

Evolution of China's National Policies for Higher Vocational Education Since the New Millennium

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Abstract. This paper explores the evolution of China's national policies issued by the Ministry of Education for its higher vocational education (HVE) across different stages over the two decades in 21st century. In the bigger context of market economy that demands HVE to play its role in promoting human capital, the intents of HVE policies issued at each of the three important stages are analyzed in detail. Then primary major progresses of the sector are charted out, and challenges and prospects are discussed. The paper identifies important strategies through which national HVE policies intend to improve the sector's overall quality to generate human power, including expanding size for the whole HVE sector, transferring responsibility to provincial and local governments to improve efficiency, enhancing teacher quality, increasing program coverage, increasing praxis elements, completing assessment scheme, selecting model institutes to create impetus for growth, adopting the strategy of group schooling to mobilize more resources to the sector, promoting international cooperation, instituting a credit system and so on. The primary progresses of HVE due to the series of policies are mainly manifest in size growth, structure completion, and raising social recognition. Challenges and concerns, however, remain to be resolved in terms of the sector's ability to generate sufficient qualified manpower.

Sci Insigt Edu Front 2018; 1(1):17-39.

Doi: 10.15354/sief.18.ar016

Keywords: Higher Vocational Education, China, National Policy, Policy Evolution, Policy Intent

IN China's governmental discourse and academic domain, Mr. Deng Xiaoping's talk on socialism in 1992 has been viewed as a turning point for the nation's reform and opening up in history. Deng, as the most powerful former leader who remained practically influential even after his retirement in the ruling Chinese Communist Party, remarked when he investigated the newly-established special economic zone in the southern city of Shenzhen that 'the essence of socialism is to liberate and develop productivity force, eradicate exploitation, eliminate polarization, and eventually achieve the goal of common wealth' (Deng, 1993). The talk has been viewed by many with greater significance inasmuch as for the first time a Chinese leader tended to bring in and promote the concept of market economy for the country's continued reform and opening up course that had begun since 1978. Long before 1992, almost every sector of the economy was planned, and although there had emerged debate about planning and market in the late 1980s, nobody would dare to take bold actions in doing business without supportive policies allowing so. Deng's remarks set the tone and encouraged the nation to take bolder actions by stating that 'a planned economy or market economy is not what distinguishes socialism from capitalism.' To 'further liberate the productivity' (Deng, 1993) was emphasized much as the ultimate goal in his talk for the nation's economic development.

Against such backdrops, several years after this important talk on China's future, market economy was popularized in many sectors of the economy and increasing competitiveness to secure the market instead of simply waiting for governmental subsidy was viewed as a key to survival and success. A post-secondary education that could meet the demand for skilled talents for various industries was thus unprecedentedly needed, and the role of higher vocational education (HVE) in the late half of the 1990s was emphasized with louder voices by the government for future economic boost.

Distinctive from general higher education provided by comprehensive universities, Higher Vocational Education (HVE) in Chinese education system refers to the post-secondary level skilled manpower-oriented and employment-oriented education whose direct purpose is to serve local economic development (Luo & Fang, 2011, pp. 225). A critical time point – the year of 1996 – has to be mentioned, when the Vocational Education Law of People's Republic of China was established and Higher Vocational Education (HVE) was legitimized with two other levels of vocational education: junior vocational education and secondary vocational education, resulting from numerous debates about the position and function of vocational education in the society. In 1998, the passage of another significant law – Higher Education Law formally includes HVE as a true and important part of tertiary education, thus HVE secured its position in legal terms for the first time since the founding of People's Republic of China. Since the early 21st century, against China's two important backdrops – higher degree of economic

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Conflict of Interests: None.

marketization following entry into the WTO and expansion of the higher education sector, the demand for more skillful graduates provided by the HVE sector has been even higher, and these two backgrounds lay the foundation for HVE's development in the later nearly two decades to come.

One influence that marketization in the economic sector and the whole reform agenda exerts on the vocational education sector is represented by the national governments' granting rights to the establishment and management of HVE institutions to provincial-level governments, as we will continue to explore in the rest of the paper. The national government, however, mostly represented by the Ministry of Education, remains powerful in putting forward policies of guidance for all subordinated level HVE stakeholders to follow. Thus, the exploration of national policies on HVE development does assist insights into the direction and string of thoughts as to China's HVE's development as a whole sector. In the 21st century, following the formalization of Vocational Education Law and the legalization of HVE sector as an indispensable part of tertiary education, the Chinese Ministry of Education has put forward a series of policies touching a variety of aspects for HVE's advancement.

Figures 1 and 2 display the position of HVE in the overall Chinese education system at large. In terms of vocational education, the earliest stage is the junior secondary vocational education, followed by three types of senior secondary vocational education, and then postsecondary vocational education. One point worth mentioning is that currently junior secondary education, though extremely rare in rural areas, still exists mostly in rural areas where there is much less developed economy (Guo & Lamb, 2010, pp 19), indicating that there is indeed early education stratification in some less developed areas of China. Another point to mention is pertaining to the subtle change in the name of the sector. In Fig 1, the postsecondary level Higher Technical Vocational Education (HTVE) which literally means “*高等技术职业教育*” in Chinese language has been replaced by “*高等职业教育*” literally translated as “Higher Vocational Education” by the academic domain and the government discourse since 1996 when the Vocational Education Law was passed. Therefore, to be loyal to original Chinese discourse, HVE instead of HTVE is used in this paper as we investigate this sector in China.

As shown in Fig 2, HVE is involved in a three-level administrative structure: national level, local level and institutional level. At the national level, while Ministry of Human Resources and Social Security and Other Ministries of Industry and Trade occasionally release policies concerning HVE development or students' employment, the Ministry of Education remains the main ministerial administrative and instructive body to guide HVE development nationwide, even after it passes the rights of approving newly-established HVE institutions to provincial-level governments in 1999.

