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Meta-Analysis on The Direction of Basic Human Resource Promotion in Vocational Training Against the Background of Industrial Demand

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Abstract: Promoting the steady development of undergraduate vocational education is an inevitable trend to promote the high-quality development of national economy and improve the vocational education system. Accurately grasping the orientation of talent training and highlighting the distinctive characteristics of vocational education undergraduate is the "key kilometer" to open up the degree level of vocational education. Facing the dilemma that the current vocational education undergraduate training orientation is ambiguous and lacks long-term planning, vocational education undergraduate needs to pay attention to top-level design, carry out overall planning with high starting point and high standard, pay attention to strengthening connotation construction, and cultivate technical skilled talents with "knowledge + technology + innovative thinking"; Pay attention to the integration of theory and practice in the curriculum, and strengthen the application-oriented technology; Establish an all-round and in-depth integration mode of industry and education, and innovate the cooperative construction and sharing mechanism between schools and enterprises; Establish a "double qualified" teacher training system, improve the evaluation mechanism and rights protection, so as to enhance the core competitiveness of Vocational Education under the background of industrial demand.

Keywords: Vocational education undergraduate, talent training, positioning industry demand

1. Introduction

With the gradual acceleration of the construction of modern vocational education system with Chinese characteristics, the vocational school system integrating "secondary vocational school vocational college vocational undergraduate" has been basically completed, and the undergraduate education of vocational education has developed steadily (Jun et al., 2021). From 2021 to the present, the Ministry of education has successively promulgated relevant documents such as school setting standards and specialty setting management measures for vocational education undergraduate, pointing out the direction for the steady development of vocational education undergraduate level schools. In the newly revised Vocational Education Law in April, 2022, it is clear that ordinary colleges and universities set up vocational undergraduate education majors to reserve space for vocational undergraduate education majors set up in vocational schools at the junior college level (Schmidt et al., 2022). Students of vocational schools can not only attend junior colleges, but also attend undergraduate courses. The attraction and influence of vocational education continue to increase.

2. Problem Statement

With the upgrading of the industrial system and the expansion of the scale, the demand for high-level professional talents in high-tech industries is increasing day by day. China's higher vocational education is in a state of "imbalance between supply and demand". Some colleges and universities cannot highlight the characteristics of students' vocational ability training because they follow the traditional talent training mode, and the positioning of talent training deviates from the economic and social needs. Therefore, accurately grasping the positioning of talent training is the key to cultivating vocational technical talents and the cornerstone of the steady development of vocational education undergraduate (Jun et al., 2021).

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3. Research objective

i. The development trend of Vocational Education under the background of industrial demand
ii. The current situation and dilemma of the development of vocational education undergraduate
iii. Analysis on the characteristics of Vocational Education Undergraduate under the background of industrial demand
iv. Reflections on the orientation of undergraduate talents training in Vocational Education

4. Methodology

A meta-analysis was utilized to compile all the data depending on Undergraduate Talent Training in Vocational Education. The process of extinction entails reading and acquiring pertinent textual materials or resources, such as academic journals and earlier research papers. For a more thorough examination, significant and pertinent literature relating to earlier investigations by other scholars were also cited. To ensure that the data acquired remains pertinent, appropriate publications are also carefully chosen, employing only articles published in 2021–2022. As a result, this study only analyses papers that have been published within the last two years.

26 articles were used in this study. The article was obtained from several countries such as USA, Indonesia, China, New Zealand, and many more. The selection of articles from overseas scholars is to ensure that the data obtained is more extensive and detailed. The findings proven that this issue is a global issue and does not only occur in China. Table 1 below shows the article based on the countries involved.

table 1 - Articles related to undergraduate talent training in vocational education under the background of industrial demand.

Country	Total	Researcher
China	8	(Gao et al., 2022; J. Yang, 2022; Zhang & Huang, 2022; Xunbo, 2022; Lv et al., 2022; Ma & Kurscheidt, 2021; L. H. Yang et al., 2021; Jun et al., 2021)
New Zealand	1	(Da Rosa et al., 2022)
Spain	4	(Prieto-ayuso et al., 2022; Schmidt et al., 2022; Ferreiro-seoane et al., 2021; Espada-Chavarria et al., 2021)
Portugal	1	(Lima, 2021)
Indonesia	2	(Firdaus, 2021; Umar, Punaji Setyosari, Waras Kamdi, 2021)
Serbia	1	(Aksović et al., 2022)
USA	1	(Dhaliwal & Hauer, 2021)
UK	2	(Duncan et al., 2022; Al-Jody et al., 2021)
Taiwan	2	(Wu et al., 2022; Yuan et al., 2021)
Arab	1	(Alhamad et al., 2022)
Croatia	1	(Dukarić et al., 2021)
Russia	1	(Eroshenkova et al., 2022)
Ethiopia	1	(Seyoum & Molla, 2022)

