

The Impact of Vocational Education on the High-Quality Development of Local Economy in the New Era

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Abstract: As China enters the new growth stage of the "14th Five-Year Plan," one of the most significant challenges for China's economic development is to accelerate the transformation of the economic development mode, with the strategic adjustment of the economic structure serving as the major direction. Strategic economic structure adjustment necessitates industry structure adjustment and upgrading. As a result, the expansion of diverse sectors necessitates more professional and technical talents, and the importance of vocational education to economic growth is growing. Based on the current state of vocational education in China, this report analyzes the interrelationship between vocational education and economic development, as well as the existing problems, and proposes targeted countermeasures for the synergistic development of vocational education and the economy in China in order to promote the healthy development of vocational education and the high-quality growth of the local economy.

1. Introduction

Vocational education takes on the important responsibility of cultivating diversified talents, transmitting technical skills, and promoting employment and entrepreneurship for the nation. There is a close link between vocational education and local economic growth, and the two have complementary, interdependent effects. On the one hand, the quality of local economic development determines the level of investment in local vocational education in terms of human, material, and financial resources, which in turn affects the development level of vocational education to a certain extent. On the other hand, the changing characteristics and development trends of economic development also place new demands on the development of vocational education, requiring vocational education to adapt. Consequently, it is essential to properly comprehend the connection between vocational education and local economic growth and to identify the problems that exist within it. Using the challenges as a guide, it is of practical importance to investigate the present method of synergistic growth of vocational education and the local economy, which may enhance the flexibility of both vocational education and local economic development.

2. Concepts Related to Vocational Education and Local Economic Development

2.1 The Concept of Vocational Education

Different nations and organizations define vocational education differently. Since the 1970s, UNESCO has referred to vocational education as "technical and vocational education"; in the United States, vocational education is known as "career and technical education." The Vocational Education Law of the People's Republic of China, passed in 1996, defines the phrase "vocational education" in China. Different parties' definitions of vocational education demonstrate that it is a distinct sort of education that is obviously different from general education.

2.2 Industry Development

Economic development is a broad notion that includes both the rise in per capita income and the transformation of the economic structure. Similar to economic development, industrial development encompasses the entire process of generation, expansion, and evolution. Vocational education is part of the tertiary sector, which supports economic and social growth. The flexibility and appeal of vocational education have risen in recent years.

2.3 Interactive Development of Vocational Education and Economy

The relationship between vocational education and economic growth is primarily expressed in two facets. First, vocational education emphasizes skill development to meet commercial and industry demands. Competition in cutting-edge research and technology is intensifying globally. China's economy is growing steadily, its economic structure is being optimized, and its development mode is undergoing a rapid transition. Numerous high-tech industries, including advanced manufacturing, new energy resource, new materials, modern agriculture, modern information technology, biotechnology, and artificial intelligence, all need high-quality technical skill talents to play a role. As a matter of fact, there is a shortage of these talents, and vocational education is urgently required to grow technically trained talents in linked industries as a kind of labor force assurance. Second, the local economy's degree of development influences the quality of vocational education to some extent. The degree of productivity might indicate the state of economic progress. Over the past four decades of China's reform and opening up, the economy has risen swiftly, and productivity has increased substantially. China's higher vocational education began to grow during the early stages of reform and opening up; it has now entered a period of internal building and quality enhancement. In recent years, China's vocational education reform and development have launched on the path of quality improvement and value-added empowerment, and the design of the overall development plan has matured. It is evident that economic development would limit the scope and pace of vocational education development. Moreover, economic development gives adequate assurance for the development and reform of vocational education, hence fostering the development of vocational education teaching content and teaching techniques.

It is clear that vocational education and economic growth are mutually beneficial. Stable economic growth fosters high-quality vocational education development, enhances its standard, and paves the way for creative reform. The combination of vocational education and economy ensures the economy's vigorous growth.

3. Analysis of the Current situation of vocational education in China

3.1 Current Situation of Vocational Education in China

The genesis of contemporary vocational education in China may be traced back to the establishment of the Naval School at the Imperial Arsenal Foochow in 1866 AD, the first vocational education school in China. Due to the limits imposed by the "highly centralized planned economic system" in the early days of New China's creation, the growth of vocational education was relatively sluggish. Until the reform and opening up, under a series of policy support, vocational education flourished. We have built an integrated vocational school system of "secondary vocational school - advanced vocational technical college - vocational undergraduate" via more than four decades of experience. The vocational education, basic education, higher education, and continuing education integration mechanism has been built. The transition from school-based education to diversified education and scale growth to high-quality connotation development has been accomplished.

China has constructed the world's largest vocational education system, with 11,200 vocational schools enrolling more than 29.15 million students and secondary and advanced vocational schools training approximately 10 million high-quality technical skills talents each year. This system provides significant support for promoting economic and social development and enhancing national competitiveness.

