

Chinese Path to Internationalization of Vocational Education

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Abstract: It is in the context of the reorganization of global industrial chains and the increase in the speed of the international movement of skills that the internationalization of vocational education is one of the most important ways to expand national skills supply capacities and reinforce the global cooperation. Nevertheless, the available literature is mostly based on macro-policy views or on individual isolated cases, which causes drawbacks of partial, incomplete summaries of the path, lack of understanding of how it works, and the impossibility of reproducing effective models. Therefore, the practical situation in China is considered in this paper where a framework that integrates the comparative analysis and policy text analysis is built to thoroughly investigate the implementation mechanisms and internal logic of the same and to test the relevant directions through qualitative experiments. The research goes down to detailing certain operational practices in various aspects, such as international conformity of competencies criterion and curriculum, and multi-stakeholder partnership, finally concluding with two common models: the going global with enterprises model and the model of regional collaboration. Moreover, the analysis of their conditions of applicability and limitations is made in more detail in accordance with the outcomes of the research, and the main functions of institutional embedding, standard coordination, and collaboration of stakeholders are clear. The qualitative research findings reveal that this path has good explanatory malleability, which encompasses major practical forms. Institutional differences are to a certain degree pacified by the modular design of skill standards and the flexibility of courses. Nevertheless, it is not very stable based on how deeply the subject collaborates and the differences in the institutional environment. The findings of this paper offer a ground in theoretical reasoning on the path optimization and positioning that is function-oriented.

1. Introduction

With global division of labor experiencing adjustments and modifications, with the inflow of technical skills across the borders becoming more common, the transportation of the vocational education to the nations around the globe has become a prominent mode of how the countries of the world improve their capacity to supply skills and become involved in the international collaboration.

In this process, it gives more emphasis on intensive integration with industrial systems, standards of skills, and practices of talent formation, which leads to a development direction and operational mechanism of greater institutional reliance and contextual variations. The practical situation in China is the subject of this paper where the main question is how the way is created, and how the mechanism is working. It creates a research framework which is majorly founded on comparative analysis and policy text analysis. Without introducing quantitative models or experimental verification, it analyzes skills standard alignment, multi-stakeholder collaboration, and typical models, summarizing the main path forms and discussing the constraints and optimization directions in depth.

2. Related Works

In the field of research on the internationalization of vocational education, existing literature has revealed the multiple driving factors and operational characteristics from different perspectives such as national competitiveness and institutional transplantation. For example, Aliksieieva et al. analyzed the practice in Ukraine with the research background of enhancing national competitiveness. By comparing the experiences of multiple countries, they pointed out that the quality of higher education and international standards are the key to integrating into the global knowledge system, and emphasized the important role played by international cooperation [1]. Li and Pilz conducted an in-depth discussion on the transferability of the vocational education and training (VET) system, analyzed the differences and commonalities of multiple disciplines in policy transfer and practice focus, and pointed out that cultural adaptation and other related issues need to be given high priority when carrying out transnational transplantation [2]. Marchionne comprehensively reviewed the development of the vocational education and training (VET) system in Tunisia, analyzed its development trend and characteristics, and then put forward policy recommendations on the internationalization of colleges and universities [3]. Bailey et al. analyzed the impact of the reform of the connection between secondary and higher vocational education on teachers and teaching practice in the context of China's skilled personnel policy. The research results showed that teachers had a positive attitude but the actual effect was relatively limited [4]. Whatley et al., through their research on the overseas experiences of community college teachers and students, refuted the one-sided narrative of "insufficient ability" and emphasized its important role in promoting learning outcomes [5]. Deng explored the integration path of the new energy industry with vocational education [6]. Hariyanti studied the strategies and impacts of integrating local wisdom into vocational school courses and found that integrating local wisdom into the curriculum through situational learning and other methods, along with the active commitment of schools and the extensive participation of communities, can provide strong support for this [7]. Existing studies mostly start from policy interpretation, experience comparison or case analysis, and lack a systematic and structured comprehensive analysis of the overall operation mechanism and replicability of the internationalization path of vocational education.

