

Research on County-Level Vocational Education Services for Rural Revitalization Based on Grounded Theory

Huijuan Lu¹, Jian Lin^{1,*}, Taipeng Zeng², Wenqian Chen³

¹County Development Research Center, Quanzhou Vocational and Technical University, Quanzhou, 362000, China

²Rural Revitalization College, Quanzhou Vocational and Technical University, Quanzhou, 362000, China

³Chinese International Education College/Overseas Education College, Xiamen University, Xiamen, 361005, China

*Corresponding author

Keywords: Grounded theory, county-level, vocational education, collaboration, rural revitalization

Abstract: This paper selects Quanzhou Vocational and Technical University as a typical case of county-level vocational colleges, and uses the grounded theory to analyze its rural revitalization practices, identify factors that influence vocational education services for rural revitalization, and clarify their intrinsic mechanisms. The study reveals that the practice of county-level vocational education services for rural revitalization involves five major factors: the government, schools, enterprises, industries, and rural areas, with the government serving as a guiding force, schools as connectors, enterprises as driving forces, and rural areas as the focal point. Finally, it proposes that county-level vocational education should adjust its role positioning in rural revitalization practices, innovate practical modes, strengthen service paths, adopt collaborative cooperation and integrate multiple means to deeply serve rural revitalization.

1. Introduction

Rural revitalization cannot be achieved without the support of various rural construction talents. As an important means of cultivating talents, vocational education plays an important role in rural revitalization due to its social attributes that cater to the public, its industrial attributes that are closely related to the economy, and its vocational attributes that cultivate technical talents for industrial development. As an important unit connecting cities and rural areas, county-level areas are key to rural revitalization. Whereas, county-level vocational education, due to its value orientation and service positioning towards the “three rural issues”, is an important carrier of rural vocational education[1]. Since the 19th National Congress of the Communist Party of China, the rural revitalization strategy has been vigorously promoted throughout the country. However, what factors affect the county-level vocational education services for rural revitalization? How can county-level vocational education mobilize various factors to provide accurate services for rural revitalization? These are essential questions that need to be considered by county-level vocational

education to service rural revitalization. This paper selects Quanzhou Vocational and Technical University, a county-level vocational undergraduate college, as a typical case to study the various factors that affect its rural revitalization service capabilities through the use of grounded theory, clarify the relationships between various factors, explore their intrinsic mechanisms, and provide references for county-level vocational education to improve its services for rural revitalization.

2. Research Design

2.1. Overview of Research Objects

Quanzhou Vocational and Technical University (hereafter, Quanzhou VTU), located in Quanzhou, the historic world maritime center of trade during the Song and Yuan dynasties, is an experimental undergraduate-level vocational education institution, the first of its kind in China, and the only in Fujian Province. Over its 36-year history, Quanzhou VTU has remained steadfast in its commitment to its educational mission of creating an “industry-partnered university” and a nurturing ground for “entrepreneurship”. With a deep sense of local pride, Quanzhou VTU has dedicated its efforts to serve the rural development of its surrounding communities, while collaborating with various stakeholders, including government, industry, and businesses, to foster a regional vocational education strategy known as the “Jinjiang Experience”. Recognizing the university’s distinct achievements in the domain, in 2022, its flagship program, “Vocational Education Empowering Rural Revitalization”, was honored as an exemplary case in the reform and development of vocational education in Fujian Province.

2.2. Methodology

Grounded theory, first conceived by Glaser and Strauss, is a qualitative research approach that emphasizes embedding data analysis and theory-building processes. By applying a bottom-up, systematic approach to analyzing data, this method allows for the identification and extraction of key insights from authentic, meaningful data, revealing their underlying logical relationships and, consequently, facilitating the establishment of a research framework. Compared to traditional text analysis methods, grounded theory effectively addresses significant challenges such as slow data analysis, difficulty in forming theories, and the production of unwieldy research conclusions. As a result, it has become widely applied in the field of humanities and social sciences[2].

2.3. Data Collection

Firstly, literature search was conducted using the keywords “county-level vocational education” and “rural revitalization” on the China National Knowledge Infrastructure (CNKI) to gain insights into the existing research on county-level vocational education with respect to rural revitalization. In addition, information regarding the related practices of Quanzhou VTU in rural revitalization was obtained from the university’s official WeChat account, the annual quality reports in recent years, and relevant media reports. Secondly, primary data was collected through interviews with the relevant personnel from Quanzhou VTU Rural Revitalization College, staff members from Weitou Village, and representatives from the enterprises involved in school-enterprise collaboration to gain a deeper understanding of the university’s engagement in rural revitalization.

