

Dilemmas and Strategies for Enhancing the Adaptability of Vocational Education Taking Yunnan Province as an Example

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Abstract. The 14th Five-Year Plan for the Development of Education in Yunnan Province clearly states that enhancing the adaptability of vocational education, striving to achieve high-quality development of vocational education, and accelerate establish the Southeast Asian radiation central in Yunnan Province. It is clear that enhancing the adaptability of vocational education is important in the development of education in Yunnan Province. This paper analyses the dilemmas of vocational education development in Yunnan Province from three aspects: internal adaptability, external adaptability and its own adaptability, and proposes development strategies to enhance the adaptability of vocational education, including enriching the types of vocational education, implementing the integration of industry and education, school-enterprise cooperation and the "post-course-competition-certification" talent training model, and increase financial investment, teacher training and evaluation system.

Keywords: vocational education adaptation; Yunnan Province; dilemmas; strategies

1 Introduction

With the supply-side structural reform and economic development, vocational education is assuming an increasingly important role in cultivating skilled personnel, passing on skills and promoting employment, etc. Enhancing the adaptability of vocational education is significant to improving the quality of training of skilled personnel in China.

There are currently two types of research on vocational education adaptation: First, exploring the connotation of vocational education adaptability and the measures to enhance it. Second, the influence of external factors on the adaptability of vocational education is analyzed from the perspective of professional setting and industrial structure. In this paper, we summarize the adaptability of vocational education into internal adaptability, external adaptability and self-adaptability. Internal adaptability means the adaptability between vocational education and the personal development of learners; External adaptability refers to the adaptability of vocational education to regional economic and human resource development; Self-adaptation refers to the coordination between the entire vocational education system itself. Then we will examine the dilemmas of the adaptability of vocational education in Yunnan Province from internal, external and vocational education itself. As shown in Fig. 1.

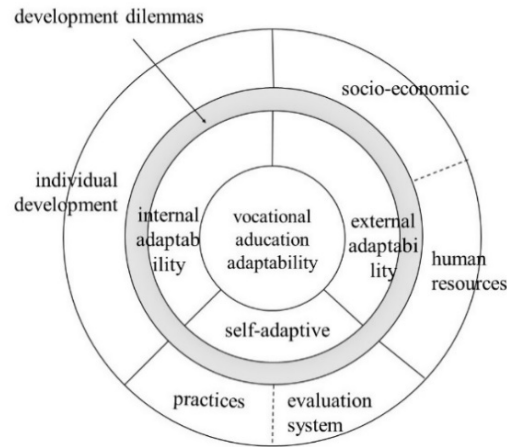


Fig. 1. Vocational Education Adaptation Analysis Framework Diagram (self-drawing)

2 The dilemmas of vocational education adaptation in Yunnan Province

In recent years, with the rapid development of the economy and society, China has had the largest vocational education system in the world. However, due to several factors, such as geographical location, the quality of vocational education development in Yunnan Province is still in the lower and middle levels. There is a long way to go to improve the quality of vocational education. In this paper, we will examine the real dilemma of the adaptability of vocational education in Yunnan Province from internal, external and vocational education itself.

2.1 Representation of inadequate internal adaptability: difficulties in meeting learners' personal development needs

Multiple intelligence theory^[1] argues that human intelligence is not a single ability, but a combination of multiple abilities. Each person has a different education and upbringing, and they are all different in intelligence. Therefore, in the process of vocational education, we pay more attention to the differences of individual students and meet their different developmental needs. However, vocational education in Yunnan Province has been seen as a level of education rather than a type of education, so the space for development is limited and the connection with general education has not been fully opened to meet the complex and different development needs. Human development should include not only the improvement of knowledge and skills, but also the acquisition of emotions, morals, and values^[2]. Furthermore, vocational education should focus on the cultivation of emotional values, as well as the responsibility of imparting knowledge and skills. In fact, influenced by the traditional concept of society, most vocational schools in Yunnan Province follow the same philosophy of schooling as general education. This is the real dilemma that hinders the overall development of students.

2.2 Representation of inadequate external adaptability

Insufficient socio-economic adaptation

The relationship between vocational education and socio-economics is mutually reinforcing and fulfilling. Lowly investment in vocational education in Yunnan Province. Survey shows that the total expenditure on education in Yunnan Province in 2020 is 146.44 billion RMB, of which 11.36%, 3.78%, 5.86% and 10.66% of the total expenditure is spent on education in undergraduate schools, high vocational schools, secondary vocational schools and general high schools, respectively; In 2021, the total expenditure on education in Yunnan Province will be 161.74 billion RMB, and the above four types of education expenditure will account for 11.26%, 4.28%, 6.60% and 13.28% of the total expenditure, respectively. Shown in Fig. 2. Similarly, the contribution of secondary vocational education to the regional economy is not high, at 1.23%^[3], which is lower than the national average and less than half of the overall education contribution. It is judged that vocational education is not well adapted to the regional economy.

