

Research on Innovation of Running-school Mode of Application-oriented Higher Learning Institutions

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Abstract: The rapid development of socialist market economy and the continuous upgrading of industrial structure make talent "supply" reform an inevitable requirement to adapt to and lead the new practice of economic development. At the same time, application-oriented universities and colleges is facing both opportunities and challenges for talent cultivation. To solve the imbalance of supply, applied universities need, under the leading of the view of application, and with modern industry elite talent training as target and tenet, to innovate education mode, set up the modern industry and modern industry research institute, strengthen students' professional consciousness and practice ability so as to produce more applied talents needed for economic and social development and finally take the road to integration of industry and education, collaborative education.

Introduction

With the continuous improvement of China's socialist market economic system and the popularization of the development trend of higher education, the multi-level specifications of talent training have put forward new objective requirements for the current mode of running higher education. The issue of a series of policy documents, including "Decision on Accelerating the Development of Modern Vocational Education", "Several Opinions on Deepening the Integration of Industry and Education", and "Guidelines for the Construction of Modern Industrial Colleges (Trial)" indicates that the Chinese government and higher education circles have also given sufficient policy support to the reform and innovation of the mode of running application-oriented colleges and universities. We will guide a large number of non-research-oriented universities to transform into application-oriented universities^[1]. The cooperation between colleges and universities and modern industrial enterprises to cultivate high-quality multi-level talents is not only a choice of application-oriented college talent training mode, but also a requirement of national education strategy.^[2]

1. The Necessity of the Mode Innovation of Application-oriented Colleges and Universities

Local application-oriented colleges and universities shoulder the mission of training innovative and entrepreneurial talents for local economic and social development. The cooperation between colleges and universities and modern industrial enterprises in running schools is not only the focus of the theoretical system of modern higher education, but also one of the emphases of the construction of curriculum structure. The cooperation between applied universities and modern industrial enterprises in running schools is the best way for all stakeholders to interact and benefit each other in terms of consolidating theoretical teaching achievements and cultivating students' innovation and entrepreneurship ability and pioneering spirit. It plays an irreplaceable important role for universities, modern industries and students.^[3] However, there are still many problems in the implementation process of innovating the school-running mode and cooperating with some specific modern industries, and the implementation effect is not ideal.

1.1. Application-oriented Universities Lack Experience in Running Schools, and Their Orientation is Vague

The "new university" of applied undergraduate university, which rises with the popularization of higher education, is basically an undergraduate university formed by the merger and upgrading of the original junior college. Because of short set-up time, no practice, not finding out the key contradictions of the transformation of an applied university, not clear development orientation, ignoring the regional characteristics, advantageous disciplines, application-oriented universities blindly imitate the previously established undergraduate in pursuing the number of master's doctoral degree setting, papers number, national projects number, so as to weaken their ability of serving local economic construction.

1.2. The Transformation of Colleges and Universities Is Not In-Depth Enough, and the Process Becomes A Mere Formality

In the context of higher education in China, some colleges and universities copy the transformation experience of other domestic and foreign colleges and universities in the process of transforming into application-oriented colleges and universities without considering the basic conditions of school running, which cannot serve the social and economic development of the region. As a result, the transformation of colleges and universities is not in-depth enough and becomes a mere formality.

1.3. The Depth of School-Enterprise Cooperation Is Not Deep Enough and the Combination with Local Economy is Not Close Enough

The transformation of application-oriented universities is to better serve the development of local economic industries, and colleges and universities cooperate with modern industrial enterprises to educate people, and jointly commit to promoting the long-term development of local economy and society. But, in fact, the practical transformation of local colleges and universities and the development of local economy is not quite close together, which makes research cooperation not in-depth. Applied universities' cooperation with local governments and enterprises is only focused on enterprises providing internships for college students, rather than the enterprise technical staff to teach at colleges and universities. College and university teachers bring students into enterprise practice just as a temporary field work, instead of students' really learning the technical skills. In the process of school-enterprise cooperation, no research has been carried out on the development of professional talent training programs and curriculum reform.^[4]

1.4. The Talent Training Mode of Application-oriented Universities Needs to be Innovated

Most application-oriented universities still maintain the traditional teaching mode, only limited to teaching materials, books and theoretical knowledge learning in class, while ignoring the cultivation of students' application ability and the connection between curriculum and job requirements, resulting in the disconnection between theory and practice, seriously hindering the cultivation of application-oriented talents.^[5] Eventually, it will cause problems such as talent backlog and difficult employment for graduates.

