

# Research on integrated development of vocational education and rural revitalization- Empirical evidence from China

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**Abstract.** With the promotion of rural revitalization strategy, vocational education plays an important role in promoting rural development, narrowing the gap between urban and rural areas, and improving people's living standards. Through the integration of vocational education and rural revitalization, resources can be shared, mutual benefit and win-win results can be achieved, and the comprehensive development of rural economy and society can be promoted. This paper first explains the integrated development mechanism of vocational education and rural revitalization, then analyzes the current situation of the integrated development of vocational education and rural revitalization in China, and finally puts forward the integrated development path of vocational education and rural revitalization from three dimensions: talent supply, integration of production and education, and improvement of vocational education service system.

**Key words:** Vocational education, rural revitalization, integrated development.

## 1. Introduction

The development of global vocational education market is closely related to the degree of economic development. According to the 2022 Global Vocational Education Industry Development Report, in economically developed Europe and Oceania, the vocational education participation rate and high school enrollment rate have reached more than 17% and 90% respectively. In contrast, in economically undeveloped regions, the participation rate of vocational education is less than 10%. However, with the development of economic level, the participation rate of vocational education in non-developed areas has obvious room for improvement. For example, in East Asia, with the significant improvement of regional economic development in recent years, the high school enrollment rate is basically on par with that of economically developed regions. With the improvement of the economic level of less developed areas, the participation rate of vocational education will also usher in further opportunities to improve.

China is a big agricultural country with a large agricultural population, and the development of rural areas is of great significance to the whole economic development. The issues of agriculture, farmers and rural areas ("three rural issues") are fundamental issues related to the national economy and people's livelihood, and the firm implementation of the rural revitalization strategy is the new deployment of the CPC Central Committee's work on "three rural issues" in the new era. The key to rural revitalization lies in the revitalization of talents, in which education plays a basic and leading role [1]. In 2021, the Central Committee of the Communist Party of China and The State Council issued the Opinions on Accelerating the Revitalization of Rural Talents, calling for accelerating the development of rural-oriented vocational education and cultivating talents urgently needed in rural areas. In 2022, the Central Committee of the Communist Party of China and The State Council, in the Opinions on the Key Work of Comprehensively Promoting Rural Revitalization in 2022, once again required that agriculture-related vocational education be well run and the construction of rural revitalization talents be strengthened. Vocational education must undertake a new historical mission to help rural revitalization and promote rural development with its high-quality development.

## **2. Fusion mechanism**

### **2.1 Human capital theory**

According to Schulz's human capital theory, education is an important way to improve human capital. Compared with basic education and higher education, vocational education is aimed at all people in the society, including academic education and continuing education, which has a strong life cycle. It closely links education and economy, and is an important way to enhance the value of human capital and enhance innovation and entrepreneurship [1]. As an important part of national education, vocational education shoulders the important responsibility of improving rural human capital. Vocational education trains talents who master the technical knowledge and technical ability needed for the ecological development of rural industry, laying the human resource foundation for the transformation of rural industry from extensive development to ecological development. The deep integration of vocational education and rural industrial ecological development [2] can enrich the connotation of the type development of vocational education, enhance the ability to serve the strategy of rural revitalization, promote the close connection of the vocational education chain, the chain of technical skills and talents, and the rural ecological industry chain, and achieve the innovative development of rural industry and high-quality economic development.

### **2.2 Stakeholder theory**

The concept of "stakeholder" originates from the field of economics. It is generally believed that this concept was first proposed by the Research Institute of Stanford University in the United States in 1963. Its core point of view is that there are many different interest groups within an enterprise, which affect the survival and development of an enterprise. Therefore, the development of an enterprise should not only emphasize the interests of shareholders, but also consider the benefits of all stakeholders. Rural revitalization and high-quality development of vocational education integrate the interest relationship between stakeholders [3]. In the integration practice of rural revitalization and the high-quality development of vocational education, the cooperation and game among the participants have formed a complex symbiotic system of interests. The government focuses on the development of rural vocational education to solve the problem of insufficient supply of talents for rural economic and social development; Through school-enterprise cooperation, enterprises can meet their needs of talents, technology and other factors, and then enhance market competitiveness; Schools hope to improve the quality of talent training with the help of enterprise resources; Students improve their core vocational ability and employment competitiveness through school-enterprise cooperation and work-study combination. It can be seen that the system is a mutually reinforcing and win-win community of interests. However, due to the different role positioning, value preference and interest demands of the participants, there must be interest conflicts and games among the participants.