The research team used NVivo12 software for qualitative data analysis to code the literature obtained, and additionally, two team members were tasked with independently encoding the same data for further accuracy, which would then be reviewed and refined by external experts to ensure the credibility of the research data. Furthermore, the results of the textual coding were

cross-referenced with the interview data through grounded theory research, which showed that no new categories emerged, thus verifying that the theory has reached saturation.

3. Process of Data Analysis

3.1. Open Encoding

Open encoding refers to the process of analyzing, refining, conceptualizing, and elementizing the collected primary data. Through the analysis and integration of the original data, 14 logically related conceptual categories were ultimately formed, as shown in Table 1.

3.2. Axial Encoding

Table 1: Encoding results

Main categories	Primary categories	Excerpts from the original text:	Theoretical basis and explanation
Government factor	Policy guidance	According to the “14th Five-Year” Plan and the 2021 Government Work Report, Quanzhou VTU established the first vocational college for rural revitalization - Weitou Rural Revitalization College.	Local governments play the roles of guide, supporter, and collaborator in rural development [3].
	Government-school cooperation	The government of Dongshi Town in Jinjiang led a local delegation of well-known enterprises to Quanzhou VTU for in-depth cooperation in areas of rural revitalization, school-enterprise collaboration, and research empowerment.	
School factor	Social training	Our school aims to serve the rural construction, providing corresponding training for village leaders, college students serving as village officials in impoverished areas, and surplus rural labor force to support rural revitalization.	Rural vocational education can provide farmers with cultural education and technical training, which is an important means to solve the “three rural issues” and has the advantage of deeply integrating multiple fields [4].
	Curriculum support	The School of Human Settlements and Architecture carried out graduation project designs in environmental art and completed the transformation of 53 rural areas in Jinjiang, helping to promote the construction of beautiful rural areas through practical actions.	
	Technical service	During the field survey in Weitou, members of the seafood e-commerce team provided technical guidance on the online sales, marketing promotion, packaging, and transportation of the Strait Aquaculture Ltd.	
Enterprise factor	Human resources	Anta Group and Quanzhou VTU jointly established the Industry College. The e-commerce director of Anta Group and the enterprise’s senior lecturer served as the teaching team to undertake the university’s relevant courses.	The basic governance framework for vocational education is “government-led, relying on enterprises, giving full play to the role of the industry, and active participation of social forces” [5]. It can promote school-enterprise cooperation through “double training”, “double teachers”, and “double management” and other “six pairs” cooperation models [6].
	Hardware facilities	Quanzhou VTU jointly established the Goke Digital Industry College with Fujian Goke Tech Information Technology Co., Ltd., introducing relevant equipment from Huawei and ICT field technology, and establishing a Huawei ICT College under the second-tier college to improve the quality of education.	
	Practice job	The Intelligent Manufacturing program has multiple off-campus practice bases, including Hengan Group, Nanwang Technology, and Hanwei Manufacturing, to provide abundant practical positions for students.	
Industry factor	Industry standards	Quanzhou VTU always adheres to the educational tenet of “industry partner-oriented university”, integrates industry standards into the classroom, and extends the classroom to company management.	As an important driving force for the development of vocational education, the industry has a guiding role in the integration of production and education, cooperation between industry, academia, and research, and formulation of training standards [7].
	Educational requirements	The Intelligent Manufacturing College classifies and layers the cultivation of talents based on job positions according to the needs of the graphite electrode industry and jointly established the “Sanitary Ware Industry College” with the Fujian Health Products Chamber of Commerce.	
	Industry evaluation	Cooperative practices with hotel and tourism industry leaders have equipped students with professional qualities to compete with industry experts, and students’ quality has won praises from the industry.	
Rural area factor	Practice space	The School of Human Settlements and Architecture carried out the <i>Measurement and Acceptance of Scenic Walls</i> practical course in the Anhai Xindian community, inspecting and transforming the “Hehehe” micro-landscape project to test students’ professional knowledge.	The rural complex contains natural, social, and economic features, with functions related to production, ecology, and culture, serving as the primary space for human activities [8].
	Cultural space	Based on the Weitou Rural Revitalization College, Quanzhou VTU integrated intangible cultural heritage into rural elementary schools, carrying out activities such as literary quality improvement, themed activities, and literature park construction through pairing up activities.	
	Industrial space	Quanzhou VTU’s expert group went to Weitou Village to promote the implementation of the comprehensive tourism and seafood e-commerce projects. Alumni expert-the head of the “One Order and Go” customized tourism platform helped in Weitou’s rural revitalization.	

