

Path Analysis of Vocational Education Cooperation and Development in the Greater Bay Area from the Perspective of the Qualifications Framework



Jun Qi¹ & Peng Zhang^{1,*}

¹ *Guangdong Mechanical and Electrical Polytechnic, China.*

Abstract: Vocational education has an irreplaceable role in cultivating high-quality talents adapted to the needs of modern industries, promoting flexible employment in the labor market, and promoting the sustainable development of the regional economy. However, due to the differences in the education system, qualifications, and curriculum between regions, there are many problems in vocational education in the Greater Bay Area that need to be solved. Based on this, this paper analyzes in detail the functions and roles of the QF (qualifications framework) in vocational education, and by comparing and analyzing the characteristics and current situation of vocational education in each region, it provides several effective paths that are in line with the development of vocational education in the Greater Bay Area by constructing a highly efficient and synergistic system of vocational education and by promoting the development of regional economic integration.

Keywords: qualifications framework; the greater bay area; vocational education

Introduction

As an important economic and talent-gathering area in China, vocational education in the Greater Bay Area faces multiple challenges and opportunities for diversified and internationalized development. With the deepening of regional economic integration, the variability of education systems among regions has become one of the major obstacles restricting cross-border labor mobility and educational cooperation. Therefore, the establishment of an effective qualifications framework can not only promote vocational education cooperation within the Greater Bay Area but also provide institutional safeguards for cross-border employment and promote the organic integration of talent mobility and economic development.

1. Overview of the Qualifications Framework

1.1. Types of Qualification Frameworks

A qualification framework is a systematic structure for standardizing and organizing different levels and types of education and training qualifications to ensure their mutual recognition and

interface between levels. NQFs (National Qualifications Frameworks) are systems designed at the national level to harmonize and standardize all educational qualifications within a country in a way that is transparent and easy to understand, thereby promoting the coordination and development of education and vocational training within the country. Regional qualifications frameworks, on the other hand, transcend national boundaries and cover multiple countries within a given region, with the goal of achieving mutual recognition of qualifications and mobility of talent within the region. For example, the EQF (European Qualifications Framework) is a typical regional qualification framework that aims to promote the harmonization of education and vocational training standards among European countries. The IQF (International Qualifications Framework) goes a step further and seeks to promote the standardization and mutual recognition of educational and training qualifications on a global scale in order to respond to the demand for educational and occupational mobility brought about by globalization. Whether they are national qualifications frameworks, regional qualifications frameworks, or international qualifications

Corresponding Author: Peng Zhang
Guangdong Mechanical and Electrical Polytechnic, China.
Email: 2789812349@qq.com

©The Author(s) 2024. Published by BONI FUTURE DIGITAL PUBLISHING CO., LIMITED This is an open access article under the CC BY License(<https://creativecommons.org/licenses/by/4.0/>).

frameworks, they ensure that education and training outcomes are comparable and transparent by setting clear standards and levels, thereby providing a wider range of opportunities for individual learning and career development. At the same time, QF helps education providers and employers better understand and compare the competencies and qualifications of candidates from different educational and training backgrounds, promoting the improvement of education quality and effective labor market alignment (Lu & Liu, 2024).

1.2. Functions and roles of Qualification Frameworks

QF has important functions and roles in modern education and vocational training systems, and their main objective is to promote educational quality improvement, mutual recognition of qualifications, and occupational mobility through clear and harmonized standards. QF categorizes and describe different levels and types of education and training qualifications, thereby making educational outcomes more transparent and comparable. This transparency and comparability are important for providers, employers, and learners themselves. For providers, QF helps them to design and evaluate curricula, ensure that educational content meets specific quality standards, and enable smooth articulation between different stages and types of education. For employers, QF provides a tool to better understand and assess the educational background and vocational competencies of job applicants and to make more accurate decisions in recruitment and human resource management. For learners, QF not only provides clear learning and development pathways, enabling them to clearly see the objectives and requirements of the various stages of education and training, but also increases their mobility and opportunities across different education systems and countries. QF also facilitates cross-border education and vocational training cooperation by promoting mutual recognition and standardization of academic qualifications (Yang & Wu, 2024). For example, in Europe, the EQF is designed to promote the mutual recognition of educational and vocational qualifications among member states and to enhance the mobility and competitiveness of the labor market. In addition to this, the EQF plays a key role in promoting lifelong learning by encouraging individuals to continuously upgrade their skills and knowledge and adapt to changing occupational needs and market conditions. By establishing clear levels

and standards, QF enables informal and non-traditional learning outcomes to be recognized, thereby motivating more people to engage in learning and training and enhancing the knowledge and skills base of society as a whole. QF plays a crucial role in enhancing the quality of education, promoting mutual recognition of qualifications, enhancing occupational mobility, facilitating cross-border cooperation, and supporting lifelong learning. They are an integral part of modern education and vocational training systems (Xu et al., 2024).