Against such backdrop, the research questions underpinning this paper's analysis include:

1) What is the trajectory of China's HVE policy evolution in the 21st century when China needs a tremendous amount of human capital to underpin its economic development and transition?

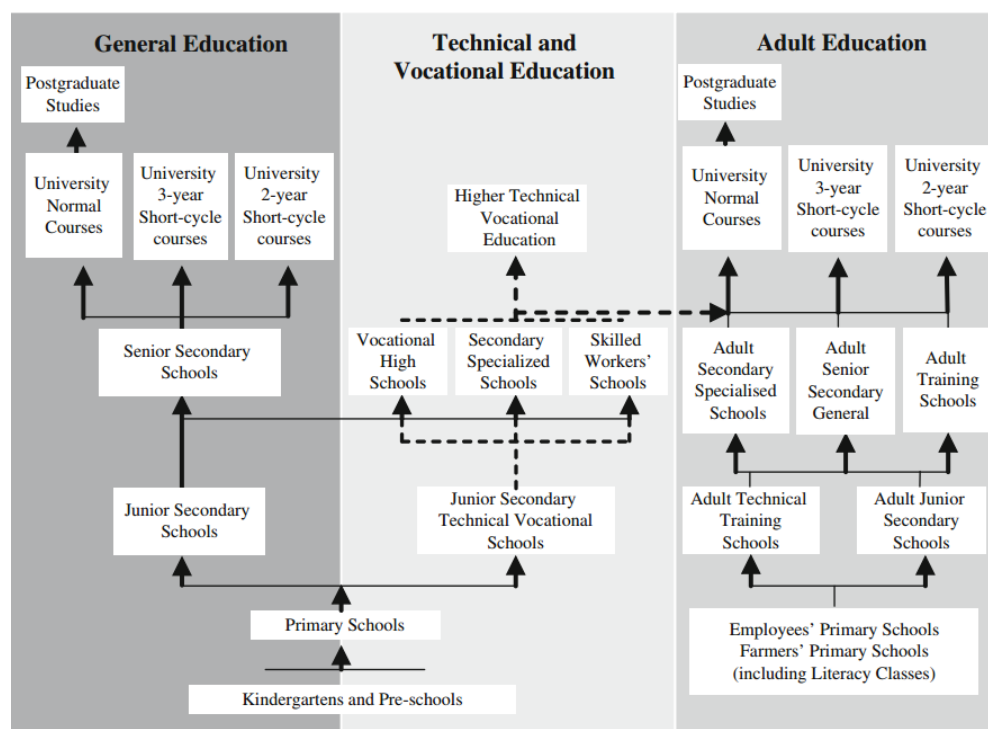


Figure 1. The Overall Structure of China's Education System.

Source: Guo and Lamb (2010, pp 19)

2) What are the ideas behind the different policies issued at various stages in terms of HVE's contributions to the development of human capital?

Methodologically, official policy documents issued by the Ministry of Education constitute the main source of data for my analysis. The paper employs a historical approach to review these official policy documents by extracting and summarizing their main purposes and major influences. As the focus of this paper is on policy intent rather than policy implementation, my analysis is concentrated on how China's educational decision-making departments led by the Ministry of Education aim to advance its postsecondary vocational education rather than the formulation and implementation of one or some single policies.

The rest of the paper is organized into three major sections. In 'Policy Evolution', I chart out specific important policies officially released at various stages over the past two decades. For each of the stage, policy intents and characteristics are the focus of analysis. In the section 'Primary Progress', I analyze several important changes that took place after each stage's policy came into effect. Last, in 'Challenges and Pro-

spects', the barriers to overcome and the five key aspects of problems in the HVE sector to be addressed in years to come are illustrated.

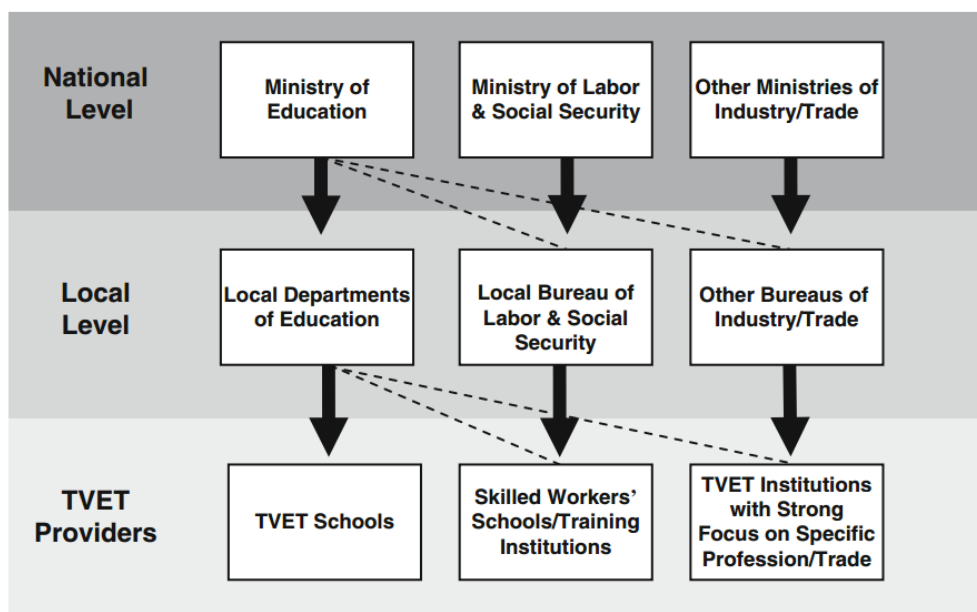


Figure 2. The Administration of Vocational Education in China.

Source: Guo and Lamb(2010, pp 26)

Policy Evolution

A series of HVE policies have been issued over the past two decades to address sector problems at various stages. This paper's analysis starts from the year of 1999 marked by Ministry of Education's first policy action after the Vocational Education Law came into effect in 1996. Considering the changes taking place in the HVE sector, I divide China's almost 20 years' HVE development into three major stages --- from scratch to existence, from simpleness to maturity, and the most recent stage with a new initiative for sector innovation.

