the "14th Five-Year Plan for the Development of Vocational Education in Hainan Province," and the "Interim Regulations on Overseas Higher Education Institutions Establishing Schools in Hainan Free Trade Port." These policies provide flexible space for the internationalization of vocational education in Hainan, supporting the strategic layout of educational reform and opening up.

Regarding the flow of internationalization elements, the current model of internationalization in Hainan's vocational education primarily involves introducing high-quality educational resources from developed countries, favoring a mode of "local internationalization." For example, the policy allows foreign engineering universities and vocational colleges to establish independent or joint schools in Hainan, aiming to transform Hainan into an international education innovation island. Additionally, policy discourse is actively shifting towards cultural export, with initiatives such as the Belt and Road construction and the establishment of the Hainan International Cultural Trade Base. These initiatives provide guidance for Hainan vocational colleges to engage in international activities, thereby reducing the economic and institutional costs associated with overseas expansion.

In terms of constructing an international brand, the "14th Five-Year Plan for Building an International Tourism Consumption Center in Hainan Province" mentions that "Study in Hainan" is one of the three major brands in building the international tourism consumption center. Hainan leverages its policy advantages



in the competitive higher education market to create the vision of "Studying in Hainan = Studying Abroad." By supporting high-quality foreign vocational colleges in establishing campuses in Hainan and optimizing the quality of international education consumption supply, the plan aims to promote the return of high-end overseas education consumption, thereby laying the foundation for building the "Study in Hainan" vocational education brand.

2.2 Accelerated Empowerment through Industrial Development

The development of industries is closely linked to the internationalization of vocational education. Leveraging Hainan's strategic location as a Free Trade Port provides an opportunity for Hainan's vocational institutions to increasingly participate in international collaboration through deeper industry-education integration.

On one hand, industrial transformation enriches the resources available for the internationalization of Hainan's vocational education. Industry-education integration is a key indicator of the depth of vocational education reform. Under this development philosophy, the integration and sharing of educational resources between industry and vocational institutions broaden the sources of vocational education resources. Given the Free Trade Port's context, Hainan benefits from liberalized investment policies and relaxed foreign market entry regulations. Consequently, Hainan's industrial development trends and market demands are significantly influenced by international factors, leading to structural reforms in regional industrial layouts characterized by industrial clusters. The elevation of industrial levels enriches the international education resources for Hainan's vocational education. For example, the second phase of the Lingshui Li'an International Education Innovation Pilot Zone will actively introduce technology enterprises through industry-education integration. This will infuse Hainan's vocational institutions with more international resources for the development of science, engineering, and the digital transformation of new liberal arts. Thus, the international development of industries enhances the international talent cultivation capabilities of Hainan's vocational education, creating a virtuous cycle of industrial upgrading and talent development.

On the other hand, the pressures of industrial transformation and upgrading necessitate the renewal of vocational talent in Hainan. As domestic economic development progresses, industrial transformation targeting both domestic and international markets involves elements such as technological upgrades, market expansion, management innovation, and conceptual advancements, all guided by high-quality development principles. Talent is a crucial component of high-quality industrial development. With the internationalization of management concepts, technological processes, and infrastructure, there is an inevitable need for the renewal of vocational talent in Hainan. Therefore, Hainan's vocational education must focus on the region's leading, emerging, and future industries, enhancing the quality of both the international faculty and the internationally-oriented student body, ensuring that regional industrial development is matched with suitable talent, thereby boosting regional productivity.

2.3 The Demand for Vocational Education Development

The internationalization of vocational education is a fundamental requirement for elevating the vocational education system to a higher level. Accelerating the frequency of international exchanges between Hainan's vocational institutions and international counterparts helps enhance the overall strength of Hainan's vocational education.

