

Research on Enhancing Vocational College Students' Employment Competitiveness from the Perspective of Industry-Education Integration

Lei Zhang*

Shanghai Institute of Commerce & Foreign Languages, Shanghai 201399, China

*Corresponding author: Lei Zhang, db@sicfl.edu.cn

Copyright: © 2025 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: In recent years, the integration of industry and education, along with school-enterprise cooperation, has garnered significant attention, prompting the state to issue a series of related policies. To effectively implement these policies, higher vocational colleges must adopt innovative approaches, foster robust school-enterprise collaboration, and position the integration of industry and education as a key driver of reform. In doing so, these colleges should focus on enhancing students' employability and addressing post-graduation unemployment challenges. The employment of college graduates has become a critical issue tied to public welfare, individual happiness, and national revitalization. Therefore, higher education institutions must proactively adjust teaching strategies and talent cultivation programs to improve training quality, ensuring that graduates are better equipped to meet societal needs. This paper explores strategies to enhance the employment competitiveness of vocational college students through the lens of industry-education integration, offering valuable insights for frontline educators.

Keywords: Industry-education integration; Vocational college students; Employment competitiveness

Online publication: October 24, 2025

1. Introduction

In April 2023, the Notice of The General Office of the State Council on Optimizing and Adjusting Policies and Measures to Stabilize Employment and Make Every Effort to Promote Development and Benefit People's Livelihood (Guo Changfa (2023) No. 11) emphasized the need to prioritize employment, adopting a multifaceted approach to create jobs, stabilize employment, and improve public well-being. Enhancing the employment competitiveness of higher vocational college students is vital for achieving full and high-quality employment, serving as a cornerstone for implementing this strategy. To this end, higher vocational colleges must remain attuned to advancements in science and technology, assess market demands, and address the

imbalance between talent supply and demand. Strengthening school-enterprise collaboration and deepening the integration of industry and education are essential to building a cooperative education mechanism. These efforts lay the groundwork for improving student employability and provide clear direction for achieving these goals.

2. Current situation of vocational college students' employment competitiveness from the perspective of industry-education integration

2.1. Poor curriculum systems

The talent training plans in higher vocational colleges divide courses into two categories: professional courses and public foundational courses. Professional courses are further classified into basic and advanced levels. However, due to shortages in faculty and practical training equipment, some institutions combine various professional courses to form new curriculum systems. This practice often undermines the scientific and targeted nature of these systems, leading to significant disparities in graduates' knowledge, professional skills, and qualities compared to the actual demands of vocational scenarios. Consequently, graduates lack competitiveness in the job market, forcing enterprises to invest substantial time and resources in retraining, which negatively impacts the depth of school-enterprise collaboration and hinders enterprises' operational efficiency ^[1]. Moreover, although curriculum adjustments are ongoing, their pace often lags behind industrial transformations and the emergence of multidisciplinary professions. Insufficient understanding and adaptation to these trends exacerbate the disconnect between vocational training and industry demands.

2.2. Insufficient practical opportunities in training bases

The practical training base plays a crucial role in integrating industry and education in higher vocational education and serves as a key indicator of the depth of such integration. A strong positive correlation exists between school-enterprise collaboration in building practical training bases and the enhancement of vocational students' employment competitiveness. This is because such bases reflect the characteristics of higher vocational education through school-enterprise cooperation and industry-education integration. Currently, constructing practical training bases has become an essential component of school-enterprise cooperation. On one hand, it fosters collaboration, supports cooperative education, and deepens industry-education integration. On the other hand, it motivates enterprises to actively participate in building practical training base teams, creating more opportunities for vocational students ^[2]. These bases enable students to engage with real-world enterprise production processes, understand frontline job responsibilities, and gain insights into workplace requirements. However, numerous obstacles hinder collaboration between schools and enterprises in constructing practical training bases. Significant disparities exist in teaching resources, practice methodologies, and the training focus of instructors provided by schools and enterprises, leading to limited opportunities for students. In today's complex employment environment, job seekers must possess core competencies and qualities that can be translated into practical value to secure long-term positions within enterprises—an inevitable trend in enterprise development.