1) 1999-2005: From Scratch to Existence

Right after the legitimization of HVE sector, the Ministry of Education issued 21st Century-Oriented Education Development Initiative in 1999, in which several strings of thoughts became clear consensus: 1) expanding HVE sector to enroll more students to

enlarge the basis for producing more human capital; 2) allowing multiple types of institutions such as HVE colleges, particular schools in general universities, adult education institutions as HVE providers to draw on strengths of various social and academic forces for developing HVE; 3) gradually granting the responsibility for HVE development to provincial-level governments to enable HVE to better cater to needs of locality. However, the national educational body – Ministry of Education remains instructional by issuing policies to guide the practices of provincial and local governments, and HVE providers in terms of the direction of the country's HVE development; 4) the keywords of the goal of HVE set on 'application' to provide front-line applicable graduates in service, production and management (MOE, 1998). In 2000, the State Council (2000) released a policy document to formally grant the rights to ratifying the establishment of HVE institutions to provincial governments. Meanwhile, this document transferred the responsibility of funding HVE into provincial governments as well. But it reserved the rights of formatting standards for HVE institutions and the quality assessment standards for the national Ministry of Education. Entering the 21st century, with respect to how to further improve the quality of HVE, Ministry of Education started to write two important concepts into the documents it issued in 2000: 'Double-qualified Teachers' and 'Institution-Industry Connection'. While the latter sounds easier to understand, the former concept is more filled with Chinese characteristics semantically referring to a teacher both qualified in teaching students at institutions and qualified in industry work at the same time. This is to emphasize the government's realization of the necessity to strengthen both theory and application for HVE students, and it was this realization that the Ministry of Education further issued three guiding documents to improve the quality of teaching plan, faculty, management, and two other documents on establishing the quality assessment standards in the same year.

A total of 30 policies were issued between 2000 and 2005 to address various aspects of HVE development, including some special motivating initiatives such as the decision to build national model HVE institutions. Statistically, in 1999, there were a total of 474 HVE institutions in China, while this number almost tripled by 2005. In a similar trend, the students registered at HVE institutions increased by 7 folds from 1,112,497 in 1999 to 7,129,579 in 2005 (Luo & Fang, 2011, pp.246). The HVE expansion during these years out-speeded that of general higher education, and HVE contributed a great deal to the overall tertiary education expansion by accepting multitudes of students. In 2003, the proportion of registered students in all types of HVE institutions accounted for 42.3% of all tertiary education's registered students, and in Chinese context it was metaphorized as 'occupying the half of the whole sector' (MOE, 2015c).

For this period, HVE's legal position in China was firstly secured from none to existence, and a large number of related policies and measures were established from scratch. The boost of HVE took its form mainly in establishing many more institutions than ever before and in enrolling an unprecedented number of students with an accelerating speed one year after another. Apart from the quantity development, marketization of HVE institutions' operation was adopted, with HVE institutions having high degree of autonomous rights to running the institutions.

These strings of thoughts demonstrate the government's urgent need of applied talents for the upcoming 21st century economy, and the decision of distributing authority over HVE into provincial and local governments embodies a willingness to spark innovation in HVE management for such a centralized nation as China.

As a newly legitimized type of tertiary education, some barriers along with the HVE's fast development emerged at this stage. Many policies were put forward in a way that 'crossed the river by feeling the stones' (Deng, 1993), and their effects were not resistant enough to withstand the test of time yet. One outcome was called "Three Nots and One High" (三不一高), which is actually a paradox. "Three Nots" refers to that the nation would not issue the uniformed graduation certificate; students' employment would not be automatically guaranteed as in the planned economy period; and the uniformed national college students' employment registration card would not apply to HVE graduates. "One High" refers to the new fact that the high tuition for HVE must be paid by students mostly, and the 'high' here means HVE tuition is much higher than ever before and also higher than general universities.

The fact that HVE students had to seek jobs themselves after graduation and the downgrade of HVE institutions level from national to provincial level to an extent degraded the attractiveness of higher vocational education compared with general higher education in universities, but in line with the trend of the expansion of higher education sector, including higher vocational education as well as certain clarified policy intents, many more HVE institutions started to spring up across the whole country. In addition, in the whole 1990s, the tertiary education graduate rates of China was relatively low, and the willingness of many families to send their children to HVE institutions to receive tertiary education, if they were not able to be accepted into universities, maintained high despite the fact that the cost of HVE became much higher and it had to be mostly born by families themselves.

The severely insufficient funding support by provincial and local governments forced many newly established institutions to charge students high fees, which was the fundamental reason why the aforementioned "One High" appeared, but the lack of money to a large extent limited their capacity to absorb excellent faculty and other teaching resources as well as upgrading the hardware of the institutions. While almost every institution was going great lengths to raise funds from multiple sources, this was far no match compared with the fiscal need due to the rapid expansion of student numbers.

The new sector in line with the trend of the expansion of the tertiary education at large did enroll more students, but this sector seemed in a rush and not fully prepared when it came to how to achieve sound and long-term development by building distinctive benchmarks and ensuring the quality of education.

Another point worth noting is the assessment of HVE quality. It was visible that Ministry of Education realized the importance of evaluation of how well HVE institutions performed and it established special commissions to research into formatting assessment schemes in 2003 and eventually issued the separated standards of quality assessment for HVE. The assessment did not formally kick off until the end of 2004(Luo

& Fang, 2011:252), which means from 1999 to 2004, the whole HVE sector developed without an authoritative yardstick to measure itself. As an old Chinese saying, however, goes that 'Everything is hard at the beginning', despite the incompleteness of relevant mechanism in the whole HVE sector, the first step it went, however, paved the way for its later development from 'from simpleness to maturity' in the following few years.

