WHIOCE PUBLISHING PTE. LTD.
PROVIDING
FIRST-CLASS SCIENTIFIC INFORMATION
FOR TOP SCHOLARS

2026 Volume 4, Issue 3
Contemporary Education Frontiers
ISSN:3029-1879 (Online)
ISSN: 3029-1860 (Print)

The Value Implications, Key Tasks, and Implementation Strategies for the High-Quality Development of Vocational Undergraduate Education

Lin Wang*
Hainan Vocational University of Science and Technology, Haikou 571126, Hainan, China

Author to whom correspondence should be addressed.

Abstract: Developing vocational undergraduate education is a crucial component in improving the modern vocational education system and building a strong education nation, as well as a key pillar for supporting industrial transformation and upgrading and empowering high-quality economic and social development. This paper takes the high-quality development of vocational undergraduate education as its starting point, conducts an in-depth analysis of its value implications, focuses on major tasks such as program development, curriculum design, and practical teaching infrastructure, and proposes strategic measures, including strengthening top-level design, enhancing substantive development, deepening industry-education integration, and advancing digital transformation. The aim is to provide theoretical references and practical guidance for the high-quality development of vocational undergraduate education, thereby cultivating more high-caliber technical and skilled professionals who meet contemporary demands.

Keywords: Vocational undergraduate education; High-quality development; Value connotation

Online publication: March 26, 2026

1. Introduction

Vocational undergraduate education is an emerging form of higher education at the undergraduate level. As of June 2025, China had 87 vocational undergraduate institutions. It aims to cultivate high-level, highly skilled applied technical professionals, granting full-time undergraduate degrees that carry equal weight with regular bachelor's degrees in employment, postgraduate entrance exams, and civil service examinations. The establishment of vocational undergraduate education responds to the growing demand for high-caliber technical and skilled talents driven by socioeconomic development, optimizes the higher education structure, elevates the quality and appeal of vocational education, and provides robust talent support for industrial transformation and upgrading. The emergence of vocational undergraduate education marks a new phase in the development of China's vocational education system.

2. The value implications of high-quality development in vocational undergraduate education

2.1. Supporting the construction of a strong education nation and improving the modern vocational education system

The high-quality development of vocational undergraduate education holds fundamental significance for supporting the construction of an education powerhouse. For a long time, China's vocational education system has faced challenges, such as incomplete hierarchical structures and relatively narrow pathways for student advancement. The emergence of vocational undergraduate education has filled the gap in undergraduate-level vocational training, achieving vertical integration from secondary vocational education to higher vocational education, undergraduate programs, and beyond. This not only improves systemic architecture but also substantially reinforces the "type-specific education" positioning of vocational education, establishing it as an educational option equal to general education with comprehensive upward mobility channels. From the perspective of building an education powerhouse, the goal extends beyond internal system strength to the strategic support capacity of education for national development strategies. By cultivating high-level technical professionals, vocational undergraduate education directly serves major strategic emerging industries, deeply integrating educational development into the modernization process [1].

2.2. Service industry transformation and upgrading to empower high-quality economic and social development

The ongoing global industrial transformation and China's economic restructuring toward high-end, intelligent, and green development have created numerous high-end technical positions requiring interdisciplinary knowledge, innovation capabilities, and complex problem-solving skills. Vocational undergraduate education inherently integrates industry and academia, enabling rapid response to these demands by cultivating high-level, creative technical professionals for strategic emerging industries and pillar sectors. This service extends beyond quantitative talent supply to crucial qualitative and structural alignment. Program offerings in vocational education are closely aligned with regional economic priorities and future technological trends, establishing interdisciplinary clusters to match industrial needs and ensure talent development synchronizes with industrial upgrading. From a macroeconomic perspective, vocational education delivers high-quality, efficient skill training that serves as a critical tool for advancing human resource supply-side structural reforms, addressing the dual challenges of "employment difficulties" and "skilled labor shortages," while accelerating the formation of new, quality productivity.