Axial encoding is the process of reorganizing the initially decomposed data based on the logical

relationships of “condition-action” or “action-result”, which can make category classification more rational and rigorous and provide a basis for building theoretical models in subsequent research. By further sorting the 14 original categories formed through open coding, 5 main categories were ultimately formed. See Table 1 for details.

3.3. Selective Encoding

Selective encoding refers to the process of finding the inherent connections between main categories and constructing theoretical models based on a core category. Using “county-level vocational education services for rural revitalization influencing factors” as the core category, based on coordination theory, it was discovered that five factors, including government, schools, enterprises, industry, and rural areas, jointly influence the effectiveness of county-level vocational education services for rural revitalization, as shown in Figure 1.

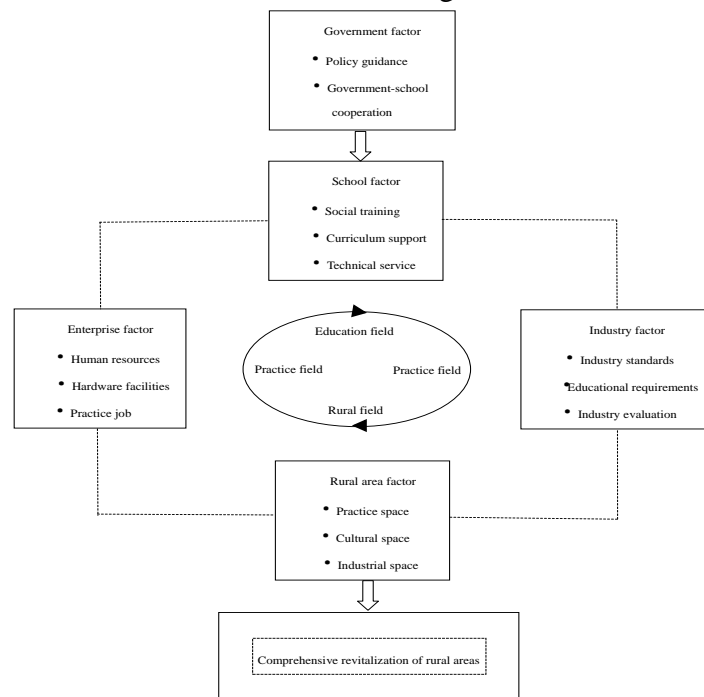


Figure 1: Model of factors influencing rural revitalization of vocational education services at county level

4. Interpretation of the Influencing Factor Model

Based on the grounded encoding analysis in the previous sections and the relationships between the main categories, we can construct the following storyline: The government is the leader in guiding the county-level vocational education services for rural revitalization. Schools are the connectors between different entities in the system. Enterprises and industries are the drivers of vocational college actions for rural revitalization. The rural areas are the ultimate destination for the actions of all other entities. In the system’s operation, the government ensures the direction of rural revitalization through policy guidance. Vocational colleges serve rural revitalization through internal and external resources. Enterprises and industries provide practical places for rural revitalization. In this process, the domains of education, practice, and rural areas further integrate. The rural industrial chain, educational chain, and innovation chain are extended, ultimately achieving comprehensive rural revitalization.

4.1. Leader: Top-level Government Regulation

Looking at the history of rural revitalization both at home and abroad, whether it is the early external development model or the new internal development model that has emerged in recent years, the government has always played a crucial role that cannot be ignored[9]. The Quanzhou VTU Weitou Rural Revitalization College was established under the guidance of the national rural revitalization strategy. As the policy leader for county-level vocational education services for rural revitalization, the government's leadership role is reflected in providing necessary basic support, public service facilities, and financial support for rural revitalization. Also, in top-level design, the government plans the direction of rural revitalization, guides the development model of rural revitalization, leads policies related to rural revitalization, provides institutional support for rural revitalization, and guides all forces to actively participate in the rural revitalization movement. Working with other entities in a coordinated fashion, the government promotes the smooth implementation of the rural revitalization strategy at the macro level.