The development of internationalization is an intrinsic need for improving the vocational education system in Hainan. The internationalization of vocational education is a practical necessity, requiring the integration of international management concepts, curriculum systems, bilingual teaching materials, practical exchanges, teaching models, professional standards, and scientific technologies into the local context. This adaptation aims to meet the dynamic demands of new technologies, industries, and markets, enhancing the quality of local educational resources and providing precise and effective services for regional and international economic and social development. In the era of big data, the improvement of systems related to intellectual property and data security facilitates deeper collaboration between vocational institutions and domestic and international enterprises, promoting the digital transformation of professional development. Using the Free Trade Port as a springboard, Hainan's digitalization process encompasses the enhancement of digital infrastructure and the cultivation of new digital economy formats. Policies such as the "Three-Year Action Plan for Cultivating the Data Element Market in Hainan Province (2024-2026)," "Hainan Province Data Intellectual Property Registration Management Measures (Trial)," and "Data Element Empowerment Services for the Entire Lifecycle of Enterprises" address contemporary needs, establishing Hainan's advantages in ensuring data security, orderly flow, and data property rights. The internationalization of these systems supports the effectiveness of international cooperation in vocational education, presenting research outcomes and fostering the development of industry-education integration communities.

Furthermore, technological upgrades optimize the allocation of resources for the internationalization of Hainan's vocational education. Supported by digital technologies, the openness of technology expands the public nature of governance space and extends the bidirectional dissemination of educational data resources. The resource-sharing networks built through technological platforms reduce the costs of acquiring, interacting, and disseminating educational data resources, significantly broadening the service range. This provides Hainan's vocational institutions with flexible and extensive international exchange platforms, facilitating connections with international institutions and industry chains. Consequently, the horizons and perspectives of both faculty and students at Hainan's vocational institutions are broadened.

3. Constructing the Mechanisms for Internationalization of Hainan's Vocational Education in the Context of the Free Trade Port

3.1 Administrative Supervision Mechanism

The administrative supervision mechanism aims to provide guidance for the internationalization of Hainan's vocational education and mitigate risks during this process. Following a chronological logic, the administrative supervision mechanism for internationalizing Hainan's vocational education should operate in a "pre-guidance, mid-term control, and post-adjustment" model. To align with the open nature of the Free Trade Port construction, the central government has granted Hainan higher education institutions a degree of autonomy, partially decentralizing authority to the local level. Although policy benefits are provided within the education sector, the innovation of educational models requires local exploration. Particularly under the regulation of both old and new supervisory systems, some vocational institutions may face challenges such as unclear academic and administrative powers, rigid thinking, and uncertainty.



First, government departments and schools need to establish dedicated international exchange departments or agencies to play a guiding role, participate in the continuous supervision of regular and project-based international exchange activities, and improve approval processes, evaluation indicators, and exit mechanisms. This ensures that internationalization develops in both form and substance, quantity and quality, preventing the misuse of institutional autonomy and maintaining the order of institutional reform and development.

Second, referring to higher-level regulations such as the "Regulations on Sino-Foreign Cooperative Education," the economic and social regulation models of the government should clarify the development goals, fundamental principles, scope of business, and regulatory requirements for the international exchange of Hainan's vocational education in institutional forms. This provides normative guidance and service guarantees for the international activities of vocational institutions, ensuring that these activities are carried out orderly within legal and institutional frameworks. Additionally, the effectiveness of international exchange activities should be regularly assessed, and feedback and summaries should be used to adjust the direction of internationalization development in a timely manner.

Third, efforts should be made to facilitate horizontal communication between domestic and international vocational institutions and vertical communication between the government and vocational institutions. This includes deepening cooperation and exchanges in areas such as curriculum setting, teaching plan arrangement, textbook selection, and teaching content design, forming a networked exchange system to gather regulatory strength, reduce information asymmetry among various departments, and improve the timeliness and accuracy of interactions.

Fourth, the construction of an international education innovation island should carry high-quality foreign educational resources. At the same time, regulatory efforts must be increased to explain, prevent, and mitigate the unpredictable, sudden, and non-continuous risks that vocational institutions face in a dynamic and complex environment, such as "educational sovereignty, ideology, laws and regulations, cultural conflicts, conflicts between public welfare and profitability, and educational quality." [3] Assessing and categorizing risks by type and level, and proposing countermeasures to improve the regulatory mechanism are necessary steps.