5. Findings

5.1 The development trend of Vocational Education under the background of industrial demand

Figure 1 shows the development trend of Vocational Education under the background of industrial demand by stage. (i) The initial stage of industrialization; (ii) Stage of rapid industrialization; (iii) New industrialization stage.

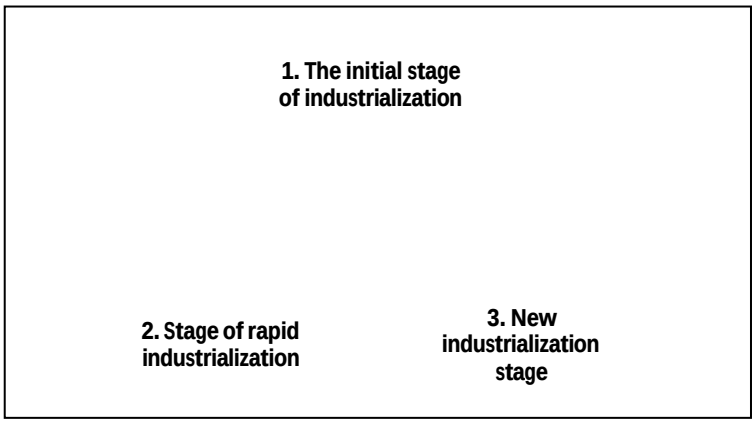

Fig. 1 - The development trend of vocational Education under the background of industrial demand.

5.1.1 The initial stage of industrialization: a vocational education system dominated by primary and secondary vocational education

In the process of industrialization in China, with the continuous replacement and upgrading of industrial structure, vocational education has experienced the evolution trend from industrial education and technical education to the construction and improvement of modern vocational education system. In the 1950s, due to the low level of national productivity, the industrial structure was dominated by agriculture, the industrialization level was low, and the development was extremely unbalanced (Espada-Chavarria et al., 2021). The state adopted the industrialization model of the former Soviet Union and implemented the strategy of giving priority to the development of heavy industry. However, with the development of socialist industrialization, there are a large number of gaps in skilled workers engaged in construction, manufacturing, textile and other production lines. In 1955, the State Council and the Ministry of education successively issued a series of documents, such as the decision of the State Council on improving secondary professional education and the constitution of secondary professional schools, to vigorously develop the secondary professional education, skilled worker education and vocational training system (Lv et al., 2022). A vocational education system focusing on primary and secondary vocational education was established, in the form of both school education and training courses for skilled workers run by enterprises (Ferreiro-seoane et al., 2021).

5.1.2 Stage of rapid industrialization: secondary vocational education and development of Higher Vocational Education

After the reform and opening up, China's industrialization process has accelerated, and the industrial structure has changed from giving priority to the development of heavy industry to the balanced development of agriculture, light industry and heavy industry. With the increase of the proportion of technology intensive industries, the demand for medium-sized technical talents and high skilled talents supporting the development of industrial structure has increased. The reform of secondary vocational education and the development of higher vocational education have become the core needs of the construction of vocational education system in this period (Jun et al., 2021).

5.1.3 New industrialization stage -- the development of the scale and quality of Higher Vocational Education

In the middle and late 1990s, with the reform of the market economic system, China's industrialization entered a new period, the industrial structure was rapidly upgraded, and the economic development was changed from the initial supply to the demand (Qureshi, 2022). With the development of information technology industry, the industrial development gradually changed from traditional technology industry to modern technology and high-tech industry, and the national demand for high-level technical and skilled talents was increasing day by day (Lv et al., 2022). From the development policy of "three reforms and one subsidy" put forward by the state to the connotation construction focusing on overall quality improvement, and then to the action plan for innovative development of higher vocational education, higher vocational education is evolving to adapt to the change of talent demand and gradually moving towards the direction of high-quality development. Vocational education undergraduate has become an inevitable choice under the background of industrial demand (Espada-Chavarria et al., 2021).

