

Research on the Development of Higher Vocational Education in China in the 21st Century*

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Abstract—Since the 21st century, China's higher vocational education has developed rapidly. The surge in "quantity" has not improved the "quality" simultaneously. Instead, many disadvantages such as unclear positioning of higher vocational education, insufficient teachers, and lack of characteristics have appeared. The author attempts to use the "Evolutionary Education Theory" to analyze the current situation of higher vocational education in China and find out the root cause of the problem, thereby exploring effective countermeasures.

Keywords: 21st century, Evolutionary Education Theory, higher vocational education, reform countermeasures

I. INTRODUCTION

From the establishment of vocational universities in early 1980 to the present, China's higher vocational education has gone through a development process of nearly 40 years. In 1996, the National People's Congress passed and promulgated the Vocational Education Law of the People's Republic of China, which legally determined the status of higher vocational education in the Chinese education system. In 1999, when the National Education Work Conference was held, the central government put forward the work requirement of "striving to develop higher vocational education", and China's higher vocational education has entered a new historical stage of vigorous development. Among them, the rapid development of higher vocational education has played a fundamental and decisive role.¹ According to the "2018 National Statistical Bulletin on the Development of Education" issued by the Ministry of Education on July 24, 2019, a total of 3,833 million people are studying in various types of higher education, and the gross enrollment rate of higher education has reached 48.1%. There were 2,663 colleges and universities in China (including 265 independent colleges), an increase of 32 from the previous year and an increase of 1.22%. Among them, there were 1,245 undergraduate colleges, an increase of 2

over the previous year; 1,418 higher vocational (junior college) institutions, an increase of 30 over the previous year. There are 277 adult colleges and universities nationwide, a decrease of 5 from the previous year; 815 graduate training institutions, of which 580 are regular colleges and universities and 235 are scientific research institutions. The average size of colleges and universities is 10,605 people, of which 14,896 are undergraduate colleges and 6,837 are vocational colleges.² Official data show that higher vocational education has taken up half of China's higher education, and China's higher vocational education is ushered in an unprecedented period of development.

II. THE PRACTICAL PROBLEMS OF HIGHER VOCATIONAL EDUCATION IN CHINA

A. *The insufficient software and hardware for professional education is a "common problem" that hinders the development of higher vocational education*

Colleges and universities have expanded their enrollment significantly since 1998, making preparations unable to keep up with the needs and serious shortage of school investment. Almost all colleges and universities enrolling higher vocational students have problems to varying degrees in terms of teachers, experimental training conditions, internship bases, teaching training programs, curriculum settings, and construction of teaching materials and so on. Higher vocational education trains applied talents and it has high requirements for the simulation and advanced nature of teaching equipment. Insufficient funding sources, especially insufficient government investment, restrict the realization of higher vocational education goals.

B. *The higher vocational education talent training positioning is unclear*

In order to implement the "Decision of the State Council on Accelerating the Development of Modern Vocational Education" and the relevant requirements of the National People's Congress Standing Committee Law on Vocational

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¹ Encyclopedia. Higher Vocational Education [EB / OL]. <http://baike.baidu.com/view/661870.htm?fr=aladdin>.

² Government portal website of the People's Republic of China. Development statistics bulletin on National Education Development in 2018 [EB / OL]. http://www.moe.gov.cn/jyb_sjzl/sjzl_fztjgb/201907/t20190724_392041.htm.

Education Law Enforcement Inspection to promote the innovation and development of higher vocational education, the Ministry of Education has formulated the "Action Plan for Innovative Development of Higher Vocational Education (2015-2018)". The "Plan" clearly states that China's higher vocational education should be guided by Deng Xiaoping Theory, the important thinking of the "Three Represents," and Scientific Outlook on Development. It should effectively implement the spirit of General Secretary Xi Jinping's important instructions and serve the "four comprehensive" strategic layout and innovation-driven development strategy. It is based on strengthening moral education and cultivating people, takes service development as its purpose, takes promoting employment as the orientation, insists on adapting to needs, faces everyone, adheres to the integration of production and education, school-enterprise cooperation, adheres to the combination of work and study, insists the unity of knowing and doing, promotes the simultaneous development of higher vocational education and economic society, strengthens the accumulation of technical skills, improves the quality of talent training, and provides a solid foundation for achieving the "two centenary goals" and a solid talent guarantee for the realization of the Chinese dream of the great rejuvenation of the Chinese nation.³

At present, some higher vocational colleges still use the discipline-based curriculum system and curriculum format in their professional training programs; in teaching, they still take teaching theoretical knowledge as the core of the curriculum, and the competency-based curriculum model basically remains at the conceptual level. The shadows of "extension of technical secondary school" and "compression of undergraduate school" are lingering, and the characteristics of higher vocational education are not reflected in the teaching practice process; in the curriculum setting, it emphasizes the rigorous, complete, systematic and authoritative of the curriculum itself, neglects the needs of learners' future positions, neglects the cultivation of students' application ability and innovation ability; the understanding of the "technical application" and theoretical "necessary and sufficient" principles of higher vocational education is simple and one-sided; the teachers of the courses do not have a practical understanding of the development of the industry in China and foreign countries, and lack practical experience.