2.3. Responding to public expectations for quality education and promoting students' all-round development

The fundamental purpose of education is to serve the comprehensive development of individuals. Vocational undergraduate education adheres to the principle of "putting people first and cultivating virtue through education." By providing undergraduate-level vocational education opportunities, it meets the public's demand for diversified and high-quality higher education, broadens career pathways for students, particularly graduates from secondary vocational schools and higher vocational institutions, and enhances the social recognition and appeal of vocational education. During the training process, vocational undergraduate education emphasizes the integration of moral cultivation and technical skills. It not only focuses on developing students' solid technical competencies to equip them with practical abilities to handle mid-to-high-level positions and complex challenges, but also places great importance on nurturing theoretical literacy, humanistic values, professional ethics, and innovation capabilities. This fusion of "higher education quality" and "vocational relevance" aims to cultivate high-caliber talents who can "adapt to grassroots roles, apply knowledge effectively, and remain committed," while possessing sustainable development potential and global perspectives. From an individual development perspective, vocational undergraduate education prioritizes students' career sustainability, striving to improve

employment quality, job retention rates, and career prospects, directly impacting public satisfaction and well-being [2].

3. Key tasks for high-quality development of vocational undergraduate education

3.1. Professional development

Program development serves as the cornerstone of vocational undergraduate education, requiring the establishment of a professional system that aligns closely with industry demands while demonstrating foresight and competitiveness. Academic programs should be strategically integrated with national strategic emerging industries and regional pillar sectors—including advanced equipment manufacturing, next-generation information technology, biomedicine, renewable energy, and new materials- to achieve deep integration of academic disciplines with industrial chains and innovation ecosystems. Institutions must implement dynamic adjustment mechanisms, conducting regular industry research and talent demand forecasting to develop competency maps that ensure program offerings precisely serve high-value segments of industrial chains. Concurrently, talent cultivation frameworks should undergo fundamental restructuring, breaking traditional disciplinary paradigms through collaborative program development with industry leaders. Emphasis should be placed on cultivating "advanced competencies" such as complex engineering problem-solving skills, technological innovation capabilities, and project management expertise, while increasing practical teaching components. Quality assurance systems must be enhanced through multidimensional evaluation mechanisms encompassing five-year graduate progress tracking, employer feedback, and third-party assessments, forming a closed-loop cycle of "program design-implementation-evaluation-feedback-improvement" to drive continuous program enhancement. Each program should possess distinct technical R&D capabilities and social service functions, integrating teaching, research, and production practices through industry partnerships and joint technical service platform development, thereby fostering a virtuous cycle of mutual growth between academia and industry [3].

3.2. Curriculum development

Curriculum development serves as the cornerstone for implementing talent cultivation plans and achieving educational objectives. It is essential to establish a curriculum system grounded in technical logic, aligned with students' cognitive patterns, and capable of supporting their sustainable development. For vocational undergraduate programs, the curriculum framework should prioritize systematic work process design. This involves deconstructing knowledge, skills, and competencies required for typical job tasks into modular, hierarchical course clusters. Course content must keep pace with industrial technological advancements, incorporating emerging technologies, processes, and standards into teaching materials to ensure practical relevance. In terms of structural design, disciplinary boundaries should be dismantled to achieve seamless integration of theoretical and practical instruction. The "Job-Course-Competition-Certification" integrated education model should be explored, organically incorporating vocational qualification standards and skills competition requirements into curriculum content and evaluation criteria. As core teaching resources, textbooks require innovative formats such as modular editions, work manuals, and multimedia materials, complemented by digital teaching resources including virtual simulations and online open courses.

3.3. Construction of practical teaching conditions

Practical education serves as a key distinguishing feature between vocational undergraduate programs and general undergraduate programs, highlighting their unique characteristics. Universities should establish high-quality, comprehensive on-campus training bases capable of simulating or replicating complete corporate production processes, technological R&D stages, or service scenarios. These bases should be equipped with advanced facilities and technical platforms that align with or slightly exceed industry standards, enabling students to conduct integrated project training, validate process designs, and simulate technological innovations. Additionally, universities should develop deeply collaborative off-campus practical training bases by partnering with leading industry enterprises and high-tech companies

to establish "schools within factories" or industrial colleges that integrate teaching, production, and R&D functions. This approach allows students to immerse themselves in real-world work environments, participate in actual production tasks and technical challenges, achieving seamless integration between learning and employment. Institutions with the necessary resources can create smart, practical platforms combining virtual simulation with physical training. For high-risk, high-cost, or difficult-to-observe practical activities, technologies such as virtual reality and digital twins should be employed to develop virtual simulation training resources and projects, forming a practical education system that blends virtual and real-world experiences while maximizing practical effectiveness, thereby expanding the breadth and depth of practical instruction [4].