3.2 Development Trend of Vocational Education in China

According to the Opinions on Promoting the High-Quality Development of Modern Vocational Education issued by the General Office of the CPC Central Committee and the General Office of the State Council in 2021: "By 2025, the characteristics of vocational education types will be more distinct, and the construction of a skill-based society will be comprehensively promoted." The state gives considerable emphasis to the development of vocational education and makes it apparent that vocational education is on par with general education in terms of significance. As China's economy continues to develop, there is a growing need for professional and qualified workers. In the future, the population quantity dividend that drives economic development will transform into a population structure dividend, and vocational education is imperative to cultivate more high-quality technical professionals and consummate craftsmen to meet the demand of economic development. Simultaneously, vocational education development resonance with local economic development to release a more robust vitality.

4. Problems in Vocational Education Serving Local Economic Development

Vocational education contributes significantly to social development and economic progress. In contrast to industrialized nations, however, China's contemporary vocational education continues to be plagued by a flawed system, a mismatch between supply and demand, and disparities in the quality of training, which are most evident in the following aspects:

(1) Insufficient coordination and adaptation between vocational education and economic development

China's tremendous economic growth has resulted in constant technical and industrial advancements. Compared to traditional industries of the past, new energy resources, new materials, and new technology industries have emerged in recent years, necessitating that vocational education schools open more majors that are in short supply and meet market demand, as well as form a professional system that closely aligns with the industrial chain and innovation chain. However, the

current supply of vocational education is inadequate in quantity and quality of talent training. According to the statistics of Figure 1, just one-third of conventional industrial workers in China are skilled workers, and only five percent of these skilled workers are senior workers. In contrast to Germany, which has established vocational education, just 40% of skilled professionals in Germany are senior workers. Quantitatively, it is evident that there is a severe shortage of highly trained individuals in China.

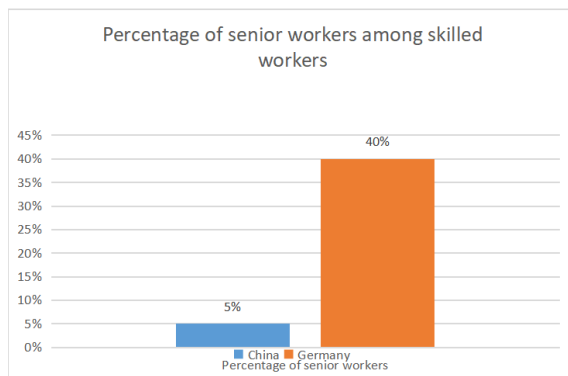


Figure 1: Chart of the proportion of senior workers among skilled workers in China compared with Germany

Secondly, in terms of quality, the technical talents currently trained in China's vocational education are mostly low-end and highly substitutable. The professional environments of many vocational institutions do not align well with industry development and economic features, nor do they meet the pressing need for high-end technical skills for economic growth. For instance, traditional vocational education in the service industry and general manufacturing tends to be saturated. In contrast, vocational education in high-end manufacturing and artificial intelligence is obviously insufficient to meet the demand for high-quality technical talents for economic development.

(2) The structure of vocational education is not reasonable, and the participation of enterprises is not high.

To pursue common development, the characteristics of vocational education need the establishment of a good interaction mechanism with enterprises and the expansion of school-business collaboration. In reality, however, many businesses lack a long-term perspective in their operations, have not developed channels for high-quality training staff, and even place a greater emphasis on quantity than quality when hiring skilled talents. Combined with the absence of commensurate policy incentives for company engagement in vocational education, enterprises lack initiative in talent training, and industry and education fail to integrate in a meaningful way.

(3) Restricted by the public awareness of society, vocational education schools have difficulties in enrolling students, which limits the development of vocational education.

There has been a significant disparity in the public's perception of vocational education for a very long time, and the phenomenon "general education is essential, but vocational education is not" is prevalent in today's culture. Most people believe that students only attend vocational schools when their academic achievement or home circumstances are subpar. Influenced by this mindset, vocational education schools typically struggle to enroll students, hence impeding the development of vocational education.

5. Ways to Make Vocational Education and Economic Growth More Adaptable

The following solutions are suggested in light of the issues above to increase the adaptability of

vocational education and economic development.

Comply with the law governing the development of vocational education, incorporate economic development's genuine needs, and continually enhance the coordination between vocational education and economic growth^[1].

As shown in figure 2, vocational education is closely related to the regional economy, and it is necessary to ensure a healthy interaction between the two. Vocational education must produce high-quality skilled talent to meet the demands of local economic growth. When the scope and quality of vocational education fall short of market demand, it will immediately lead to a conflict between the supply and demand of local talent, which will impede economic growth. Similarly, the degree of investment in the hardware and software of vocational education will directly affect the development of vocational education and be constrained by the amount of economic development. Therefore, in order to exactly meet industry demand, vocational education must adhere to the legislation of vocational education development, combining the actual demand of economic development in professional settings. It should provide career paths that are in line with the times, work to establish a strong link between vocational training and employment opportunities, and continually enhance how vocational training and economic development are coordinated.

