

# Integration of Industry and Education: Practical Path of Vocational Education Enabling the Cultivation of New Quality Talents

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**Abstract:** New productive forces represent a qualitative leap in traditional productive forces, with new quality talents being the key component. The integration of industry and education, along with the development of new productive forces, mutually empower each other; however, issues such as inadequate policy mechanisms exist. To address this, it is necessary to improve top-level design, align with corporate needs, innovate teaching content, and enhance international cooperation, in order to cultivate new quality talents and promote the development of new productive forces.

**Keywords:** Vocational Education, Integration of Industry and Education, New Quality Talents, New Quality Productivity.

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## 1. Introduction

In September 2023, President Xi Jinping emphasized the need to accelerate the formation of new productive forces. Developing these new productive forces has become an important task of our times. Talent is crucial in this new productive force, as it possesses diverse thinking and can support technological innovation and industrial transformation[1]. Vocational education, with its mission to cultivate technical and skilled personnel, is closely linked to industry. The core mission and value realization path of vocational education lie in providing suitable talent for industrial development. Against the backdrop of the development of new productive forces, how vocational education can integrate industry and education to nurture new talents has become a critical issue that needs urgent attention. This not only concerns the development of vocational education itself but also impacts the overall situation of national industrial upgrading and high-quality economic growth.

## 2. The Connotation of New Productive Forces

Marx's theory of productive forces points out that productive forces are constantly developing, and new quality productive forces are the organic integration of higher-quality workers, more advanced means of labor, and broader scope of labor objects[1]. President Xi Jinping elaborates on its connotations as innovation taking the lead, characterized by high technology, high efficiency, and high quality, aligning with the advanced nature of productive forces under the new development philosophy. In terms of essential characteristics, new quality productive forces represent a new development in productive forces[2], breaking away from traditional economic growth models through technological innovation, achieving harmony between modern technology and people, nature, and promoting industrial upgrading. Its "new" aspect is reflected in the deep integration of concepts, technologies, systems, and industries, with cutting-edge technologies constantly emerging, new business forms thriving, and new professions arising accordingly. The "quality" represents a

new state of productive forces, shifting from a focus on quantity to pursuing high quality, high technology, and high efficiency, which involves the high integration of technology, people, and industries, adopting a sustainable, green, open, and shared development model.

## 3. The Demand for New Quality Talents under the Background of the Development of New Quality Productivity

The development of new productive forces cannot do without high-quality workers, that is, new-type talents. The demand for talent skills has become more complex. The transformation and upgrading of traditional manufacturing and the development of strategic emerging industries require talents not only to master professional basic knowledge and traditional techniques but also to possess modern intelligent industrial technologies. The emergence of new professions also indicates that technical and skilled personnel cannot rely solely on single production skills. The need for talent capabilities is becoming digitalized. With the development of new technologies, industries require talents who can use new smart labor tools, and vocational education should cultivate digital and intelligent talents. The multi-faceted and multidimensional nature of the development of new productive forces determines the diversified requirements for talent qualities. New-type talents need to have solid technical capabilities, profound knowledge, growth-oriented thinking, craftsmanship spirit, professional ethics, interdisciplinary knowledge integration ability, as well as international literacy and cross-cultural communication skills.

## 4. Characteristics of New Quality Talents

New-type talents differ from traditional ordinary technical workers. They can apply modern technology, adapt to high-end advanced equipment, and possess the ability for rapid knowledge iteration. New-type talents have a continuous learning mindset and growth attitude, capable of adapting to environmental and technological changes, updating their knowledge and skills; they embody humanistic qualities and

craftsmanship, balancing social value with engineering quality; they possess innovative thinking and practical wisdom, transforming innovative ideas into results to solve complex problems; they have an international perspective and cross-cultural action capabilities, effectively collaborating and innovating in a global environment; they have

interdisciplinary knowledge and boundary-breaking abilities, transcending disciplinary and industry boundaries to address multifaceted issues; they possess professional ethics and a sense of social responsibility, serving the strategic development needs of the nation, as shown in Figure 1.