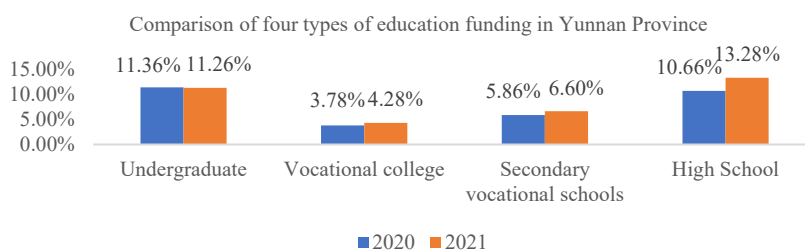


Fig. 2. Comparison of education expenditure in Yunnan Province(self-drawing)

Mismatch between professional layout and human resource demand

It is an inevitable requirement for vocational schools to adapt their professional settings to the market demand for human resources. The graduates trained in this way can better adapt to their positions in a short period of time, and at the same time, enterprises can solve the problem of shortage of skilled personnel in a limited period of time. In 2020, the GDP ratio of primary, secondary and tertiary industries in Yunnan Province is 14.68%, 39.61% and 51.53% respectively, while the three industries correspond to 7.68%, 11.53% and 81.67% of the students studying in school respectively, as shown in Table 1. As far as the tertiary sector is concerned, it is the pillar industry of Yunnan Province, accounting for 51.53% of its GDP, while corresponding to a total of 81.67% of students enrolled in secondary vocational schools. It can be seen that secondary vocational schools in Yunnan Province are over-set in the tertiary industry, the proportion of professional settings exceeds the proportion of industrial output, and there is an over-supply of talents training^[4].

Table 1. Industrial structure and professional structure ratio of Yunnan Province, 2018-2020

Project Year	GDP ratio %			Ratio of students in school %		
	Primary Industry	Secondary Industry	Tertiary Industry	Primary Industry	Secondary Industry	Tertiary Industry
2018	11.97	39.54	53.23	5.62	11.90	83.15
2019	13.08	39.44	52.64	6.45	12.65	81.71

2020	14.68	39.61	51.53	7.68	11.53	81.67
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Data from the Yunnan Provincial Statistical Yearbook and the Annual Report on the Quality of Secondary Vocational Education in Yunnan Province in 2020.

2.3 Representation of self-adaptive deficiencies

The evaluation system of vocational education is not sound

The main problems of the vocational education evaluation system in Yunnan Province are as follows: First, the evaluation subject is single, mainly based on the internal evaluation of the school, lacking external evaluation such as enterprise industry, experts and third-party professional institutions; Second, the evaluation of students is one-sided, focusing on theoretical examinations and lack of practical skill's assessment, focusing on absolute evaluation and neglecting developmental and relative evaluation; Third, the evaluation of teachers' comprehensive quality is not comprehensive, and when recruiting teachers, it simply requires a master's degree, but lacks the assessment of teachers' own technical level and teaching ability. In the identification of "dual-teacher" teachers, the emphasis is on "dual-certification" examinations, while the assessment of technical skills and teaching skills is not taken seriously; Fourth, the evaluation of textbooks focuses on external quality and circulation, and downplays the content logic and presentation of the textbooks.

Insufficient implementation of practical teaching

In 2020, the average floor space per student in secondary vocational schools in Yunnan Province is 15.85 m², which does not meet the 20 m² required by the document "Standard for the Establishment of Secondary Vocational Schools"^[5], and the average number of paper books per student is 18, which does not meet the standard of 30. There is also a serious shortage of "dual-teacher" teachers in vocational schools in Yunnan Province. In 2020, 40% of the 369 secondary schools in the province will not be able to meet the requirement of "no less than 30% dual-teacher teachers". Such an environment makes it difficult to adequately guarantee the implementation of practical teaching for students.

3 Strategies to enhance the adaptability of vocational education

This paper refers to a large amount of literature and national policy documents about the development of vocational education, and combines the actual problems in Yunnan Province. The strategies to enhance the adaptability of vocational education in Yunnan Province are proposed.