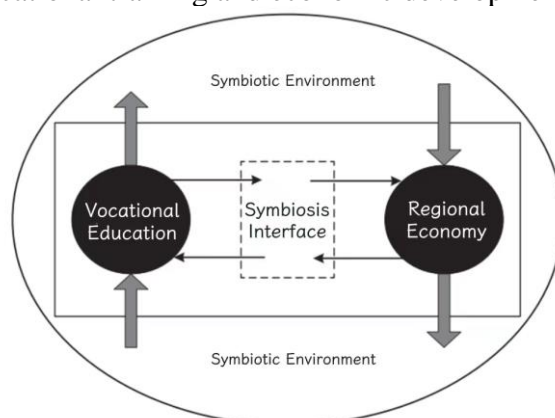


Figure 2: Schematic diagram of the synergistic development of vocational education and regional economy

(2) The government shall progressively transition from a dominant to a guiding position in the development of vocational education and consistently encourage the growth of a positive and orderly relationship between vocational education and the economy.

A high-quality stage of vocational education development has now been reached in China, and the model of total government dominance is no longer appropriate for this growth stage or for the contribution of vocational education to economic development. To promote the development of vocational education, which has become a necessary trend and a real need, it is necessary to enhance the structure of vocational schools and adopt a method of coordinated development of multiple subjects, such as government, industrial organizations, and enterprises.

The government's involvement in the development of vocational education is evident, and the collaborative governance of all parties is dependent on the government's oversight, coordination, and assistance. First off, because of the government's credibility, it is possible to balance the conflicting interests of many disciplines in vocational education and optimize those interests through government cooperation. Second, in order to align the action objectives of various disciplines, the government must macro-regulate the development direction of regional vocational education. Third, the government must create equitable policies and processes for vocational education and accord both public and private vocational schools the same treatment regarding the direction of policy, money, and teacher preparation. We may cooperatively encourage the healthy

growth of vocational education by setting up a long-term mechanism of reciprocal teacher assignment, collaborative curriculum creation, and resource information exchange for public and private vocational schools. Finally, the government's policy directives and publicity about vocational education can raise public knowledge of the field and guarantee its equity.

(3) Develop new mechanisms for school-business partnerships and broaden their scope in terms of both form and content to better align vocational education with business development requirements.

The key to vocational education's success in developed nations is close collaboration between schools and businesses. For instance, the "dual system" of vocational education in Germany, which combines theoretical instruction in classrooms with hands-on experience in businesses, has produced impressive outcomes^[2]. Likewise, we may draw on the prosperous experience of developed nations to design a management system to promote and expand school-enterprise cooperation in vocational education. On the one hand, Invite technicians from high-tech businesses into vocational education institutions, so they can conduct hands-on instruction, align business needs with the philosophy of vocational education, and direct students toward researching advanced scientific and technological advancements; on the other hand, invite teachers and students from these institutions into businesses so they can actively participate in the particular work of product development.

(4) Strengthen the "dual-teacher" model's training throughout the vocational education process.

The competency and level of the teachers themselves are the central components and essential assurance of the quality of vocational education. For vocational education to be successful, teachers are essential. Developed nations have set up an advanced teacher preparation system for those teaching vocational subjects. For instance, the "dual-teacher" training program in Germany primarily consists of a thorough in-service teacher training program, distinctive school-based teacher training, highly integrated training for school-enterprise cooperation, and a full external institutional guarantee.

In recent years, China has continued to carry out plans to raise the quality of teachers at universities and colleges for vocational education. The size and quality of the teaching force have greatly increased. More than 1.35 million full-time teachers are employed in vocational education in China as of 2019, with more than 480,000 being "dual-teachers," or 35% of the total. However, there are still issues with the faculty, including a lack of business experience, limited research skills, a lack of social service experience, and a low feeling of school pride.

From Germany's experience, China can actively learn. First, let's explain the "dual-teacher" admissions process. Given that vocational education has its distinct characteristics, it is necessary to update and improve the requirements for principals and teachers in this field, as well as the standards used for hiring teachers and evaluating their performance. This will encourage teachers in this field to strive for professional development. Second, broaden the methods used to hire instructors for vocational education. The goal is to create a resource pool of part-time teachers for vocational institutions and universities by encouraging them to engage professionals and highly qualified staff with real-world experience from businesses as part-time teachers. In terms of institutional mechanisms, a dynamic management mechanism is set up to manage full-time and part-time teachers flexibly to draw in more high-caliber talent to the teaching force in vocational education.

6. Conclusion

During new Five-Year Plan period, China's vocational education is on the fast track to quality improvement and value-added empowerment, and it needs to take into account the new situation

and new requirements to achieve synergistic development and win-win cooperation between vocational education and the local economy. This paper makes some suggestions for improving the adaptability of vocational education and economic development that have some practical value based on a review of the current state of vocational education development in China.

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