

Study on the Linkage Mechanism of Employment, Enrollment and Talent Cultivation in Vocational Undergraduate Colleges

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ABSTRACT

This paper focuses on the study of the "Employment-Enrollment-Talent Cultivation" linkage mechanism in Vocational Undergraduate Colleges. First, it analyzes the positioning of Vocational Undergraduate Education in the modern vocational education system and the current status of the mechanism, pointing out problems such as "hierarchical mismatch" in employment, disconnection between enrollment and market demand, and imbalance between talent cultivation and industrial needs. Then, it proposes approaches to construct the linkage mechanism, including establishing a four-party linkage leading group of "government-industry-enterprise-college", dynamically adjusting enrollment majors and plans, optimizing modular talent cultivation programs, and improving the full-cycle employment feedback system. Meanwhile, it constructs an implementation guarantee system from four dimensions: policy and funding, faculty and institutions, quality monitoring, and social coordination. Finally, the paper points out that Vocational Undergraduate Education should adhere to its type-oriented positioning, deepen Industry-Education Integration, and promote the implementation of the linkage mechanism through multi-stakeholder collaboration, so as to improve the quality of talent cultivation and provide support for high-level technical and skilled talents for the high-quality development of the economy and society.

KEYWORDS

Vocational undergraduate colleges; Employment-enrollment-talent cultivation linkage mechanism; Industry-education integration; Talent cultivation quality; Guarantee system

1 Current status of the employment, enrollment, and talent cultivation mechanism in vocational undergraduate colleges

Vocational undergraduate education is the high-level stage of the vocational education system, with its core orientation being the cultivation of "undergraduate-level technical and skilled talents" and the goal of connecting the demand for high-end industrial positions with the cultivation chain of secondary and higher vocational education. However, due to their short school-running history and unclear positioning, most vocational undergraduate colleges currently still see the three key links of employment, enrollment, and talent cultivation "operate in isolation" ^[1], failing to form an effective and coordinated closed-loop mechanism. This institutional fragmentation not only affects the quality and efficiency of talent output but also restricts the social recognition and development potential of vocational undergraduate education. In the future, systematic reforms are needed to break down departmental barriers, promote information sharing and process restructuring, and realize the organic interaction and dynamic adjustment of these three links.

1.1 Employment status: coexistence of "hierarchical mismatch" and "quality shortcomings"

Graduates of vocational undergraduate colleges generally face the employment dilemma of being "neither able to compete for high-end positions nor willing to take low-end ones": compared with higher vocational college graduates, they have higher expectations for job levels and salary; while compared with general undergraduate graduates, they have no advantage in academic research capabilities. Moreover, due to insufficient in-depth practical teaching in some colleges, the technical and skilled advantages of graduates have not been fully demonstrated ^[2]. To address this dilemma, it is necessary to conduct in-depth analysis of the essence of the problem from multiple dimensions and propose systematic solutions.

1.1.1 Challenges arising from ambiguous positioning in the employment market

As an emerging type of education, vocational undergraduate education has not yet established a clear positioning in the employment market. On one hand, graduates from traditional undergraduate colleges have advantages in theoretical knowledge systems and research capabilities, making it easier for them to obtain R&D-related positions; on the other hand, higher vocational college graduates excel in practical skills and job adaptability, which are highly favored by front-line production enterprises. Graduates of vocational undergraduate colleges, however, fall into an ambiguous zone between the two: they lack solid theoretical foundations and fail to form significant technical and skilled advantages. This unclear positioning is directly reflected in employment quality. According to survey data from 25 vocational undergraduate colleges across the country, the average starting salary of graduates in the first year is higher than that of

higher vocational college graduates but significantly lower than that of general undergraduate colleges.

1.1.2 Gap between enterprises' talent demand and cultivation quality

There is a significant gap between enterprises' expectations for the capabilities of vocational undergraduate graduates and their actual performance^[3]. Most enterprises expect vocational undergraduate graduates to take on mid-to-high-level responsibilities such as technological innovation, process optimization, and production management. However, after actual recruitment, they find that graduates can only complete basic technical work in most cases. A survey of intelligent manufacturing enterprises in a certain region shows that these enterprises expect vocational undergraduate graduates to become technical backbones on the production line, but in reality, they need to invest a large amount of training resources to help graduates meet the job requirements. This gap is mainly reflected in insufficient technological innovation capabilities, weak awareness of process improvement, and lack of teamwork capabilities.