5.2 The current situation and dilemma of the development of vocational education undergraduate

Figure 2 shows the two current situation and dilemma of the development of vocational education undergraduate. (i) Development status of vocational education undergraduate; (ii) Puzzles faced in the process of vocational education undergraduate pilot program

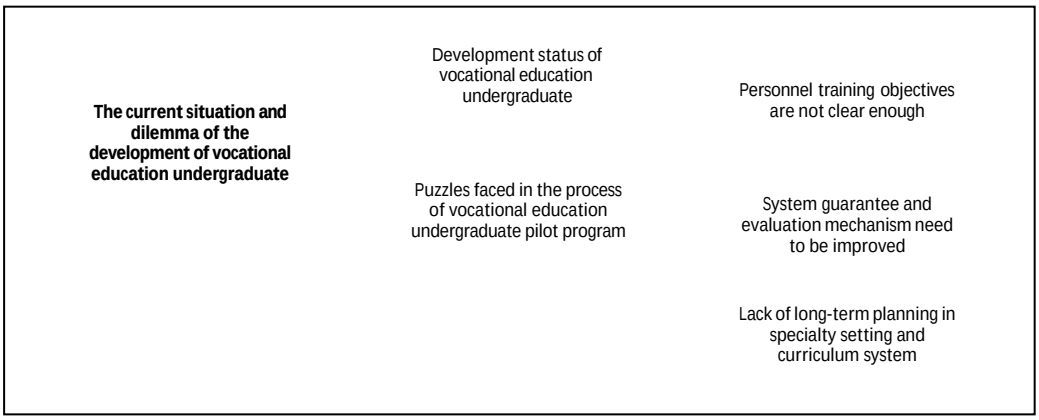

Fig. 2 - The current situation and dilemma of the development of vocational education undergraduate.

5.2.1 Development status of vocational education undergraduate

Since 2019, the Ministry of education has approved 33 schools to carry out the vocational education undergraduate pilot program, implement the long-term schooling system to cultivate highly skilled talents, focus on cultivating large-scale craftsmen comparable to scientific masters, break the "ceiling" that vocational education stops at the junior college level, overcome the embarrassment after the upgrading of high-quality vocational education junior college to ordinary undergraduate, unblock the growth channel of highly skilled talents, and lead the integration and high-quality development of vocational education (Eroshenkova et al., 2022). [what are the advantages of undergraduate vocational education? In february2022, the Ministry of education stressed at the press conference that "developing vocational undergraduate education" is one of the important contents of the "five breakthroughs", and the current goal is to promote the steady progress of vocational undergraduate education. In 2021, the enrollment of vocational undergraduate students will increase by 41000. There are 32 Vocational Undergraduate Schools in China, with a total of 129000 vocational undergraduate students. In 2022, about 10 high-level vocational undergraduate education demonstration schools will be selected and built, which will provide opportunities for more vocational school students to obtain higher-level education and enhance their employment competitiveness. Through a series of policy documents, the state has transformed the undergraduate vocational education, which has been tried and explored for many years, from the pilot to the steady development of standardization (Espada-Chavarria et al., 2021).

5.2.2 Puzzles faced in the process of vocational education undergraduate pilot program

(i) Personnel training objectives are not clear enough

In 2021, the education departments of Jiangsu, Zhejiang, Shandong and Jiangxi provinces successively announced the suspension of the transfer of independent colleges to vocational and technical universities, which aroused the attention and thinking of the education sector. From the pilot process of vocational education undergraduate schools, it is found that most of the pilot schools still have vague concepts about the document understanding of school running orientation, talent training objectives and specialty settings (L. H. Yang et al., 2021). Some can only use the original college model to position the talent training program, while others follow the application-oriented undergraduate model, which deviates from the national policy objectives (Ma & Kurscheidt, 2021). However, compared with applied undergraduate and Vocational Education College, what are the differences in the orientation of talent training? How to cultivate talents to meet the current industrial needs is an urgent problem to be solved.

(ii) System guarantee and evaluation mechanism need to be improved

"Article 21 of vocational education" [notice of the State Council on printing and distributing the implementation plan of national vocational education reform (UNESCO, 2021). However, in the process of steadily developing the undergraduate vocational education in China, due to the lack of experience that can be used for reference, it is still in the exploratory stage. Many indicators and evaluation systems of the school are similar to ordinary undergraduate courses, with no significant differentiation, or follow the original Vocational Education College Model, which has become a mechanical extension of the educational system of higher vocational education, it cannot reflect the advantages of undergraduate level and lack the characteristics of type education. Vocational undergraduate education has insufficient supply in the evaluation of teaching quality, the institutional guarantee of horizontal accommodation and the evaluation mechanism, which needs to be further improved (Espada-Chavarria et al., 2021).

