

The Characteristics of the Curriculum in China's Vocational and Technical Normal University and the Enlightenment From the Abroad

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Abstract

The vocational and technical normal university is the mainstay to cultivate vocational education teacher. The author reviews the history of development of the vocational and technical normal university, analyzes the characteristics of the curriculum, and uses the experience of special courses in cultivating vocational education teacher from the Germany, Japan and Australia to consummate related courses in China. Tianjin University of Technology and Education, famous for the cradle of cultivating vocational education teacher in China, initiates the mode of double certificate system and the integration in cultivating vocational education teacher, from which the development prospect of China's vocational education teacher training is been found.

Key words: Vocational and technical normal university; Vocational education teacher; Curriculum; Special course

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INTRODUCTION

The vocational and technical normal university is to cultivate a vocational education teacher, and it is the new type of higher college, which is different from the ordinary higher normal college. The vocational and

technical normal education has three traits: normal, occupational and technical traits. The occupational trait is the foundation; the technical trait is the key; and the normal trait is the guarantee. Besides, three traits are an indivisible organic whole and constitute the characteristics of higher vocational and technical normal education. What's more, cultivating the talents with double certificate and double skill is the core competence; attaching great importance to the construction of a training base and the cultivation of students' operational ability are important ways of talents training. Nowadays, vocational education in China really needs this kind of teacher, who can not only teach professional theory, but also can guide students' skill training.

1. THE HISTORY AND PRESENT SITUATION OF THE VOCATIONAL AND TECHNICAL NORMAL UNIVERSITY

In 1959, because of the lack of teachers in mechanic schools, the State Council set up four normal schools of mechanic education. After the Cultural Revolution, the State Council agreed to add four mechanic normal colleges. In 1985, the CPC central committee's decision on the reform of educational system put forward to vigorously develop the secondary vocational education, and a number of vocational and technical normal universities were established to solve the problem of the lack of teachers. From 1979 to 1988, the vocational and technical normal university experienced prosperity and development, and 12 independent vocational and technical normal universities were successively established. So far, there are 8 vocational and technical normal universities: Tianjin University of Technology and Education, Jilin Teachers Institute of Engineering and Technology, Jiangxi Science and Technology Normal University, Jiangsu University of Technology, Hebei Normal University of

Science & Technology, Guangdong Polytechnic Normal University, Henan Institute of Science and Technology and Anhui Science and Technology University.

Higher vocational and technical normal education is a new thing to China's higher education with a short history and slow development, and it's the weakest part in China's normal education system. In order to promote the stable development of the vocational and technical education, it is necessary to have relatively stable professions and teachers to guarantee the systematization and standard ability of the education teaching. Therefore, the way to cultivate the vocational and technical teachers should have its own comparatively independent higher vocational and technical normal education system, just like the ordinary normal education system.

2. THE CHARACTERISTICS OF THE CURRICULUM IN THE VOCATIONAL AND TECHNICAL NORMAL UNIVERSITY

According to the statistics in 2008, there are 11,744 all kinds of secondary vocational technical schools, and the student and teacher ratio is 25:1, which still has a big distance compared with the requirement 16:1 from the Ministry of Education's 11th five-year vocational education teacher's plan. It means 380,000 secondary vocational education teachers are needed in 2008. So the vocational and technical normal university should actively strengthen its main field to provide a large number of high-quality teachers for the secondary vocational education. Meanwhile, the vocational and technical normal university should emphasize the cultivation of the double-qualified teacher, who can not only engage in theoretical teaching, but also are competent for the practice teaching.

The classification of curriculum in vocational and technical normal university usually has two kinds like the classification of curriculum in ordinary normal university: based on the nature of curriculum, the curriculum is divided into general culture course, specialized course, pedagogical course and elective course; based on the function of curriculum, the curriculum is divided into basic course, specialized course and general course.

Moreover, the curriculum should adhere to the basic principles: profound foundation, wide scope, practical application, multi-direction and dynamicity. The profound foundation means to put special emphasis on the teaching time of basic courses, such as mathematics, English and computer, etc. to strengthen the construction of the main basic courses; wide scope means to introduce the system of major and minor. For instance, higher vocational normal education adopts double majors in Germany, which is worthy of learning. Students must complete double majors in school: one is the major and the other one is the minor. In this way, the students can broaden

their view of knowledge and meet the requirements of teachers' work in the future; practical application means to strengthen the cultivation of students' practical ability and application ability, especially the cultivation of students' innovative consciousness and innovative ability; multi-direction means to implement credit system. More modular elective courses should be provided to promote students' comprehensive development according to their own characteristics; dynamicity means the curriculum should have advancement and innovation to keep track of the latest development of the profession.