4.2. Connector: Schools Linking Various Parties

County is the basic unit between the city and rural areas. In rural revitalization, it can coordinate various forces and effectively link multiple entities[10]. The “vocational” and “educational” nature of vocational education, as well as its “technical” aspects, make it naturally advantageous in connecting various entities in rural revitalization. As the connecting part of the county-level vocational education system serving rural revitalization, vocational colleges rely on school curriculum, training, and technology to closely link the government, enterprises, industries, and rural areas. For example, Quanzhou VTU enhances students' vocational abilities through cooperation between the school and enterprises, industries, and even the government. In serving the countryside, the school uses the course *Measurement and Acceptance of Scenic Walls* to carry out reconstruction activities in the local village. By relying on the school's training capabilities, they provide training for village leaders, impoverished university student as village officials, and other personnel. In practice, vocational colleges seamlessly connect the domains of education, practice, and rural areas by working with the other four main entities. Furthermore, they integrate the advantages of the government, enterprises, and industries into rural development, providing technical, human, and cultural support to rural revitalization. This in turn promotes rural innovation and development.

4.3. Promoter: Industry and Enterprises Driving Action

The high-quality development of rural economy is one of the important indicators to measure whether rural areas are revitalized or not[9]. Technological, talent, and industrial issues hinder the sustainable development of rural areas. In contrast, industries and enterprises have rich experience in marketing, business management, and cost control. They have significant advantages in terms of capital, talent, and technology. Through close cooperation with vocational colleges, enterprises and industries provide corporate teachers, hardware facilities, and practical venues to cultivate talents through school-enterprise and industry-enterprise cooperation in vocational education. They integrate industry standards, industry talent demands, and industry evaluations into vocational education to improve the social service capacity of vocational education and promote its high-quality development. Quanzhou VTU continuously deepens the “school-enterprise cooperation” and “industry-education integration” in its schools. Currently, the school has more than 220 off-campus practical and internship bases. Additionally, as rural revitalization policies are implemented, industries and enterprises can also directly connect with agriculture, rural areas, and farmers to help rural areas build modern industrial, production, and business systems, achieve the integration of the primary, secondary, and tertiary industries in rural areas, and play an important

supporting role in vocational college practices for rural revitalization.

4.4. Focus: Rural Areas Nourishing All Parties

Rural areas are a hindering factor for realizing the great rejuvenation of the Chinese nation, and they are also the ultimate focus for county-level vocational education to serve rural revitalization. Its rich natural resources lay a solid foundation for China's long-term economic development. At the same time, its diverse tangible and intangible cultural resources are a precious national treasure that can provide a broad cultural space for the development of excellent Chinese culture. The excellent culture that urgently needs to be promoted and the industries that urgently need to be developed in rural areas can provide sufficient cultural, industrial practice, and operational space for schools, enterprises, and industries. The ultimate revitalization of rural areas can also promote the high-quality development of vocational education and create good development opportunities for enterprises and industries. The expert group of Quanzhou VTU has conducted research in Weitou Village in Jinjiang City many times to promote the implementation of tourism, e-commerce, and other projects. The rich historical and cultural landscape of Weitou Village has also inspired the school's design team, who have completed a series of Weitou cultural and creative product designs based on this inspiration.

5. Research Conclusions and Suggestions

5.1. From Independent Struggle to Collaborative Cooperation: the Role of Vocational Education Should Transform

On the one hand, vocational education should become an extension platform of government governance, by aligning policy support, financial guarantee, and institutional support from the government's rural revitalization initiatives to enterprises and rural areas, whereby the benefits of government decision-making can be maximized. On the other hand, vocational education should become a platform for cooperation in enterprise and industry development, by integrating industry and education and cooperating with colleges and enterprises to meet the talent needs of enterprises and industries. This way, the financial, technological, and market resources of enterprises and industries can be linked to rural revitalization, and the benefits of enterprise and industry roles can be maximized. Additionally, vocational education should also become a service platform for rural revitalization, by connecting and integrating resources both within and outside of schools to meet the needs of rural revitalization. This way, the service benefits of rural revitalization can be maximized.