Challenges such as insufficient internship and training equipment, inadequate funding, and personnel shortages in practical training bases built through school-enterprise cooperation prevent vocational college students from accessing high-quality internship platforms ^[3]. Building these bases is a systematic project requiring substantial investment in material, human, and financial resources. Although these bases provide

students with a deeper understanding of enterprise production processes, bottlenecks such as a lack of practical training instructors and inadequate equipment hinder further development.

2.3. Misalignment between curriculum setting of school-enterprise cooperation and job market needs

In school-enterprise cooperative education, enterprises should actively reference the “Three-Education Reform,” which vocational colleges must consider when designing their curricula. These curricula should closely align with enterprise development needs, be market-driven, and aim to enhance students’ employment quality and vocational skills. Despite some vocational colleges offering employment guidance courses, many students find these courses monotonous, overly focused on traditional employment knowledge, and neglecting the exploration of the relationship between students, the job market, and enterprise development ^[4]. As a result, school-enterprise cooperative curricula often fail to meet job market demands, leaving significant gaps in effectively guiding students toward successful employment. Several factors contribute to this mismatch: (1) Outdated teaching methods: Employment-related courses, such as those on entrepreneurship and innovation, often fail to integrate theory with practical application. Additionally, poorly planned schedules for employment guidance courses negatively affect students’ competitiveness. (2) Timing issues: There is often a disconnect between the timing and duration of these courses and the actual employment timelines of vocational students, leading to insufficient timeliness. Furthermore, outdated guidance materials, limited enterprise participation, and a lack of practical guidance further weaken these courses. (3) Short-term focus: Many such courses involve superficial activities, such as organizing visits to enterprises or incorporating talent training concepts through “order classes” in school-enterprise cooperation. However, the curriculum design lacks long-term, systematic planning ^[5]. To better serve students, vocational colleges must bridge the gap between curricula and market demands, ensuring alignment with enterprise needs and fostering students’ vocational development.

3. Enhancing vocational college students’ employment competitiveness from the perspective of integration of industry and education

3.1. Improving the curriculum system

For industrial enterprises seeking to successfully transform and upgrade, embracing high-end and green development is essential, with high-quality, skilled talent as the cornerstone of this transition. To achieve this, enterprises must translate their demand for talent into strategic human capital investment by deepening the integration of industry and education. Active participation in talent training processes and collaboration with schools to update and refine the curriculum system is crucial ^[6]. Firstly, industrial enterprises should proactively establish cooperative relationships with higher vocational colleges, collaborating on enrollment and professional learning. This partnership involves engaging in the entire talent development process, embedding enterprise-specific requirements and standards, and involving industry experts to guide students. This approach equips vocational students with the necessary professional knowledge, skills, and an understanding of job-specific requirements, thereby enhancing their employability. Secondly, enterprises must adopt innovative approaches such as “school-in-factory” and “factory-in-school” models. By co-creating integrated industry-education centers with higher vocational colleges, they can facilitate teaching practices that expose students to real-world production environments and operations. This hands-on approach enriches students’ practical training while allowing enterprises to leverage the research and development (R&D)

resources of colleges for staff training, technology innovation, and cost reduction in labor, operations, and training. Such initiatives not only support enterprise talent pipeline development but also promote high-quality growth and operational efficiency ^[7].

3.2. Promoting effective alignment of base construction and internship employment

The construction of training bases should align closely with students' internship practices and employment preparation to enhance their competitiveness. Firstly, schools and enterprises should strengthen their collaboration by forming a dedicated base construction team, comprising enterprise experts, renowned teachers, and specialists from vocational colleges. This team can examine employment and entrepreneurship challenges for vocational students from diverse perspectives ^[8]. Secondly, effective management collaboration between universities and enterprises is essential for fostering students' self-management skills. Vocational colleges should empower student leaders and form organized groups to mitigate issues like lax oversight during internships. Career guidance teachers from both enterprises and colleges can establish a joint mentorship team, leveraging information management tools to facilitate real-time reporting, feedback, and monitoring of students' internship progress. Thirdly, employment situations must be thoroughly analyzed to arrange students' internships and subsequent employment opportunities strategically. Enhancing students' employment competitiveness extends beyond employment guidance courses—it requires showcasing personal strengths during internships. Finally, students should be guided in summarizing their internship experiences. Inviting enterprise experts to deliver lectures, share real-world case studies, and conduct practical demonstrations, if needed, can inspire students to clarify their learning and career goals. This approach not only boosts their motivation for professional learning but also sets a clear direction for their future development ^[9].

