



Construction of "3+6" Cultivation Mode of Labour Model and Craftsmanship under Modern Apprenticeship System

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Abstract. The spirit of labour model and craftsmanship has been a deeply rooted spiritual belief and artisan culture since ancient times, which has a high degree of compatibility with vocational education. Based on the integration of the modern apprenticeship system, this study has successfully constructed the "3+6" training model, which has achieved remarkable results in educating people, and the quality of student training is excellent, and has gained a high degree of satisfaction and recognition from enterprises, parents and other stakeholders.

Keywords: apprenticeship, craftsman, labour model

1 Introduction

In the "14th Five-Year Plan" and the 2035 Vision Outline, the state proposes to "deeply implement the strategy of manufacturing a strong country", build a new development pattern, and promote the high-quality development of the manufacturing industry, and high-quality vocational education is the basis for promoting the high-quality development of the manufacturing industry. In this regard, in January 2019, the State Council issued the "Implementation Plan for National Vocational Education Reform" (hereinafter referred to as the "20 Articles of Vocational Education"), proposing that we should deeply promote the integration of production and education, modern apprenticeship and other talent training model reforms, cultivate a large number of high-skilled personnel to adapt to the needs of economic and social development, and build a knowledge-based, skill-based, innovative workers, carry forward the spirit of model workers and craftsmen, and create a social trend of glorious labour and a dedicated atmosphere of striving for excellence. Thus, the training of a group of highly skilled personnel guided by the spirit of labour models and craftsmen is the need of the times to promote the high-quality development of China's manufacturing industry, and thus to realize the transformation of a manufacturing power into a manufacturing power and the comprehensive construction of a strong socialist modern country.

2 Review of Research

2.1 Current Status of Research on the Spirit of Labour Models

Domestic research on the spirit of the model worker mainly focuses on the research on the connotation of the spirit of the model worker, the characteristics, the functional role, and the path of promotion, and has made certain achievements. Xing Liang and Liu Qiancheng in *Exploring the Connotation of the Era of the Spirit of the Model Worker and the Spirit of Labour* interpreted that the spirit of labour in the new era is the concrete embodiment of the socialist core values in the workers, whose connotations include love of work and dedication, diligence and pragmatism, honesty and trustworthiness, compliance with the law and innovation and creation [1]; Wang Yongxi and Zhang Xiaoming in "Briefly Describing the Historical Development of China's Labour Models" analysed the connotation and evolution of the spirit of labour models from the revolutionary war period, the early period of the founding of New China, the reform and opening-up period and the new period of socialist modernization [2]; and Makoto Matsuo put forward the four basic paths of "Strengthening Propaganda, Activity Demonstration, Improving Systems, and Setting Up Role Models" for carrying forward the spirit of the labour models [3].

Generally speaking, the domestic research on the spirit of labour models has formed unique Chinese characteristics, but there is still a gap with the real needs of high-quality economic and social development, especially in the strategic background of the country's vigorous development of vocational education, how to cultivate high-tech and skilled talents with Chinese characteristics through the cultivation of the spirit of labour models is still deficient in both theoretical and practical research.

2.2 Current Status of Research on Craftsmanship

In recent years, under the influence of national policies and regulations to vigorously promote the spirit of craftsmanship in the new period, a lot of research results on the spirit of craftsmanship have been accumulated, and the results are mainly focused on the research on the connotation, elements, value, inheritance, promotion and cultivation of the spirit of craftsmanship. For example, Zhuang Xizhen in "Craftsmanship in a Multidimensional Perspective: Connotation Analysis and Interpretation" elaborates on the hierarchy and content dimensions of craftsmanship [4]; Mark H characterise the value of craftsmanship as the dedication to "striving for excellence", "flexible" manufacturing wisdom, "exquisite and unique" creativity and "pragmatic" education concept [5]; Yang Hongtsuen and Su Wei in "Modern Apprenticeship System-based Yang Hongquan and Su Wei in "Research on the Cultivation of Contemporary "Craftsmanship" Based on Modern Apprenticeship System" proposed that the cultivation of contemporary craftsmanship must be rooted in modern apprenticeship system, and schools and enterprises should work together to formulate the talent cultivation system, and set the assessment standards and supervision standards of craftsmanship [6]. The existing research results are beneficial to the research of this project, but due to the influence of the value orientation of emphasising skills over human beings and the

absence of a culture of craftsmanship system, vocational education still pays more attention to the learning of professional skills, and in-depth research is still needed on the construction of a value system of craftsmanship and the effective cultivation path of craftsmanship.

