

Research on the Promotion of Rural Revitalization Via Vocational Education under the Background of Multiple Information

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Abstract: With the integration development of big data, information technology, and “Internet plus” in the age of economic digital intelligence, the multiple information development of vocational education has over time grown to be a significant driver for rural rejuvenation. Based on a multi-information background, this paper analyzes the interactive influence mechanism and realization path between vocational education and rural revitalization, and provides a thorough understanding of the realistic dilemma of the interactive influence between vocational education and rural revitalization in the current information visual field. Meanwhile, this article outlines the theoretical framework for the mutually supportive growth of vocational education and rural rejuvenation against a background of various data. On a practical level, it is beneficial to strengthen the organic integration of information education popularization, rural revitalization strategy, and vocational education strategy, as well as to realize the improvement of the interactive mechanism strategy of vocational education to promote rural revitalization.

1. Introduction

At present, the implementation of a rural revitalization strategy necessitates the support of the higher education system, particularly a high-intensity coupling relationship with vocational education, which possesses significant characteristics such as vocational orientation, practice orientation, and multi-function. At the same time, the link between vocational education and rural revitalization is not straightforward. In order to achieve the “win-win” of vocational education and rural revitalization, it needs to rely on overall system thinking, based on interaction and integration for common development, and then form an all-around collaborative pattern of rural industry, talent, culture, ecology, and organizational revitalization.

However, as an important means of rural revitalization, vocational education is still dominated by resource allocation in most rural areas in China, which is characterized by high investment and low efficiency. It is difficult to ensure that resource allocation is absolutely fair, and there is still a gap between the expected interaction effect of people. Education has taken on a new meaning as a result of the information technology advantages of “high efficiency, low consumption, convenience,

and sharing” brought about by the advancement of science and technology, particularly in the context of multiple information. Multiple information technology can, to some extent, alleviate the disparity in vocational education caused by the imbalance in economic development between urban and rural areas, and can become a new and effective way to promote the interaction between vocational education and rural revitalization.

2. The Practical Predicament of Vocational Education Serving Rural Revitalization

The rapid advancement of digital information technology presents both opportunities and problems for the endogenous power and function of vocational education. Currently, there are issues such as a weakened poverty alleviation function, a lack of integration development and information technology resources for vocational education to aid rural revitalization, which cause vocational education service strength, coverage breadth, and usage depth to face developmental contradictions and challenges.

2.1 Profound Reform of Information Technology Leading to the Function Weakening of Vocational Education Skills in Poverty Alleviation

Although the information and intelligent technology revolutions will lead to the creation of new jobs, the demand for human resources will sharply decline due to intelligent production, thus weakening the ability of vocational education to end poverty by promoting employment and making it challenging for the current talent training mode of vocational education to meet the needs of intelligent production [1]. Simultaneously, the overall reform of vocational education is lagging, making it difficult to connect with intelligent production. It is more difficult for the poor to obtain re-employment through short-term skill training, weakening the function of vocational education in combating poverty by promoting employment.

2.2 Insufficient Coupling Correlation between Information Resource Application and Regional Development

Even while the online resources such as dedicated classroom or online classroom have widely benefited the poverty-stricken areas, the normal application is insufficient. Therefore, in order to meet the new requirements of the modernization of the new curriculum reform, it is urgently necessary to increase the frequency and effectiveness of the use of digital resources. In some areas, however, the deep integration of information technology and subject teaching is not sufficient [2]. From a practical standpoint, there is still a lack of typical experience to systematically summarize and explore the promotion of information-based education and teaching reform and the innovative application of information technology by taking the region as a unit.

2.3 Lack of Information Technology Resources Leading to the Limitation of Precise Poverty Alleviation in Vocational Education

Due to a shortage of rural vocational education teachers, the richness of teaching materials and resources has been limited, and a lack of effective information technology support has made it impossible to exchange information and share resources across regions, consuming significant time and energy. Additionally, despite the integration of key technologies like cloud computing, cloud storage, and artificial intelligence, online education has not been widely adopted in rural schools and other underserved areas. This has a negative impact on the breadth, depth, and effectiveness of the information technology used in vocational education [3].