3.3. Promoting the curriculum to meet market demand

To better implement the concept of the integration of industry and education, the curriculum should be adapted to align with market demands. Specifically, this can be achieved through the following three strategies: First, we should integrate theoretical teaching with practical teaching in entrepreneurship and innovation guidance courses, ensuring that the employment and entrepreneurship knowledge acquired during school can guide students in their own ventures. Additionally, professional qualification certificate courses should be fully incorporated into the curriculum ^[10]. Second, the talent training program should be enhanced by strategically arranging employment guidance courses, ideally in the second semester of the sophomore year and the first semester of the junior year. These courses should be updated regularly to address current job search challenges. Vocational students who have already graduated could be invited to return to campus to share relevant experiences, thereby addressing the issue of low timeliness in career preparation. Finally, such curricula should emphasize work processes and tasks. Recently, China has issued a series of guidance documents on higher vocational education, highlighting the importance of training students' vocational skills and employment competitiveness. These aspects should be integrated into the core curriculum, reflecting the real processes of enterprises, helping students quickly adapt to job market demands.

3.4. Strengthening the role of leading enterprises and leveraging employment competitiveness training

The integration of industry and education requires the joint efforts of the government, schools, and industry

enterprises. The question of “who to train for” can be addressed through genuine cooperation among these parties ^[11]. One key strategy for achieving these goals is to strengthen the role of leading enterprises and leverage their advantages in enhancing employment competitiveness. Leading enterprises, representing industry authority, provide technical support, teacher expertise, and equipment resources that contribute to effective talent development. When vocational college students intern at enterprises, they gain exposure to real working environments, understand employment needs and requirements, and receive training that helps them quickly adapt to job demands, thereby improving their employment competitiveness.

To further this goal, leading enterprises at the forefront of their industries should engage in in-depth research and discussions on issues related to profit distribution in the integration of industry and education, as well as cooperation between schools and enterprises. These discussions can focus on the quality of employment training for students who intern at these enterprises, laying the foundation for future safeguards. Additionally, leading enterprises should actively explore vocational skills assessments in collaboration with local human resources and social affairs bureaus, as well as relevant industries, to develop appropriate models that continuously improve vocational training quality. This approach ensures that students gain the corporate literacy and characteristics required by leading enterprises. For students who have interned with enterprises for more than a year and show a strong willingness to stay, management training programs can be implemented for outstanding young individuals, helping to highlight their work characteristics and competitive advantages.

3.5. Focusing on the digitization of employment and strengthening students’ employability

A key indicator of the success of higher vocational colleges is whether their students can secure employment smoothly. To achieve this, these institutions should focus on strengthening digital infrastructure. By leveraging big data, the Internet of Things, cloud computing, and other related technologies, vocational colleges can develop a service system for student employment guidance ^[12].

First, a sharing mechanism for employment should be established, enabling the collection and integration of information from multiple sources. Recruitment resources should be pooled, and up-to-date job demand data, categorized by region and industry, can be released according to students’ school records, employment destinations, and internship experiences ^[13]. This ensures students have access to targeted job search information. Second, for students facing employment challenges, a comprehensive employment guidance service system should be created. This system could assign a personalized file for each student, with a multi-party support organization overseeing their progress ^[14]. The support group could include employment guidance staff, counselors, and other personnel. The system would track students’ job search efforts, provide psychological support and employment skills training, and push the latest recruitment information based on students’ job search goals. Moreover, the support group could leverage its resources to forward students’ resumes to human resources departments and talent markets of school-enterprise partnership companies, offering both students and companies opportunities to choose from each other. Third, vocational colleges can offer career planning services, lectures, consultations, and guidance throughout students’ education. Through career planning and guidance courses, colleges can gather students’ career interests, habits, and ideals, and use data analytics to create a comprehensive profile that includes dimensions such as personality and career aspirations. Based on this, colleges can provide one-on-one, targeted career guidance, fully integrating actual student employment data. In addition, the composition of guidance teachers can be diversified by including professional course instructors and counselors. External technical experts or specialists from partnering companies can also be invited to deliver lectures, helping students gain a deeper understanding of industry

demands and the skills required for various positions ^[15]. Ultimately, this approach creates conditions for students' high-quality employment and entrepreneurship.

