

Systematic Cultivation Building Interchanges for Vocational Education

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Abstract—The National “twelve-five year” plan to protect and improve people's livelihood as all the work starting points and end - result, thereafter, it is a problem for us to solve on how to make system design of vocational education, in the construction of the increasing channel among vocational, higher vocational and undergraduate education. Drawing lessons from international experience of training system in developed countries, and combining Qingdao pilot project of 5-year consistent system in International Trade Practice Major, this article provides relevant references to other institutions.

Keywords- systematic cultivation, five-year consistent system, International Trade Practice Major.

At present, China's economic and social development comes into a new historical stage. The national “twelve –five year” plan puts forward the economy and industry development goals for the next five years, taking the protection and improvement of people's livelihood as a starting point and end result of all the work. The main problem to improve people's livelihood is the promotion of employment. While to promote the employment, the employability of workers should be improved, so as to equip workers with industrial qualities and skills needed for economic development. Therefore, the vocational and higher vocational education for whole society becomes the essential guarantees for supporting industrial development and employment promotion. According to the Ministry of Education's strategic plan, the primary mission of building the present modern vocational education system are the ten convergences among the promotion of the training objectives, professional layout, course System and Teaching Materials, teaching procedure, application of information technology, talents development approach, teachers' training, profession guidance role, deep cooperation between vocational college and enterprises and educational evaluation reform etc.

I. A SUMMARY OF THE RELEVANT STUDY AT HOME AND ABROAD

A. Research Situation of Vocational and Higher Vocational Convergence Training Objectives in Developed Countries

In USA, No matter what type of implementation of secondary vocational education schools, the main goal is to cultivate talents with basic theoretical knowledge and proficiency skills for the community. The President of the

United States ratified in September 1990 the Perkins Vocational and Applied Technology Education Act which links up the after high school vocational education and training objectives of cohesion post - secondary education up, the first stage of high school students in vocational guidance education to help students understand individual differences in abilities, interests and needs and develop their own ability to make career decisions independently, the next stage which is the technology after the preparation phase, directly linked to the post - secondary education, to help prepare students for employment, training and continuing education registration. So American students graduate from high school vocational education, after getting the diploma and professional certificates, they can get employment or enroll in the university. The United States community college mainly focusing in arts, and business with double functions: one is to provide the students the first two years University education, which is studies education; the second is to provide vocational education and training. However, since the new bill enacted, community colleges participate in vocational education reform, and accept employers to school transportation talent criticism, and pay attention to train the students to have resolving the actual problem ability, information processing ability and collaboration ability.

Training objectives of vocational education in Germany is based on competence based training (CBT), which is to foster meet the requirements of social enterprises and technical personnel. It not only focuses on professional training of the ability, but also emphasize especially on the training of Key Competencies. The so-called Key Competencies are defined as purely vocational skills which are not directly related to professional expertise. It is beyond the ability of vocational skills and professional knowledge areas. The key capability of the most important is independent learning and independent projects, independent implementation, independent of the control and evaluation capacity. Dual system of vocational school focuses students' practical ability training, which belongs to vocational preparation education, and after graduation, many students go for jobs. The high school due to interface directly with the college, in training requirements, focusing both the theories of general education and vocational education, so as to facilitate students go to college in the future.

College graduates employed mainly in the field of economics, where graduates are required to equip with more knowledge practically, and quick adaption to work, ability to resolve practical problems that appear in the enterprises. On

the convergence of training objective and operational capacity, colleges require enrollers to have some basic knowledge and expertise knowledge and capacity. If the enrollers short of the said knowledge, they should go to cram school for tutorial basic knowledge, or participate in the pre-practice step, so as to fulfill the requirements of practical ability. Vocational College recruiting only high school graduates, and carries out dual system of vocational education, which mainly trains high-level technical personnel. The graduated students should meet with width and a certain depth of specialized theoretical knowledge, and familiar with the technology and methods, and have the professional ability of the compound, group consciousness and coordination capacity.