(iii) Lack of long-term planning in specialty setting and curriculum system

The promulgation of the administrative measures for specialty setting of undergraduate Vocational Education (for Trial Implementation) provides a basis for standardizing the orientation of undergraduate vocational education. However, in the process of steady development of undergraduate vocational education, most schools are upgraded from the original higher vocational colleges (Qureshi, 2022). Due to lack of experience and lack of long-term top-level design, they are still in the stage of continuous exploration and practice. There are problems in using or copying the original professional settings and curriculum system construction (Da Rosa et al., 2022). If vocational education undergraduate schools cannot fully highlight their own school running characteristics and advantages, simply by simply expanding the enrollment scale and school running conditions, they will not be able to meet the urgent needs of high-tech industries for talents, forming a dilemma that talent training does not match the market demand (Dhaliwal & Hauer, 2021). Therefore, how to strengthen the top-level design of vocational education undergraduate schools needs to deal with the relationship between quality and scale and plan the specialty and curriculum system in a more long-term way against the background of industrial demand. The table 1 below shown the puzzles faced in the process of vocational education.

Table 1 - Puzzles faced in the process of vocational education.

Number	Puzzles	Researcher
1	The goal is not clear enough	Cui Yan, 2022; Yuhuigang,2021; guojianru,2020; Zhu Jun,2022; Cui Yan,2016
2	Institutional guarantee is not perfect	Liu Sai,2022; the CPC Central Committee,2021; Vocational and technical education, 2022; Yudongsheng & Zhu Jun,2022
3	The evaluation mechanism is not perfect	Zhangshaoqin,2015; rongchanghai,2020; wangqilong & shiweiping,2017; dengwenyong,2019
4	Professional setting requires long-term planning	Niewei,2020; xuguoqin,2021; suncheng,2021; hefei,2021; Jiaoaiping,2019
5	The curriculum system needs to be fully demonstrated	Wang Yaming & Wang Jue,2014; Zhong Kunming & Wang Guangming & Li Wei,2017; Songlianxi & Qi Ying;2019

5.3 Analysis on the characteristics of Vocational Education Undergraduate under the background of industrial demand

The national vocational education reform implementation plan clearly puts forward "improving the training system of high-level applied talents and carrying out the pilot of undergraduate vocational education". The newly revised vocational education law makes it clear that vocational education is an education type with the same important status as general education (Provisions, 1999). Vocational undergraduate needs the transformation of vocational education mode and the strengthening of the training paradigm of high-quality technical and skilled talents, which further defines the type orientation of vocational education (Ferreiro-seoane et al., 2021).

With the continuous evolution of the development trend of vocational education and the clarification of the type positioning, the categories of undergraduate education in China are gradually divided into three categories: general, applied and vocational. How to distinguish vocational education undergraduate from applied undergraduate and higher vocational college in talent training orientation needs to analyze its personality characteristics from its type orientation (Schmidt et al., 2022). Figure 3 shows the points of analysis on the characteristics of Vocational Education Undergraduate under the background of industrial demand.

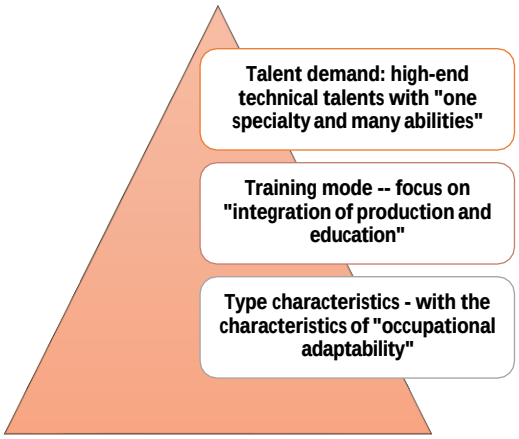

Fig.3 - Analysis on the characteristics of vocational education undergraduate under the background of industrial demand.

