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A Macro-Level Exploration of Reform Pathways for China's Vocational Undergraduate Institutions: The Dual Drivers of Policy Support and Market Demand

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Abstract

This paper examines the reform of China's vocational undergraduate institutions through the combined lens of policy support and market demand, arguing that the process is shaped by both top-down policy design and bottom-up industrial pressures. It identifies persistent problems—such as curriculum mismatches with labor-market needs, weak quality assurance, insufficient dual-qualified faculty, and slow institutional responses to emerging industries—and contends that effective reform requires closer alignment among policy, governance, and industrial change. Reform priorities include strengthening industry–education integration, redesigning curricula, improving faculty capacity, and developing outcome-oriented quality assurance. The paper concludes that long-term development depends on moving beyond expansion toward a more responsive, practice-based, and innovation-oriented model.

Keywords

Vocational undergraduate institutions; Reform pathways; Policy support; Market demand.

1. Introduction

1.1. The Role of Vocational Undergraduate Education in China

Vocational undergraduate education has become increasingly important in China's higher education system, particularly in response to economic restructuring and rising demand for higher-level technical talent. According to the National Medium- and Long-Term Education Reform and Development Plan Outline (2010–2020), vocational education is a key part of higher education and is expected to cultivate high-quality workers with practical competence, technical expertise, and innovative capacity [1]. Within this framework, vocational undergraduate education is expected to provide application-oriented and technically skilled talent for economic and social development.

In recent years, this role has become more visible as China has moved toward industrial upgrading and technological transformation. During the Fourteenth Five-Year Plan period, the state further emphasized the need to build a high-level vocational education system and to align vocational education more closely with labor-market demand. Vocational undergraduate education therefore serves not only economic development and industrial upgrading, but also workforce improvement and, to some extent, social mobility [2].

Its comparative strength lies in its practical orientation. Compared with conventional academic programs, vocational undergraduate education is more directly linked to industrial needs and places greater emphasis on technical competence, applied knowledge, and workplace readiness. In this sense, it also helps bridge the long-standing divide between vocational and general higher education.

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1.2. Historical Background of Reform

The development of vocational undergraduate education in China has moved from limited experimentation to gradual institutionalization. In the late 1980s and early 1990s, some higher vocational colleges began to explore upgrading to the undergraduate level. At that stage, however, vocational undergraduate education faced several problems, including narrow training models, weak links to social demand, and insufficient cooperation between schools and enterprises [3].

A major turning point came with the promulgation of the Vocational Education Law in 2006, which provided a legal basis for the development of vocational education. Later, the National Medium- and Long-Term Education Reform and Development Plan Outline (2010–2020) reaffirmed the importance of vocational education and emphasized the cultivation of application-oriented technical talent [4].

Subsequent policy documents further pushed reform forward. The 2014 Implementation Plan for National Vocational Education Reform highlighted the need to develop higher vocational education that serves national development and stressed industry–education integration, school–enterprise cooperation, and quality improvement. The 2019 reform package often referred to as the "Twenty Articles on Vocational Education" marked a new phase in vocational education reform [5]. In 2021, the Opinions on Promoting the High-Quality Development of Modern Vocational Education set a clearer expansion target by proposing that vocational undergraduate enrollment should account for at least 10% of higher vocational enrollment by 2025 [6]. This policy shift accelerated the establishment and expansion of vocational undergraduate institutions.

1.3. Main Goals of Current Reform

Current reform has several interrelated goals. First, it aims to improve talent cultivation by deepening cooperation between schools and enterprises and by strengthening the practical relevance of teaching. Second, it seeks to improve educational quality through stronger program development, better teaching, and more effective faculty support. Third, it aims to reduce the divide between academic credentials and vocational skills, creating more flexible progression pathways for students [7]. Fourth, it seeks to improve the policy and funding environment for vocational undergraduate education. Finally, it promotes international engagement through exchange, cooperation, and selective learning from international practice.

Taken together, these goals show that reform is not simply about institutional expansion. It is also about redefining the role of vocational undergraduate education within China's broader economic and educational transformation.

2. Current Problems in the Reform of Vocational Undergraduate Institutions

2.1. Misalignment Between Curricula and Market Demand

Curriculum design is central to the quality of vocational undergraduate education, yet in many institutions it still does not match the needs of employers [8]. Traditional vocational curricula often place insufficient emphasis on workplace application and current industry practice. As a result, graduates may have formal qualifications but still lack the competencies required in actual jobs.

This problem is especially evident in fast-changing sectors. In fields such as information technology and artificial intelligence, labor-market demand changes quickly, but curriculum revision often moves much more slowly [9]. Some institutions still rely on older content and fail to introduce new technologies, new work processes, and interdisciplinary skills in time. This weakens graduates' adaptability and employability.