3. Impact Path of Vocational Education to Promote Rural Revitalization

This paper delves deeply into the interaction between vocational education and rural revitalization under the background of multiple information. It is shown in Figure 1 that vocational education supports rural revitalization from five perspectives: enrollment, funding, cultivation, training, and employment. It also encourages the realization of prosperous industry, ecological livability, civilized countryside, effective governance, and rich life in rural areas.

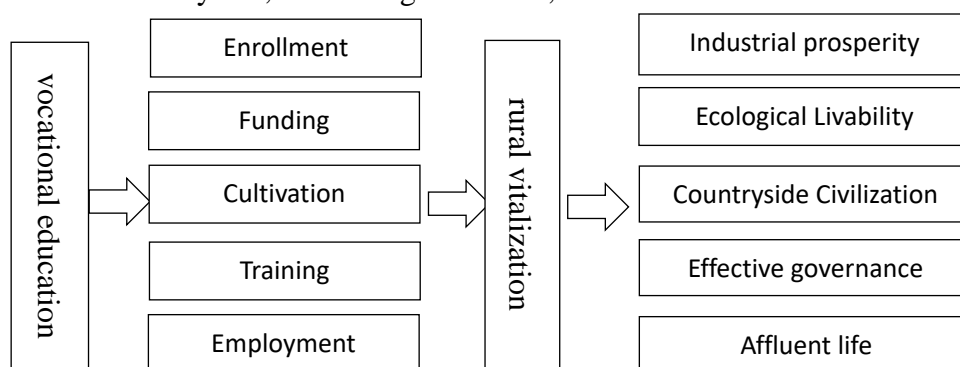


Figure 1: Path Diagram of Vocational Education Promoting Rural Revitalization Based on Multiple Information

3.1 Enrollment

The talent pipeline for rural construction needs to be continually strengthened, and technical skills development is made possible by vocational education. In order to achieve more accurate enrollment, higher vocational colleges can continue to enhance the student source data statistics system in conjunction with information technology, and adjust and reform the student recruitment policy in accordance with national policies and the current situation of rural students. Faced with a structural change in the potential student stock, vocational education can implement staggered enrollment with a college entrance examination to achieve educational diversion and lay a solid foundation for achieving the goal of training talents for rural revitalization [4].

3.2 Funding

The national education system has established special files to implement precise financial support for students from poor families who have established a record, and built a financial support management system for students from poor families who have established a record, giving priority to ensure that they can enjoy the maximum financial support policy and prevent the intergenerational transmission of rural poverty [5]. The full financial coverage of financial aid for underprivileged students and support for the technical people training in rural construction can both be realized through the ongoing strengthening of the policy system for vocational education financial aid. However, it is necessary to increase the intensity, precision, and intelligence of financial aid, fully implement financial aid policy, accurately solve the problem of poor and deprived students' difficulty attending school, promote educational equity, improve the level of financial aid, and allocate resources rationally. Give vocational education a guarantee to aid in the development of rural talent [6].

3.3 Cultivation

In the “Internet+” era, it is essential to fully utilize contemporary information technology resources to empower vocational education skills cultivation with technology in order to enhance the quality of instruction in rural vocational education and to promote the embodiment and characterization of learners’ skill capital [7]. In order to meet the demands of the modern society for new and flexible talents, vocational education must combine the inherent benefits of information technology to implement flexible teaching management, widely cultivate innovative consciousness, deeply explore potential, comprehensively improve comprehensive quality of students, and continuously innovate teaching concepts and methods [8].

3.4 Training

In order to achieve “precision training”, the actual demand for entrepreneurship and employment training in poverty-free areas was thoroughly investigated. Higher vocational colleges conduct in-depth investigations on the local poor-stricken people, find out their actual training needs, and accurately grasp their employment, skills, entrepreneurship, and actual training needs, in conjunction with the filing data and files of the poverty-stricken people in the poverty relief areas. They set up training courses scientifically and rationally, starting with the most urgent training needs in poverty relief areas, and invite industry experts and technical experts to give lectures [9].