2.3 Current Status of Research on Modern Apprenticeship and its Relevance to Labour Model Craftsmanship

The modern apprenticeship system based on school-enterprise cooperation was first established in Germany, which is an internationally recognised mode of vocational talent training. The "Proposal of the Central Committee of the Communist Party of China on the Formulation of the Fourteenth Five-Year Plan for National Economic and Social Development and the Vision for the 23rd Five-Year Plan" adopted by the Fifth Plenary Session of the 19th CPC Central Committee establishes the development goals of "exploring the apprenticeship system with Chinese characteristics" and "constructing a high-quality education system" to provide policy guidance for vocational education talent cultivation. The Proposal of the CPC Central Committee on the Formulation of the 14th Five-Year Plan for National Economic and Social Development and the Visionary Goals for the 23rd Five-Year Plan establishes the development goals of "exploring the apprenticeship system with Chinese characteristics" and "constructing a high-quality education system", which provides policy guidance for the cultivation of vocational education talents. Research on the correlation between modern apprenticeship system and labour model craftsmanship is an emerging research direction. Currently, scholars have put forward universal path suggestions from general system construction to specific curriculum system and cultivation path. For example, Zheng Yuqing pointed out in "Research on the Cultivation of Craftsmanship under Modern Apprenticeship" that it is necessary to build a curriculum system for the cultivation of craftsmanship [7]; and Wang Yi and Zhong Xiaomi pointed out in "Research on the Cultivation Mode of Craftsmanship in Higher Vocational Under the Modern Apprenticeship" that it is necessary to improve the assessment mechanism for talent cultivation and establish a quality management system [8].

In general, the research related to the modern apprenticeship system has matured. However, research based on the correlation of labour model spirit under the modern apprenticeship system has failed to receive the attention it deserves from scholars and the industry, which provides the space and foundation for the research of this project.

3 Constructing Meaning

3.1 The Need to Modernise Education

China's Education Modernisation 2035 sets out the core concepts for advancing education modernisation, stressing the importance of equal emphasis on morality and talent, all-round development, universal education, lifelong learning, personalised teaching and learning, the combination of theory and practice, integration and development, and shared development. In particular, it was pointed out that the develop-

ment of modern vocational education should be accelerated, and higher vocational colleges and universities should be guided to clarify their own positioning, develop education with special characteristics, and gradually improve the structure and layout of education. At the same time, in-depth cooperation and organic integration between higher vocational colleges and industries should be promoted, and resources should be concentrated to create a group of high-level vocational colleges with Chinese characteristics^[9]. Currently, the cultivation of professionalism is still insufficient, and although some students have high vocational skills, their professionalism is insufficient, making it difficult for them to meet the specific requirements of high-end positions. Therefore, it is necessary to promote the modernisation process of education and enhance the overall competitiveness of institutions.

3.2 The Need for Reform Requirements

The Twenty Articles on Vocational Education clearly state that vocational education should draw on the mode of operation of general education and transform itself into a type of education that involves in-depth participation by enterprises and society and has outstanding professional characteristics. In order to meet the guiding requirements of the reform of the Ministry of Education, higher vocational colleges and universities must take the enhancement of students' professionalism as the core link of talent cultivation, deeply implement the spirit of the speech of General Secretary Xi Jinping, carry out the cultivation of professionalism through all aspects of education and teaching, insist on employment orientation, insist on the integration of industry, academia and research, insist on the combination of theory and practice, and promote the simultaneous development of talent cultivation in higher vocational education and the needs of the society. By strengthening the cultivation of students' vocational spirit, it helps students establish firm vocational beliefs and ambitious vocational goals, which in turn enhances their confidence in future employment. This is not only of far-reaching strategic significance for the implementation of civic moral construction, but also crucial for the promotion of social morality and professional ethics^[10].