3.1 enriching the types of vocational education

People are different from each other, and different people have different needs regarding vocational education. It is therefore particularly important to enrich the types of vocational education and to meet the development needs of different people in order to enhance the adaptability of vocational education to individual development. Firstly, encourages the integration of general and vocational education at all levels and promotes the horizontal integration of different types of education as a means of meeting the needs of different groups of people. Such as, vocational education initiation courses and vocational experience activities are conducted in general primary and secondary schools. Cooperation mechanisms are established between general high

schools and secondary vocational schools, and the two types of education can achieve mutual selection of courses, sharing of resources and mutual recognition of credits. Secondly, we should build a diversified evaluation system for vocational education. The system of "cultural literacy + vocational skills" for the VET entrance examination should be improved to break the independence of general education and vocational education and achieve true integration. Finally, it enables the coordinated development of secondary, higher and undergraduate vocational education and promotes vertical integration between different levels of education. Promote a vertically integrated vocational education system based on secondary vocational education, higher specialist vocational education, and undergraduate and postgraduate professional degrees, thereby meeting the needs of learners at different stages of their personal development.

3.2 Implementing the industry-education integration and "post-course-competition-certificate"

Industry-education integration is the key to address the disconnect between vocational education and industry and the inadequate implementation of practical teaching. schools and enterprises should work together to establish new majors, and they should also be deeply involved in curriculum development, professional construction, teaching materials development, talent training and employment guidance in vocational schools^[6]. The talent training mode of "post, course, competition and certificate" is the key to solve the disconnection between the curriculum system of vocational education and the social environment, and the disconnection between professional settings and industrial development^[7].

3.3 Increase economic investment in vocational education

The factors that restrict the development of vocational education in Yunnan Province are many, and the lack of investment in education is the root cause, which affects the teaching facilities, teachers, teaching environment and the quality of education in vocational schools. Therefore, increasing financial investment is the primary measure to solve the above problems. Firstly, the provincial treasury should adjust the original education funding program. The financial investment in vocational education should be increased, with a focus on ethnic minority areas, to reduce the funding gap between vocational education with other education, and to narrow the educational inequity between regions. Secondly, the existing funding formula^[8] should be reformed. Setting separate per pupil funding rates for secondary and higher vocational education, depending on the level of study. Depending on the specialization, there are fluctuations in the per capita allocation rate. Finally, broaden the donation channel and call for active participation of the community. Encourage social enterprises and caring individuals to participate in vocational education donations, adopt "online + offline" donation channels, and simplify donation procedures to increase the enthusiasm of the community.

3.4 Building a quality faculty

On the one hand, vocational schools employ highly skilled personnel, skilled craftsmen, and inheritors of intangible cultural heritage as part-time teachers or internship instructors^[9]. Increase the number of teaching posts in vocational schools, and appropriately increase the proportion of middle and senior posts set up. High-level and highly skilled personnel are recruited openly by means of direct inspection.

On the other hand, improving the teacher training system. On the one hand, to encourage universities to open vocational and technical education majors to train a group of highly qualified professional teachers who master modern education theory, have vocational education teaching practice and strong professional skills. On the other hand, the pre- and post-vocational training mechanism is improved. Increase the opportunities for teachers to interact with employees from enterprises, so that they can understand the current industry trends and essential skills for their positions, and update their knowledge system and teaching contents in a timely manner.

3.5 Improve the evaluation system of vocational education

Firstly, establishing an evaluation system based on the theory of relevant stakeholders, with students, teachers, government, enterprises, schools, parents and third-party intermediary certification bodies as the evaluation subjects. Through the comprehensive evaluation of multiple stakeholders, more objective and reasonable evaluation results will be obtained to guide the development of vocational education. Secondly, a multi-dimensional student assessment system is designed. The content of the assessment should not only assess students' mastery of declarative knowledge, but also their vocational skills literacy and moral and emotional well-being^[10]. Design a scientific and comprehensive student assessment index system. Evaluate the whole range of students' moral, intellectual, physical, aesthetic and social development, thus focusing on the all-round development of students. To change the previous summative assessment. Combine process assessment, formative assessment and outcome assessment in a variety of ways together.

4 Conclusion

This paper introduces the concepts of internal adaptation, external adaptation and self-adaptation in vocational education. Then, the above three aspects of vocational education in Yunnan Province were analyzed. Analysis of the data reveals that it is still not well adapted to human development, socio-economic and human resources, and its own development. Finally, the paper proposes strategies to enhance vocational education in Yunnan Province from the perspective of vocational education's own development.

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