3.5 Employment

Vocational colleges can use digital technology to fully exploit their advantages in scientific analysis and accurate research, in conjunction with the current state of industrial development and future transformation in areas of poverty, and with regional characteristics to attract more local people to start businesses and work through projects. Furthermore, rural talents, particularly young talents, require effective strengthening of employment guidance and services at the vocational education stage in order to improve employment rate and employment quality. Online and offline employment platforms should collaborate to provide long-term or short-term employment information for landless or idle farmers, guide farmers to nearby jobs, and constantly promote the organic unity of rural revitalization and high-quality employment [10].

4. Status Quo of Vocational Education Development under Rural Revitalization

Currently, our vocational education plays a larger role in the economic and social advancement of educational reform, innovation, and rural revitalization, continually enhancing the rural revitalization vocational education and training system, and maximizing the organization of schools and specialties. We will continue to deepen the reform of the school-running system and the education mechanism, as well as work to improve the quality of personnel training for rural revitalization and our contribution to the development of rural revitalization[11-12].

At the moment, our vocational education occupies a more prominent position in the economic and social development of educational reform and innovation, as well as rural revitalization, constantly improving the rural revitalization vocational education and training system, and optimizing the layout of schools and specialties. In terms of education spending, the state increased transfer payments from 2010 to 2018, made significant efforts to promote the policy of “reinforcing the weak points and strengthening the foundation” of vocational colleges in rural areas, and established special funds to address the relatively poor conditions of vocational education in rural

areas. However, as a result of the COVID-19, national financial expenditure on vocational education has seen a small decline and negative growth since 2018, as shown in Figure 2.

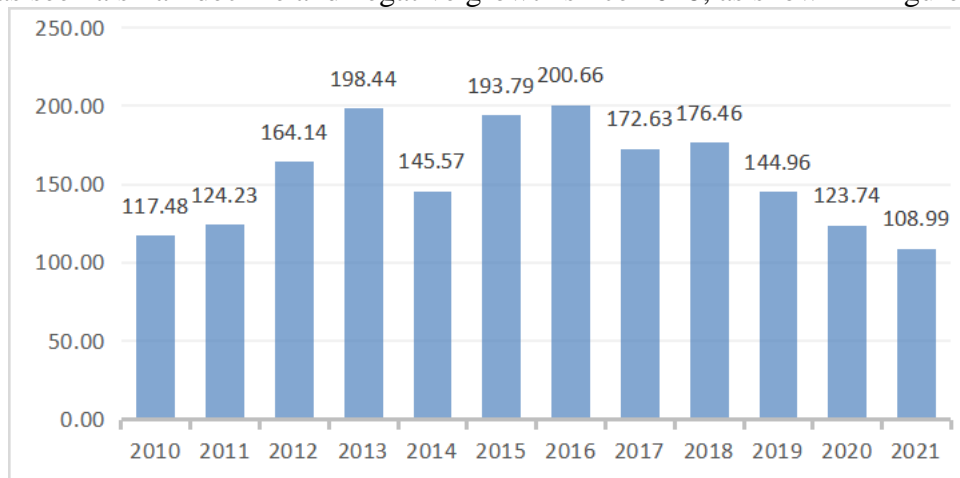


Figure 2: Fiscal Expenditure of National Vocational Education from 2010 to 2021

According to the requirement of building high-level vocational colleges and universities, the number of higher vocational colleges and universities nationwide has maintained a steady growth with an average annual growth rate of up to 6.25%, while the number of vocational secondary schools, vocational high schools, and other types of vocational education institutions has decreased, as shown in Figure 3.