Japan's specialized high school, formerly known as the professional high school, similar to China's vocational or technical secondary schools, in a very small percentage of high school education, graduate employment - oriented, small studies, implementation is the basis for the development of future technical personnel required expertise, skills education. With the reform of vocational education, specialized high school and general high school vocational major, under the requirement of the capacity of career skills, begin to pay more attention on the students' career skills capacity cultivation, creative theories capacity and career skills capacity. This will cultivate more middle class talents for the society. Specialized school and college to develop the tertiary industry talent for the purpose of recruiting high school students, teaches advanced skills expertise, training office or the actual needs the ability to create social talents. Japanese secondary and higher vocational education mode of convergence is five-years, college recruitment of junior high school graduates in accordance with the unified goal for culture, primarily intended for secondary industry, its goal is to train with deep expertise and skills and the ability to work necessary for the professional middle - level technicians. College and high school vocational school or vocational studies, are the talents exports to the community, developing a sequence of two levels of technical expertise.

Measure the level and type of school graduates or students of the United Kingdom is the standard of education certificates and professional credentials. National Vocational Qualification (NVQ) from the first grade to fifth grade in general is: skilled workers, skilled workers, technicians, senior technician or junior administrators or supervisors, Professionals or middle - level managers. Third - level approximately equivalent to Secondary vocational education training, its eligibility requirements for a wide range of commitments in an environment of change for complex and large, the vast majority of non - routine work ability, responsibility and independence; to manage and guide the work of others. Level fourth approximately equivalent to undergraduate education in higher vocational education or training requirements, its eligibility requirements for a degree of commitment in a wide range of environments are complex technical or professional capacity; with a strong sense of responsibility and independence, to be responsible for the work of others and for material assignment, and so on. Since 1992, the United Kingdom has implemented of the

general national vocational qualification (GNVQ), which is divided into three levels: foundation level, intermediate and advanced. Advanced GNVQ three - level NVQ is equivalent to the original. GNVQ for employment ready for a more broad and as leading to a higher level of qualifications (such as higher education) channel.

Judging from the training objectives and operational capacity, divided into middle and higher of two levels; judging from the above four countries, training objectives of secondary vocational school has a duality, not only as a professional and technical personnel of export, providing ready and vocational education, training as required by the community, but also the convergence of higher education, provides vocational basic education, to the talents in colleges and universities. However, all stages of secondary vocational education and higher vocational education convergence, in terms of human knowledge and ability, require graduates achieve solid cultural foundation (a high school education), professional theoretical knowledge and practical ability of certain requirements to meet the needs of university education. As the export of talents in higher vocational schools, attention should be paid to the actual demand of talents in society, intermediate and advanced technology of cultivating practical talents. On talent series, convergence of secondary vocational education and training of talents should be carried out. Meanwhile, in the United States and Germany in addition to the requirements other than the professional ability of higher vocational graduates reaches a certain, also requires the ability to engage in outside of the professional graduate. In the United States it is called the basic quality in Germany it is called key competencies, while in the United Kingdom it is called the core skills.

B. The Present Study on the Training Objective of Higher Vocational Talents of Convergence in China

Study on higher vocational education in convergence in China started in the 1980's of the 20th century, a representative of the main research results: CIXI Professional High School Group takes in secondary vocational education and higher vocational education convergence; and academic structure, the entrance exam and course structure are the three very important aspects. Only to grasp the overall aim targeted to take the appropriate measures to establish the ideal mode of convergence can we promote vocational and higher vocational education through the formation of the system. Mr. Bai Zongxin from a foreign educational system, trains students with objectives and operational capacity, teaches and compares courses. Mr. Wu Yong thinks that the target based on higher vocational education is to train a high quality of production, sales and service skills, talents, school - enterprise cooperation and common development of training programs to implement the key of " Paragraph 3+2 ". Higher vocational colleges should take lead in the joint technical staff of professional teachers in secondary vocational schools and enterprises explore corporate jobs to China, the students in higher vocational colleges should have a professional capacity requirement. Occupational skills training in the teaching program, segment completed vocational training, vocational stage

reached in the junior professional level of skills, intermediate, advanced training phase in Higher Vocational Colleges. Mr. Wang Wu Lin and Mr. Shan Songling in the secondary and higher vocational education countermeasures of professional cohesion presented in the study: comparison of secondary vocational and higher vocational training objectives, mainly in secondary vocational education to train skilled workers, skilled workers and junior technicians and managers. Higher vocational education should cultivate vocational knowledge and the ability to have more jobs needed to improve the practical expertise in high technology and vocational education in higher vocational education reflecting higher. After a place in secondary vocational school students in higher vocational learning, more solid theoretical basis of professional, vocational and professional ability has clearly improved.