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2.2. Weak Quality Assurance

A second problem is the weakness of quality assurance mechanisms. In many vocational undergraduate institutions, quality management remains fragmented and insufficiently systematic. This limits improvement in students' vocational competence, professional skills, and overall learning outcomes.

One issue is that evaluation systems are often incomplete. Although some institutions have introduced teaching assessment, many still lack clear standards and professional criteria. Assessment tends to focus on visible teaching activities—such as classroom hours or participation—rather than on outcomes such as employability, innovation, and digital competence. Another issue is weak internal coordination. Teaching units and administrative departments often work in parallel rather than collaboratively, which reduces the effectiveness of quality control measures [9].

2.3. Inadequate Faculty Capacity

Faculty development remains a major constraint. In particular, many vocational undergraduate institutions still lack enough dual-qualified teachers—that is, teachers with both academic knowledge and substantial industry experience [10]. Such teachers are especially important in vocational undergraduate education because the model depends on linking theory with practice.

At the same time, existing teachers often have limited access to high-quality continuing training. Some have not updated their teaching methods, industrial knowledge, or technical skills in line with recent developments. This directly affects instructional quality and weakens students' preparation for employment.

2.4. Diverse Market Demand and Delayed Policy Response

Market demand has become increasingly diverse under conditions of technological change and industrial restructuring. Vocational undergraduate institutions are therefore expected to respond to a wider range of occupations, industries, and skill profiles. In practice, however, policy adjustment and institutional reform often lag behind these changes.

Although vocational education policy has been updated frequently in recent years, support measures do not always keep pace with industrial transformation [11]. This is particularly clear in emerging sectors such as artificial intelligence and big data, where industrial demand has expanded rapidly but institutional adjustment remains slow. As a result, program design, course delivery, and employment guidance are often less responsive than they need to be.

3. A Framework of Policy Support and Market Demand

The reform of vocational undergraduate institutions is shaped by two major forces: government policy and labor-market demand. Neither force alone is sufficient. Policy creates institutional direction, legitimacy, and resources, while market demand pushes institutions to adapt their programs, curricula, and training models. Reform is most effective when these two forces reinforce each other.

3.1. The Role of Policy Support

At the national level, vocational education has received sustained policy attention. Recent policy documents have given vocational undergraduate education a clearer institutional identity and a stronger reform mandate. In particular, the 2019 reform plan and the 2022 implementation scheme for industry–education integration have provided an explicit framework for development.

Local governments have also played an important role by adapting national priorities to regional industrial structures. Guangdong, for example, has linked vocational education reform

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to the development of the Guangdong–Hong Kong–Macao Greater Bay Area and has encouraged closer ties between institutions and local industries [12].

Policy support operates in three main ways. First, it defines strategic direction by clarifying the goals of talent cultivation and institutional development. Second, it provides financial support through special funds, incentives, and project-based investment. Third, it promotes industry–education integration by encouraging school–enterprise cooperation and applied training.

3.2. Industry – Education Integration as a Policy Focus

Industry–education integration has become one of the core themes of vocational education reform. One important dimension is faculty policy. National policy encourages institutions to recruit industry experts, enterprise mentors, and technical specialists so as to strengthen the dual-qualified teaching workforce [13]. This is especially important in emerging industries and highly technical fields.

A second dimension is school–enterprise cooperation. Through funding support, tax incentives, and institutional guidance, policy encourages enterprises and institutions to jointly design training plans, build practice bases, and participate in collaborative innovation [14]. These arrangements are intended to improve both employability and technological relevance.

A third dimension is innovation. Policy increasingly expects vocational institutions not only to teach existing skills, but also to participate in technological application and local innovation. This places higher demands on curriculum design, teaching methods, and institutional capacity.

3.3. Changes in Market Demand

Market demand has shifted from a narrow focus on operational skills to a broader demand for innovative, cross-disciplinary, and adaptable talent. Employers increasingly expect graduates to have technical competence, digital literacy, communication skills, and the ability to respond to changing work environments [15].

This shift means that vocational undergraduate institutions must move beyond traditional training models. Reform on the supply side of education should therefore focus on improving the quality, structure, and responsiveness of educational provision. This includes more tailored programs, more flexible curricula, and stronger links between training and industry demand.

3.4. Supply-Side Reform in Education

Supply-side reform in vocational education requires institutions to reallocate resources and redesign teaching more effectively. In practice, this means updating curricula in line with industrial change, expanding practical teaching, and building stronger pathways for lifelong learning.

Institutions need to introduce new content in areas such as artificial intelligence, big data, and the Internet of Things. They also need to strengthen internships, project-based learning, and enterprise-based practice so that students develop real problem-solving ability [16]. In the longer term, vocational education also needs to be linked to continuing education and lifelong learning, since technological change makes one-time training insufficient.