5.3.1 Talent demand: high-end technical talents with "one specialty and many abilities"

After vocational education has been incorporated into the degree system, it has higher requirements for the positioning of talent training. It has gradually experienced the transformation of "technical operation type" - "knowledge + technology type" - "knowledge + skills + innovative thinking". The original single technical talents can no longer meet the needs of high-tech industries (Firdaus, 2021). Compared with "operational" talents, vocational education undergraduate has risen to the education of "innovative thinking", which is also the direction to improve on the basis of in-service education specialist talent training.

Vocational education undergraduate students should not only master more professional knowledge, but also apply professional knowledge to production practice (UNESCO, 2021). While improving their technical ability, they should cultivate students' creative thinking. What they need to cultivate is high-end technical skilled talents with "one specialty and multiple abilities".

5.3.2 Training mode -- focus on "integration of production and education"

The training mode of vocational education undergraduate closely centers on the important fields of national and regional economic, social and industrial development, and serves the high-end technology industry, which inevitably requires that in the curriculum, "production" and "teaching" must be integrated, and the acquisition of students' knowledge cannot only depend on the theoretical knowledge of textbooks, but more importantly, adapt to the industrial needs (Zhang & Huang, 2022). Therefore, strengthening the construction of industrial colleges, innovating the way of school enterprise cooperation, and focusing on the new "integration of industry and education" are the key to the training mode of vocational education undergraduate (Gao et al., 2022). In terms of curriculum setting, the school gives full play to the advantages of enterprises, deeply integrates with the teaching of the school, builds a new mode of industry education integration with cities as nodes, industries as fulcrum and enterprises as key points, and gradually forms a new situation of school enterprise cooperation featuring joint construction of specialties, joint education of talents, joint management of processes, sharing of resources and sharing of responsibilities. [establish a new path of reform with cities as nodes, industries as fulcrum and enterprises as the focus.

5.3.3 Type characteristics - with the characteristics of "occupational adaptability"

Vocational education undergraduate is the highest level of education in the vocational education system. It cultivates technical adaptive talents, that is, high skilled talents matching the current industrial needs. At the practical level, it has more obvious "Vocational attributes". In the curriculum system, it pays attention to the improvement of vocational skills and professional quality (Education, 2021). It is not a popular public education, and it is more inclined to cultivate high-level technical and skilled talents for the development of the service industry. In the process of talent training, the school cannot be divorced from the social needs (Jun et al., 2021). It needs to match the professional setting and curriculum system with the industrial needs through practice and research to meet the requirements of enterprises for the employment orientation of technical talents. However, due to the fixed thinking of the talent training system, many vocational education undergraduate pilot schools will show the problem of insufficient "adaptability" (Seyoum & Molla, 2022). In the face of a new round of scientific and technological revolution and the rapid change of industrial structure, the undergraduate vocational education should strengthen the connotative development, better adapt the technical and skilled talents to the industrial needs, and enhance the ability to adapt to the development and changes of modern technology (Dhaliwal & Hauer, 2021).

5.4 Reflections on the orientation of undergraduate talents training in Vocational Education

In the newly revised vocational education law, it is the first time to clarify in legal form that "vocational education is an education type with the same important status as general education" (Dhaliwal & Hauer, 2021). By promoting top-level design such as general vocational integration, it truly realizes the transformation of vocational education from "level" to "type", and clearly defines the type positioning of vocational education. Figure 4. Shows the reflections on the orientation of undergraduate talents training in Vocational Education.

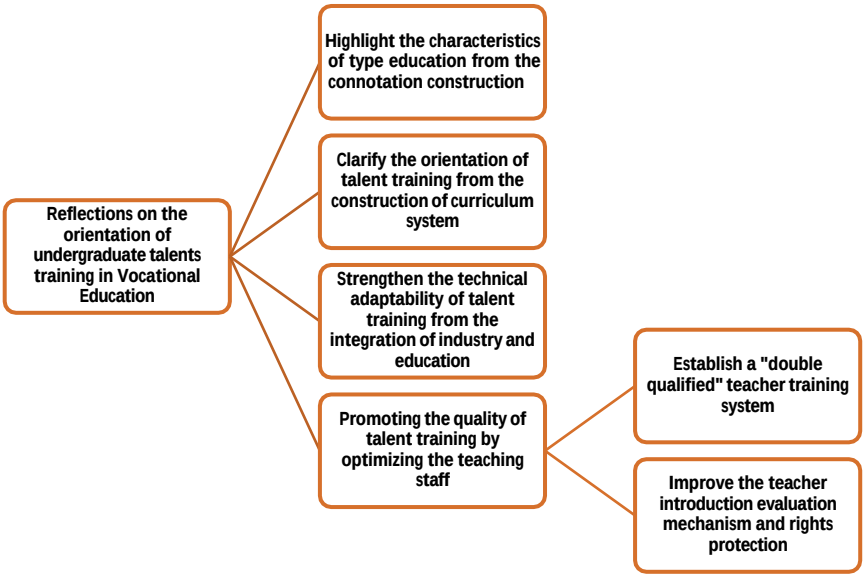

Fig. 4 - Reflections on the orientation of undergraduate talents training in vocational education.