3.2 Interactive Mechanism Between Internal and External Entities

The interactive mechanism between internal and external entities aims to optimize the allocation of teaching resources through internal interactions and acquire more international resources and information through external interactions. This allows institutions to adapt to changes in the external environment and expand the international development space of vocational institutions. Specifically, this mechanism can be constructed through interactions among faculty and students, teaching teams, exchange programs, and industry-education integration.

First, an internal platform for faculty and student interaction should be established. By creating an environment for international interaction on campus, the enthusiasm of returned international students, faculty members who have studied abroad, international exchange students, and current international students should be fully mobilized. This group can play a role in developing "localized internationalization," driving other faculty and students to recognize internationalization as a development trend in vocational education. Teachers should be encouraged to actively understand and integrate cutting-edge professional knowledge into teaching,

research papers, and social services, thereby enriching students' cross-cultural knowledge and enhancing their intercultural communication skills.

Second, the professional competence of teaching teams should be optimized. Hainan's vocational institutions should regularly conduct special international training for teachers based on the international cooperation and exchange development positioning of Hainan's policy discourse, enhancing their cooperation and exchange capabilities. Additionally, the introduction of foreign teachers and strengthening exchanges with partner institutions can facilitate the sharing of high-quality teaching resources. For example, the cooperation between Ural Federal University in Russia and Hainan College of Economics and Business in establishing the Ural Institute involves Russian teachers teaching at the school, helping students keep up with international professional knowledge and improving their proficiency in a second foreign language.

Third, educational and exchange programs should be primary channels for talent cultivation. Attracting international students requires adherence to the principles of differentiation and broad coverage. As the internationalization of Hainan's vocational education progresses, cooperation with countries along the Belt and Road has deepened. Some international students may choose their majors and study regions based on their home country's industrial needs. Therefore, in long-term exchange programs, Hainan's vocational institutions need to consider their own discipline advantages and the industrial development of the source countries, expanding the supply of services and optimizing the scale of international students. Short-term exchange programs can also be established, improving systems for student selection and credit transfer, offering diverse learning modes such as short-term study visits and cultural experiences.

Fourth, a comprehensive cooperation platform with international industries should be built. Institutions should actively establish partnerships with international companies and industry associations, setting up overseas practice and training bases for technical research and talent cultivation. This alignment with the development of international industrial chains enhances the practical teaching capabilities of vocational education.

3.3 Quality Assurance Mechanism

According to the international standard ISO9000:2000 "Quality Management Systems—Fundamentals and Vocabulary," quality is defined as "the degree to which a set of inherent characteristics fulfills requirements." [4] Based on this definition, establishing a quality assurance mechanism for the internationalization of vocational education aims to ensure that outcomes meet the predetermined standards or requirements. This mechanism should address the needs of vocational institutions, industries, and students, thereby enhancing the transparency of higher education and ensuring the level of degree education. [5]

First, addressing institutional development needs. With the advent of the governance era, the right to quality assurance evaluation has gradually been transferred from the government to higher education institutions. Hainan's vocational institutions can introduce third-party certification bodies for Sino-foreign cooperative or independent educational projects, such as UK ENIC (UK NARIC—National Recognition Information Centre for the United Kingdom), and collaborate with institutions to develop internationally accepted professional standards and curricula, thereby standardizing professional development. Chinese institutions can also collaborate with foreign partner institutions and introduce the third-party forces of higher education quality assurance agencies [6] to establish quality evaluation indicators and standards, creating a favorable institutional



environment to measure and ensure teaching effectiveness. Additionally, in terms of financial support, special funds should be set up to support student exchanges abroad, international teacher training and certification, and participation in international conferences.

Second, addressing industry development needs. From the supply side, the internationalization of vocational institutions involves talent cultivation, knowledge innovation, and professional development, ensuring that the dynamic adjustment of professional settings, content, structure, and curricula meets the evolving requirements of the professional world. This provides technical support and intellectual backing for regional and international industrial chain development. Additionally, based on major categories, vocational education groups can be established to effectively integrate educational resources and optimize educational services, enhancing the global competence of vocational students.