1.1.3 Restrictive factors for unsmooth career development channels

The career development of vocational undergraduate graduates faces multiple constraints. On one hand, the technical promotion channels within enterprises often prioritize traditional academic backgrounds, which limits the promotion space of vocational undergraduate graduates; on the other hand, due to the lack of a clear career positioning, graduates are confused about career planning. In addition, vocational undergraduate graduates also face significant obstacles when switching industries—employers have a low level of awareness of their capabilities and backgrounds, which affects the flexibility of their career choices^[4].

1.1.4 Structural issue of unbalanced regional employment

There are obvious regional differences in the employment status of vocational undergraduate graduates^[5]. In economically developed regions, especially the Yangtze River Delta and Pearl River Delta regions with concentrated manufacturing industries, the employment rate and salary level of vocational undergraduate graduates are relatively high; while in the central and western regions, due to the constraints of industrial levels and enterprise scales, the employment quality of graduates is significantly lower. This regional imbalance not only affects graduates' employment choices but also poses challenges to the regional layout and major settings of vocational undergraduate colleges.

1.1.5 Impact of insufficient in-depth industry-education integration

Insufficient in-depth industry-education integration is an important reason for the unsatisfactory employment quality^[6]. At present, the cooperation between most vocational undergraduate colleges and enterprises remains at the shallow level of internship and employment collaboration, failing to form an in-depth cooperation mechanism featuring joint talent cultivation, process co-management, and achievement sharing. Enterprises have low enthusiasm for participating in talent cultivation, and colleges lack sensitivity to the development trends of industrial technology, resulting in an obvious time lag between talent cultivation and market demand. According to surveys, only 35% of vocational undergraduate colleges have established industry colleges in the true sense, and the school-enterprise cooperation of most colleges remains at the agreement level, lacking substantive in-depth cooperation^[7].

1.2 Approaches to constructing the employment-enrollment-talent cultivation linkage Mechanism in Vocational Undergraduate Colleges

To achieve high-quality development, Vocational Undergraduate Colleges must establish an organic linkage mechanism among employment, enrollment, and talent cultivation. The construction of this mechanism requires systematic design and innovative practice from multiple dimensions—including organizational structure, major setting, cultivation model, and employment services—to form a virtuous cycle of talent cultivation.

1.2.1 Establish a government-industry-enterprise-college four-party linkage leading group to strengthen overall coordination

Breaking away from traditional management models, a four-party leading group (comprising government, industry associations, leading enterprises, and the college) is established, which adopts a "dual-leader system" (with the college's Party Secretary and President serving as co-leaders, and the head of the education authority and the president of the industry association as deputy leaders). Members include enterprise executives, heads of the college's relevant departments, and deans of secondary colleges. Four special committees are set under the group—Professional Construction Guidance Committee, Talent Cultivation Quality Committee, Employment Service Guidance Committee, and Resource Coordination & Guarantee Committee—with experts conducting regular seminars and field research.

The Work Regulations of the Four-Party Linkage Leading Group is formulated, and a working mechanism of "monthly meetings, quarterly analysis, and annual summaries" is established. A four-party information sharing platform is

developed to realize real-time information sharing while protecting commercial secrets and personal privacy. The effectiveness of linkage work is incorporated into the annual assessments of all four parties (government performance evaluation, industry association assessment, corporate social responsibility evaluation, and college-running evaluation). A special reward fund is set up to recognize contributors, and typical experiences are promoted regularly.

1.2.2 Dynamically adjust enrollment majors and plans to realize "enrollment follows employment"

A big data-based early warning system for major setting is built, integrating multi-department data to establish an evaluation model. A three-level early warning mechanism is adopted: red warning (majors with employment rate <70% and job matching rate <60% for two consecutive years) leads to immediate enrollment suspension; yellow warning (employment rate 70%-80%, job matching rate 60%-70%) leads to enrollment reduction; blue warning (emerging/urgently needed majors) leads to enrollment expansion. New majors must undergo demonstration by enterprise experts, market research, and evaluation of cultivation conditions.

The reform of "classified examinations, comprehensive evaluation, and multi-channel admission" is promoted, with additional assessments of vocational skills (practical operation + interview), comprehensive quality, and practical ability. Pilots of innovative enrollment methods are carried out, including "modern apprenticeship" (school-enterprise targeted training with alternating work and study), "project-based enrollment" (forming characteristic classes), and "cross-major enrollment" (cultivating interdisciplinary talents).

Cultivation plans are formulated based on student source types (general high school graduates, secondary vocational graduates, social candidates). The ratio of general high school graduates to secondary vocational graduates is controlled at approximately 1:1, and a student source quality tracking mechanism is established.

