

Study on the Current Status of Higher Vocational Education in Boosting Local Economic Development

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Abstract

Higher vocation can promote the healthy growth of local economy by fostering highly skilled talents, optimizing industrial structure, and driving innovation and entrepreneurship. However, it currently faces a variety of problems such as lagged development, disconnection between professional settings and local needs, social cognitive bias, and insufficient teaching staff. To solve these problems, some measures are proposed in this paper, including strengthening policy support and financial investment, deepening school-enterprise cooperation, optimizing professional settings and curriculum reform, and improving the teaching staff and teaching quality. In the future, higher vocational education will achieve deeper integration with local economy, providing strong support for the innovation-driven and high-quality development of regional economy.

Keywords

Higher Vocational Education; Local Economic Development; School-enterprise Cooperation; Innovation and Entrepreneurship.

1. Introduction

Local economic development is the pursuit of economic growth and social advancement through diverse economic activities within a particular region. The significance of local economic development is that it not only enhances the regional economy but also better the living standards of the populace and fosters social stability and harmony. Therefore, it has been an important task for governments at all levels and all sectors of society to promote local economic development. Compared to general higher education, higher vocational education places more emphasis on practicality, applicability, and career orientation. Its teaching content is closely integrated with the needs of local economic development, with the purpose to provide direct support to the local economy. Moreover, there is a close correlation between higher vocational education and local economic development. On one hand, higher vocational education supplies a substantial number of skilled and applied talents to local economic development, aiding in the enhancement of labor productivity and business competitiveness. On the other hand, the development of local economy provides abundant practical platforms and job opportunities for the students of higher vocational education, promoting the improvement of education quality and the perfection of the education system. In this context, a win-win situation for education and economy can be achieved by strengthening the interaction between higher vocational education and local economic development.

2. Contribution of Higher Vocational Education to Local Economic Development

2.1. Meeting the Need of Local Economic Development for Talents

The main task of higher vocational education is to cultivate high-quality technical talents with professional skills and practical experience. By establishing professional courses that align closely with local industries and offering hands-on skills training, higher vocational education can effectively bridge the skilled talent gap in the local economy. For example, students of some vocational schools in Wulian County, Shandong Province learn to install circuits in the final assembly workshop of an agricultural machinery enterprise, where they not only have to understand how to reduce wear and tear on the lines, but also have to make sure the lines can withstand the bumps of the ride. Through this practical teaching model, students can quickly transform the theoretical knowledge learned in class into practical operation skills, which can not only improve their hands-on ability and problem-solving ability, but also cultivate practical talents that can adapt to job requirements for the company. This school-enterprise cooperation model was further deepened during the Vocational Education Week, becoming a vivid epitome of vocational education in providing skilled craftsmen for local economic development.

In addition to optimizing the allocation of educational resources, the close cooperation between vocational schools and enterprises can achieve seamless connection between talent training and enterprise needs. Enterprises directly participate in the training of students in the production process, which not only improves the quality of students' internships, but also provides them with a real working environment and practical opportunities. This win-win cooperation model ensures a robust talent foundation for local economic growth while presenting broader employment prospects and opportunities for development.

2.2. Promoting the Optimization of Local Industrial Structure

In terms of promoting the optimization of local industrial structure, the core concept of higher vocational education is to cultivate high-quality technical talents that are in line with local economic development by adjusting and optimizing professional settings, thereby promoting the optimization and upgrading of local industrial structure. By closely integrating with local industrial needs and setting up relevant specialized courses, higher vocational education can effectively improve the industrial technology level, promote the extension of the industrial chain and the optimization of the industrial structure.

For instance, following the strategy of “industrially strengthen and develop the city”, Zaozhuang City phased out several “useless” and “redundant” majors, refined and restructured the current professional framework, and introduced 13 new majors such as new energy vehicle application and maintenance, industrial robot technology application, and polymer material processing technology. The establishment of these majors aims to cultivate technical talents that can adapt to the needs of emerging industries and enhance the competitiveness of local industries. In 2023, Zaozhuang City planned to add new majors focusing on the lithium battery industry to further enhance its ability to serve local industrial development.