2. Innovation Model of Application-oriented University Running Mode

To fundamentally solve the above problems, application-oriented universities need to take innovative school-running models as a breakthrough point, closely integrate with the needs of modern industries, create a new mechanism for universities and modern industrial enterprises to jointly cultivate talents, and implement and promote the modern industry research institute and modern industry. The establishment and development of the college further deepen the exploration and practice of the school-running model.^[6] The innovation model of application-oriented universities and colleges is shown in Figure 1.

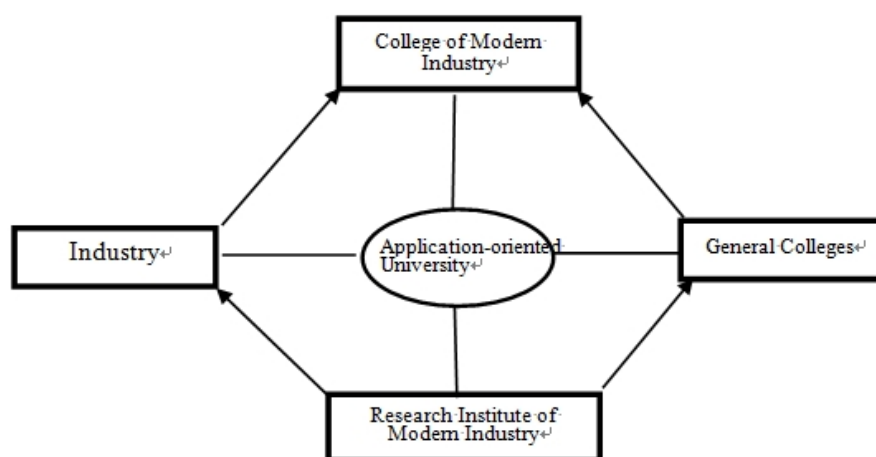


Figure 1. Model of application-oriented universities

2.1. Application-oriented Universities and Modern Industry Cooperate in Running Schools, and Jointly Establish A Modern Industry College

The modern industry college refers to a school-running institution established in cooperation between an applied university and a certain modern industry(s). It adopts a "four common" operating mechanism, that is, "jointly formulating training plans, setting up curriculum systems, forming a team of teachers, and choosing "Practice training base" is mainly responsible for exporting high-quality applied talents for regional economic development.^[7]

2.1.1. The School and Modern Industry Jointly Develop A Training Plan

Application-oriented universities should implement the talent training method of "close school-enterprise cooperation, industry-university collaborative education" based on the characteristics of professional talent training and local market needs, and jointly formulate various professional application-oriented talent training programs with relevant modern industries. Cultivate a group of high-level professional talents with all-round quality and application-oriented, and actively build a school-site, school-run, school-enterprise industry-university-research cooperation platform.

2.1.2. The School and Modern Industry Jointly Set up A Curriculum System

The curriculum system determines the level, specifications, and types of talent training. Local undergraduate colleges and universities should reconstruct a curriculum system that focuses on professional knowledge and competence in accordance with the needs of modern industries for relevant professionals and the specifications of talent training in universities. In addition, it is necessary to set up relevant professional courses across majors from the perspective of major categories, and establish a "multi-level platform + professional module" curriculum system with practical ability, practical knowledge, and practical spirit.

2.1.3. The School and Modern Industry Jointly form A Faculty Team

Application-oriented universities need to have a team of "dual instruction and dual abilities" teachers who both possess professional knowledge and are familiar with technical business. This team is not only able to impart basic professional knowledge, but also familiar with job operations. Through the mechanism platform of the modern industry college, university teachers can directly participate in the production practice of enterprises, thereby helping enterprises to solve some practical technical difficulties in daily production, and school teachers can also use this opportunity to continuously improve and exercise themselves; modern industry experts and technical experts can also participate in teaching to make students' skill training and professionalism more specific. Moreover, the interactive exchanges between college theoretical teaching and modern industry experts will also promote the development of modern industries.