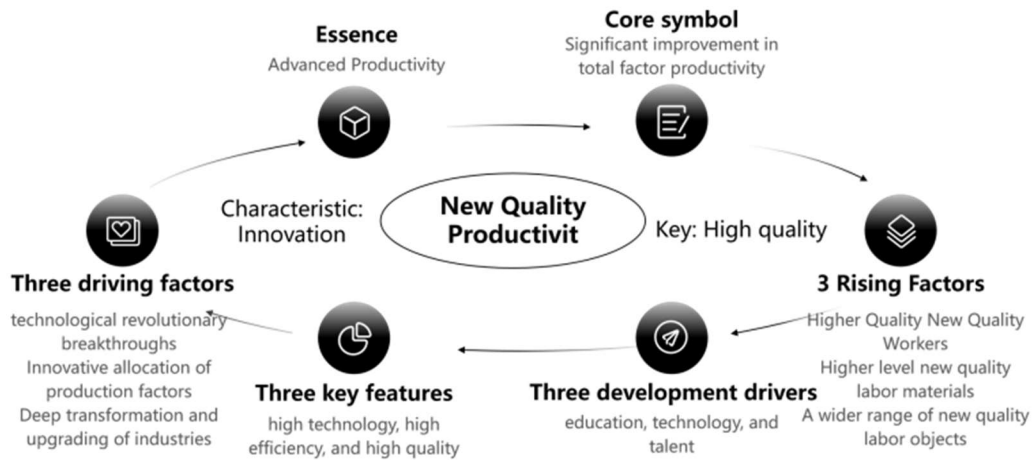


Figure 1. Characteristics of the connotation of new quality productivity

## 5. The Mechanism by Which New Quality Productivity Promotes the Quality Improvement of Vocational Education Personnel Training

The development of new productive forces has triggered an iteration in the content of vocational education[3]. Industrial transformation has altered job standards and requirements, making it impossible for single-discipline course content to meet societal needs[4]. Therefore, the teaching content of vocational education must shift towards interdisciplinary and multi-field integration, fostering students' cross-boundary thinking and innovative practical skills. The new productive forces have also optimized the talent cultivation model in vocational education. The transformation and upgrading of traditional manufacturing and the emergence of new industries have raised the skill requirements for talents. Vocational education should focus on knowledge updates, optimize its training model, and cultivate new types of talents with composite thinking and boundary-breaking capabilities to support industrial upgrading. The new productive forces drive the cross-sector integration in vocational education. Technological revolutions have facilitated the sharing of educational and industrial resources across regions and industries, deepening cooperation between vocational colleges and enterprises, forming collaborative innovation communities to jointly address challenges of industrial upgrading and technological innovation[5].

## 6. The Practical Dilemma of Integrating Vocational Education and Industry to Empower the Cultivation of New Quality Talents

(1) The policy system and mechanism are not sound

The government's policy orientation on the integration of industry and education is unclear, with inadequate motivation and incentive mechanisms, making it difficult for multiple stakeholders to achieve long-term deep integration. There is a lack of coordinating bodies and consultation mechanisms,

leading to unclear responsibilities among various entities, which complicates work coordination and policy implementation. Additionally, the absence of policy and legal safeguards increases the legal risks and costs associated with school-enterprise cooperation, reducing companies' willingness to participate. This results in schools and enterprises not collaborating effectively, and industry and education integration failing to achieve synergy.

(2) Inconsistent educational goals

Companies pursue economic benefits, hoping to gain the immediate talent and productivity improvements needed through school-enterprise cooperation; vocational colleges focus on nurturing individuals, paying attention to students' all-round development. This difference in objectives leads to disagreements between both parties regarding the content, methods, and evaluation standards of cooperation, affecting its effectiveness and causing issues such as insufficient resource sharing and low cooperation efficiency. The root cause lies in the lack of a reasonable profit distribution mechanism, which fails to balance the interests of both sides, thus constraining the deep integration of industry and education.

(3) The content of industry and education courses is out of line

Vocational education programs and professional content do not align with the demands of new quality positions, practical teaching is weak, teachers lack practical skills, and students struggle to meet actual production needs. Program offerings are homogeneous, with low alignment to industrial structures, lagging courses in emerging technology fields, lack of distinctive features, and insufficient interdisciplinary professional courses, making it difficult to meet students' personalized development needs and the diverse talent requirements of society.

(4) Traditional and single forms of cooperation

The school-enterprise cooperation model is superficial, mostly limited to traditional forms such as internships and practical training. Participation in core aspects of enterprise R&D, production, and management is insufficient, with low involvement in key cooperative content. Order-based training predominates, with a single format that lacks versatility and

flexibility, restricting students' job options and competitiveness. The faculty of vocational schools lack practical experience, affecting teaching effectiveness and innovation in school-enterprise cooperation models.

## 7. Practical Paths for Cultivating New Quality Talents through the Integration of Vocational Education and Industry

The integration of industry and education is the fundamental model for vocational education, where the government, vocational schools, enterprises, and students play distinct roles. The government provides policy guidance and institutional support; vocational schools engage in multidimensional collaborative talent cultivation; enterprises offer technical support to co-educate; and students grow into the talents needed by industries through collaborative training. Through this model, barriers between education and industry are broken down, achieving an organic connection between the education chain, talent chain, industrial chain, and innovation chain.