3.3 The Need to Improve Student Literacy

In daily teaching activities, students tend to focus their attention on the learning of professional courses and neglect the importance of moral education courses; they are more inclined to emphasise the cultivation of vocational skills and do not pay enough attention to the enhancement of moral qualities and cultural literacy. In view of this, the cultivation of vocational spirit should be integrated into the whole education and teaching process. Promoting craftsmanship in higher vocational and technical colleges and universities is extremely important for students to realise their self-worth. At present, higher vocational and technical colleges and universities have organised innovation and entrepreneurship competitions and skills competitions, and these activities actually stimulate students' interest and motivation in learning. Because the highest level of human needs is to realise self-worth, for vocational talents, craftsmanship represents to a large extent a kind of vocational spirit, which not only can significant-

ly enhance their employment competitiveness, but also is closely related to their future career development, laying a solid foundation for their all-round development.

Meanwhile, the connotation of the cultivation of the spirit of the model worker and the general characteristics of the college students in the new era illustrate that the cultivation of the spirit of the model worker is highly compatible with the nurturing goals of the college students in the new era.

4 Model Construction

Guangdong Institute of Construction Vocational Technology, as a pilot school of modern apprenticeship system, is an important place for the cognitive development of students' labour model and craftsmanship. The school has accumulated rich practices and experiences in cultivating labour model and craftsmanship based on the modern apprenticeship system, and constructed the "3+6" cultivation mode, which creates a favourable atmosphere of labour model and craftsmanship and improves the quality of talent cultivation. Quality. The model is mainly constructed at the "3" levels of schools, teachers and students, and specifically at the "6" initiatives of organisational and institutional safeguards, cultural environment construction, monitoring and evaluation of teaching quality, development of teachers' vocational skills, innovation of nurturing models and provision of employment support. The specific models are as follows:

4.1 School Level

Organisational and Institutional Safeguards.

There should be a series of clear cultivation systems for the cultivation of model workers and craftsmen in the modern apprenticeship system. The school has formulated and continuously improved its management system and talent cultivation programme to escort the cultivation of model workers and craftsmen for students. Firstly, in terms of management system, the school has formulated the "Management Measures for the Implementation of Modern Apprenticeship Pilot System in Guangdong Construction Vocational and Technical College" and other relevant system documents and action plans, so as to provide good guidance for the cultivation of the spirit of model workers and craftsmen and to make a good top-level design in terms of a sound system and the implementation of measures. Secondly, in terms of the training programme, according to the "Measures for the Formulation (Revision) and Implementation Management of Talent Training Programme of Guangdong Construction Vocational and Technical College" of the school, the training objectives of the students are clearly defined, and the full participation of the enterprise personnel, school counsellors and full-time teachers is mobilized, so that the spirit of model workers and craftsmen can be integrated into the whole process of the students' admission education, school learning and graduation and employment, and the students can receive all-round education and cultivation in the course of the curriculum, the

second class, the hands-on practice and the training lectures, etc., so as to achieve the "three-full cultivation" of model workers and craftsmen. "

Building the Cultural Environment.

The construction of the school cultural environment mainly focuses on two aspects, namely, infrastructure and campus atmosphere. In terms of infrastructure, the school is adapted to the local conditions, according to the actual situation to create professional practical training and operation venues. Firstly, increase the investment and construction of practical training room, effectively promote the construction of school vocational education innovation base; secondly, actively do a good job in attracting enterprises to the school, lead the introduction of Beijing Huasheng Jingshi Information Technology Co., Ltd, Shenzhen SAR Construction Vocational and Technical Training School, Zhuhai Construction Holding Group Co., Ltd, China Construction Group Co. technical centre and other head, state-owned enterprises to carry out relevant cooperation; finally, actively build digital costing industrial college, Guangjian Zhongtian industrial college, BIM and green building design modern industrial college. In terms of campus atmosphere, each department of the university has its own role to form a synergy to create a campus atmosphere to promote the spirit of labour models and craftsmen. First, the Publicity and United Front Work Department posted the "labour model and craftsmanship" logo slogans on campus, displaying the deeds of advanced people, and made the "labour model and craftsmanship" tangible, so that students can see and learn; second, the Youth League Committee organised the three rural activities, encouraging the participation of students, and cultivating diligence, hard work and dedication from the activities. Thirdly, the Student Work Department has started all the labour education courses, and students form the labour habit of respecting, loving and working hard in the labour education classroom; fourthly, the Innovation and Entrepreneurship College carries out the activities of entrepreneurship and employment lectures to cultivate the spirit of love and dedication, innovation and creation of students; fifthly, the second-level colleges carry out the activities according to the professional characteristics of the series, so as to let the students form the industry and vocational awareness in the activities. career awareness.