So far, Zaozhuang has formed a curriculum structure with automobile operation and maintenance, computer application and other majors as the core by building high-level majors. This optimization of curriculum layout and course improvement not only makes vocational education more in line with the actual needs of local economic development, but also promotes the optimization and upgrading of local industrial structure. Vocational colleges represented by Zaozhuang Economic School and Zaozhuang School of Technology have trained a large number of high-quality technical talents for the local area by setting up specialized majors such as computer graphic design, automobile inspection and maintenance, and electromechanical technology application. While promoting the development of emerging industries, these talents

have also promoted the transformation and upgrading of traditional industries, provided strong support for the high-quality development of the local economy, and ultimately achieved a win-win situation for education and the economy.

2.3. Promoting Local Innovation and Entrepreneurship

Through related education and practice platforms for innovation and entrepreneurship, higher vocational education cultivates students' innovative awareness and entrepreneurial ability, thereby promoting the diversified development and technological progress of the local economy. By integrating multiple functions such as teaching, production, training, technology research and development, and relevant services, higher vocational colleges can provide students and enterprises with all-round support and resources, thereby boosting the implementation and development of innovative and entrepreneurial projects. Rizhao, a City of Shandong Province, has built a public training base for vocational education in its economic development zone, and established a public training center that integrates multiple functions, including teaching, production, training, appraisal, technology research and development, and services.

By now, the first phase of the training base has been put into operation, and the Shandong Province Micro, Small and Medium enterprises Incubation Base has also been established here. Now, 36 enterprises and makers have settled in, and several innovative and entrepreneurial projects such as photovoltaic power generation, automatic darkening masks, and aviation blade mold processing and production have been successfully incubated. These projects not only demonstrate the huge potential of higher vocational education in innovation and entrepreneurship, but also inject new vitality into the local economy. In addition, the second phase of the project will keep up with new technologies, new industries, new business forms and new models, focusing on the construction of intelligent manufacturing training centers, new energy vehicle training centers, mold processing training factories, etc. The construction of these new projects has built a new platform for Rizhao City to cultivate high-quality technical and skilled talents, and will also provide support for more innovative and entrepreneurial projects. In this way, higher vocational education can not only enhance students' capabilities of innovation and entrepreneurship, but also provides continuous power of innovation for local economic development, promoting regional economic prosperity and progress.

3. Bottlenecks in the Process of Higher Vocational Education Promoting Local Economic Development

Higher vocational education faces many problems and challenges in promoting local economic development at present.

First, the demand for skilled personnel is increasing with urban development and industrial transformation, but the development of vocational education has failed to keep pace with the pace of urban development, which has led to fierce competition for enrollment among vocational colleges [1].

Second, due to the lack of unified planning, the majors set up in vocational colleges are scattered, making it difficult to form outstanding professional characteristics. Many of these majors are divorced from the actual needs of local economic development and cannot truly achieve mutual complementation with the industry. The irrationality of major setting directly affects the training quality and actual effect of higher vocational education.

Third, the deviation in society's perception of vocational education makes a large number of people still believe that vocational education is for "poor students". This concept is deeply rooted in the minds of many people, resulting in low social recognition of vocational education and difficulties in enrollment. The difficulty in recruiting students further leads to the loss of

teaching staff, forming a vicious cycle. This “vicious circle” not only affects the development of vocational colleges, but also restricts the ability of vocational education to provide high-quality skilled talents for the local economy.

Fourth, vocational education also faces challenges in practical teaching and school-enterprise cooperation. Although some vocational colleges have established cooperation with enterprises, the depth and breadth of their cooperation still needs to be strengthened. The lack of high-quality practical teaching resources makes it difficult for students to effectively transform theoretical knowledge into practical operation skills, which not only affects students' employment competitiveness, but also weakens the ability of vocational education to serve local economic development.

Therefore, to truly play its role in promoting local economic development, vocational education must overcome these problems and challenges and improve its quality and influence.