4. Strategies for promoting high-quality development of vocational undergraduate education

4.1. Strengthening top-level design and policy guidance

To advance the high-quality development of vocational undergraduate education, it is essential to establish a clear, stable, and robust national and local policy support system that fundamentally addresses the institutional issues of its "status" and "career pathways." At the national level, detailed implementation rules for the Vocational Education Law of the People's Republic of China should be further refined to clarify establishment standards for vocational undergraduate institutions, professional management protocols, and degree conferral and accreditation frameworks, ensuring the principle of "distinct in type but equal in status" between vocational and regular undergraduate education is fully realized. Accelerating the establishment of a vocational education college entrance examination system tailored to vocational undergraduate characteristics will break down barriers to further education and create a vertically integrated training system spanning secondary vocational schools, higher vocational colleges, vocational undergraduate programs, and professional degree graduate studies, providing students with clear career trajectories. Local governments at all levels should develop specialized vocational undergraduate education plans aligned with regional industrial development strategies, guiding institutions toward scientific positioning and differentiated growth while avoiding redundant investments and homogenized competition. Policy guidance must also manifest in resource allocation through mechanisms prioritizing educational quality and service impact, with targeted support for institutions and programs that effectively serve regional key industries and demonstrate outstanding performance. Additionally, societal biases against vocational education must be eliminated through comprehensive measures, including policy advocacy, promotion of exemplary graduate cases, and enhanced compensation and social recognition for technical and skilled professionals, to foster a social ethos that honors "the dignity of labor, the value of skills, and the greatness of innovation."

4.2. Strengthening connotation construction and characteristic development

Connotative development remains the eternal theme for high-quality advancement in vocational undergraduate education. It is imperative to abandon the extensive model of scale expansion and shift toward a connotative development path centered on quality enhancement. Educational institutions should focus their development efforts on strengthening core competencies: Firstly, implement a talent-driven strategy to build a high-caliber "dual-qualified" faculty team. This involves recruiting technical experts and skilled craftsmen with profound industry expertise and practical corporate experience, establishing comprehensive teacher-industry collaboration systems, and encouraging faculty members to regularly engage in frontline corporate practice for skill refinement. Secondly, deepen educational reforms by innovating talent cultivation models. Fully adopt student-centered teaching methods such as project-based learning, case studies, and situational instruction, while emphasizing heuristic, inquiry-based, and discussion-oriented approaches. Simultaneously, establish an outcome-based education (OBE) quality evaluation system that comprehensively assesses students' practical skills, innovative thinking, and professional competencies through process-oriented evaluations. Thirdly, steadfastly pursue distinctive development paths. Institutions should align with regional resource endowments and industrial characteristics to

refine educational orientations, focusing on specialized disciplines to cultivate unique advantages characterized by "unique strengths and superior performance." These distinctive features should manifest in targeted talent cultivation strategies, original curriculum resources, and forward-looking technical services, thereby securing irreplaceable positions in the competitive education landscape.