4.2 Teacher Level

Monitoring and Evaluation of Teaching Quality.

The school establishes and improves the monitoring and evaluation mechanism of teachers' teaching quality, and carries out the monitoring and evaluation of teachers' teaching quality in "multiple ways", "from a wide angle" and "with new indicators". First, focus on multiple monitoring and evaluation, using offline listening, online senseless listening, regular special inspections and normalised daily inspections and other ways of monitoring and evaluation; second, broaden the monitoring and evaluation perspective, through the "student evaluation", "supervision evaluation", "teaching evaluation", "teaching evaluation" and "teaching quality evaluation". The second is to broaden the angle of monitoring and evaluation, through "student evaluation", "super-

visory evaluation", "teaching evaluation", "evaluation of secondary colleges", "peer evaluation" and "special evaluation" and other perspectives to carry out monitoring and evaluation. Third, updating the monitoring and evaluation indicators, incorporating and highlighting "industry characteristics", "labour spirit", "new products" and "new processes" in the monitoring and evaluation indicators. Third, updating the monitoring and evaluation indicators by incorporating and highlighting "industry characteristics", "labour spirit", "new products", "new crafts" and other relevant elements in the monitoring and evaluation indicators, and guiding teachers to incorporate the spirit of occupation into the ideological and professional courses, so as to further fit the monitoring and evaluation of the cultivation of the spirit of labour models and craftsmen.

Development of Teachers' Professional Skills Literacy.

Teachers have an important influence on the formation of students' mould and craftsmanship, and their own qualities, especially vocational qualities and skills, directly determine the quality of students' training, so the school carries out strict control and development of teachers' vocational skills. Firstly, in the process of teacher recruitment, teachers with industry-related experience are explicitly required to carry out initial control in the process of teacher admission; secondly, teachers are required to take advantage of the summer and winter vacations to carry out on-the-job training, to follow up on technological advances and technological updates, and to design and implement teaching based on the work process of the vocational positions; lastly, teachers are incentivised to obtain industry qualifications, and to promote the "dual-teacher" training programme. Finally, teachers are encouraged to obtain industry qualifications to promote the recognition of "dual-teacher" teachers.

4.3 Student Level

Innovative Models of Parenting.

The school has formed a "1-4-6+N" new model of party building and educating people, with the core of promoting the high-quality development of party building and ideological and political education ("one main line"), relying on the advantageous resources of multi-party party building to jointly build college students' ideological and political theory education positions, social practice positions, The four positions are to strengthen cooperation with the Organisation Department, Propaganda Department, Academic and Labour Department, Youth League Committee, Academic Affairs Department and Science and Technology Department ("six departments") in party building, moral education, scientific research and team building. "Through multiple initiatives ("N") based on the "Party building + four coherent" working method, we have formed the construction idea of Party building leading the innovative development of ideological and political work, and promoted the development of Party building and ideological and political work. Through multiple initiatives ("N") based on the "Party building + four through" working method, the construction of Party building leading the innovative development of ideological and political work has

been formed to promote the "double integration and double promotion" of Party building and ideological education.

Provision of Employment Support.