1.2.3 Optimize talent cultivation plans to realize "cultivation follows demand"

A modular curriculum system oriented to post capabilities is built (covering general ability, professional foundation, professional technology, expansion & improvement, and innovation & entrepreneurship modules), replacing the traditional disciplinary system. The "post-course-competition-certificate" integrated model is promoted—core courses align with vocational standards, practical projects are derived from enterprise cases, and assessments are linked to vocational skill certification.

Project-based teaching reform is advanced (practical teaching accounts for ≥50% of core courses, with real project training ≥60%), and a case resource database is established. The integration of information technology and teaching is deepened: virtual simulation training bases are built, online courses are developed, and blended teaching and intelligent evaluation are promoted.

A four-level practical teaching system ("basic training - specialized training - comprehensive training - on-the-job internship") is constructed. High-level training bases are built in line with the principles of "productivity, advancement, and openness," introducing enterprise equipment and technology to achieve seamless connection between teaching and work environments.

1.2.4 Improve the "full-cycle" employment feedback and service system to realize "employment feeds back to enrollment and cultivation"

A full-cycle employment tracking system (covering enrollment to 5 years after graduation) is built, with career files established for students and their learning and career development tracked. An employment big data platform is developed to integrate multi-source information, generating quality reports to support decisions on enrollment and cultivation.

A hierarchical and classified employment guidance system is established (providing career planning, skill training, and school-enterprise docking). Files for students with employment difficulties are created, and targeted support ("one policy for one student") is provided, including skill training, internships, and job recommendations.

The "order-based" cultivation model is promoted (school-enterprise joint formulation of plans, teaching, and employment arrangement). A school-enterprise employment alliance is established—alliance enterprises give priority to recruiting graduates, participate in talent cultivation, and provide internships; colleges adjust cultivation plans based on enterprise needs.

2 Policy and funding guarantees

2.1 Improve the policy support system

A multi-level policy mechanism serves as the prerequisite: at the national level, formulate Regulations on the Development of Vocational Undergraduate Education to clarify the legal status of colleges, their autonomy in school-running, and the rights, responsibilities, and interests of all parties in school-enterprise cooperation; the Ministry of Education, the Ministry of Human Resources and Social Security, and other departments issue special policies to grant

colleges more autonomy in enrollment, program approval, and teacher staffing; local governments develop detailed rules in line with industrial plans to provide support in land allocation, tax incentives, and talent introduction. Meanwhile, establish an inter-departmental coordination group (involving education, human resources, development and reform, etc.) to hold regular meetings for problem-solving; incorporate the development of vocational undergraduate education into local government assessments to strengthen policy supervision.

2.2 Innovate the funding input mechanism

Build a diversified funding system: first, increase financial investment, establish a growth mechanism for per-student funding (not lower than that of general undergraduate universities), and set up a special fund to support training bases, dual-qualification teachers, teaching resources, and school-enterprise cooperation; second, innovate investment and financing models, encouraging local governments to issue special vocational education bonds, promote the PPP model, and establish education foundations; third, improve the cost-sharing mechanism, implement dynamic tuition adjustment, and strengthen student financial aid; fourth, enhance funding supervision, develop benefit evaluation indicators (linking results to subsequent funding), and disclose project funds for social supervision.

2.3 Faculty and institutional guarantees

2.3.1 Strengthen faculty team construction

Focus on dual-qualification teachers: implement cultivation programs, establish a two-way personnel flow mechanism between colleges and enterprises, formulate professional standards for teachers, set up positions for industrial professors/skill masters, and require professional teachers to accumulate at least 6 months of enterprise practice every 5 years; improve the evaluation and incentive system, reform the professional title review (highlighting practical skills and technical achievements), tilt performance-based salaries toward key positions, high-level talents, and frontline teachers, and set up special awards for teaching/technological innovation.

2.3.2 Improve the internal governance structure

Build a scientific governance system: refine the college charter to clarify the responsibilities of the council, academic committee, etc., and delegate management authority to secondary colleges (expanding their autonomy); establish an inter-departmental collaboration mechanism, set up an Enrollment-Cultivation-Employment Linkage Office (led by school-level leaders) for regular meetings and a data sharing platform; improve the assessment system, incorporate the effectiveness of the linkage mechanism into departmental assessments, and evaluate secondary colleges based on enrollment, cultivation, and employment quality (linking results to resource allocation and recognition).