4. How to Promote Higher Vocational Education to Further Boost Local Economic Development

4.1. Increase Policy Support and Financial Investment

Enhancing policy support and financial investment is a crucial strategy to advance higher vocational education and further stimulate local economic growth. The government should formulate and implement policies that are conducive to the development of vocational education, and meanwhile provide policy guarantees in various forms including tax incentives, financial subsidies and project support. Especially in terms of investment in education funds, priority should be given to ensuring the infrastructure construction, updating of teaching equipment and construction of practice bases in vocational colleges, so as to improve the conditions and level of vocational education.

Simultaneously, the government ought to incentivize social capital involvement in vocational education development. By creating a varied funding mechanism, a positive model can be established where the government, businesses, and the broader community collectively sustain vocational education [2]. The government also needs to strengthen supervision and guidance of vocational education to ensure that policies are implemented and effective, thereby improving the quality of vocational education and its social influence. In addition to helping break through the development bottleneck of vocational education, policy support and financial investment can also enhance the comprehensive strength of vocational colleges, enhance their capacity to contribute to local economic growth and offers a robust talent pool and technical backing for the transformation and upgrading of local industries, as well as high-quality economic progress.

4.2. Strengthen School-enterprise Cooperation and Practical Teaching

To achieve the goal of strengthening school-enterprise cooperation and practical teaching, higher vocational colleges should focus on deepening the integration of industry and education, and build “local industry-education alliances” and “industrial industry-education communities”. For example, the establishment of organizations such as the Wuxi Intelligent Manufacturing and Internet of Things Municipal Industry-Education Consortium, the National Cloud Intelligence and Internet of Things Industry-Education Integration Community, and the National Machinery Industry Industrial Software and Digital Manufacturing Industry-Education Integration Community have provided new paths for school-enterprise cooperation. First and foremost, higher vocational colleges must leverage the roles of government coordination, industry clustering, corporate engagement and educational leadership to enhance partnerships between schools, collaborations with other colleges, and local alliances, thereby establishing a diverse array of collaborative innovation platforms. These platforms can

facilitate the advancement of essential shared technologies in the region, address challenges in technology implementation, and assist in establishing a local hub for industrial science and technological innovation. Through these measures, the school can not only improve its own teaching quality and scientific research level, but also provide strong technical support for the development of the local economy.

Secondly, higher vocational colleges should promote a two-way exchange mechanism between professional teachers and engineering technicians and highly skilled talents of companies to promote the comprehensive integration of professional teacher supply and industry demand. Besides improving teachers' practical ability and teaching level, this mechanism can meet the needs of enterprises for high-quality skilled talents, thereby forming a virtuous circle of deep integration of industry and education.

Thirdly, schools should explore the "platform, project, technology, and resource" model for technical skill accumulation and collaborate with local governments to establish a system of cooperative innovation. By gathering scientific and technological talents and technical resources from regional universities, the transformation and application of scientific and technological achievements can be promoted, providing "intelligent transformation and digital transformation" services for local enterprises, especially small and medium-sized manufacturing enterprises. The establishment of such a collaborative innovation system can not only promote the development of the local economy, but also enhance the core competitiveness and social influence of higher vocational colleges [3].

Through the enhancement of school-enterprise cooperation and practical teaching, higher vocational education can more effectively contribute to local economic growth and achieve the deep integration of education and industry, supplying a continuous flow of skilled talent and technical support to fuel the innovative advancement of the local economy.

4.3. Optimize Major Settings and Curriculum Reform

Optimizing the major settings and curriculum reform are important means to promote higher vocational education and further stimulate local economic development. Vocational colleges should closely align with the specific needs of local economic development and dynamically adjust their major settings to ensure that the disciplines provided correspond with the growth trajectory of local industries [4]. For example, relevant majors should be added to target local emerging industries and key development areas, such as new energy vehicles, intelligent manufacturing and information technology, so as to cultivate high-quality skilled talents that meet market demand.