4.3. Deepening industry-education integration and school-enterprise cooperation

The integration of industry and education, along with school-enterprise collaboration, constitutes the fundamental requirement of vocational undergraduate education. At the institutional level, a multi-stakeholder governance framework involving government, industry, enterprises, and educational institutions should be established. Governments should play a guiding and coordinating role, leveraging policy tools such as tax incentives, financial support, and service procurement to encourage enterprises' deep involvement in the entire talent development process. Industry associations need to promptly release forecasts of industrial talent demands and occupational competency standards to inform academic program design and curriculum development. Schools and enterprises should explore establishing shareholding or mixed-ownership industrial colleges/training bases with clear property rights and shared benefits, creating stable collaborative partnerships. At the platform level, high-level industry-education integration platforms should be jointly developed with leading enterprises and research institutes, including applied technology innovation centers, master studios, and engineering practice centers. These platforms should serve not only as practical training bases for students but also as incubators for technological R&D, process optimization, and commercialization, achieving organic alignment between educational systems, talent pipelines, industrial chains, and innovation networks. Regarding operational models, modern apprenticeship systems and enterprise-based apprenticeship programs should be comprehensively implemented, adopting a dual-subject approach to talent cultivation and interactive training. Real-world enterprise projects, production cases, and R&D topics should be incorporated into teaching as graduation project themes or comprehensive training modules. A "revolving door" mechanism for mutual personnel exchanges between schools and enterprises should be established, allowing corporate engineers to teach in classrooms and academic faculty to engage in workshop practices, thereby ensuring seamless integration between educational processes and production workflows [5].

4.4. Advancing digital transformation and empowering smart education

Leveraging digital technologies to transform educational paradigms serves as a crucial approach for vocational undergraduate education to adapt to the digital economy era and achieve leapfrog development objectives. Universities should establish intelligent teaching environments that support personalized learning, including high-speed campus networks, smart classrooms, virtual simulation training labs, and blended online-offline learning spaces. They should develop comprehensive digital teaching resource repositories covering all core professional courses, virtual simulation-based experimental and practical training projects, and open online courses (MOOCs), enabling students to access learning resources anytime and anywhere. Data-driven strategies should be employed to advance teaching reforms and management, utilizing university-specific data centers and smart education platforms to collect comprehensive data across the entire learning cycle, encompassing instructional processes, learning behaviors, internships, and career development. Through big data and artificial intelligence analytics, institutions can deliver early learning alerts, recommend personalized learning pathways, and monitor teaching quality in real time, providing precise insights for faculty improvement, student self-directed learning, and informed decision-making by administrators, shifting from experience-driven to data-driven approaches. Digital transformation must be closely integrated with disciplinary upgrades, with digital technologies such as AI, big data, and IoT fully incorporated into professional training programs through dedicated courses or digital modules to cultivate students' digital literacy.

5. Conclusion

Vocational undergraduate education is a new form of higher education that plays a significant role in supporting the construction of an education powerhouse, serving economic and social development, and meeting the public's demand for quality education. In response to the new requirements of the new era, concerted efforts must be made from multiple aspects, such as top-level design, connotation construction, industry-education integration, and digital transformation, to continuously advance the reform and innovation of vocational undergraduate education. This will truly leverage the unique advantages of vocational undergraduate education in cultivating high-quality technical and skilled talents, providing a solid talent guarantee for realizing the China Dream of the great rejuvenation of the Chinese nation.

Disclosure statement

The author declares no conflict of interest.

References

[1] Wei Y, 2024, Intrinsic Logic and Action Path of Vocational Undergraduate Education Discipline Construction. China Vocational and Technical Education, (3): 36–43.

[2] Shen JL, Zhu DQ, 2023, On the Provision of Technical Knowledge in Vocational Undergraduate Education. Higher Engineering Education Research, (2): 159–165.

[3] Bie DR, 2022, Conceptual Definitions, Educational Characteristics, and Requirements for Academic Undergraduate, Applied Undergraduate, and Vocational Undergraduate Programs. China Higher Education Research, (8): 61–68+75.

[4] Tang L, 2022, Vocational Undergraduate Education at the Crossroads: A Discussion on Building a High-Quality Vocational Education System. Vocational and Technical Education, 43(28): 18–23.

[5] Deng XH, Huang TT, 2024, Discipline Construction in Vocational Undergraduate Schools: Value Orientation of Knowledge Foundation and Action Paths. Vocational and Technical Education, 45(13): 13–19.

[6] Li JG, Wu XM, Dai W, et al., 2025, Vocational Undergraduate Education Actively Responding to Industrial Transformation and People's Educational Demands: New Progress in Research and Practice of Vocational Undergraduate Education in 2024. China Vocational and Technical Education, (2): 63–75.

[7] Li S, Xu GQ, 2022, Vocational Undergraduate Educational Technology Discipline: Academic Implications, Core Elements, and Development Pathways. Higher Engineering Education Research, (6): 146–152.