3 Quality monitoring and evaluation guarantees

3.1 Establish a full-process quality monitoring system

Cover enrollment, cultivation, and employment: monitor student source quality, procedures, and admission standards during enrollment; conduct real-time teaching quality monitoring through teaching supervision, student evaluations, and peer reviews during cultivation; establish a graduate tracking database, employer satisfaction surveys, and an annual employment quality report system during employment.

3.2 Build a multi-subject evaluation system

Integrate evaluation forces from multiple parties: establish a system involving the government, industries, enterprises, and colleges, introduce third-party evaluation institutions, promote internationally equivalent program accreditation, and invite industry/enterprise experts to participate in quality evaluation; improve the application of evaluation results, promptly feed back problems for rectification, link results to funding and project applications, and disclose results for social supervision.

3.3 Social coordination guarantees

3.3.1 Construct an industry-education integration ecosystem

Deepen industry-education integration: establish an industry-education integration alliance with multi-party participation, and build industry-education integration parks (attracting enterprises to settle in or set up R&D/production bases); innovate school-enterprise cooperation, promote "integrating enterprises into education" (enterprises participate in training plans, courses, and practice), set up "college-enterprise dual tutors", and carry out technological research (teachers participate in enterprise R&D and integrate results into teaching).

3.3.2 Enhance social recognition

Optimize the external environment: strengthen publicity (via media, campus open days, etc. to showcase school

achievements) and establish a database of outstanding graduates; improve social services, provide technical training and vocational certification, build an alumni liaison mechanism (to support enrollment and employment), and conduct community services to enhance the college's image.

4 Conclusion

Vocational Undergraduate Education, as an important component of the modern vocational education system, undertakes the mission of cultivating high-level technical and skilled talents. Constructing the linkage mechanism of employment, enrollment, and talent cultivation is key to improving its educational quality; it is necessary to realize the virtuous cycle of "employment feeds back to enrollment, enrollment guides cultivation, and cultivation supports employment" by deepening industry-education integration, innovating cultivation models, and optimizing the governance system.

For the future development of Vocational Undergraduate Education, it is essential to adhere to its type-oriented positioning, highlight distinctive advantages, and strengthen connotative development. Guided by serving industrial development, centered on improving talent cultivation quality, and driven by deepening institutional mechanism reform, it should improve the multi-stakeholder collaborative mechanism of "government coordination, industry guidance, enterprise participation, and school implementation". Through continuous innovation and reform, Vocational Undergraduate Education will surely provide talent support for the high-quality development of the economy and society, and contribute to the construction of the modern vocational education system.

Vocational undergraduate colleges should have the courage to explore and practice, summarize experiences to optimize mechanisms, and realize their value in serving national strategies and regional economies; educational administrative departments should strengthen guidance and support to create a favorable development environment; industries and enterprises need to actively participate to jointly promote its innovative development. Only with the joint efforts of all parties can the healthy development of Vocational Undergraduate Education be promoted, and more high-quality technical and skilled talents that meet the needs of the new era be cultivated.

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References

- [1] Wang, Z. Study on the Logic and Practical Path of Talent Cultivation Goal Positioning in Vocational Undergraduate Education[D]. Jiangxi Science and Technology Normal University, 2024.
- [2] Huang, Y. C. Study on Social Recognition of Vocational Undergraduate Education[D]. Guizhou Normal University, 2025.
- [3] Dong, Y. N., Qi, Z. Y. Type Preference and Action Strategies of Social Recognition for Vocational Undergraduate Universities: An Exploratory Q-Method Analysis from the Perspective of the General Public[J]. Education and Vocation, 2025, (17): 23-32.
- [4] Editorial Board of Chongqing Human Resources Service Industry Development Report. Chongqing Human Resources Blue Book[M]. Chongqing University Press: December 2022, p. 307.
- [5] Zhang, X. M., Wang, K. H. Response Logic, Practical Review and Optimization Strategies of School-Running Positioning of Vocational Undergraduate Colleges under the Background of High-Quality Development[J]. Vocational and Technical Education, 2025, 46(25): 50-57.
- [6] Song, Y. F., Cao, T. T. School-Running Dilemmas and Countermeasures of Vocational Undergraduate Colleges under the Background of Building a Powerful Education Country[J]. Journal of Ningbo University (Educational Science Edition), 2025, 47(03): 47-59.
- [7] Li, P. P. Practical Strategies for School-Enterprise Collaborative Talent Cultivation in Vocational Undergraduate Education Based on the Triple Helix Theory[J]. Journal of Hebei Vocational University of Science and Technology Engineering, 2025, 42(03): 5-9.