Schools through multiple measures to provide students with multi-faceted employment support, one is to broaden the employment channels for graduates, with the secretary and headmaster to visit enterprises to expand jobs, held online and offline campus job fairs, held campus previews and organisations to participate in the Ministry of Education and other units of the job fair held by the way to enrich the employment channels for graduates; the second is to actively carry out school-local cooperation, through the "please come in, go out! The second is to actively carry out school-enterprise cooperation, through the form of "inviting in, going out" with Zhuhai Xiangzhou District, Dongguan Shilong Town, Foshan Gaoming District and other places to carry out school-enterprise cooperation and exchange activities, to further strengthen the school-government-enterprise linkage, and in-depth co-operation to open up employment opportunities; the third is to strengthen the work of employment guidance services to carry out the college students' job-seeking, career planning competitions, hold lectures on employment and entrepreneurship, and in-depth education on employment situation and employment guidance. Thirdly, we will strengthen the employment guidance service by carrying out job-seeking contest, holding lectures on employment and entrepreneurship, and carrying out in-depth education on employment situation and employment guidance.

5 Cultivation Effectiveness

The school implements the "20 Articles of Vocational Education", enhances the adaptability of vocational education, establishes the concept of scientific success, gives full play to the advantages of modern apprenticeship system, and integrates the spirit of model workers and craftsmen into the cultivation of students in an all-around way, in the whole process, and by all staff. In recent years, the number of graduates has been rising year by year, and the quality of student employment is high, which has achieved good results in nurturing people.

5.1 High Implementation Rate of Graduation Orientation of Graduates

From 2021 to 2023, the implementation rate of graduation orientation of school graduates is basically stable, which is higher than the average value of higher vocational colleges and universities in Guangdong Province, and the implementation rate of graduation orientation of students in 2023 is 93.94%, which shows that students of the school have good professional qualities and high competitiveness in employment(As shown in Figure 1).

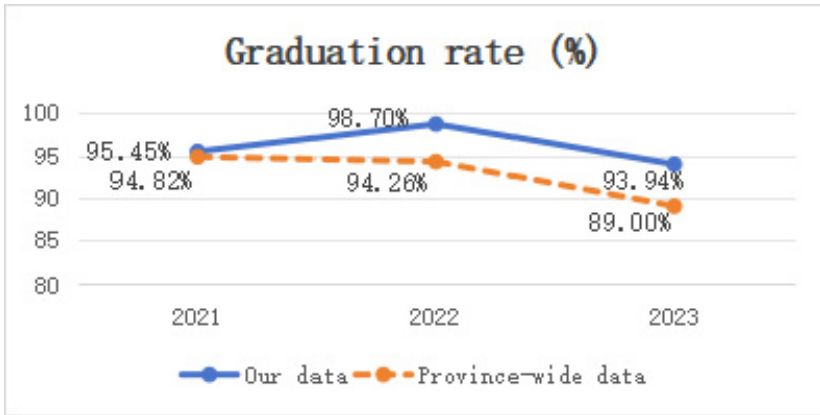


Fig. 1. Trends in the implementation rate of graduation orientation of graduates in recent years

(Source: Report on the Quality of Higher Vocational Education in Higher Vocational Institutions in Guangdong Province, 2021-2023)

5.2 High Level of Satisfaction with Graduate Training

Graduate cultivation satisfaction is reflected in three aspects, namely employers' satisfaction with graduates, graduates' satisfaction with the teaching of their alma mater and parents' satisfaction with the school. In the past three years, all three satisfaction levels have become stable, including 98.31% of employers' satisfaction with graduates, 92.22% of graduates' satisfaction with the teaching of their alma mater, and 96.51% of parents' satisfaction with the school in 2023, which is higher than 90%, and the enterprises, students and parents are all satisfied with the quality of the cultivation of the school's students and their recognition is high(As shown in Figure 2).

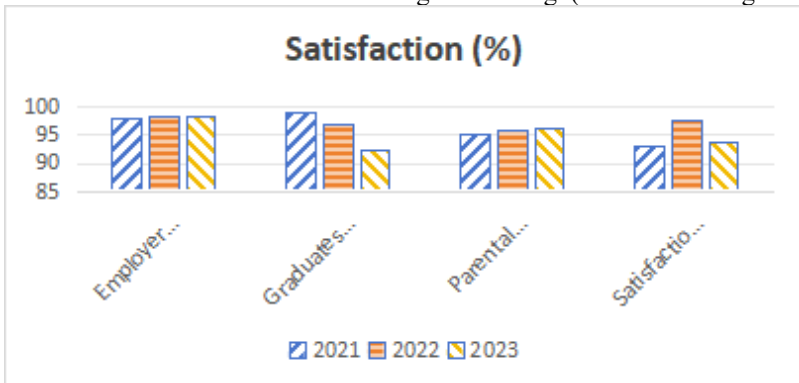


Fig. 2. Trends in Graduate Satisfaction in Recent Years

(Source: Report on the Quality of Higher Vocational Education in Higher Vocational Institutions in Guangdong Province, 2021-2023)