5.4.1 Highlight the characteristics of type education from the connotation construction

The incorporation of vocational education into the bachelor's degree system is only the starting line of vocational education reform. How to adapt to the industrial demand of new technology for technical talents, pay attention to top-level design, and carry out overall planning with high starting point and high standard is the "key kilometer" (Zhang & Huang, 2022). Therefore, it is necessary to strengthen the connotation construction of undergraduate vocational education and reflect the characteristics of type education.

Compared with vocational colleges, vocational education undergraduate has higher requirements for the cultivation of technological innovation ability. Compared with ordinary undergraduate, it also has more requirements for skills and vocational adaptability (Wu et al., 2022). Therefore, we need to take into account the dual attributes of academic standards and professional standards, guide students to master theory and professional knowledge, strengthen the educational function of vocational education, highlight the cultivation of professional quality and professional ability, pay attention to the cultivation of students' innovative ability, and shape the talent training goal of "knowledge + technology + innovative thinking" to meet the needs of future industries for high-tech talents, Reflect the type of vocational education undergraduate education characteristics (Jun et al., 2021).

In view of the type orientation of vocational education undergraduate, the state should establish and improve the quality assurance system and evaluation mechanism in combination with the needs of regional economic and social development, and issue the degree award standards that meet the special requirements of vocational education; Vocational education undergraduate schools should combine their own school running characteristics and school-based culture, formulate personalized talent training objectives and evaluation and incentive mechanisms, form a paradigm to serve local needs, highlight the characteristics of type education, and transform connotation construction into a strong centripetal force (Eroshenkova et al., 2022).

5.4.2 Clarify the orientation of talent training from the construction of curriculum system

The core element of undergraduate talent training orientation of vocational education is the construction of curriculum system (Xunbo, 2022). How to meet the needs of the industry for technical talents in the process of the new generation of scientific and technological transformation requires full investigation and analysis to meet the technical needs of students' participation in post internships and enterprises' talent recruitment, so as to get through the adaptability between the industrial needs and the construction of the curriculum system.

In terms of specialty setting and course system construction, the undergraduate level vocational education specialty should closely focus on the key areas of national and regional economic, social and industrial development, adopt the technology adaptation-oriented course development mode, and scientifically and reasonably design and arrange courses around industrial needs (Schmidt et al., 2022). The professional distribution needs to actively serve the advanced industrial foundation and the modernization of the industrial chain and cultivate high-level technical and skilled talents who can solve complex problems, carry out complex operations and really need long-term schooling. Specifically, the curriculum needs to integrate theoretical courses and practical courses and increase the application-oriented of practical teaching on the premise of paying equal attention to both. Vocational college students focus on practical operability, while vocational education undergraduate students pay more attention to systematic professional thinking training, cultivate technical practical ability, and cultivate students to analyze and solve technical problems with innovative thinking in the process of practical training (Espada-Chavarria et al., 2021). From the perspective of employment, the employment field of vocational education undergraduate students is broader, and the requirements for technical ability are higher, which requires that the curriculum should match the advanced industrial foundation and the modernization of the industrial chain, and meet the needs of high-quality employment and students' sustainable development (UNESCO, 2021).

5.4.3 Strengthen the technical adaptability of talent training from the integration of industry and education

The integration of industry and education is the basic school running mode of vocational education and the most prominent school running advantage of vocational education. "Integration" means mutual accommodation. The integration of industry and education needs to really open up the boundary between enterprises and schools. The school should take the service industry demand as the core standard, connect with the strategic needs of regional and local development, and improve the fit between the training mode and the talent needs of enterprises (Lv et al., 2022). This requires the establishment of a school enterprise collaborative education mechanism to open up the context of multi-dimensional integration.