Curriculum reform should reinforce practical teaching components and raise the percentage of hands-on operation and training courses, aiming at enhancing students' practical and innovative skills. At the same time, under the school-enterprise cooperation model, the latest technologies and actual projects of enterprises should be introduced to enrich the course content and enhance the practicality and foresight of teaching. By establishing a curriculum system aligned with industry demands, students gain direct exposure to the latest knowledge and technologies within the sector throughout their study journey, thus enhancing their employability and capacity for innovation. Special attention must be devoted to interdisciplinary integration and the enhancement of comprehensive quality. Students should be encouraged to engage in project-based practice, scientific research innovation, and entrepreneurial activities, thereby holistically advancing their comprehensive skills and professional competencies. By optimizing major settings and curriculum reform, higher vocational education can better serve local economic development, providing powerful talent support and intellectual guarantee for regional economic transformation and upgrading.

4.4. Enhance the Quality of the Teaching Staff and Instruction

The presence of high-level teaching staff is a crucial safeguard for maintaining the quality of education. Vocational colleges must enhance the professional training and continuing education of their teachers to elevate their professional expertise and instructional capabilities. Furthermore, a teacher assessment and incentive system should be implemented to motivate educators to consistently enhance their teaching quality, thereby ensuring that students can receive a high standard of education, which can promote vocational education to cultivate more high-quality skilled talents and provide strong support for local economic development.

It is also feasible to encourage school-enterprise cooperation and invite enterprise experts and technical specialists to serve as part-time teachers to enrich teaching content [5]. Jiaxing City, located in Zhejiang Province, has enhanced its educational faculty and the quality of instruction by recruiting industry experts, including master chefs, cosmetology professionals, and root carving artisans, and by establishing master workshops. These masters, with their extensive industry experience and exceptional skills, inspire students' interest in learning and professional zeal through their personal instruction. By introducing industry experts and setting up master workshops, vocational colleges can facilitate a seamless melding of theoretical knowledge and practical application, thereby bolstering students' hands-on operational skills and capacity for innovation. At the same time, as inheritors of intangible cultural heritage, these experts can also pass on traditional skills to the new generation, thereby aiding in the growth and perpetuation of local industries with distinctive characteristics.

In summary, improving the faculty team and teaching quality is an important guarantee to promote the high-quality development of higher vocational education, which will provide a solid talent foundation and intellectual support for local economic development.

5. Conclusion

The study concluded that higher vocational education plays a crucial role in the development of the local economy. It can not only provide a large number of high-quality technical talents for the local economy, but also promote the healthy development of the local economy through various aspects, such as optimizing the industrial structure, and promoting innovation and entrepreneurship. The deep integration of higher vocational education with local economic development is an irresistible trend, and its high-quality development can be promoted by increasing policy support and investment, strengthening school-enterprise cooperation and practical teaching, optimizing the major settings and curriculum reform, and improving the faculty team and teaching quality. Its development can not only help the sustained and healthy development of the local economy, but also provide solid talent guarantee and intellectual support for the innovation-driven and high-quality development of the regional economy. In the future, higher vocational education will play a more important and positive role in local economic development.

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References

- [1] Cai Xueling, Liu Yueling. A Study on Adaptability of Vocational Education to Regional Economic Development-Based on 2022 Quality Annual Report of 7 Double-high Plan Colleges in Tianjin [J]. Higher Vocational Education-Journal of Tianjin Professional College, 2024, 33(02): 27-33.

- [2] Li Hongguang. Exploration and Practice of Promoting Rural Revitalization through Secondary Vocational Cooking Education [J]. China Food Industry, 2024(05):162-164.
- [3] Wang Dan, Zhang Dan, Wang Na. Exploration on the Path of Coordinated Development of Vocational Education and Regional Economy in Jilin Province [J]. Journal of Changchun Normal University, 2024, 43(03): 68-70.
- [4] Liu Binnian, Liu Qinglan, Ba Yuanxiao, et al. Research on the “1345” Integration Model of Local Universities and Lanzhou’s High-Quality Development [J]. Journal of Lanzhou Vocational Technical College, 2024, 40(02): 62-65.
- [5] Shao Rui. Research on Vocational Education Empowering High-quality Development of Regional Economy [J]. Journal of Huainan Vocational & Technical College, 2024, 24(01): 137-139.