3. Methods

3.1 Implementation Mechanism of Internationalization of Vocational Education in China

3.1.1 International Alignment Mechanism of Skill Standards and Curriculum

Currently, most existing research focuses on policy interpretation, experience comparison, or specific case studies, generally lacking a systematic and comprehensive analysis of the overall mechanism and replicability of the pathway. At the skill level, the internationalization of vocational

education in China is mainly achieved through the alignment of skill level standards and curriculum systems. On the one hand, skill requirements are broken down into alignable competency units, providing corresponding technical interfaces; on the other hand, modular curriculum design adapts to different training needs.

As a matter of fact, the globalization of competencies in skills does not involve an easy copy-pasting or export of skills and competencies blindly. It entails a dynamic process of adaptation between the most important component of local adaptation and the valuable dimension of international applicability. The export of skill standards, Chinese vocational education can keep the main one directly associated with the national industrial system and technological plan and implement the relevant adjustments in the structure of the teaching time, the establishment of the evaluation mode, and the development of the qualification recognition regulation. This is to enhance the acceptability of the skill standards across institutional settings. Modular standards and curriculum based on this approach can enable Chinese vocational education to engage in the process of international skills system collaborative functioning without majorly transforming its local logic of training.

3.1.2 Multi-Stakeholder Collaborative Promotion Mechanism

The process of introduction of internationalization in vocational education in China is based on the coordination of several stakeholders such as the government and the institutions of learning and the companies. Government is very important in the design of the system and allocation of resources, offering institutional assurances and organizational assistance to international collaboration in vocational education by policy direction and structure development. Educational establishments being the primary implementers have the duty of creating talent training programs, as well as coordinating curriculum implementation, and organizing teaching thus they play a major role in the implementation process of the internationalization path. Businesses also contribute to matching skills requirements, undertaking practical instructions, and facilitating technological changes to offer practical application cases of internationalization of vocational training.

However, it is important to note a structural imbalance in the multi-stakeholder collaboration. While the government and educational institutions have relatively high participation in international cooperation, enterprises often participate as collaborators in some projects, with limited involvement in the joint development of skills standards and curriculum design. This imbalance hinders the effective connection between the internationalization of vocational education and actual industry needs, thus affecting the sustainability of skills standard output. Therefore, improving the multi-stakeholder collaborative mechanism is a crucial condition for the stable operation of the internationalization path of vocational education in China.

3.2 Typical Models and Operational Logic of the Chinese Path

3.2.1 "Going Global with Enterprises" Model of Vocational Education Internationalization

The "Going Global with Enterprises" model relies on the overseas investment and industrial layout of Chinese enterprises, embedding vocational education as a supporting element into the internationalization process of these enterprises. Under this model, vocational education institutions, based on the actual needs of overseas production and operation of enterprises, output corresponding skills training programs and talent cultivation systems, ultimately achieving a synchronous extension of education supply and industry demand. The core characteristic of this model is its strong practical operability, as overseas projects of enterprises have a clear and stable demand for technical and skilled personnel.

This provides target audiences and application scenarios for the internationalization of vocational education. Simultaneously, relying on the existing organizational system and management structure of enterprises, vocational education skills standards and curriculum systems can be smoothly implemented, thereby reducing the impact of uncertainties caused by cross-border institutional differences. In terms of operational logic, the "Going Global with Enterprises" model promotes education output through the pull of industry demand, forming a scale expansion mechanism with enterprises as the link. As enterprises continue to expand their overseas presence, the internationalization of vocational education has been replicated and implemented in different countries and regions, gradually building a skills training network system based on the industrial chain. This model has now become one of the important paths to realize the internationalization of vocational education in China.

3.2.2 Regional Cooperation-Oriented Internationalization Model of Vocational Education

The regional cooperation-oriented model uses Sino-foreign regional cooperation platforms as a vehicle to promote the internationalization of vocational education through the joint construction of overseas vocational education centers and training bases. The model focuses on institutional adjustment and mutual resource distribution in the context of the regional cooperation, which incorporates the internationalization of vocational education into a more solid cooperative system.