(1) Improve the top-level design and increase the supply of systems

Explore risk-sharing mechanisms and build a shared entity for industry-education integration to address the issue of inconsistent goals between enterprises and institutions. Optimize the management mechanism for cooperative education, formulate detailed and actionable guidelines for school-enterprise collaboration, and promote the close integration of education and industry. Improve the teaching evaluation system, establish a comprehensive quantitative assessment indicator system, collect data from multiple stakeholders, and provide evidence for teaching improvement. Enhance the incentive mechanism for industry-education integration, encourage faculty and students to participate in school-enterprise cooperation, and promote deeper involvement of enterprises in talent cultivation.

(2) Connect with enterprise needs and optimize education goals

Vocational colleges should establish regular communication mechanisms with enterprises, pay attention to market dynamics, and adjust educational goals and teaching plans according to enterprise needs. Conduct market research, build a database of enterprise demands, and provide data support for optimizing educational goals. Optimize program offerings, collaborate with enterprises to develop course materials, strengthen practical teaching, and create training bases. Promote flexible talent cultivation models, such as order-based training and alternating work-study programs, to enhance the alignment between talent development and enterprise needs. Establish evaluation and feedback mechanisms, and optimize cooperation plans based on collaboration outcomes and enterprise feedback.

(3) Reform the content of the three teachings and build a collaborative education mechanism

Deepen the construction of teacher teams, transform teachers' roles and concepts, improve training systems, introduce high-level talents, and build a "dual-qualified" team. Refine teaching content, collaborate with enterprises to align with occupational standards, develop courses and textbooks, and adjust teaching plans according to industry dynamics. Innovate teaching methods, leverage information technology

tools and cutting-edge technologies, create immersive learning environments, establish smart education platforms, promote blended learning models, and enhance students' comprehensive qualities and practical skills.

(4) Expand opening up and strengthen international cooperation and exchanges

The government should introduce policies and regulations to support the opening up of vocational education, providing financial support. It should build international exchange and cooperation platforms, encouraging all parties to collaborate overseas, enhancing academic and technical exchanges, and upholding cultural confidence. Efforts should be made to promote deep integration of industry and education internationally, setting up professional courses that align with global industrial development, introducing high-quality resources, and cultivating talent through mutual "order classes," assisting companies in going global.

Vocational education and industry-education integration hold significant importance in the context of new productive forces development. Despite facing numerous challenges, effective empowerment of new talent cultivation and promotion of new productive forces can be achieved through practical approaches such as improving top-level design, aligning with corporate needs, innovating teaching content, and enhancing international cooperation. This will facilitate positive interaction between vocational education and industrial development, providing robust talent support for national economic and social progress. In future development, all relevant parties should take proactive actions, continuously explore and innovate, and jointly open up new horizons for the integration of vocational education and industry-education.

## 8. Peroration

The development of new quality productive forces has set higher standards for the integration of industry and education in vocational education, and it also points the way for cultivating new quality talents. Despite the current challenges in policy mechanisms, school-enterprise collaboration, and curriculum content, by improving top-level design, aligning with enterprise needs, innovating the 'three teachings' content, and enhancing international cooperation, we can promote the deep integration of the education chain, talent chain, industrial chain, and innovation chain. In the future, vocational education should focus on the integration of industry and education as its core driving force, continuously cultivating new quality talents with composite skills, digital capabilities, and diverse qualities, providing solid human resources support for the development of new quality productive forces, and helping to elevate industrial upgrading and high-quality economic development to new levels.

## References

- [1] Lin Xibao, Yu Jingbo, Song Yan. Exploring the Support of Higher Vocational Colleges for High-Quality Development of New Productive Forces [J]. Vocational and Technical Education, 2024(3):1-9.
- [2] Xinhua News Agency. Xi Jinping stressed at the 11th collective study session of the Political Bureau of the CPC Central Committee that we should accelerate the development of new productive forces and make solid progress in high-quality development [EB/OL].(2024-02-01)[2024-07-18].[https://www.gov.cn/yaowen/liebiao/202402/content\\_6929446.htm](https://www.gov.cn/yaowen/liebiao/202402/content_6929446.htm).

- [3] Zhu Zhiting, Zhao Xiaowei, and Shen Shusheng. Practice Path of Empowering the Cultivation of New Quality Talents with Digital Intelligence Technology [J]. China Distance Education, 2024,44(05):3-14.
- [4] Li Ming. The Mechanism, Dilemmas, and Countermeasures for the Improvement of the Quality of High-Quality Skilled Talent Training Led by New Productive Forces [J]. Education and Vocational, 2024, (19):50-55.
- [5] Han Yuanjian, Chen Qiang. A Reconsideration of the Concept of Common Technology [J]. China Science and Technology Forum, 2014, (07):127-132