Schools and enterprises can establish an all-round and in-depth industry education integration mode of "curriculum integration", "site co construction" and "teacher sharing", innovate the school enterprise collaborative co construction and sharing mechanism, jointly design and formulate talent training programs, and form a talent training force, so as to achieve a mutually beneficial and win-win talent supply and demand mode (Dukarić et al., 2021). Vocational undergraduate schools can explore a diversified school running mode with enterprises as the main body,

explore a talent training mode integrating industry and education that promotes industrial economic development and serves social needs, accelerate the promotion of "modern apprenticeship" of vocational education, innovate school enterprise cooperation, export talents in demand directionally, accurately locate social needs, and cultivate technical and skilled talents that adapt to the development of enterprises (Zhang & Huang, 2022).

5.4.4 Promoting the quality of talent training by optimizing the teaching staff

The administrative measures for the establishment of undergraduate level vocational education majors (for Trial Implementation) clearly stipulates that the undergraduate level vocational education majors shall be established, and the teacher-student ratio of the whole university shall not be less than 1:18 (Economic Planning Unit & Prime Minister's Department, 2015). Among the full-time teachers of this major, the proportion of "double qualified" teachers shall not be less than 50%; Part time teachers from the front line of industrial enterprises account for a certain proportion and have substantive professional teaching tasks. Their teaching hours of professional courses are generally not less than 20% of the total professional courses (Hahl & Pietarila, 2021).

"Double qualified" teachers refer to teachers with both professional knowledge and technical skills. In 2006, the Ministry of Education issued several opinions on improving the teaching quality of Higher Vocational Education in an all-round way, which proposed to gradually establish a "double qualified" teacher qualification certification system, and study and formulate the employment standards and access system for teachers in higher vocational colleges, marking that the construction of "double qualified" teachers has evolved into an important policy content (Huang et al., 2021).

(i) Establish a "double qualified" teacher training system

In the process of the new generation of scientific and technological revolution and the reform of industrial structure, the technical skill level and professional adaptability of vocational education teachers cannot keep up with the needs of industrial talents' specialization (Lv et al., 2022). How to adapt the training of teachers to the target orientation of vocational education talents training, the key lies in the cultivation of dual abilities of theoretical teaching and practical teaching, which requires teachers not only to master the necessary post skills, but also to have professional quality Innovation and creativity and technology application ability. Nowadays, the "double qualified" teachers have initially established a training system, but the key is to pay attention to the accuracy and benefit of training (Hahl & Pietarila, 2021). Vocational education undergraduate schools should further promote the implementation of the "1+x certificate system" and further improve the vocational education and training system (Hong et al., 2021).

(ii) Improve the teacher introduction evaluation mechanism and rights protection

Teachers in vocational education undergraduate schools focus on the technical adaptability to industrial needs. They should fully control the "entry level", introduce a team of artisan teachers with rich practical work experience, form an accommodation mode of "double qualified" teachers coming from the enterprise and feeding the enterprise, and establish a cooperation and co construction mechanism between vocational education undergraduate teachers and enterprises (Huang et al., 2021).

The school should give full play to the radiation and demonstration role of model teachers. For example, the school can establish a "famous craftsman teacher" studio, select typical teachers through teacher skill competitions, famous teachers and other ways, give full play to the radiation and demonstration role of model teachers, and drive the overall quality improvement of the teaching team; Establish a teacher evaluation and promotion mechanism in line with the orientation of vocational education undergraduate type, improve the performance appraisal methods, improve the social status of teachers, improve the job attractiveness of vocational education undergraduate teachers, and implement the rights and interests protection and incentive mechanism (Ferreiro - seoane et al., 2021).

6 Conclusion

Promoting the steady development of undergraduate vocational education is an inevitable trend to promote the high-quality development of national economy and improve the vocational education system. Accurately grasping the orientation of talent training and highlighting the distinctive characteristics of vocational education undergraduate is the "key kilometer" to open up the high-level development path of vocational education. Vocational education undergraduate course needs to pay attention to top-level design, carry out overall planning with high starting point and high standard, and strengthen connotation construction from the aspects of system, talent training objectives, courses and teacher training, so as to accurately locate the industrial demand and cultivate high-quality technical and skilled talents with "knowledge + technology + innovative thinking", so as to improve the quality of vocational education undergraduate talent training and strengthen the core competitiveness of Vocational Education under the background of industrial demand.

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Conflict of Interest
The authors declare no conflicts of interest.

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