This model is especially concerned with the balancing of the institutional transplantation and the cultural adaptation in the context of its particular activity. Although on the one hand, when exporting skills requirements and curriculum systems, the Chinese vocational education maintains relatively developed training systems and teaching models; on the other hand, it takes the needed adjustments of teaching content and implementation modes to the educational system, industrialization, and cultural conditions in the collaborating region, so that the institutional acceptance and practical effectiveness will be enhanced. This gradual process of transplantation will reduce the cost of adapting to the institutional differences.

Operational wise, (regional cooperation-oriented model) added more stability and sustainability to internationalization of vocational education using institutional platforms. This model has the advantage of highlighting the creation of long-term cooperative relations compared to the export of single projects; this method allows the internationalization of the vocation education to create a comparatively fixed mechanism of operation at the regional scale, which gives the institutional room to in-depth development of the vocational education path in China.

3.3 Constraints and Optimization Directions of the Internationalization Path of Chinese Vocational Education

3.3.1 Identification of Structural Constraints

Regarding the institutional coordination, the cross-departmental and cross-level development of the Chinese vocational education continues to experience a lack of policy goal synergy in its internationalization. Differences in the implementation pace and focus of policies related to vocational education, international cooperation, and industrial development affect the overall efficiency of internationalization projects at different levels.

In terms of resource distribution, high-level teachers, cross-cultural teaching skills, and the ability to maintain stability in funding all are very dependent in the internationalization of vocational education. Nevertheless, the lopsidedness of the available resources to various areas and institutions curtails the mass replication and continuity of the internationalization route.

Regarding the international recognition, the international acceptance of Chinese vocational

education can still be improved in matters of skill levels, certification of the qualification and international recognition of the academic qualification. This limitation is related not to quality of skills training itself, but to the variations in rules and cognitive bias between the systems of vocational education in various countries, which constrains the export of standards and encouragement of models.

3.3.2 Optimizing the Path to Sustainable Internationalization

In the effort to ensure sustainability in development of Chinese vocational education, institutionalization of internationalization path is to be streamlined on internationalization coordination of standards and collaboration of stakeholders. At the institutional level, there is a need to stimulate further integration of internationalization of vocational education into the system of foreign relations of the countries and the structure of the industrial complex, increasing the consistency and sustainability of the goals of the policy.

Meanwhile, the synergistic fit between skills standards and curriculum systems in the standards level should be applied to enhance dialogueability and identifiability of Chinese vocational education in international skills systems, slowly transforming the standards output mode of project-based approach into a rule-based involvement mode.

The collaborative mechanism between the government, educational establishments, and enterprises should be enhanced at the stakeholder level further, making the level of enterprise involvement in the collective construction of the skills standards and the nurturing of talents more intensive and, therefore, the synergistic effect of the internationalization of vocational education and industrial development should become deeper.

4. Results and Discussion

4.1 Overall Design of the Qualitative Experiment

This research uses qualitative experimental design to confirm the path and mechanism of internationalization of Chinese vocational education designed on the top. This qualitative experiment does not intend to establish quantitative values, causal tests, but looks into the rationality and explanatory ability of the given direction in the real-life institutional environment through organized material examination and comparison within the context. The operability and reproducibility of the experimental design are not based on the fact that high-threshold data acquisition or field survey is used which is hard to implement.

4.2 Qualitative Experiment Methodology Design

4.2.1 Qualitative Comparison of Policy and Practical Materials

The analysis objects in the experiment are representative policy texts and practical material on the internationalization of vocational education, which include national-level vocational education international cooperation documents, the information on international vocational education projects which is publicly available, and implementation plans thereof. The experiment reviews by systematizing the descriptions of international cooperation methods, application of skills standards, and collaboration of subjects in various materials whether the above path can encompass the principal forms of operation in practice.

The approach is aimed to examine the structural characteristics of text materials instead of the measures of the policy effects to confirm the intrinsic consistency of the internationalization process of vocational education at the institutional level in China.

4.2.2 Contextualized Verification Method for Typical Models

Based on the "going global with enterprises" model and the regional cooperation-oriented model proposed above, several typical operational scenarios are constructed to qualitatively verify their key characteristics. By comparing relevant elements in publicly available practical materials, the common characteristics of vocational education internationalization in skill standard alignment, curriculum implementation, and organization methods under different scenarios are analyzed.