In study on the convergence of secondary and higher vocational, secondary and higher vocational education convergence involves both macro - institutional convergence, as well as convergence in the field of micro - teaching, includes educational system, enrollment and entrance examination system, the training objective, professional setting such as convergence, courses, textbooks, a professional capacity. In the ready research, the convergence is general agreement that the entrance examination system, the high level of convergence in the breakthrough point, the training objective of convergence is a prerequisite. The major construction is the foundation of convergence; the interface is the core of the course and end - result. Training objective of higher vocational education is in two different levels of skilled talents, but with the same property. The exact location of all levels of vocational education training objectives is to achieve the perfect prerequisites for the vocational education course system and teaching standards. Training objectives and specifications are to reflect two different aspects of the essential characteristics of a particular type of education. The secondary and higher vocational education in training objectives and specifications have a lot in common, for example, both with professional, practical, skill levels and other characteristics. Training objectives are mainly from the industry's job requirements and specifications to be determined, focused on the training of skilled personnel in secondary vocational schools, focusing on cultivation of talents with high skills in higher vocational colleges. At present, China's similar in a professional, no dependencies between the training objectives of higher vocational education. Cultivation of high skilled specialists of higher vocational education and vocational training of skilled personnel is relatively independent, not to build their skills, talents and connection of high - skilled talents training. Secondary vocational education emphasis on cultivation of students' skills and employability, there is a light foundation, a professional, light theory, and practice, light phenomenon of understanding, and action, to make it difficult for students to a broader and deeper theoretical study of higher vocational education, do not meet the basic requirements for high - skilled talents training.

II. FIVE-YEARS' EXPERIENCE IN QINGDAO

A. *The High Level of Convergence in Qingdao Pilot*

National pilot project for the reform of the education, Qingdao, Shandong Province -- "Develop local governments to promote comprehensive reform of higher vocational education development pilot", On the systematic training of vocational education it should be tried to do some of the best, including "convergence in the higher vocational teaching union Project". At present, Qingdao, 3+2 continuous education is carried out in 23 main schools of higher vocational education in the vocational colleges affiliated in 12 Cities in Shandong Province in higher vocational colleges. Qingdao has two higher vocation colleges with five-year vocational education enrollment plan. Much higher vocational colleges have more time to recruit 3+2 continuous education students, and five-years of experience, personnel training and teaching work in two stages have made various attempts to ensure the continuity of personnel training.

Shandong Foreign Trade vocational college has taken Qingdao city's education science key topics of the "Qingdao Secondary and Higher Vocational Education Promoting the Organic Way of Convergence and Coordination of Development Studies", carried out the actual research for the secondary and higher vocational colleges in Qingdao, and found there are still certain problems on the current training objective of higher vocational talents of convergence in Qingdao. Convergence of the training objective of Higher Vocational Talents is in the fragmented each other, the lack of organic links. Under current policy, there are two main sources of higher vocational education: One is the high school graduates (HSG) and the other is the secondary vocational school graduates (SVSG), and the main source is the former. Of the three classes in high school and vocational school (secondary school, technical school, vocational school) depending on the specific training objectives there are great differences in curriculum, made uneven fundamental qualities in higher vocational college students, taught to simultaneously on two different sources is very difficult. Many of two students in higher vocational colleges now have the mixed culture of ways, not only specifically set a target SVSG Talent Training Model of students and training objectives, but also by the student training curriculum and teaching model and teaching objectives. This inevitably occurs in Higher Vocational Education in convergence or duplicate the problem of knowledge and skills, wastes in the vocational education resources has also increased the difficulty of higher vocational colleges so that expectations of higher vocational educational purposes difficult to achieve.

B. *Case study*

Since 2010 Shandong Foreign Trade Vocational College and Qingdao Tourism School have engaged in the five - year pilot in the major of international trade practice.

They systematically design the training programs. Together with the Qingdao Tourism School, the development of training system of personnel training program is settled for 5 years. From the training objective,

professional competence, professional qualification certificate system and curriculum, teaching materials, and other aspects of convergence.