2) 2006-2014: *From Simpleness to Maturity*

After the initial expansion from 1999 to 2005, the government realized the accompanying consequences including quality issues, employment issues as well as the pattern issues for cultivating desired talents and graduates. Therefore, the policies issued since 2006 was mainly aimed at "consolidating the previous achievements and improving the internal development" (Luo & Fang, 2011). The phrase "internal development" (in Chinese: *内涵建设*) refers to the core issues concerning the quality and soft power of a certain project or entity in Chinese context, and it is paralleled with another concept 'external development' referring mostly to quantity, size and hardware. For a university or an HVE institute, 'internal development' refers to the quality of teaching, education patterns and all other issues pertaining to students' growth and development.

In 2006, China's Ministry of Education issued an important document (called No.16 document) specifically to emphasize a number of aspects of 'internal development' for HVE. To respond to the prevalent problem of lack of 'vocation' in what students learn and the quality of curricula at HVE institutions, No.16 document highlighted several policy intents at national level to further guide the HVE development nationwide. In the first place, No. 16 document emphasized the adjustment and reform of courses. To quote from the document itself, 'HVE institutions must actively engage in course development participated by industries and enterprises and reform curricula system and teaching contents according to relevant industry standards. When setting curricula standards, the vocational competence must be considered to improve the quality of curricula.' (MOE, 2006) As the instructive body, Ministry of Education then announced that during China's 11th 'Five-year Plan Period', which is from 2006-2010, it would select a total of 1,000 excellent courses from all HVE institutions across the country. Besides, for the curricula reform, it required that HVE institutions must include more 'praxis-oriented courses' in their curricula reform projects. Three aspects of praxis were highlighted in the document: experiment, training, and internship, and there was a measurable requirement that all HVE students must undertake internship in a business for half a year during their study. The highlight of praxis was to challenge the purely theoretical and academic characteristics of HVE courses that had maintained in the fullness of time. It was believed that as higher vocational education must in action differentiated itself from general higher education, and it was a consensus that while theory was needed for students' learning, vocation was more in need.

To be more concrete, in order to practically implement the idea of praxis-oriented learning, the Ministry of Education not simply emphasized the importance of curricula reform, which is important but usually take a long process, but required that HVE insti-

tutions must seek close cooperation with enterprises and build institutions' praxis bases at business, which could be either at the institution or at enterprises. It hoped that through building more praxis bases and cooperative ties with enterprises, the HVE students' internship and praxis could be institutionalized and guaranteed, with or without the institution leaders' willingness and ideas.

The concept of "double-typed teacher" was emphasized with the idea that teachers should in the first place master a profound theoretical knowledge of the subjects they need to teach in the classrooms, and in the meanwhile demonstrate praxis-oriented competence by gaining certain certificates in the industry. To help promote the faculty team of HVE, the Ministry of Education on the one hand required that institutions send their teachers to certain enterprises to gain practical skills and competence in person, and on the other hand required that institutions employ talents from the business to teach full time or part time at the HVE institutions. It's clearly stated that "It needs to form a mechanism that the praxis-oriented courses should be mostly taught by experienced talents from the business and industry" (Luo & Fang, 2007, pp.249).

In addition, completion of the educational assessment mechanism was emphasized as well to further guarantee the quality assurance, and the educational assessment was expected to involve business sectors to participate. Local governments were expected to work out a five-year-cycle assessment system to highlight both process assessment and outcome assessment according to a comprehensive set of indexes such as teachers 'double-typed certificates' rate, institutions' internship bases, students' internship quality, cultivation of students' professional competence, and the structure of faculty team, etc. To speak of, the 'double-typed certificates' rate focuses on how well faculty generally obtain both a teacher certification and a business-related skill certification, and the structure of faculty team probes into how well a faculty team consists of both full-time institutions' teachers and part-time business talents. The tone was that 'vocation' must be once again repositioned as the nature of HVE, and HVE institutions must distinguish themselves from general universities and colleges in terms of educational goals and approaches.

Completion of Assessment Scheme

In line with the calling for the completion of quality assessment scheme, the Ministry of Education formatted HVE Talents Cultivation Assessment Scheme (hereafter called 'New Assessment'), a very instructive document for HVE quality assessment on April 9, 2008, and required that from then on, all local authorities should organize assessment on the quality of education of HVE institutions across the nation according to this document. Before that day, there were two related but not updated schemes (hereafter called 'old documents') in 2004 and 2005 respectively, but the Ministry articulated that the New Assessment issued in 2008 would replace the previous two old ones.

The update of the assessment scheme was a response to the old documents' lack of sufficient investigation into 'vocation' as well as their inflexibility due to 'one yardstick measures all' limits. Many indexes in the old documents were not too quantified with-

out consideration of the uneven economic development of various regions in the country, nor did it take into account the different features of different industries and their different demand for students' different quality.

Compared with the old documents, this 2008 New Assessment scheme has represented a number of changes in such aspects as institution leadership, faculty build-up, curricula development, praxis-oriented teaching, development of special discipline and cooperation with related stakeholders.

With respect to institution leadership, the changes have been mostly reflected in two aspects of the positioning of the HVE institutions. Firstly, in the old assessment document, there was a general statement that teaching must be put as the center of all institutional activities. In contrast, the New Assessment examined more about the prospects and planning of institutional leadership, looking into whether the goal of the institution would truly match the demand of local economies. Secondly, in the old document, the guiding principle set for developing HVE was the combination of industry-Academia-Research, but in the new one, "Academia" was left out from the assessment scheme as there has been a clearer vision of HVE's development and the determination to distinguish HVE from the general universities or colleges.

In terms of faculty build-up, the old assessment contained detailed and quantified indexes such as student-teacher ratio, and the total amount of full time and part time teachers'. In the new assessment, the detailed quantity requirement did not exist anymore, but the emphasis on the quality of part-time and full-time faculty was stronger. Full time teachers who teach general courses are expected to achieve higher level diploma and certificates, and those for professional courses are expected to have more industry experiences. Meanwhile, those who have abundant industry experiences are encouraged to teach as part-time faculty in the HVE institutions.