5.3 Increase in Monthly Income of Graduates Over the Years

The average monthly income of the school's graduates in 2023 is RMB 3,949.15. The monthly income of the graduates in 2021-2023 has been increasing year by year, which is higher than the average value of Guangdong Province, and the enterprises have a high degree of recognition of the professional ability and quality of the school's graduates(As shown in Figure 3).

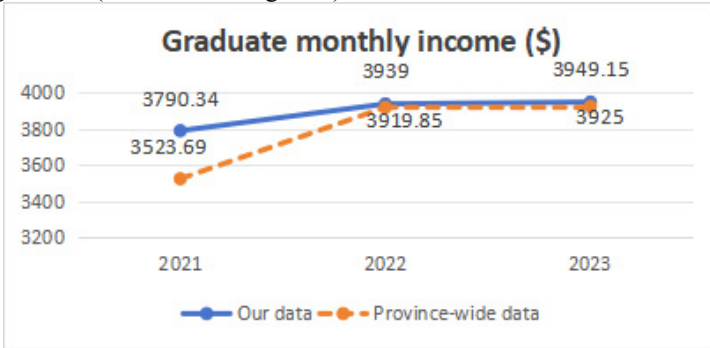


Fig. 3. Trends in monthly income of graduates in recent years

(Source: Report on the Quality of Higher Vocational Education in Higher Vocational Institutions in Guangdong Province, 2021-2023)

5.4 High Degree of Relevance of Graduates' Employment Specialisations

Over the past three years, the overall rate of graduates' employment professional matching rate tends to be stable, and the rate of graduates' employment professional matching rate in the year of 2023 is 83.13%, the school graduates' professional relevance is high, which is conducive to the students' medium- and long-term career development, and in the professional setting to adapt to the social demand(As shown in Figure 4).

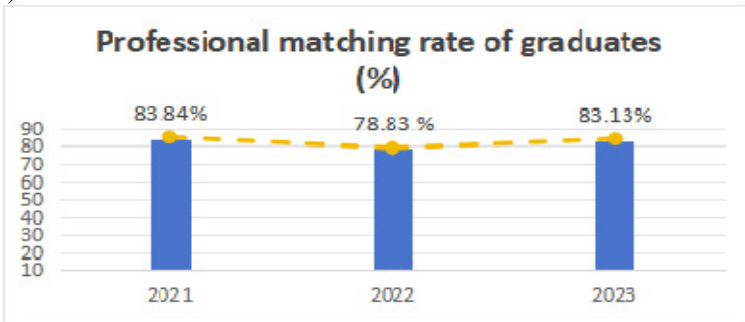


Fig. 4. Trends in the speciality matching rate of graduates in recent years

(Source: Report on the Quality of Higher Vocational Education in Higher Vocational Institutions in Guangdong Province, 2021-2023)

6 Conclusion

Against the backdrop of the development of the productive forces of the new era, new requirements have been placed on vocational education. Vocational education that matches the productivity of the new era must be vigorously developed in order to cultivate a large number of high-quality labourers so as to provide solid talent support for the development of the productivity of the new era. Vocational education, as a key way to cultivate high-quality workers, has seen the growing importance of craftsmanship and labour model spirit in its development, which is directly related to the quality of talent cultivation. The school makes full use of the advantages of the modern apprenticeship system and has constructed the "3+6" model craftsmanship cultivation model. Under the implementation of this model, the quality of talent cultivation has been significantly improved, which is highly recognised and satisfied by stakeholders such as enterprises, parents and students, and provides an important reference value and practical basis for the cultivation model of higher vocational colleges.

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