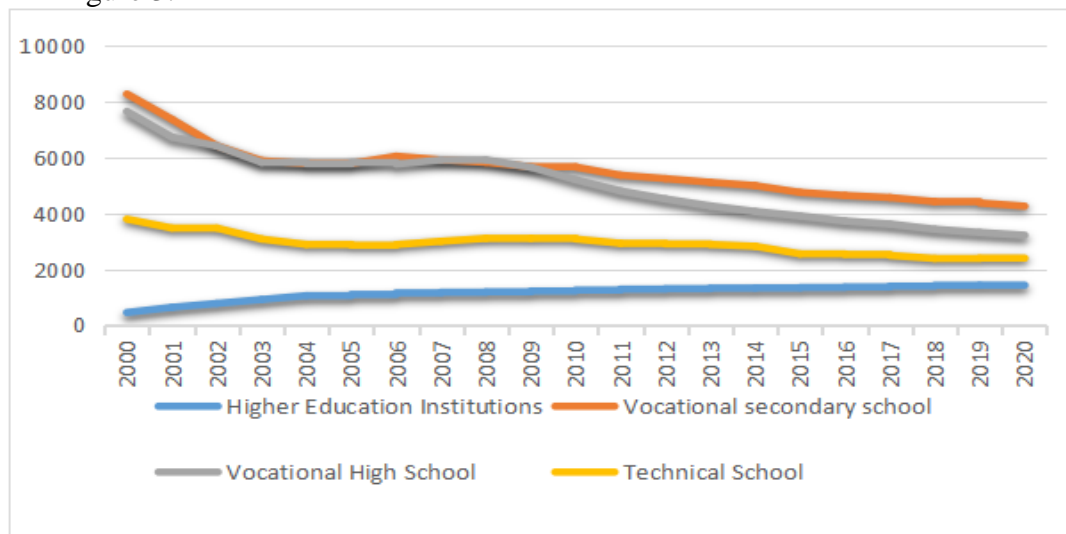


Figure 3: National Vocational Education School Development from 2000 to 2020

High quality and high standard instructors are an important guarantee to support the rehabilitation of rural areas in terms of teacher preparation. From 175,000 in 2000 to 744,478 in 2020, the number of teachers at higher vocational colleges is currently increasing substantially every year. However, it is comparatively challenging to ensure the export of talents for rural vitalization due to the amount, quality, and structure of the current teachers in vocational secondary schools, vocational high schools, and technical institutions, as shown in Figure 4.

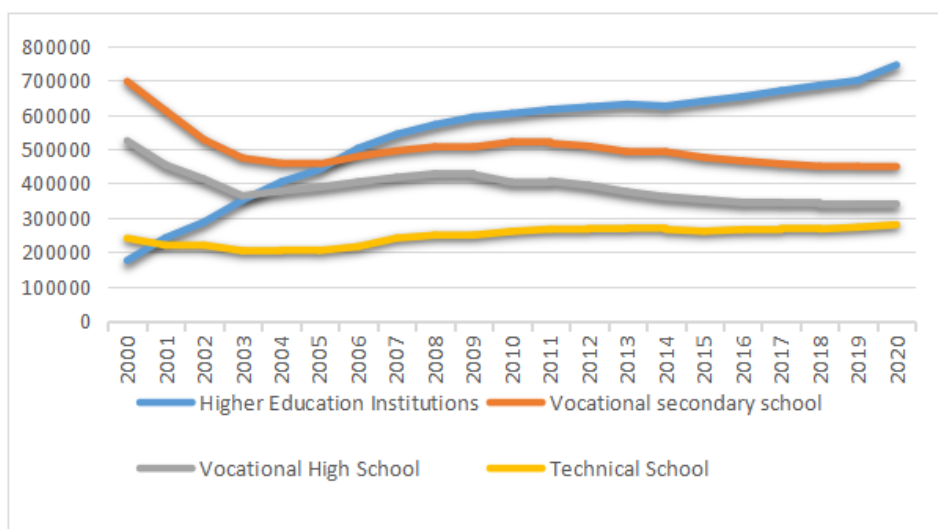


Figure 4: Changes in the Number of Vocational Education Teaching Staff Nationwide from 2000 to 2020

The number of graduates from higher vocational colleges and universities has increased at a faster rate, gradually taking over as the main body for cultivating new types of professional farmers, providing a high-quality, high-quality reserve talent base for rural revitalization, and working to establish a new pattern of mutual articulation and cooperation. The annual graduates of vocational education nationwide have maintained a steady growth in terms of talent cultivation, as shown in Figure 5.