As for curricula development, the too general statements as to the curricula contents reform, textbooks development and teaching methods reform have been replaced by new statements which put special emphasis on the cooperation with industries. Institutions are expected to develop curricula jointly with industries and to include more praxis-oriented contents into the courses. Teaching methods in the New Documents are expected to be an integration of 'teaching-learning-doing' with more weight put on the practice and vocation. Textbooks of higher quality are needed for the sector, and writing applied teaching materials jointly by institution faculty and industry professionals are highly encouraged in the New Assessment.

Another point worth noting in the new assessment is the development of special discipline. In the old document, the only feature-related concept was a general phrase called 'characteristic innovation'. The original purpose was to offer institutions more flexibility, but it also signified the immaturity of the whole HVE sector's vision of how it could develop to unleash its full potential without a concrete path. In the new assessment, this particular phrase has changed into 'building characteristic disciplines', and this change as a matter of fact pushes the requirement for HVE institutions into a new height in that building a discipline would require a whole set of updates and innovations from goals, input to education patterns and cooperation with the industry and society.

To speak of, in the module of assessment, the old requirement of measuring ‘teaching effects’ now has become ‘social evaluation’, which reveals that the new assessment puts more attention on the social feedback of how well HVE actually cultivate their graduates.

The updated assessment scheme has served as a more professional and detailed framework for the nationwide evaluation of HVE quality. It's a mandatory for all HVE institutions which have up to 3 sessions of graduates to participate in the assessment, and to a large extent raises the awareness of institutions themselves to be focused on self-evaluation in that the principle as required in the new assessment scheme is called ‘the combination of self-evaluation by institutions and external evaluation by professional experts (教高[2008]5). For those institutions that have had 3 sessions of graduates but are not ready yet for receiving external evaluation, they can wait for two more years, but their quota of enrolling fresh students are supposed to be gradually reduced by provincial authorities. Institutions assessed are to be approved “Pass” or “Postpone”, with the requirement that institutions assessed “Postpone” have to receive another round of assessment within one year at the cost of reduction of enrollment quota. If an institution fails for the second time to get a “Pass”, its qualification of enrolling students will be very likely to be suspended.

Selection of Model and Key HVE Institutions as Impetus of the Sector

On November 3rd, 2006, the Ministry of Education and Ministry of Finance formally kicked off the Initiative of National Model HVE Institutions Selection, aimed at selecting 100 model HVE institutions from 2006 to 2010 within three rounds. The procedure of selection was based on provincial recommendation and then these recommended institutions would receive evaluation by national expert team. The selection criteria mostly represented in 5 aspects: institution leadership, comprehensive competence, education reform, discipline development and social service.

Specifically, institution leadership refers to whether the leadership of an HVE institution would have an advanced strategic mindset on the institution development and the capability needed to mobilize necessary resources, while comprehensive competence is a reference to investigate the overall education quality of HVE institutions as well as their social recognition and industry recognition. Education reform is an index to measure whether an HVE institution has established a long-term mechanism of production and academia with the industry, and discipline development serves as an yardstick to view the core competence of an institution's education capacity. Lastly, social service measures the institution's role in training applied talents for regional economic development.

The goal of building model institutions, as literally revealed, was to spark innovation in educational pattern reform, teaching quality, social service capacity and building up special features. The more concrete goals involved benefiting more than 600 thousand registered students' study and employments, developing approximately 500 quality specialties that cover a wide range of industries, enjoy quality facilities and maintain

close connections with the market and business. Besides, it was also expected that these 100 model HVE institutes would develop around 4000 quality core courses with 1500 categories of textbooks and coursewares. This measure intends to power the core capacity of HVE institutions as education providers: curricula and teaching, which signifies that it has been realized that the transition and upgrade is never to be achieved without the improvement of quality of curricula and teaching.

The 2006, 2007, and 2008 respectively witnessed a total of 100 HVE institutions selected as model institutions as planned, achieving at least that within the HVE sector, there have emerged leading exemplars for other institutions to follow and chase. These three rounds of evaluation from 2006 on to a large extent has enhanced the overall education quality of these institutions as well as the related social recognition.

Following the 100 model institutions, the Ministry of Education issued another document to select 100 Key HVE Institutions, which has been regarded as the second period for model institution project. As stated in the document, 'Over the past four years, model institutions have played a leading and exemplary role in mobilizing educational resources for the development of HVE sector, and for the sake of better serving the needs of the nation's pursuit of a new industrial development path accompanying with economic transition and industry structure update, the Ministry of Education and Finance decide to continue the model institution project and expand the scope of leading HVE institutions so as to push forward the reform and opening up of higher vocational education and further tap the potential role of HVE in cultivating high-quality applied talents and improving employment and people's livelihoods.' (MOE & MOF, 2010)

A timetable for the selection of 100 Key Institutions was put forward in the meantime, scheduling to prioritize the establishment of 40 institutions in 2010, another 30 institutions in 2011 and 30 more institutions in 2012. The time cycle for preferred development is set to be three years and all the 100 key institutions selected, as required, must all receive evaluation by the end of 2015.

Group Schooling and Promotion of International Cooperation

Group schooling is another approach to facilitating resources sharing, cost reduction and draw more non-governmental capital to the HVE sector. It usually involves business participation and HVE institutes merge. The most direct effect of group schooling is to tighten the binds between students and the industry, which is in line with the coherent idea of institution-industry cooperation put forward in very early documents by the Ministry of Education. Taking Shaanxi Electronic Vocational Education Group, located in the northern western region of China--- Shaanxi Province as an example. The HVE institute within the group --- Shaanxi Electronic Industry Institute --- has signed contracts with a number of corporations in a number of fields related to electronics and telecommunications. They believe such an approach has achieved four benefits for the HVE institute and students: 1) internship places for students are guaranteed ; 2) business are invited to participate in the institute's design of training programs; 3) some

production tasks are shifted from business to the institutes; 4) students' employment is mostly directed to these corporations who also provide special and abundant pre-job training for these prospective employees, and corporations can recruit students directly from the institute whose education and program design involve their participation before (Cui, 2012: 182).