2.1.4. The School and Modern Industry Jointly Choose Practicum Bases

Application-oriented colleges and universities encourage all teaching units on campus to actively contact local enterprises and institutions, select cooperative enterprises, establish strategic partnerships, and jointly establish training bases with well-known enterprises in modern industries. At the same time, strengthen the construction of off-campus practicum bases.

2.2. On the Basis of Running Schools in Cooperation with Modern Industries, Application-oriented Universities Set up Modern Industry Research Institutes

The modern industry research institute refers to the establishment of a school-level research institution dedicated to the research of a certain modern industrial technology in a university. The institution introduces high-level modern industrial researchers on demand, outputs scientific research results, and applies them to the school's discipline and professional construction.

The establishment of the modern industry research institute can provide in-depth services to modern industries, provide a research basis for students' modern industrial skills training, and build a mechanism platform for application-oriented universities to introduce high-level talents.

2.2.1. Modern Industry Research Institute Exports Technology to Modern Industry

The modern industry research institute obtains economic returns by exporting technology to modern industries, retains high-level talents, and creates economic benefits for modern industries by solving practical problems in the production process of modern industries. At the same time, it obtains returns and enriches school funding, so as to better provide students with a variety of theoretical and practical teaching to meet social needs, to improve students' employment competitiveness, and solve the overflow of existing human resources.

2.2.2. The Modern Industry Research Institute Outputs Academic Results to General Colleges

The research results of the modern industry research institute are not only delivered to relevant modern industries, but also to other ordinary colleges in the university. The ordinary colleges adjust the curriculum system in a timely manner according to the social and economic development, and promote the reform of the subject and professional curriculum system.

3. Conclusion

School-enterprise cooperation is not only the main way for the transformation and development of local application-oriented universities, and the promotion of the cultivation of applied talents, but also the main method of teaching reform, and it is the country's strategic measure to accelerate the development of modern vocational education.^[8] Application-oriented universities set up the modern industry research institute to study modern industry theories and technical knowledge, and adapt to the characteristics and needs of modern industry from teacher reserves, curriculum settings and talent training methods. This is the basis for effective training of modern industry talents. The establishment of a modern industry college to strengthen the characteristics of modern industry can rely on the modern industry research institute to set up specific majors and curriculum plans to guide students and cultivate professional abilities. In fact, the talent training model of modern industry colleges should be regarded as a kind of elite education and a school-running model for cultivating modern industry elites.

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References

[1]Luo Gaoyong, Zhang Jin: Research on the Cultivation Mode of Engineering Application Talents Based on CDIO Mode for School-Enterprise Cooperation in Running Schools. [J]. Higher

Education Exploration. 2011. (5)

[2]Wang Qinglin. Some thoughts on the training mode of innovative and applied undergraduate talents[J]. China University Teaching 2013(6): 20-23.

[3]Meng Ziyuan, Long Zhongmin. Thoughts on the transformation of ordinary universities in my country [J]. Scientific Consultation: Science and Technology Management, 2014 (12): 7-8.

[4]Cao Dan. From "school-enterprise cooperation" to "integration of production and education"—Confusion and reflections on the application-oriented undergraduate colleges and universities in promoting the deep integration of production and education[J]. Tianzhong Journal, 2015, 30(01): 133 -138.

[5]Liu Yourong, Xiang Guie, Wang Jiancheng. Research on the integration mode of production and education in applied undergraduate colleges and its influencing factors[J]. China Higher Education Research, 2015(5): 64-68.

[6]Feng Jianye, Yan Xiliang. Analysis on the cultivation of applied talents in local universities under the integration of production and education[J]. Science and Technology of Chinese Universities, 2016(5): 47-49.

[7]Wang Yuping. Discussion on the "integration of production and education" mode in local applied undergraduate colleges [J]. Educational Modernization, 2016(20):93-95.

[8]Xu Gongfen, Jiang Chengjie. The practice of system construction of school-enterprise cooperation in higher vocational colleges [J]. China Vocational and Technical Education. 2017. (7)