C. The lack of "double-professionally-titled teachers" hinders the improvement of education and teaching

Double-professionally-titled teachers are the characteristics and focus of the construction of higher vocational education teaching staff. Vigorously strengthening the construction of "double-professionally-titled" teaching staff has become the common voice of

society and education.⁴ However, at present, China's higher vocational colleges generally lack "double-professionally-titled teachers", and it is difficult to reflect the characteristics of higher vocational colleges. The main reason is that the Chinese universities have always adhered to "one-size-fits-all" teacher promotion standards, focusing on academic qualifications and academic standards, and ignoring practical abilities, which is obviously not conducive to the training and construction of "double-professionally-titled teachers" in higher vocational colleges.

D. The operating mechanism of mutual benefit and symbiosis between professional construction and industry enterprises has not yet been formed

At present, the economic and social functions of vocational education are relatively weak, and there is a lack of a virtuous interaction and mutually beneficial symbiotic operation mechanism between industries and industries, and between enterprises and vocational education, and there is a serious disconnection phenomenon. From the perspective of vocational education, the professional talents cultivated in some higher vocational colleges at this stage are not consistent with the employment requirements of their corresponding industries and are not closely integrated with the industry; the functional positioning of higher vocational colleges is not scientific enough, and the employment-oriented and ability-oriented goal orientation is not obvious.⁵ From the perspective of industry and enterprises, the enthusiasm of industry enterprises for participating in and holding higher vocational education is not high, coupled with the poor implementation of the employment admission system, and has affected the healthy development of higher vocational education to a certain extent.

III. USING "EVOLUTIONARY EDUCATION THEORY" TO ANALYZE THE COUNTERMEASURES OF CHINA'S HIGHER VOCATIONAL EDUCATION DEVELOPMENT AND REFORM

On the basis of summarizing his many years of education practice, Professor Tu Hongbin, the former president of Wuhan International Trade University, has the courage to break through the traditional way of thinking in education theory to create a brand-new pedagogy concept — Evolutionary Education Theory from the perspective of the integration of natural sciences and humanities and from systems theory and general evolution theory. It is also the basic school running philosophy of Wuhan International Trade University. In the academic book "Evolutionary Education Theory" formally published by Wuhan University Press in December 2012, Tu Hongbin proposed that the "Evolutionary Education Theory" is precisely produced in the practice of the development and reform of higher vocational education in China. The environmental selection principle, the principle of autonomous growth, and the

³ Government portal website of the People's Republic of China. Development statistics bulletin on National Education Development in 2018 [EB / OL]. http://www.moe.gov.cn/jyb_sjzl/sjzl_fztjgb/201907/t20190724_392041.html.

⁴ Encyclopedia. Double-professionally-titled teachers [EB / OL]. <http://baike.baidu.com/view/1254683.htm?fr=aladdin>

⁵ Li Maiqiang, Fang Fengling. Current Status and Reform Trend of Higher Vocational Education in China [J]. Vocational and Technical Education, 2005 (34): 17-19.

principle of hybrid advantage can be formulated and simply expressed as: Evolutionary Education Theory = (Environmental Selection Principle + Independent Growth Principle) × Principle of Hybrid Advantage.⁶ "Evolutionary Education Theory" also pointed out the direction of reform for how to effectively solve the practical problems faced in the development of higher vocational education in China.

A. The Environmental Selection Principle requires perfecting the software and hardware infrastructure of higher vocational education

In view of the characteristics of higher vocational education, in order to fully reflect that the "theories-sufficiency is limitation and practical teaching is the main factor" in teaching practice, the software and hardware infrastructure of higher vocational education must be improved. In terms of software, it is necessary to abandon the low-level model of simplified teaching of undergraduate theory, and to organize the compilation of special textbooks suitable for the academic situation of higher vocational students in combination with the teaching practice of higher vocational education; in terms of hardware, it is necessary to invest a certain amount of funds, combined with the setting of the professional curriculum system, increase the construction of professional internship training centers, and minimize the setting of pure theoretical courses, so that each professional course offered can be combined with practical training to train students' practical ability, so as to reflect the difference between vocational teaching in higher vocational education and theoretical teaching in undergraduate education.

B. The Independent Growth Principle requires a clear positioning of personnel training in higher vocational education

Higher vocational education trains high-quality application-oriented talents, and the positioning of higher vocational education personnel training must always be clear about this fundamental point. In the actual teaching process, the teachers should not be overcritical of how many professional theories the students must remember. Teachers need to combine theoretical teaching with practical operations, guide the practice with theory, focus on training students' practical exercises, and work hard to impart business skills to students, so as to achieve the goal of cultivating talents for each higher vocational student to possess the basic literacy and basic skills of industry professionals corresponding to their majors. Cultivating great country craftsmen in the new era is the inevitable trend and key to the development of higher vocational education in China in the 21st century.