Moreover, greater prominence has been given to international cooperation in enhancing HVE's development as with other measures over the past decade. The manifestations of international cooperation are various, including recruiting international students, bringing in international scholars and experts, sign cooperative programs with foreign institutions, organizing international conferences, carrying out faculty exchanges, achieving credit recognition, participating in government-led international cooperative programs, etc. Inspired by the power of openness and cooperation, it is hoped that international cooperation can help HVE institutes gain more understanding of the world, of the trend of the industries, of different education systems and ideas, and bring in quality educational resources.

3) 2015-2018: A New Initiative on Innovation and Development

By the end of 2014, the HVE institutions nationwide amounted to 1,327 with a total of more than 10 million registered students. Quoting an official from the Ministry of Education, 'HVE accounts for half of the whole tertiary education sector' (MOE, 2016). With such enormous capacity, the issue of quality improvement for the whole HVE sector has been urgent than ever before for China's economic transition and sustainable growth. A cluster of prominent national strategies such as Made in China 2025, Internet Plus, Mass Innovation, Targeted Poverty Alleviation and Belt and Road have all posed new demands for talents that are expected to be provided by HVE. Under such backdrop, Ministry of Education at the end of 2014 started to seek advice for a new initiative which can serve as a new guiding principle for the further HVE development in the newest times.

After some one year, as recently as Oct 21, 2015, the Ministry of Education (MOE) finally issued Higher Vocational Education Innovation and Development Initiative (2015-2018) (hereafter referred to as Initiative) on , with the aim to draw strengths from all walks of life to improve the quality of HVE, and promote it to better serve the demand for professional human capital for the country's economic transition. The Initiative aims to accomplish five critical tasks to guide the HVE's development including increasing high-quality educational resources, enhancing education vitality for institutions, accumulating technological and technical capacity, and completing quality assurance mechanism. Concretely, these five critical tasks have been divided into a total of 65 sub-tasks and 22 major projects assigned to a variety of accountability bearers such as different departments of the Ministry of Education, provincial educational departments, HVE institutions, relative vocational education commissions, industries and business concerned, etc. It is worth noting that according to the list of a total of 87 sub-tasks and projects, among such many subjects of responsibility, those that need to be led

by provincial government's amount to 71, accounting for around 81.6%, which means provincial governments, will be the major accountability holders for the regional HVE progress.

The Initiative has pointed out 6 directions for HVE's innovation: 1) to offer HVE institutions more decision-making rights in commensurate with their own strengths and weaknesses; 2) shift from quantity expansion to quality improvement; 3) striving for operation of institutions based on more openness; 4) offering more weight to the soft power rather than hardware conditions in the assessment scheme; 5) further emphasizing the significance of enrolling 'double-typed teachers' for HVE institutions; and 6) further strengthening institution-business cooperation by exploring modern apprenticeship mechanisms and establishing more effective internship bases at business.

Another unprecedented aspect for this Initiative is that it has for the first time put forward the exploration of instituting a credit system to record students' school performance as well as a credit banking system to document students' degree studies and non-degree studies. Besides, it also calls for exploring a mutually recognizable credit transfer mechanism between HVE and general higher education.

Primary Progress

With the aforementioned series of policies issued over the past two decades, there has been some primary progress for the HVE sector. The most salient progress is manifest in the growth of the sector size, quantity of HVE institutes and buildup of a more comprehensive vocational education structure. In addition, the calling for the recognition of HVE's important role in producing applied manpower has raised the sector's social recognition than before.

Size and Structure Growth

Since the advent of 21st century, against China's two important backdrops --higher degree of economic marketisation following entry into the WTO and expansion of the higher education sector, China's HVE in line with the trend has experienced rapid development in terms of number of institutes and student registration. There were only a total of 474 providers for HVE in 1999, and this number rocketed to 1,184 in 2008 (Luo & Fang, 2011, pp.246), and further grew to 1,327 in 2014 (China Net, 2015). Correspondingly, students registered at HVE institutions were merely 1,112,497 in 1999, and grew almost by 8 folds to more than 9 million in 2008 (Luo & Fang, 2011:246), and further grew to 10 million plus in the year 2014 (MOE, 2015a). In the foreseeable future, it is expected to develop into a new height with increasing social attention drawn to it and financial resources allocated to it (MOE, 2015b).

Besides, the structure of the HVE system has undergone from scratch to maturity as well. On the one hand, after a decade of market tests and relevant policy guidance, independent higher vocational education institute stands out as the main provider of HVE as a kind of separate tertiary institution (Stewart, 2015) among all the four types

of institutions that entail HVE provision: 1) independent higher vocational education institutes; 2) adult higher colleges; 3) vocational education programs in universities; and 4) other types of non-formal vocational training. HVE students are mostly enrolled from three sources at secondary-level technical schools: vocational high school, secondary specialized schools and skilled workers' schools as shown in Graph One above, and among these three, vocational high schools remain the major source. This trend to a large extent has indicated the normalization and professionalization of the whole HVE sector.