TABLE I. IN THE HIGHER VOCATIONAL INTEGRATION AND TRAINING SYSTEM DIAGRAM

<i>project</i>	<i>In secondary vocational schools</i>	<i>Higher Vocational Education Subhead</i>
Professional training objective of cohesion	Cultivating moral, intellectual, physical, aesthetic, comprehensive development, documentation specialist with a comprehensive professional ability. Primarily intended for freight forwarding companies, trade companies, logistics companies, enterprises, such as customs inspection line, clot formation in the document and auditing.	Foreign trade - oriented companies cultivate a strong work ethic and team spirit, strong communication ability, professional competence of international trade, foreign language skills and computer skills, Knowledge of international market development, business negotiations, import and export contracts signed, foreign trade contracts, documentation for the actual operation, "focus on integrity, fine, strong skills in foreign trade, high quality" high-skilled talents for the foreign trade industry training of talents with high skill
Professional competence	Able to engage in underlying document production, documentary assistance and office work	Can meet all kinds of foreign trade enterprises with single member, one member, the primary demand of foreign trade clerk jobs, engage in business negotiations, document production, contracts and other complex work
Vocational Qualifications	Membership certificate of the country's international business documents	The national foreign trade clerk certificate, the national foreign trade certificate
Main courses	The foundation of international trade, international finance, foreign trade documents operations, comprehensive training of foreign trade operations, foreign trade, foreign trade English, English oral negotiations, international trade practices case studies, international freight forwarding practices, and so on	Geography of international trade, international finance, foreign trade documents operations, comprehensive training of foreign trade operations, foreign trade, foreign trade English, English oral negotiations, international trade practices case studies, international freight forwarding practices, and so on
Curriculum Standards	In the discussion on establishing vocational curriculum standards	Discussion on establishing higher vocational curriculum standards
Teaching materials	The Ministry of Education in the vocational teaching materials in the vocational curriculum standards are prepared in accordance with established vocational school textbooks	According to the established curriculum in higher vocational education standards, the preparation process of systematic project of school-based teaching materials

- The development of standards and teaching contents for the professional course of convergence for the Coordination of International Trade.

In the vocational stage in accordance with foreign trade operations assistant and documentation specialist positions need to develop curriculum system, consolidate the foundation of the theory of students, focusing on the cultivation of students' humanity quality, guiding Students' Learning planning, career planning, training students' consciousness of service, customer awareness and professional ethics. Vocational stage except in accordance with foreign trade clerk and outside the demand for jobs with a single curriculum system of foreign trade, focusing on employment - oriented training students' consciousness of innovation and entrepreneurship, taking into account the needs of the students' future academic upgrading and life-long learning.

- Unified formulation, implementation of teacher training programs. In addition to participating in national and provincial teacher training program, selection of outstanding teachers from the College to recruit experts from the enterprise are invited as a trainers. Depending on the age characteristics of students, training objectives in each stage, to vocational school teachers from teaching methods, curricula and classroom organization for specialized training, to enhance teachers' ability of vocational education. By affiliated enterprises, improving the teachers' teaching ability to the top of the enterprise post internships, obtain a vocational qualification certificate and other forms, improving the quality of both teachers and technicians. Professional core curriculum of Higher Vocational Teachers in docking, a clear division of labor, avoid duplication and omission of the teaching content.
- Through the practice of the 2 years of graduation, in the teaching of students in the course of the actual situation and the employer feedback to fine tune the system for five - year training program, timely adjustment of teaching content and teaching methods. Through the student seminars, teacher seminars and surveys, students and teachers for teaching of five - year program designed the system is recognized and welcomed, and achieved good social effects.

III. CONCLUSIONS

It should be solved form the root for the systematic design of vocational and higher vocational education, by reforming education system and realizing effective convergence of vocational and higher vocational education. In fact, convergence pilot project has been carried out by higher vocational and regular higher education in some districts. Entrance examination system should be reformed. Only half of the junior high school students can go to high school in Qingdao. However, applying 3+2 system or five-

year consistent system, it will provide vocational students of a high education channel, meeting the needs of students' personal development. And the talent training programs should be systematically designed to realize vocational and higher vocational education convergence from the training objective, professional settings, courses, textbooks and professional abilities.

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