Third, addressing student development needs. Understanding the cultural backgrounds, learning abilities, intercultural interests, and career development needs of both domestic and international students is crucial. Providing diverse language skills training and high-quality international courses, selecting suitable teaching materials, and adjusting teaching content based on the internationalization progress of professional development are essential. Furthermore, establishing a feedback mechanism for students to timely capture their learning outcomes and issues is necessary.

4. Pathways for the Internationalization of Hainan's Vocational Education in the Context of the Free Trade Port

4.1 Enhancing Policy Support for Vocational Education Internationalization

Institutional innovation is the core task of constructing the Hainan Free Trade Port. It is essential to promote the integration of educational system innovations and lead the international development of higher education to meet the governance needs of Hainan's vocational education internationalization.

First, in terms of knowledge innovation, it is crucial for enhancing the quality of vocational education, advancing academic disciplines, and serving the regional economy. To address the low commercialization rate of patents in vocational institutions,[7] Hainan should focus on innovating intellectual property systems, aligning with the demands of the international industrial market, and encouraging the collaboration of academia, industry, and research entities in scientific research and technological innovation projects. This will enhance the market value of patents, and promote the co-creation, sharing, dissemination, and commercialization of knowledge.

Second, regarding personnel mobility, policies should be optimized to attract talents for the key industries developing in Hainan. This includes improving the visa system for high-end foreign talents,[8] expanding the list of recognized foreign professional qualifications in fields such as computing, and implementing talent introduction programs to break entry barriers. These measures will diversify the faculty sources for Hainan's vocational institutions. The Free Trade Port policies, aligned with the concept of a community with a shared future for mankind, should expand visa-free entry for citizens of Belt and Road Initiative countries for business, education, and major conferences. This will facilitate the internationalization of vocational education in

Hainan, allowing vocational institutions to provide faculty training and other services to countries with weaker vocational education systems and underdeveloped international industrial chains.

Third, in terms of educational services, international education services represent a significant mode of consumption in international trade. Based on the "Study in Hainan" brand project, vocational institutions in Hainan can relax language admission requirements, improve systems for vocational to undergraduate degree transitions, and recognize inter-institutional credits, thus enhancing the appeal of studying in Hainan and expanding the openness of international educational consumption. This creates a convenient international educational environment for domestic and international students, alleviating the constraints of personnel mobility and promoting the internationalization of vocational education in Hainan.

4.2 Participating in the Construction of Think Tanks for Vocational Education Internationalization

The purpose of constructing think tanks is to gather diverse stakeholders to provide high-quality intellectual support and decision-making consultation for the internationalization of vocational education, based on trends and patterns in international vocational education development. Leveraging the advantages of Hainan's openness, vocational institutions should take the initiative to establish global and regional think tanks, which is vital for enhancing international status and the discourse power of local vocational education.

On one hand, establishing global think tanks is essential. With the accelerating process of globalization and deepening interdependence between nations, vocational institutions can form global educational think tanks to promote exchanges in education, science, and regional culture. Hainan's vocational institutions can build on the foundation of external cultural bases, attracting talents with international perspectives, interdisciplinary knowledge, and understanding of international industry standards. This can lead to the formation of the Hainan Vocational Education International Alliance or International Vocational Education Group, spearheading think tank construction and expanding dialogue mechanisms with foreign think tanks. Such efforts would foster open, inclusive, and culturally diverse academic groups, serving the high-quality development of vocational education internationalization. For example, annual exchange conferences can be held, where representatives from various countries discuss governance concepts, management models, institutional norms, professional talents, and discipline construction, addressing differences in political and economic environments to broaden cooperation channels for the internationalization of vocational education, facilitating the aggregation and sharing of international educational resources, and promoting collaborative integration and competitive order maintenance among educational institutions.