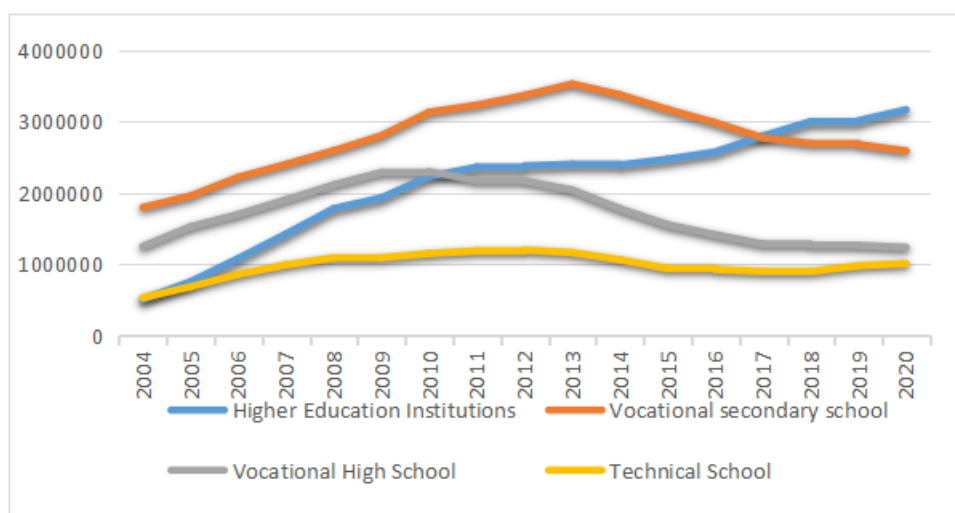


Figure 5: Changes in the number of vocational education graduates nationwide from 2004 to 2020

5. Long-term Mechanism of Vocational Education Accurately Promoting Rural Revitalization

Firstly, we can develop the idea of vocational education practice and enhance the general quality of rural people using information technology. The ability of the team of vocational teachers, the ability of the management service for vocational education, and the convergence of vocational education with international vocational education are all improved by information technology, which eliminates the space and time constraints on vocational education. To foster diverse traits in rural residents in various locations and provide the foundation of human resources for rural

rehabilitation, vocational education curricula are continuously updated according to varied features of rural groups using information technology[13-14].

Then, the integration of numerous disciplines in vocational education is made possible by the use of information technology, which also helps to improve the teaching methodology. In order to support and encourage lifelong learning among individuals who are out of poverty and to realize the balanced development of vocational education resources, rural areas can use the Internet platform backed by information technology to integrate online and offline education modes. Meanwhile, the teaching design should be established based on the characteristics of those who have overcome poverty in order to meet the regular vocational education demands of those who have overcome poverty and to fully exploit the initiative of various subjects to participate in vocational education, .

Thirdly, enhancing the management system for vocational education in the context of an information-based society lays the groundwork for effective administration of rural rejuvenation. Information technology enables the integration and analysis of instructional data, which boosts the effectiveness and caliber of management of vocational education. And information management also enhances service effectiveness and facilitates more effective resource distribution for vocational education. The vocational education resource base that satisfies the requirements of rural revitalization is further upgraded on the information management platform to provide practical and integrated information services. Additionally, by creating a cooperative information management system between the government, businesses, and vocational education institutions, it supports rural regeneration and offers a modern and effective management foundation for the development of vocational education[15].

In order to offer the framework for information facilities for rural regeneration, we must strengthen the creation of the vocational education information platform. The development of an information platform that meets the demands of vocational skills and the construction of a rich and varied data resource library that meets the needs of vocational education should be the foundations upon which the information support platform for vocational education is constructed. The building of the information support platform must be accomplished through many interactions and coordination since it combines information technology, vocational education, and organizations that work to reduce poverty. The construction of information infrastructure, comprising network facilities, information system infrastructure, and network information services, needs to be strengthened. Building a unified “Internet plus Vocational Education” classroom under the direction of the government with participation from numerous parties is required to support groups working to alleviate poverty that find it challenging to use information technology.

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