4. Conclusion

To sum up, improving vocational students' employment competitiveness through the integration of industry and education is a long-term effort that requires continuous improvement of the vocational education system. Therefore, higher vocational colleges must continue to deepen the integration of industry and education, fostering strong collaborations among government bodies, schools, and industry enterprises. By building a collaborative education mechanism, colleges can focus on improving students' professional skills and literacy, aiming to enhance their employment competitiveness and cultivate high-quality, skilled talent.

Disclosure statement

The author declares no conflict of interest.

References

- [1] General Office of the State Council, 2023, Circular of The General Office of the State Council on Optimizing and Adjusting Policies and Measures to Stabilize Employment to Promote Development and Benefit People's Lives, viewed April 30, 2023, https://www.gov.cn/zhengce/zhengceku/2023-04/26/content_5753299.htm
- [2] Lin D, 2020, Employability Training of Vocational College Students with Vocational Competence as the Core under the New Employment Pattern. *Education and Occupation*, 2020(15): 75–80.
- [3] Zhou Q, Qiu X, 2024, Discussion on Improving Employment Competitiveness of Students in Higher Vocational Colleges of Chemical Industry under the Integration of Production and Education—Review of the Cognition of Chemical Production Process. *Application of Chemical*, (9): 2263.
- [4] Ling J, 2024, Research on the Path to Improve Vocational College Students' Employment Competitiveness under the Background of Integration of Industry and Education. *Public Relations World*, (07): 54–56.
- [5] Wang M, 2024, On Improving Vocational College Students' Employment Competitiveness from the Perspective of Integration of Production and Education. *Employment and Security*, (04): 136–138.
- [6] Chen J, Ma Y, Wan Y, et al., 2024, A Study on Improving Employment Competitiveness of Construction Engineering Students in Higher Vocational Colleges based on Integration of Industry and Education. *Fujian Building Materials*, (04): 108–111 + 38.
- [7] Qiu L, 2024, Research on Strategies for Enhancing Employment Competitiveness of Contemporary Higher Vocational Students. *Knowledge Window (Teachers Edition)*, (10): 111–113.
- [8] Yu Y, 2024, Research on Career Planning to Improve Vocational College Students' Employment Competitiveness. *Liaoning Higher Vocational Journal*, 26(10): 78–80 + 107.
- [9] Zhu H, Lu G, 2024, Cultivation of Vocational Students' Employment Core Competitiveness under High-Quality Development of Vocational Education. *Taste · Classics*, (15): 132–135.
- [10] Sun T, Chang H, 2023, Market Orientation of Higher Vocational Colleges and Universities Employment Instruction Work Challenges and Countermeasures. *Journal of Suzhou Vocational University*, (4): 84–88.
- [11] Zhang W, 2024, Fusion Education under the Background of System Construction and Practice of Higher Vocational

- Students' Learning Value-Added. *Journal of Taiyuan City Vocational and Technical College*, (11): 57–60.
- [12] Zhao Y, Yang J, Zhang Y, et al., 2024, The Way to Carry Out Career Planning Education of Higher Vocational Students under the Background of Integration of Production and Education. *Sichuan Labor Security*, (10): 87–88.
- [13] Zhang L, Shi L, 2024, An Analysis of Vocational College Students' Core Quality Cultivation from the Perspective of Integration of Production and Education. *Journal of Chuzhou Vocational College*, 23(03): 1–5 + 9.
- [14] Feng X, 2024, Research on the Cultivation Path of Vocational Students' Craftsman Spirit from the Perspective of Production-Education Integration. *Journal of Anhui Electrical Engineering Vocational and Technical College*, 29(03): 117–125.
- [15] Gao M, Ding H, 2024, New Era to Promote High Quality Full Employment for Higher Vocational Students, the Present Situation, the Difficulties and Countermeasures. *Journal of Contemporary Vocational Education*, (5): 87–95.

Publisher's note

Whioce Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.