5.2. From Single Approach to Multiple Methods: Vocational College Practice Patterns Should Innovate

Currently, the practice patterns of vocational colleges serving rural revitalization are mostly focused on integrating resources from within and outside the vocational college and using the advantages of school majors, faculty, and research to serve rural revitalization. For vocational colleges themselves, they should continually improve the vocational education system as rural revitalization practices progress, by integrating more vocational education elements with rural revitalization. For collaboration, vocational colleges should include as many related rural stakeholders as possible as cooperation subjects, using multiple stakeholders, methods, and venues to serve rural revitalization. In the practice of serving rural cultural revitalization, vocational education should adopt a logical approach from "conservative" to "innovative", from "boundaries" to "cross-boundaries", from "independent" to "collaborative", ultimately achieving the logical goal of "connecting with farmers".

5.3. From Shallow Cooperation to Deep Integration: Diverse Stakeholders Should Strengthen Service Paths

First, the government should continue to strengthen guarantees for vocational education serving rural revitalization. This includes providing policy guidance, actively promoting the integration and development of vocational education at all levels, and creating favorable conditions for deep industry and education integration. In terms of school-enterprise cooperation, policies should be introduced to encourage enterprise participation in school-enterprise cooperation. Second, vocational education's elementary, secondary, and higher education should enhance cooperation, build a vocational education alliance, optimize the layout of vocational education, and create an education quality assurance system. At the same time, vocational education should actively collaborate with well-known regional enterprises to build practical bases, industrial colleges, and scientific and technological innovation platforms. Third, rural areas should transform from a "waiting-to-be-dependent" mentality to actively identifying needs and seeking targeted assistance from multiple stakeholders according to their own needs. With sound cultural spaces, enterprises and industries can find ample space for incubation and operation in the countryside, promoting the development of vocational education and providing practical, nurturing spaces for talent. In the end, this will help drive overall rural revitalization and create a new pattern of rural revitalization that is built, shared, and collaboratively developed.

Acknowledgements

Supported by Fujian Provincial Center for Vocational and Technical Education as a Key Project of Vocational Education Teaching Reform Research in 2021 "Exploring the Path of County-level Vocational Education's Contribution to Rural Cultural Revitalization Based on Grounded Theory" (GA2021002).

References

- [1] Lin Kesong, Wang Guanyan, Zhao Xuebin. *Double Spiral Coupling of County Vocational Education Development and Rural Cultural Revitalization*. *Education and Vocation*, 2020, (16): 27-34.
- [2] Wu Yi, Wu Gang, Ma Songge. *Review on the Origin, Genre and Application of the Grounded Theory Method*. *Journal of Distance Education*, 2016, 35(3): 32-41.
- [3] Zeng Wei. *Driving Forces, Driving Forces, Structure and Path of Cooperative Governance of Rural Industries in Strategic Transition Period: A Case Study of the "State-Owned Enterprises Link Villages" of M Village in Feng Town*. *Journal of Agro-Forestry Economics and Management*, 2022: 1-16.
- [4] Luo Chunna, Li Shenghui. *Study on the Driving Factors of Rural Revitalization in China: Based on the Perspective of Education*. *Scientific Management Research*, 2020, (8): 105-117, 145.
- [5] Han Wengen. *Meaning, Problems and Key Measures of County Vocational Education Development under the Background of Rural Revitalization*. *Education and Vocation*, 2021, (10): 28-33.
- [6] Zhu Chengchen, Yan Guangfen, Zhu Dequan. *Rural Construction and Rural Education: An Integrated Model for Targeted Poverty Alleviation of Vocational Education and Rural Revitalization Strategy*. *Journal of East China Normal University (Educational Science Edition)*, 2019, 37(2): 127-135.
- [7] Zhu Chengchen. *Collaboration and Co-existence: The Action Logic and Support System of Integration Governance in Rural Vocational Education*. *Journal of National Academy of Education Administration*, 2020, (1): 80-88.
- [8] An Husen, Guo Yingying. *Foreign Rural Revitalization Theories and Their Inspiration to China*. *Research on Development*, 2019, (3): 47-53. 2(12): 203-210.
- [9] Zhu Dequan, Shen Jiale. *The Economic Logic of Vocational Education Serving Rural Revitalization: New-Endogenous Kinetic Energy and Mechanism*. *Education and Economy*, 2022, 38(3): 25-34.
- [10] Yang Lei, Zhu Dequan. *"Three Domains" Advance and "Chain" Promotion: Integration Action of Vocational Education Serving Rural Revitalization in Ethnic Areas*. *Journal of Southwest University for Nationalities (Humanities and Social Sciences Edition)*, 2021, 42(12): 203-210.