On the other hand, the fields and specialties that HVE cover currently have become much broader than before in accordance with the real needs of the industry and economy. According to the Catalogue of Specialty (2015 version) released by China's Ministry of Education, there are altogether 19 big categories of specialty including 1) agriculture and fishery; 2) resource, environment and security; 3) energy, power, and materials; 4) civil constructions; 5) hydrology and water resources; 6) equipment manufacturing; 7) biological and chemical science; 8) light and textile; 9) food and medical drug; 10) communication and transportation; 11) electronic information; 12) medicine and health; 13) finance and commerce; 14) tourist industry; 15) culture and arts; 16) journalism; 17) education and sporting; 18) public security and judicature; and 19) public administration and service (MOE, 2015c). Under each big category, there are a number of categories which are more concrete than the big category. And under each category, there also exist many concrete specialties (To see **Figure 3**). For example, under big category one: agriculture and fishery, there are 4 categories of specialty which are farming, forestry, grazier and fishery. And under the category of forestry, there are also 13 specific specialties such as forest resources protection, economic forest usage, wild animal resources protection and usage, forest eco-tourism, and so on. The most recent statistics show that there are altogether 19 big categories, 76 categories of specialty, and 589 specific specialties in the official catalogue of specialties for HVE. The relationship of the three is seen in the graph below.

Another progress to be marked is the official recognition of the status of HVE as a sector, mirrored by the unprecedented promotion of its role in providing applied talents and propelling economic development. As in some other countries in the world, HVE's status was traditionally less recognized for a long time than general academic higher education (Xiong, 2011), and Zhao and Lu (2007) attribute the disadvantaged position of HVE to one of the Confucian ideas that 'those who do mental labor rule and those who do manual labor are ruled', echoed by some other scholars who explain such status from the perspective of policies, assessments and actual graduate quality. But as China's economy attempts to achieve a transition from the low-cost and low-skill-based export to a service-based, consumer demand-based and high-tech-based model, ideas on vocational education have gradually changed in the fullness of time. Now, Chinese government has indeed acknowledged four critical roles of HVE in China's economic growth: 1) supporting industrial structure adjustment by outputting millions of skilled manpower; 2) mitigating unemployment in the society, especially among young adults; 3) pushing forward urbanization and development of rural areas; 4) bettering the struc-

ture of the education system and promoting the process of higher education massification. (Liu, 2015)

The growth from none to maturity also applies to national policies and regulations which have been systematized in a step by step manner. Before 1999, the whole sector did not have a clear direction for its development, namely not clear about what type of talents it wanted to produce. In the following several consecutive years after 1999, the Ministry of Education held numerous meetings to discuss the industry-learning-research pattern for the HVE sector, and reiterated that the fundamental task and goal for HVE is to cultivate and produce high-quality technology-applied talents, which clearly articulated the difference in missions between HVE and general higher education, stating that the expected outcome of HVE was not academic talents, but skill-oriented ones. It is for the sake to achieve this ultimate goal that the national policies evolve as we have explored in this paper.

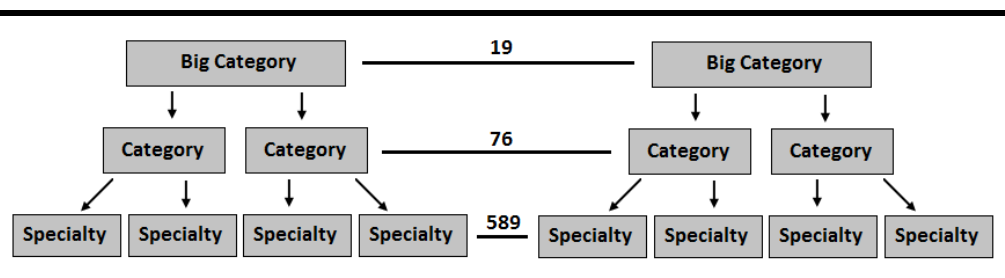


Figure 3. Categories and Specialty Structure for Chinese HVE.

Source: Drawn according to *Catalogue of Specialty* (2015 version) by China's Ministry of Education

Raising Social Recognition

Despite the remaining disadvantaged position of HVE as a whole sector compared with general higher education, the national government has been persistent in exploring new pathways to turn this around and improve the comprehensive quality and position of higher vocational education. At the national level, based upon the existing policies measures including the newly released significant Initiative, in the years to come, the central government's policies of persistent explorations are to be focused on both raising HVE's social recognition and further promoting the implementation of relevant policies on five key areas. With respect to raising social recognition of HVE, the central government naturally links it with a contemporary national strategy – 'China Manufacturing 2025' which aims at upgrading the country's manufacturing power to transit China's economy from the traditional labor-intensive one to a high-tech-supportive one. 10 sectors are to be strongly developed under this strategy including bio-medicine and

high-performance medical apparatus, information technology, energy-saving vehicles, electrical equipment, aerospace and aviation, maritime engineering equipment and high-tech vessel, new materials, high-end numerical control machinery and automation, rail equipment and agricultural equipment.(China Daily, 2015) Thus the demand for exponential high quality vocational talents are urgently needed under such background and the position of HVE has correspondingly been more valued than ever before.

Philosophically, China has once again stressed the concept of 'Craftsman Spirit' nationwide to counteract the traditional bias against craftsman and labor work, as it has been realized that craftsman spirit serves as a core quality to achieve breakthroughs in science and technology that the country needs for its real economic upgrade. As craftsman by its nature has high degree of connection with vocation, as Vice Premier LIU Yandong states that the central government expects to build an environment of 'revering professional skills and competence instead of diploma' nationwide (LIU, 2015). In order to make prevalent social respect to vocational education, the Ministry of Education has taken a series of measures including establishing Annual Vocational Education Week, organizing various kinds of vocational competitions, further building the selected model and key HVE institutions, requiring provinces to submit annual vocational education report, and many other measures to motivate HVE reform and innovation. With all these measures conducted together, HVE is expected to form a social image of openness and vigor to be embedded in people's minds.

