

Research on the Challenges and Countermeasures of Undergraduate Vocational Education in China

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Abstract: Undergraduate vocational education represents a significant innovation within China's education system, aimed at cultivating high-level technical and skilled talents to meet the modern economy demand for skilled and application-oriented professionals. Drawing on a review of domestic and international literature on undergraduate vocational education, this paper analyzes the issues and challenges in curriculum design, school-enterprise cooperation, faculty development, and quality assurance, proposing corresponding optimization strategies.

Keywords: Undergraduate vocational education; curriculum system; school-enterprise cooperation; "dual-qualified" teachers; quality assurance.

1. Research Background

The emergence of undergraduate vocational education in China has a profound policy foundation. The 2019 National Vocational Education Reform Implementation Plan explicitly stated that vocational education and general education hold equal importance. The expansion of vocational education from secondary and junior college levels to the undergraduate level reflects China's growing emphasis on this sector. As China's economic structure upgrades, the demand for high-level technical and skilled talent, particularly in advanced manufacturing and emerging industries, is increasing. Undergraduate vocational education, with its focus on skill development, aligns closely with the needs of the modern economy, supporting the cultivation of high-quality, application-oriented professionals essential for national economic growth.

Internationally, models such as Germany's universities of applied sciences, American community colleges, and Japan's universities of technical sciences have achieved positive results in undergraduate vocational education. These countries have accumulated substantial experience in curriculum design, school-enterprise collaboration, and teaching methodologies, offering valuable insights for China.

2. Current status of research in China and abroad

In China, research on undergraduate vocational education primarily focuses on its necessity, curriculum system, and school-enterprise collaboration. Vocational education curricula should prioritize employability, aligning teaching content with skill requirements to create an applied curriculum that meets market demands. The Ministry of Education's "1+X" certificate system emphasizes technical skill development, aiming to promote vocational education reform through a model of "academic certification + multiple vocational skill certificates." However, practical implementation reveals challenges such as an imbalance between theoretical and practical content and outdated materials. In school-enterprise collaboration, while many institutions have attempted partnerships with businesses, these efforts often lack depth, with cooperation mainly

limited to internships rather than substantive resource-sharing and co-training models^[1-2].

Internationally, Germany's dual education model emphasizes theory-practice integration, where students engage in hands-on experience through job placements and rotations within enterprises. American community colleges focus on short, two-year programs and various certification options, equipping students with industry-specific skills to meet immediate workforce demands. Japan's technical universities emphasize innovation and blend practical and theoretical learning^[3-5].

3. Issues and Challenges

1) Inflexibility in Curriculum Design

The curriculum systems in many current vocational institutions fail to fully meet industry needs, often with overly simplified content, a heavy emphasis on theory, and insufficient practical training. Although the "1+X" certificate system is in place, the certificate training content has not been effectively integrated with academic courses, resulting in a disconnect between students' skill acquisition and actual industry requirements.

2) Shallow School-Enterprise Cooperation

School-enterprise partnerships in undergraduate vocational education still face numerous issues. Cooperation models in some colleges are superficial, with limited substantive engagement. Many partnerships only provide internship opportunities without involving enterprises in curriculum design or instruction. This lack of incentive mechanisms for enterprises to participate in talent development results in cooperation at a basic level, offering students minimal practical job training and hands-on experience.

3) Shortage of Qualified Teaching Staff

A significant barrier in developing undergraduate vocational education is the lack of "dual-qualified" instructors—teachers with both academic and industry expertise. Many faculty members come from academic backgrounds and lack industry experience, and issues such as low salaries and limited promotion opportunities further deter skilled professionals from entering the educational sector.

4) Incomplete Quality Assurance System

Quality assurance systems in undergraduate vocational education lack standardization, especially regarding course

quality monitoring and evaluation mechanisms. Some institutions lack effective feedback systems, making it challenging to adjust courses based on outcomes and employer input. Furthermore, discrepancies in student quality add complexity to quality assurance efforts.

4. Development Suggestions and Optimization Strategies

1) Establish a Comprehensive Curriculum System

Curriculum design should emphasize both practicality and professional adaptability. A modular approach can help integrate core, elective, and practical courses with certification training. For example, a three-tiered curriculum structure- “fundamental courses + core professional courses + certification courses”-can be developed to meet industry demands, ensuring both scientific rigor and practical relevance.

2) Deepen School-Enterprise Cooperation

Introducing profit-sharing mechanisms can encourage enterprises to engage in talent development comprehensively. Specific measures might include establishing joint training bases, co-building laboratories, and collaborating on R&D projects. Drawing from Germany’s dual model, universities might invite industry experts as adjunct instructors or send teachers to work on industry projects, fostering in-depth integration.

3) Enhance “Dual-Qualified” Faculty Development

“Dual-qualified” faculty are essential for effective vocational education. It is advisable to support teachers in gaining industry experience through policy and financial incentives. Colleges could also collaborate with industry associations to bring in expert instructors or establish part-time positions across academia and industry, thereby boosting the practical skills of teaching staff.

4) Improve the Quality Assurance System

A systematic quality assurance framework should encompass curriculum design, teaching implementation, school-enterprise cooperation, and outcome feedback. Regular multidimensional evaluations based on course quality and employment outcomes can help optimize curricula. Third-party institutions could provide objective assessments, offering guidance for continuous improvement.

5) Policy Support and Resource Investment

Government policy should bolster vocational education, providing dedicated funds for school-enterprise projects and “dual-qualified” teacher training. Policies that promote regional collaboration between colleges and local industries can also facilitate resource-sharing and foster mutual benefits.

5. Conclusion

Undergraduate vocational education in China has significant growth potential, yet faces challenges in curriculum design, school-enterprise collaboration, faculty development, and quality assurance. By optimizing curriculum structures, enhancing partnerships with enterprises, improving faculty practical capabilities, and strengthening quality assurance, the quality of undergraduate vocational education can be elevated, effectively supporting the economic growth of China.

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