2. Current Situation of Vocational Education in the Greater Bay Area

2.1. Overview of vocational education in the Greater Bay Area

As one of the most economically active and open regions in China, vocational education in the Greater Bay Area shows different characteristics and development trends. As a major economic province and manufacturing town in mainland China, Guangdong Province has a complete and large-scale vocational education system, covering all levels from secondary vocational education to higher vocational education, and the curriculum focuses on combining with the needs of the local industry to cultivate a large number of technical and skilled talents to meet the needs of local economic development. The vocational education institutions in Guangdong are diversified, including vocational high schools, technical schools, and higher vocational colleges, focusing on the teaching of practical skills and the enhancement of vocational abilities. The mode of school-enterprise cooperation is very common, providing students with abundant internship and employment opportunities. The vocational education system in the Hong Kong Special Administrative Region of China is relatively independent and internationalized. Vocational education in Hong Kong is mainly provided by the Hong Kong VTC (Vocational Training Council) and other tertiary institutions, with a flexible and diversified curriculum covering a wide range of fields such as commerce, services, engineering, and the arts, and with an emphasis on the teaching of English and Chinese, as well as the cultivation of the students' international outlook (Zhang et al., 2023). Vocational education in Hong Kong emphasizes professional qualifications and continuing education, focuses on the integration of theory and practice, and provides students with opportunities for all-round

development. Vocational education in the Macao Special Administrative Region of China is relatively small but has its own characteristics. Vocational education in Macao is mainly provided by the Macao Polytechnic Institute, the Macao Institute of Tourism, and other vocational training institutions, with curricula biased towards the pillar industries of Macao's economy, such as tourism, gaming, and the service industry, emphasizing the cultivation of multilingual competence and service skills. The Macao government has also been actively promoting cooperation between vocational education and local enterprises in order to enhance graduates' employability and market competitiveness (Sun et al., 2023).

2.2. Major features and differences in vocational education

Vocational education in the Greater Bay Area exhibits significant features and differences, which are mainly reflected in the curriculum, teaching mode, and qualification certification. In terms of curriculum, vocational education in Guangdong Province focuses on the manufacturing industry and the cultivation of technically skilled personnel. The content of the curriculum is closely related to the needs of local industries, emphasizes practicality and skills, and covers a wide range of technological fields such as machinery manufacturing, electronic information, and automobile maintenance. Vocational education in the Hong Kong Special Administrative Region of China is more diversified, covering a wide range of fields such as commerce, services, engineering, and the arts, with a flexible curriculum that focuses on international integration, emphasizing the teaching of English and Chinese, and aiming to cultivate well-rounded human resources with an international outlook and multi-lingual capabilities. The curriculum of vocational education in the Macao Special Administrative Region of China mainly focuses on economic pillar industries such as tourism, gaming, and service industries, emphasizing the cultivation of multilingual competence and service skills in order to meet the needs of local economic development (Dong, 2023). In terms of teaching mode, vocational education in Guangdong emphasizes school-enterprise cooperation to enhance students' practical skills and competitiveness in employment through internships, training, and enterprise cooperation projects. The teaching mode of vocational education in Hong Kong emphasizes the combination of theory and practice and adopts

diversified teaching methods, including classroom teaching, laboratory training, and enterprise internships, so that students are able to accumulate experience in the actual working environment. The teaching mode of vocational education in Macao, on the other hand, emphasizes practice orientation. The curriculum design focuses on students' ability to apply themselves in real-life work scenarios and provides students with abundant practical opportunities through close collaboration with enterprises. In terms of accreditation, Guangdong's vocational education accreditation system is more comprehensive, covering all levels from secondary vocational education to higher vocational education, and students are able to obtain nationally recognized vocational qualification certificates upon completion of their studies. In Hong Kong, the vocational education accreditation system focuses on professional qualifications and continuing education, and students can obtain internationally recognized qualifications through taking various professional examinations to enhance their vocational competitiveness. The vocational education qualification system in Macao is relatively small, but it has been gradually improved. Students can obtain locally and internationally recognized vocational qualification certificates through relevant training and examinations to enhance their employability and market competitiveness (Li, 2023).