### **2.3 System coupling theory**

Coupling is a concept originally derived from physics, which refers to the phenomenon of two or more systems or systems interacting in various ways. Benign coupling is the matching of elements, structure, function and mode between systems, so that the systems can coordinate with each other to improve operation efficiency. Sociology, management, education and other fields have also begun to apply coupling theory to solve specific problems. Under the rural revitalization strategy, the realization of rural revitalization needs the help of vocational education in the aspects of talent and technology. At the same time, the transformation and upgrading of vocational education in the new era also needs the feedback and empowerment of rural revitalization, and the integrated development of the two is a process of mutual influence. Vocational education system and rural

revitalization system achieve overall coupling between the two systems by coordinating functional coupling and mode coupling [4]. Functional coupling is realized through the integration of production and education. The education function of vocational education actively connects with the needs of compound talents in the integration of rural industries, and the service function actively connects with the new functions of ecological conservation, leisure and tourism, cultural experience, health and elderly care in rural areas. Mode coupling is realized through school-agriculture cooperation. Vocational colleges cooperate with farmers, agricultural enterprises, rural professional cooperatives, new business entities and other agriculture-related entities to innovate vocational education models, such as: "school + company + farmer" model, "school + base + farmer" model, "school + association + farmer" model, etc., to promote the emergence of new models of rural industry integration.

### **3. Development status**

#### **3.1 The total amount of vocational education for rural revitalization is insufficient**

On the one hand, in China's vocational colleges, there are few higher vocational colleges with agricultural characteristics. According to the list of national higher education institutions in 2022 released by the Ministry of Education, according to statistics, as of May 31, 2022, there are 1,489 higher vocational colleges in the country, of which only 237 are agriculture-related higher vocational schools, and only 54 are agricultural and forestry higher vocational colleges. The number of agriculture-related higher vocational colleges is small and the regional distribution is not uniform, more developed areas, less Chengdu-Chongqing area.

On the other hand, from the perspective of the setting of agriculture-related majors, the enrollment of agriculture-related majors in vocational colleges is not good. Due to the poor fit between the talent training of some higher vocational colleges and the demand for rural revitalization talents, and the poor employment situation of students, some vocational colleges reduce the setting of agriculture-related majors in order to ensure the source of students, improve the employment of students, and cater to the situation of comprehensive colleges.

Generally speaking, the supply of talents for the transformation and upgrading of rural industries is insufficient. Under the new normal of economic development, the mode of agricultural and rural economic development is undergoing the transformation from traditional agriculture to modern agriculture, from extensive management to intensive management, and from decentralized production of one household to large-scale management. In the process of personnel training, vocational colleges should focus on the key links and common needs of industrial transformation and upgrading to carry out personnel training. However, at present, the professional setting and curriculum development of China's agriculture-related vocational colleges are out of step with the needs of rural industrial transformation and upgrading, and the construction of agriculture-related majors represented by traditional agriculture, horticulture and forestry has a low integration degree with the rural revitalization strategy, and the docking with emerging industries is insufficient and insufficient, which is difficult to meet the needs of talent training for rural industrial transformation and upgrading.

#### **3.2 Vocational education service rural revitalization personnel training mode is single**

At present, the disadvantages of the training mode of agriculture-related talents in vocational education are mainly manifested in the following aspects: first, the construction of professional courses is out of touch with industrial development, the school curriculum is out of touch with the needs of enterprises and the market, and the phenomenon of "unemployment upon graduation" is widespread, which cannot meet the needs of talents in rural economic and social development. The second is the disconnection between the curriculum content and rural life and production practice, the correlation between the vocational education curriculum content and agricultural production

process and farmers' life and production practice is low, and the value of vocational education to rural economic and social development is not obvious. The third problem is the source of teachers. The number of "double-qualified" teachers in agriculture-related majors is small, the agriculture-related talents with a lot of practical experience lack the reserve of teaching theories, and the teachers with a lot of theoretical research knowledge lack the current advanced agricultural technology experience.

## **4. Fusion path**

### **4.1 Strengthen the supply of vocational education services to revitalize rural talents**

We will strengthen policy support. Rural problems have always been the focus of attention in our country, and a number of measures have formed the overall solution of rural problems in our country, in which vocational education plays an indispensable role. From the laws and policies of vocational education to promote rural construction in developed countries, it can be seen that the earlier the country promulgates policies to support vocational education to promote rural development, the greater the influence of vocational education on rural development. The more importance the country attaches to the role of vocational education in rural development, the more specific and systematic vocational education will be in rural construction [5]. Therefore, combined with the current situation of rural revitalization and development, the combination of policy guidance and macro-control gives vocational education the mission of The Times and historical responsibility to serve the strategy of rural revitalization. Guided by policy, we increase capital investment to build a solid material foundation and stable institutional guarantee for vocational education to promote rural construction.