2.1 Pedagogical Course

In the vocational and technical normal university. a) students should learn educational psychology to master the foundation and basic skills of the educational psychology, and analyze the process of education and understand students' psychological characteristics from the perspective of psychology; b) students should learn vocational education to comprehensively understand the education and the teachers, and better fulfill the duties of teacher after graduation; c) students should learn teaching theories and methods of vocational high school to improve teaching efficiency and teaching quality systematically and effectively; d) students should learn professional morality of secondary school teacher to impart knowledge and educate people and become the model of students; e) students should learn introduction to education laws and regulations to master the laws and regulations of teacher occupation and be a qualified teacher knowing the laws and abiding by them. In order to be a qualified vocational education teacher, one must have a command of basic teaching skills, such as language expression ability, organization and management ability, guidance ability in the practice teaching, blackboard design ability, and multimedia teaching ability, etc..

Tianjin University of Technology and Education regularly holds the teaching competition and calligraphy competition to evoke students' enthusiasm to enhance their own comprehensive quality. Jiangsu University of Technology sets up the expansion credit and innovation credit to improve students' quality education and strengthen the cultivation of students' innovation ability. The expansion credit includes the modular credits in education teaching, skills, subject development and sports competition, etc. The innovation credit includes the credits in science competition, scientific research achievements, and invention, etc..

2.2 Specialized Course

Vocational and technical education has many kinds of professions. Vocational education teacher not only needs to master professional theory knowledge, but also pays attention to strengthen the cultivation of the professional practice ability. The course of theory teaching should control the depth and difficulty of

teaching, and strengthen the link between knowledge and application. It is advisable that the period of practice course should accumulate to one year and students should obtain corresponding advanced technician certificate and intermediate technician certificate in practice, which can provide students qualified practical ability in the future work. As to the choice of practice teaching material, it is suggested to choose occupational skill appraisal training book (advanced technician) of the ministry of personnel and ministry of labor. This teaching material is based on the national occupational standards and professional skill appraisal norms and is close to the reality of skills and many case studies. Besides, the teaching material is relatively simple and easy to understand when introducing the new knowledge and new technology.

In practice, in addition to train students' operational ability, vocational and technical normal university should arrange students to visit related factories according to students' professional direction. If conditions are permitting, students can work and learn in the daytime, and they should be organized to discuss in the evening. In this way, students can better link theory with practice.

In 1990, Tianjin University of Technology and Education established the system of double certificate and the mode of integration in cultivating vocational education teacher. Double certificate means that students get an graduation certificate and national vocational qualification certificate at the same time; integration means that graduates cannot only teach professional theory course, but also can guide students' professional skills training. The mode of double certificate and integration in cultivating vocational education teacher is the university's bold attempt, which reflects the characteristics of vocational education teacher and reflects the educational thought of linking theory with practice. In order to ensure the smooth implementation of the mode of double certificate and integration, the university carries out various reforms. This university develops different training plans and reforms the teaching content according to the technical school students and high school students. In 1996, the university has cultivated the first double high graduates, who have the bachelor's degree and senior professional qualification certificate at the same time. In 1997, the mode of double certificate and integration has won the first prize in national teaching achievement as a pioneering mode to cultivate vocational education teacher in China.

2.3 General Culture Course

The vocational and technical normal university should provide general courses, such as politics, English and Chinese, etc. to cultivate students' morality and humanity quality. Due to the particularity of vocational education teacher' work, English teaching should appropriately compress the basic English and increase the professional English reading and strengthen the cultivation of listening

and speaking ability, which are necessary for students when they operate imported equipment and read technical materials in the future work. Basic English should focus on the study of daily communication, commerce and law. What's more, the vocational and technical normal university can increase the courses of business, law and travel, etc. for art students based on the current course mode.

2.4 Elective Course

The characteristics and the core of cultivating vocational education teacher in vocational and technical normal university are to teach students in accordance with their aptitude. Some vocational and technical normal universities implement the system of major and minor, develop modular courses and set up a flexible credit system. Since 2009, Jiangsu University of Technology implements the credit system management and students can choose flexible length of schooling. Students can graduate one year ahead when they complete courses and meet the requirements of graduation according to the major teaching plan. At the same time, because of the difference of students' learning ability, the longest schooling can be up to eight years. On the one hand, the implementation of flexible length of schooling greatly improves good students' study enthusiasm; on the other hand, it also provides plenty of time to learn for the students who are unable to finish school within the given time.

Since 2008, Jiangsu University of Technology takes the lead in implementing credit bank system, and designs 5 types of success: type of education teaching, technology, subject development, research innovation and minor. This university encourages students to play their specialty to get innovative credits and expansion credits, which broaden students' road to success.