3. The Need for Cooperation in Vocational Education in the Greater Bay Area

3.1. Demand for cooperation in vocational education due to economic integration

The necessity of vocational education cooperation in the Greater Bay Area lies in the strong demand for vocational education in economic integration, which is mainly reflected in the changes in the labor market and the upgrading of skill demand. As the Greater Bay Area becomes the fourth largest bay area economy in the world, the economic ties within the region are becoming increasingly close, the flow of people, capital, technology, and information between the places is accelerating, and the labor market is gradually integrating. Against this background, the demand for high-quality skilled personnel for economic development in different places has been increasing, and it has become difficult for the vocational education resources and system of a single region to fully meet the needs of the entire Bay Area. Economic integration has driven

the upgrading and transformation of the industrial structure. Emerging industries such as high-tech, financial, logistics, and creative industries have put forward higher requirements for the labor force, and vocational education needs to be rapidly adjusted and upgraded to train professionals who can meet the needs of these emerging industries. Enterprises in the region have raised higher expectations for cross-border employment and career mobility. Vocational education cooperation can reduce institutional barriers to cross-border employment through mutual recognition of academic degrees and qualifications and provide enterprises with more flexible and efficient talent allocation solutions. In addition, economic integration brings new business models and forms of cooperation. Cooperation in vocational education can promote the sharing and complementarity of educational resources in different regions, optimize the allocation of educational resources, and improve the quality and efficiency of education. Cross-border cooperative programs and exchanges can provide students with more diversified learning and practice opportunities and cultivate composite talents with international perspectives and cross-cultural communication skills (Li, 2022).

3.2. The role of QF in vocational education cooperation

QF provides a basis for mutual recognition of academic and skills qualifications by establishing a unified system of standards and grades to make education and training qualifications in different regions and countries comparable and transparent. In the Greater Bay Area, the vocational education systems have their own distinctive characteristics. Through the QF, the interface and mutual recognition of these different systems can be achieved, and the qualifications and skills acquired by students in one region can be recognized in the other, thus facilitating cross-boundary mobility of labor and employment. The QF also promotes cross-border cooperation in vocational education. Through the QF, vocational education institutions in different regions can more easily carry out collaborative projects and exchange programs, jointly develop curricula and training programs, and improve the quality and effectiveness of education and training. Cross-boundary cooperation not only enriches the learning and practical experience of students but also provides teachers with more opportunities for professional development and enhances their teaching capacity and capability. In addition, the QF

plays an important role in enhancing the quality and standardization of vocational education. By setting clear standards for education and training, QF ensures consistency in the quality and standards of vocational education across regions, which is important for improving the overall quality of education. QF can help local vocational education institutions benchmark against international standards, improve the quality of education and training, and enhance the international competitiveness of students. At the same time, QF can also provide strong support to education policymakers, helping them to formulate and implement more effective education policies and measures and promoting the reform and development of vocational education. The role of QF in vocational education cooperation is not only limited to promoting mutual recognition of academic and skills qualifications but also includes promoting cross-border vocational education exchanges and cooperation and upgrading the quality and standardization of education, which provides a solid foundation and guarantee for the cooperation and development of vocational education.

4. The Development Path of Vocational Education in the Greater Bay Area

4.1. Policy support and institutional guarantees

In order to promote the sustainable development of vocational education and the process of regional integration, the government needs to formulate and implement a series of policy measures to provide strong support and guarantees. First, it is necessary to strengthen the coordination and unification of education policies within the region and to promote the docking and integration of vocational education policies across the region through the establishment of cross-regional education cooperation platforms and mechanisms so as to form a unified policy framework and standards. Policy support should focus on the sharing and optimal allocation of educational resources, integrating educational resources from different regions through intergovernmental cooperation, establishing a sharing mechanism, and enhancing the efficiency of educational resource utilization. In terms of institutional safeguards, mutual recognition of academic and skills qualifications should be promoted, and a unified qualifications framework should be established to ensure that students' academic qualifications and credentials are

recognized between regions so as to promote labor market integration and cross-border employment. At the same time, the government should formulate incentive policies to encourage cooperation between enterprises and vocational education institutions, promote the deepening of the school-enterprise cooperation model, and provide more internship and employment opportunities for students. Policies should also cover the building and training of the teaching force, formulate standards for teacher qualification and training, promote cross-border teacher exchanges and cooperation, and improve the teaching standards and professionalism of teachers.

4.2. Sharing and optimization of educational resources

Through the integration and sharing of educational resources across the region, the utilization efficiency of educational resources can be significantly enhanced, promoting the collaborative development of vocational education. Specifically, a regional education resource sharing platform should be established to pool together the vocational education resources of Guangdong, Hong Kong, and Macao, including teaching facilities, teacher strength, curriculum systems, and education technology. Through this platform, vocational education institutions in the three places can share advanced teaching equipment and laboratory resources so as to improve the practical ability of students and the quality of education. The sharing of educational resources should also include the construction and sharing of high-quality curricula and teaching materials, so as to promote the popularization and dissemination of high-quality educational resources in the region and enable more students to enjoy high-quality vocational education. Meanwhile, it is necessary to actively promote teacher exchanges and cooperation and enhance the overall teaching level and professionalism of the teaching staff through the exchange and training of teachers within the region. In addition, vocational education information technology should be promoted, and modern information technology means should be used to build online education platforms and resource libraries so as to realize the digitalization and networked sharing of high-quality educational resources and to provide students with diversified learning channels and resource support.