We will increase the supply of vocational education in areas in urgent need of talents such as agriculture and rural areas in rural areas. Agriculture-related vocational education should serve rural revitalization and become the main driving force to promote the priority development of agriculture and rural areas. Agriculture-related vocational education must take the initiative and act actively to improve the quality and enhance the value added according to the needs of rural revitalization. Agriculture-related vocational education should focus on the goal of serving rural revitalization, adjust the school layout for rural development, and meet the education and development needs of all aspects of rural vocational education audiences. All kinds of agriculture-related vocational schools at all levels should plan their schools according to the current situation of local economic development, industrial foundation, and social development needs, and carry out various forms of joint education [6] to promote the priority development of agriculture and rural areas. We will deepen the supply-side reform of agriculture-related vocational education, focus on the needs of farmers for lifelong education, and cultivate a new type of professional farmers.

### **4.2 Promote the integration of vocational education and rural revitalization**

First, promote the integration of vocational education and rural industries. Strengthen the top-level design of the integration of industry and education in rural vocational education, give full play to the strong pull of the visible hand of the government, clarify the functional boundaries, rights, responsibilities and benefits of the government, industry, enterprise and school in the integration and development of industry and education, strengthen the important main role of industry and enterprise, and break the cooperation barriers caused by the diversified system of vocational education. To build an effective platform and provide direct guarantee for the integration of production and education [7].

Secondly, reshape rural vocational education running form. Build new industries, new formats and new models, strengthen the cultivation of new farmers' quality, emphasize the transformation of school orientation from "general vocational education" to "rural characteristics", vertically establish a farmer vocational education and training system from primary, secondary and specialist levels to

undergraduate and postgraduate levels [8], and horizontally integrate vocational education with general education and social education. It covers farmers' vocational enlightenment education, vocational preparation education, on-the-job training and vocational continuing education.

Finally, adhere to the mode of integrating production and education, strengthen the role of agricultural enterprises in teaching, break the multiple obstacles caused by the participation of multiple subjects in the integration of production and education and school-enterprise cooperation, and build a good evaluation system for the integration of production and education, and introduce a third party to participate in the evaluation when necessary, so that multiple subjects can directly participate in the teaching of agriculture-related majors in vocational colleges. Developed countries attach great importance to the participation of enterprises in vocational education. Even if the school-running mode is dominated by schools, they still attach importance to the participation of enterprises in the whole teaching process. Therefore, the government, enterprises and schools should actively participate in vocational education to promote rural construction, introduce scientific and technological innovation, learn new agricultural knowledge, promote new agricultural technology, and make agriculture and rural areas more modern and scientific.

### **4.3 Improve the vocational education service rural revitalization personnel training model**

The professional setting is adapted to the needs of the industry. Agricultural students are the new force for rural economic and social development. Agricultural vocational colleges should adhere to the purpose of serving "agriculture, rural areas" and promoting the modernization of agriculture and rural areas. Based on the development of agriculture-related industries, they should scientifically set up agriculture-related majors to meet the needs of industries [9].

Combine the cultivation of talents with the training of farmers. It is necessary to start with improving the quality of agricultural practitioners, meet the actual needs of agricultural and rural economic development, strengthen the training of farmers, and cultivate a group of high-quality new vocational talents with culture, technical understanding, management skills and good management [10]. Strengthen the construction of teachers in agriculture-related vocational colleges, explore an effective mechanism for teachers to practice training in enterprises, and select and send backbone teachers to carry out temporary training in agriculture-related enterprises.

Combine curriculum setting with teaching content reform. It is necessary to adhere to the school-running policy of "service as the purpose and employment as the orientation", closely connect with the industrial development of agriculture-related industries and the actual situation of enterprises, highlight the professional characteristics and advantages, and optimize the professional structure and curriculum system; Strengthen the construction of agriculture-related teaching content and teaching materials; Strengthen practical teaching links to cultivate students' professional skills, innovative spirit and entrepreneurial ability.

Combine teaching methods with method innovation. According to the requirement of "combining work with study", modern apprenticeship system, work-study alternations, work-study and other forms of teaching should be adopted. Optimize the course structure and teaching content; Strengthen practical teaching links; Use modern teaching methods to teach; The employment guidance runs through the whole process of cultivating agriculture-related talents.

Combine incentive mechanism with performance appraisal. It is necessary to establish and improve the incentive mechanism for graduates of agriculture-related vocational colleges to find employment and start businesses in rural communities, and launch action plans for employment and start business services and career planning and counseling. The employment of graduates will be included in the performance appraisal system of agriculture-related vocational colleges.

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