3.5. Industrial Upgrading and Emerging Sectors

As China moves from traditional manufacturing toward advanced manufacturing, high technology, and service-sector growth, vocational undergraduate education must adjust accordingly. In manufacturing, this means preparing students for intelligent manufacturing, robotics, and related fields. In services, it means preparing students for more knowledge-intensive and skill-intensive roles in finance, healthcare, education, and other sectors.

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Emerging industries such as artificial intelligence, big data, and the green economy are especially important in this transition [17]. Vocational undergraduate institutions therefore need to update programs, redesign courses, and improve teaching methods so that graduates can work effectively in these sectors.

4. Reform Pathways and Strategies

To respond to economic restructuring and labor-market change, vocational undergraduate institutions need a clearer reform agenda. The key priorities include stronger policy implementation, deeper school–enterprise cooperation, curriculum renewal, more effective quality assurance, more flexible training models, and improved faculty development.

4.1. Policy-Led Institutional Reform

Institutional reform needs to build on existing national and local policy support. One priority is program restructuring. Institutions should revise existing programs and establish new ones that correspond to industrial development, especially in areas such as artificial intelligence, big data, the green economy, and digital media-related fields.

A second priority is more diversified institutional provision. Vocational undergraduate institutions should expand beyond traditional full-time degree delivery and explore school–enterprise cooperation, continuing education, and social training [18]. This would improve institutional flexibility and better connect institutions with broader labor-market needs.

A third priority is the effective use of policy-based funding. Public support for reform, innovation, and industry–education integration should be used to improve teaching conditions, support distinctive programs, and expand development capacity. Finally, institutions should strengthen internal quality systems so that policy goals can be translated into better teaching and learning outcomes.

4.2. Deepening School – Enterprise Cooperation

School–enterprise cooperation remains the most direct way to improve the practical relevance of vocational undergraduate education. One basic approach is the joint construction of training bases, which allows students to learn in more realistic technical environments. Another is joint participation in enterprise research and development, which connects institutional knowledge with real production needs and can support innovation [19].

A further step is targeted talent cultivation. Institutions and enterprises can jointly develop programs, customized classes, or order-based training models so that students are prepared for specific occupational roles. Enterprises can also participate more directly in curriculum design, ensuring that teaching content reflects actual technological change and workplace practice.

4.3. Optimizing Curriculum and Program Design

Curriculum reform should respond more quickly to industrial change. Institutions need to introduce new content related to digital technology, artificial intelligence, the Internet of Things, and other emerging fields. At the same time, they should strengthen interdisciplinary program design, since many new occupations require integrated knowledge across computing, engineering, management, and communication [20].

Just as importantly, theory and practice need to be more effectively combined. More practical components—such as labs, internships, simulated projects, and enterprise case analysis—should be built into the curriculum so that students can develop stronger workplace competence.

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4.4. Strengthening Quality Assurance

Quality assurance needs to move beyond formal monitoring and become more outcome-oriented. Institutions should establish clearer systems for monitoring teaching quality, evaluating student outcomes, and identifying weaknesses in program delivery. External evaluation can play a useful role, but internal coordination is equally important.

Enterprise feedback should also be incorporated more systematically. Employers' assessments of graduates can provide institutions with direct evidence on whether curriculum content, training methods, and skill outcomes actually match labor-market expectations.

4.5. Market-Oriented Reform

Vocational undergraduate institutions also need more flexible training models. Credit systems, modular teaching, and differentiated learning pathways can help institutions respond to both market change and student diversity [21]. These approaches may also improve the adaptability of vocational undergraduate education in emerging sectors.

Faculty development is equally important. Institutions need stronger support for teacher training, more opportunities for teachers to gain industry experience, and more flexible mechanisms for bringing enterprise experts into teaching. Recruitment standards should also place greater value on professional experience, not just academic credentials.

Finally, joint school–enterprise training models should be further developed. Co-built training platforms, collaborative projects, and joint innovation activities can strengthen students' practical capacity and improve the transition from education to employment [22].

5. Conclusion

This paper has examined the reform of China's vocational undergraduate institutions from the perspective of two interacting drivers: policy support and market demand. It argues that although vocational undergraduate education has expanded quickly, major problems remain, including outdated curricula, weak quality assurance, insufficient dual-qualified faculty, and slow responses to industrial change.

The future of vocational undergraduate reform depends on whether institutions can better connect policy goals with labor-market needs. This requires deeper industry–education integration, stronger curriculum renewal, improved faculty capacity, and more effective institutional quality assurance. If these issues are addressed more systematically, vocational undergraduate education will be better positioned to support China's industrial upgrading and workforce development.

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