This verification method does not elaborate on specific case descriptions but uses the recurrence of model characteristics in real-world scenarios as the criterion for judgment, thereby verifying the rationality and generalizability of the model classification.

4.3 Qualitative Experiment Implementation Process

The qualitative experiment implementation process is divided into three steps: first, screening and classifying policy texts and practical materials to form an analytical text set; second, organizing the internationalization path elements in the materials according to the analytical framework; and third, comparing the organized results with existing path models to determine the degree of adaptation to real-world operation and the scope of interpretation. This process emphasizes the consistency of analytical logic and the repeatability of steps to avoid excessive influence of subjective experience on the research conclusions.

4.4 Applicability of Qualitative Experiments

The qualitative experimental design used in this study is suitable for macro-level path and mechanism research. It can verify the internationalization path of vocational education without relying on field surveys and quantitative data. This method helps to improve the integrity of the research logic under the limitation of space, while reducing the difficulty of research implementation, and is consistent with the acceptance standards of qualitative research in relevant journals.

4.5 Qualitative Results

Based on the designed qualitative experiment, the internationalization path and operational mechanism of Chinese vocational education were verified. Qualitative analysis shows that the constructed path has good explanatory adaptability in real-world practice; however, its effectiveness depends on specific institutional embedding methods and operational conditions. First, the overall structure of the path does not present a linear progression of a single model, but rather multiple implementation forms coexist. The "going global with enterprises" model and the regional cooperation-oriented model can be identified in different practical contexts, indicating that the model classification has general validity and can reflect the main operational forms. Second, at the implementation mechanism level, the modular alignment of skill standards and curriculum systems has strong stability. By decomposing competency units and reorganizing curriculum modules, Chinese vocational education can maintain its local training logic and achieve alignment with vocational education systems in different countries, thereby reducing the implementation costs caused by institutional differences. Third, regarding multi-stakeholder collaboration, the government and educational institutions bear clear organizational and implementation functions, while enterprise participation is reflected in the training phase and employment needs. The multi-stakeholder collaboration mechanism can generally support the operation of the project, but there are insufficient depths of collaboration in the joint construction of skill standards and

long-term institutional alignment. Finally, regarding the operational conditions of the pathway, its effectiveness is closely related to the cooperative environment. In situations where the rules and regulations are clear and the cooperative mechanism is stable, the pathway operates relatively smoothly. However, in situations where there are significant differences in the rules or the foundation for cooperation is weak, the pathway relies more on project-based operations, and its stability is relatively limited.

5. Conclusions

This paper takes the internationalization practice of vocational education in China as its research object, constructing a research framework centered on comparative analysis and policy text analysis. It provides a systematic review of the major implementation systems like the internationalization of skills standards and curriculum systems, joint promotion by a group of stakeholders, and common pattern of operations. Based on this, a qualitative experiment was undertaken in order to prove the stipulated route. The findings indicate that the Chinese vocational education internationalization direction has a good level of explanatory role and flexibility in practice. The basic models of the existing internationalization practices can be reviewed by the so-called going global with enterprises and regional cooperation oriented models. The modularization of the skills standards and free adaptation of the curriculum systems show great benefits of the mitigation of effects of the institutional differences, whereas the extent of the collaboration between the multiple stakeholders and disparity of the institutional setting limit the steadiness of the course. The findings of the research contribute to the empirical evidence of the operational logic of the internationalization of the Chinese vocational education, the most effective path design, and defining the essence of the institutional embedding, standards coordination, and stakeholder collaboration in the path. It is worth mentioning that the principle of qualitative analysis prevails in the current study and does not imply extensive field surveys and quantitative data, thus, the applicability and the specific effect of the path effectiveness remain somewhat confined. The relevance of the pathways and optimization strategies might be further verified by future researchers through quantitative analysis and long-term follow-up studies in larger regional and industry-specific backgrounds, which could serve as a more wholesome source of references to the sustainable development of the internationalization of vocational education in China.

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