On the other hand, establishing regional think tanks is equally important. Vocational institutions should collaborate with government departments and regional industries to build regional vocational education think tanks, driving the internationalization of vocational education through industrial internationalization and adapting to international development needs. Hainan's vocational institutions should align with regional vocational education development trends and industry needs, seizing the benefits of industry-education integration policies. They should enhance cooperation and exchanges with theoretically solid and practically advanced corporate research teams to collaboratively construct industry-education integration frameworks and play the advisory role of industry think tanks in providing directions for policy optimization and reform in vocational



education. Additionally, focusing on commonalities and differences in regional development, vocational institutions should strengthen cooperation with think tank projects in various regions of China. For instance, think tank projects related to Hainan's marine industry could deepen cooperation with similar projects in coastal cities, gaining a macro understanding of national industry development and forming a networked collaboration from points to areas, from superficial to deep levels.

4.3 Leveraging Technology to Empower the Internationalization of Vocational Education

From the perspective of the Hainan Free Trade Port layout, digital technology represents the new productive force for the industrial development of Hainan. Through the establishment of industrial parks and the promulgation of digital regulations, the new track of the digital economy is being strengthened. Therefore, the internationalization of Hainan's vocational education should effectively utilize digital technology, creating a new "digital + education" model to promote the "digital vocational education" brand of Hainan.

First, enhancing the digital resilience of vocational institutions is essential. Smart education, a new educational form derived from the digital era, features openness, sharing, and interactivity,[9] aligning with Hainan's concept of open co-construction and sharing in localized internationalization. Based on the global modern vocational education's discipline and professional development needs in the digital era, Hainan's vocational institutions should coordinate teaching models and content with diverse domestic and international education systems. Teachers should actively use digital technology to conduct teaching activities, while students should adeptly utilize online educational resources, enhancing digital literacy and adapting to the digital teaching environment.

Second, facilitating online exchange channels for vocational education is crucial. Empowered by digital technology, traditional teaching concepts, methods, and carriers have changed. Especially in the post-pandemic era, the model of cloud-based learning and exchange can continue, establishing a stable interactive network that breaks the time-space limitations of cross-border mobility. By utilizing formal and informal educational environments, Chinese and foreign teachers and students can enhance communication and enrich the content and forms of education. For example, Hainan's vocational institutions can organize online activities such as thematic reports and seminars involving Chinese and foreign students from partner institutions for Sino-foreign cooperative education projects, deepening the understanding of professional knowledge from multiple perspectives.

Third, shaping an intelligent management model for vocational education is necessary. With the development of generative technologies and intelligent Q&A systems, Hainan's vocational institutions can utilize AI technology's advantages in language processing and information integration to customize personalized educational content for Chinese and foreign students, providing new structural methods for international talent cultivation.[10] Developing international vocational education learning software, establishing a remote education system, and uploading teaching videos, practice exercises, and classic cases to form a public international vocational education resource library will support students' learning from pre-class preparation to post-class knowledge consolidation. Monitoring and intelligent analysis technologies can track teaching quality, individual learning duration, learning outcomes, and feedback, forming personal profiles to understand students' international vocational education trajectories in real-time, thereby improving the evaluation mechanism for

students' international education.

5 Conclusion

The internationalization development strategy is a long-term, integrative, and mission-driven higher education policy, which is also an urgent requirement for enhancing the vocational education system in Hainan. The geographical advantage of the Hainan Free Trade Port injects significant impetus into the internationalization of Hainan's vocational education. In the future, it will be essential to refine administrative regulatory mechanisms to provide guidance and risk prevention for internationalization, expand internal and external interaction mechanisms to create flexible spaces for international development, and improve quality assurance mechanisms to meet the needs of institutions, industries, and students.

Additionally, the institutional development of the Hainan Free Trade Port can enhance policy support by focusing on knowledge innovation, personnel mobility, and educational services. This includes advocating for Hainan's vocational institutions to lead the construction of global and regional think tanks, and effectively utilizing digital intelligence technology to promote Hainan's digital vocational education brand. These measures aim to advance the internationalization process of Hainan's vocational education, enhancing its global influence and competitiveness.

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