C. The Principle of Hybrid Advantage requires a two-pronged approach of "bringing in and going out" to establish and improve a "double-professionally-titled teachers" teaching team

The key to the development of higher vocational education lies in the construction of professional teachers. At present, many professional teachers in many vocational colleges in China are mainly graduate students from colleges and universities. Although teachers are born in professional training classes and have a certain theoretical knowledge reserve, the change from school to school and the change from students to teachers has led to a lack of practical experience for young teachers, which has also become a common problem in the construction of higher vocational education teachers. The teacher's own knowledge of the relevant industries is based on theoretical knowledge and lacks practice, therefore, it is impossible to impart relevant professional skills to students in the teaching process. This drawback is very obvious.

The development of higher vocational education must rely on the construction of a "double-professionally-titled teachers" team. To change the current teachers' problem, it is needed to start from two aspects at the same time: first, all higher vocational colleges should introduce relevant systems, requiring on-the-job professional teacher to go to relevant profession enterprise or public institution to take a temporary post regularly to steel themselves, and learn the professional skills and operating models of industry companies in work practice, which should serve as an important basis for personnel assessment and promotion of professional titles. It is also necessary to commend teachers who have performed outstandingly in their units and form incentive mechanisms. Secondly, by using various channels, qualified professionals from industry companies need to be introduced as course teachers of the corresponding majors of the school to promote the reform of teaching practice, and professional teachers and external teachers of the school should be organized to exchange and learn with each other in various forms.

D. Gradually improving the teaching mode of "combination of work and study", "order training" school-enterprise cooperation mode, and practicing "Evolutionary Education Theory"

Higher vocational education should take the needs of related industries as the direction of teaching reform, reduce or eliminate courses that are too theoretical and realistic, and the core professional curriculum should focus on skills development. The professional curriculum system should be dynamically adjusted with the development of the corresponding industry, and the curriculum setting should even be forward-looking and predictable. In order to more accurately grasp the needs of the industry, employers can be invited to participate in the construction of the curriculum system, and it is important to meet the requirements of the current industry employment ability standards as far as possible. Only by accurately grasping what kind of skilled talents the industry needs, students can be more welcomed

⁶ Tu Hongbin. Evolutionary Education Theory [M]. Wuhan: Wuhan University Press, 2012: 12.

by employers. Each professional course must pay attention to the combination of theory and practice. Practical class hours should account for more than half of the total class hours. It is necessary to gradually establish and improve the teaching mode of "combination of work and learning", so that students can achieve the role change from professional students to industry workers while they are in school, and they will be able to fulfill the job requirements upon graduation.

IV. CONCLUSION

In June 2014, the State Council issued the "Decision on Accelerating the Development of Modern Vocational Education" (hereinafter referred to as the "Decision"), and comprehensively deployed to accelerate the development of modern professional education. The "Decision" clarified the guiding ideology, basic principles, goals, tasks and policies and measures for accelerating the development of modern vocational education in the coming period. In the second key point of the "Decision", "Accelerating the Construction of a Modern Vocational Education System", it is clearly stated that it is necessary to "innovate development of higher vocational education"; it specifically requires that "professional higher vocational colleges should closely cooperate with industry, universities, and research institutes to cultivate technical and technical personnel serving regional development".⁷ Therefore, all majors in higher vocational colleges should vigorously carry out school-enterprise cooperation, establish an entire process of "order training" cooperation mode, and take the needs of relevant industries and enterprises as the teaching goal, so that employers can participate in professional education in all aspects. For example, schools and enterprises work together on professional higher vocational teaching materials, schools establish "double-professionally-titled teachers" classes for professional correspondence industry enterprises and the on-campus training base and off-campus practice unit jointly carry out practical teaching, etc. to create a scientific development approach of "integration of production, teaching and research" with higher vocational education characteristics. Higher vocational education should take into account the actual situation of the school, adopt a variety of effective methods, and strive to create a new professional vocational education centering on "talents as the center, employers' satisfaction as the standard". It not only supplies qualified high-quality professional skills application-oriented talents for corresponding industry enterprises, but also solves the practical pressure of vocational students' difficult employment, and truly realizes the win-win situation of school-enterprise cooperative development. Only in this way, the goal proposed by the "Decision" — "By 2020, the deep integration of production and education that suitable for the development needs, the integration of secondary vocational and higher vocational education, the communication between

vocational education and general education, and a modern vocational education system embodying the concept of lifelong education with Chinese characteristics and world-class standards", can be truly realized.

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⁷ The State Council. *Decision on Accelerating the Development of Modern Vocational Education* [EB / OL]. http://www.moe.edu.cn/publicfiles/business/htmlfiles/moe/moe_1778/201406/170691.html