3. ENLIGHTENMENT FROM TRAINING COURSES OF VOCATIONAL EDUCATION TEACHER ABROAD

3.1 Germany: Strengthen the Practical Courses and Operational Ability

The advantage of the dual system of vocational education in Germany is the close combination between the study and work, between the school training and enterprise practice, which attracts tremendous attention from home and abroad. In Germany, it is not easy to be a teacher in vocational school. If one wants to be a teacher in vocational school, he needs to enter the university to study, experiences two years' internship, participates in and pass two national exams and has relative work experience. Most of German vocational education teachers are engineers and technicians with rich work experience

in enterprise. They enter the vocational and technical normal university to study relative courses after working for many years, which ensures that German vocational education teacher has strong practical experience. Therefore, the vocational and technical normal university in China should emphasize to cultivate students' practical ability.

Furthermore, combining the China's national conditions, in addition to strengthen the practical teaching, the university should actively encourage students to participate in technical grade exam to obtain the certificate through various channels. And the students should be encouraged to take part in the challenge cup extracurricular science and technology works competition for national college students, electronic design contest, etc. to improve students' operational ability.

3.2 Japan: Strengthen the General Courses

University of professional ability development in Kanagawa, Japan is a higher vocational and technical normal university under the management of Japan's labor ministry. The electronic technology profession in this university is the level of graduate, and the length of schooling is 4 years. Moreover, it recruits high school graduates and its training target is to cultivate the qualified teachers for the secondary vocational and technical schools and the training institutions. University of professional ability development sets up 56 general courses for students to choose and general courses are divided into humanities, social science, natural science, foreign languages, the health care and sports science according to the nature of the course. The establishment of many general courses provides vocational education teacher with broad professional vision and lays a solid foundation for students' career choice.

Meanwhile, a lot of courses about electricity basic skills, computer technology, and software design technology, etc. are set up in the professional technical course to provide students key technology of different technology areas in the same industry. Because of the rapid development of science and technology, the update speed of the occupation type is faster and faster, so the vocational of education profession must closely follow the development of science and technology. Technical talents not only should possess knowledge and skills suitable to the work they engage in, and what's more important is that they should possess the ability to update professional skills, otherwise they will be knocked out in the tide of technological reform. Therefore, when cultivating the vocational education teacher, the university should always pay attention to the development of science and technology, and its requirements on the technical talents. Then the university can adjust the teaching plan dynamically according to the development of science and technology. When Japan cultivates the vocational education teacher, its target is to train students to possess

the ability to adapt to the development of new technology and have the ability to convert industry within limits.

3.3 Australia: Parallel Pedagogical Courses and Independent Choice of Modular Courses

The Australian government attaches great importance to the cultivation of vocational education teacher and the establishment of high-quality vocational education teachers is an important work plan. In Australia, the institution of cultivating vocational education teacher is the institute of technical and further education (TAFE institute) and there are two main training methods: end method and parallel method. The end method means that students learn professional degree courses in the first three years and learn pedagogical courses at the fourth year in university; the parallel method means that students learn the professional degree courses and pedagogical courses at the same time during the four years of university. Before 1990s, the end method has been regarded as the best way to cultivate the vocational education teacher. However, with the in-depth development of educational practice, since the mid-1990s, the TAFE institute starts to adopt the parallel method to cultivate vocational education teacher.

The cultivation of vocational education teacher in Australia adopts the result-oriented mode, and its main performance characteristics are modular courses and students choosing the sequence of the courses freely. This kind of teaching mode ensures students' autonomous learning and is beneficial to arouse students' learning motivation.

CONCLUSION

At present, non-government funded education and mechanism of sino-foreign cooperation in running schools are introduced into colleges and universities, non-technical normal universities also start to participate in cultivating vocational education teacher, which make the cultivation of technical talents in technical normal universities face severe challenges. However, vocational and technical normal universities set up special curriculum system, strengthen the system of professional skills training, and embody the combination of normal, occupational and technical traits in teaching, which play the irreplaceability in cultivating vocational education teacher. In addition, the training mode of vocational and technical normal university enhances the comprehensive development of students and enriches the diversity of vocational education teacher.

The special school-running mode and special curriculum system are the power and weapons of long-term survival and development of the vocational and technical normal universities.

Tianjin University of Technology and Education initiates the mode of double certificate system and the integration in cultivating vocational education teacher.

Since 2007, 5 of the 8 independent vocational and technical normal universities have been authorized to confer master degree. At the same time, we should learn the special courses of cultivating vocational education teacher from the developed countries modestly to create a bright future in the cultivation of China's vocational education teacher.

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