4.3. Teacher development and training

Teacher development and training ensure the high-quality development of vocational education by

upgrading teachers' professionalism and teaching ability. There is a need to establish a cross-border teacher training and exchange mechanism in the region to promote mutual visits and learning among teachers from Guangdong, Hong Kong, and Macao, so as to improve the overall teacher qualification level through the sharing of high-quality educational resources and teaching experience. Training courses, seminars, and professional development programs can be jointly organized to enable teachers to be exposed to the latest education concepts and teaching methods and to enhance their professionalism and teaching skills. In addition, vocational education institutions in the three places should strengthen their cooperation and set up teacher training bases to provide teachers with systematic and specialized training courses covering a wide range of aspects, such as education theory, teaching practice, and vocational skills. The government should formulate incentive policies to encourage outstanding teachers to participate in cross-border exchange and training programs and support their professional development and further studies through scholarships and subsidies. Meanwhile, international advanced vocational education concepts and teacher training experiences need to be introduced to enhance the internationalization of the teaching force and cultivate a team of teachers with a global perspective and cross-cultural communication skills. Vocational education institutions should establish a perfect teacher evaluation and incentive mechanism and motivate teachers to continuously improve their quality and teaching level through regular evaluation and feedback. It is also necessary to pay attention to the industry background and practical experience of vocational education teachers and encourage teachers to participate in enterprise practice and industry training so as to enhance their understanding of industry development and market demand and improve the practicality and relevance of teaching.

Conclusion

In summary, the development of vocational education in the Greater Bay Area faces great opportunities and challenges, so it is necessary to further strengthen the cooperation and coordination of vocational education institutions in the region, optimize the allocation of educational resources, improve the quality of teaching staff, and ensure the fairness and quality of education. Meanwhile, the government should formulate more precise and

effective policies to provide solid institutional safeguards and policy support for the sustainable development of vocational education. These measures will lay a solid foundation for the vigorous development of vocational education in the Greater Bay Area and help the healthy development of the regional economy and social progress.

Acknowledgement

This research was funded by:

2021 Philosophy and Social Sciences Planning Project of Guangdong Province (GD21CJY03)

"Research on the Integration of Vocational Education in the Guangdong Hong Kong Macao Greater Bay Area Based on Qualification Framework: Task Design, Mechanism Construction, and Guarantee Strategies"

Conflict of Interest

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

References

- Dong, P. (2023). Study on the Adaptability of Vocational Education in Guangdong, Hong Kong, and Macao Greater Bay Areas under the Perspective of Ecological Location. *Modern Business Industry*, 44(17), 33–35.
- Li, Q. (2022). *Research on Key Issues and Countermeasures in the Construction of the National Qualifications Framework in China*. East China Normal University.
- Li, X. (2023). Development and analysis of a qualification framework under the perspective of standardization. *Journal of Fujian Open University*, 2023(02), 76–80.
- Lu, S., & Liu, S. (2024). Synthesis of research on collaborative development of vocational education in Guangdong, Hong Kong, and Macao Greater Bay Area under the background of high-quality development. *Journal of Guangdong Light Industry Vocational and Technical College*, 23(3), 42–48.
- Sun, Y., Xie, J., & Huang, M. (2023). The construction path of a vocational education qualification framework under the perspective of synergistic development of education and talent work. *China Vocational and Technical Education*, 2023(35), 48–52.
- Xu, G., Huang, W., & Li, Y. (2024). A study on the construction of cooperative development mechanisms for higher education in Guangdong, Hong Kong, and Macao Greater Bay Area from the perspective of public policy. *Development Research*, 41(04), 57–63.
- Yang, C., & Wu, L. (2024). Chinese-foreign cooperative education in higher vocational education in Guangdong, Hong Kong, and Macao Bay Area: practice review and path investigation. *China Vocational and Technical Education*, 2024(18), 40-49+56.
- Zhang, S., Tan, R., & Guo, X. (2023). An analysis of the cooperation mechanism of open higher education in the Guangdong-Hong Kong-Macao Greater Bay Area. *Journal of Guangzhou Radio and Television University*, 23(6), 77-83+111.

How to Cite: Qi, J., & Zhang, P. (2024). Path Analysis of Vocational Education Cooperation and Development in the Greater Bay Area from the Perspective of the Qualifications Framework. *Journal of Global Humanities and Social Sciences*, 05(09), 334-339. <https://doi.org/10.61360/BoniGHSS242016810901>