Challenges and Prospects

Despite the size expansion and the improvement of the sector's structure as mentioned above, concerns of the sector's quality remain. Compared with general higher education consisting of universities and colleges, the quality of HVE institutes is still faced with many constraints. Mainly targeted at skill development and employment promotion, the quality of HVE and whether its graduates can effectively meet the demand of the market has constituted a concern for all-related debates and discussions in the academic domain regardless of the goodwill of all national policy intents. As Westerheijden, Stensaker, and Rosa (2007, pp.1) stress, quality is the core value in higher education, which should with no doubt include HVE in Chinese context as it accounts for half of the whole tertiary education domain. Some scholars sort of worry that on such special occasions as the recent global economic downturn, the future of Chinese HVE is in doubt (Roggow, 2014), as China's economy updates, a mismatch between employer needs and HVE graduate capabilities seems more salient with the phenomenon that while numerous HVE graduates find it difficult to find a decent job, job seekers also find it hard to employ ideal talents they need to fit the job posts (Kuang, 2006).

Discussing at a micro and effect level, many scholars view the problem from more micro perspectives such as HVE's educational aims, curricula, financial input and other factors. For example, in terms of educational aims, a number of scholars express that HVE ought to further the degree of embodying both "H" (higher) and "V" (vocational), which in their explanations once again implies that HVE bears the responsibility to cul-

tivate high-quality vocation-oriented talents, and the mission of HVE differs from that of the general higher education carried out by universities (Cheng, Li & Liu, 2007). It has been acknowledged that the level should be set high, and the essence of vocation must not be ignored. Some other scholars hold that HVE is supposed to work on improving students' humanity spirit (Tu, 2012), and that serving social and economic development is considered an important mission as well (Wang, 2014). Kuang (2006) based on international comparisons, however, warns that as the enrolled students of HVE institutes are graduates from secondary vocational schools or general schools without any work experience, HVE should not set their goals unrealistically high such as cultivating scientists or world-class engineers. He believes that the goals should be set proceeding from reality and being commensurate with the institutes' real capacity and the external support they can gain, but to cultivate and train applied and skillful talents is in his consent. When it comes to curricula, a large number of scholars consider necessary the need for a shift of emphasis from systematic knowledge teaching to increasing practice-included curricula, and they maintain that skills and competence instead of knowledge should prioritize on HVE institutes' agenda (Ren, 2001; Dai, 2003; Jiang, 2003). With respect to curricula contents, the consensus is that courses should be developed in connection with industry needs, but should avoid making the course as handbooks and discrete skills should be integrated into a certain subject framework backed by relevant theories (Li, 2006; Xu, 2009)

The fundamental challenge for the whole HVE sector is attributed to the lack of sufficient financial support. This not only means the vast gap between HVE institutions and universities in students' average expenditure, but also refers to the uneven financial input between provincial government-led institutions and local government-led institutions. There are well-to-do HVE institutes that have the capacity to purchase advanced experimental equipment and pay teachers well for sure, but the more prevalent situation is that because of the lack of money, a lot of HVE institutes would choose to cut curricula or teachers' salary to make ends meet. Regarding HVE's finance, Du (2007) believes that it is the misconception of HVE as a "level" instead of a "system" that leads to the systematic insufficient finance support to HVE whether it is governmental or non-governmental, and there exists high degree of imbalance across the whole country. Du also believes that the inappropriate positioning of HVE institutes also results in the unreasonable funds for the institutes themselves. Du's views, especially the view of shortage of funds has resonance with Kuang (2006:239) who holds that the overall shortage of governmental input and the scarcity of funds raised from non-governmental bodies directly lead to the lag-behind of facility update and staff attraction for HVE institutes.

This crucial barrier thus leads to a relatively weak connection to industry. During students' study period, they do have some work experiences, but their organized work experiences typically consist of only a few weeks of working at the end of a course, and they do not seem to have connections to multinational corporations that usually incorporate the most advanced industries and international standards (Stewart, 2015). The

incentives for employers to cooperate with HVE institutes are not high either, given the high mobility of HVE graduates, especially in eastern developed regions.

As some international researchers hold that policy implementation follows a far more complex and unpredictable course than most policy makers assume (Osei&Brock, 2006; Kelchtemans, 2007), the above discussions by various scholars reveal the existing gap between national policy intents and their implementation effects, though the focus of this paper is purely on national policy intents. It is certainly noteworthy that it is this gap that propels new national guiding policies to emerge in order to respond to HVE development demand under new circumstances as time progresses.

The Chinese central government represented mostly by the Ministry of Education aims to strengthen HVE development in five major areas according to issued documents. Strengthening discipline development is the first and foremost aspect to be highlighted, with HVE institutions being expected to strengthen their discipline and gradually to establish vocational discipline complex with institutional characteristics and build brands in a step by step manner. The second area to be explored is scheduled to be on the institution of a modern apprenticeship mechanism aimed at tightening the bonds between school discipline and business demand as well as between institutions and industries. Among all other things, modern apprenticeship attempts to resolve the issue of making what students learn inapplicable. The third aspect to be addressed, which embodies a deeper level for the second aspect, is pertaining to the closer cooperation between HVE institutions and business and industries, including more effectively implementing the idea of inviting business and industries to participate in the institutions' core development such as courses design, teaching and internship systems. Fourth, there is scheduled to be more complete regulations and rules on HVE institutions' advancement, including establishing HVE institutions' constitution, board of directors, annual quality report mechanism. Fifth, it is scheduled to further enhance openness and international cooperation in the operation of HVE institutions. On the one hand, China is aimed to bring extraordinary international human resources to improve its HVE quality, and on the other hand, it is expecting through international cooperation and open education that Chinese HVE faculty and students are likely to join more international participation such as working together with other nations to formalize global standards on vocational education, and promoting the mutual recognition of vocational certificates internationally (HTVEC, 2016).

Conclusions

This paper has analyzed China's HVE policy evolution trajectory in the 21st century, charting out policy intents at three major stages in a step by step manner. This trajectory seems to embody an idea of manpower development by 'growth from quantity to quality', with quantity already reaching a desired level while the quality still needs improvement. As an officially recognized important component of the country's education system, the size of the HVE sector has grown from a small base to one that accounts for half of the whole tertiary education sector within just less than 20 years. Considering

the population base of China, such a size of manpower output system is substantially higher than in many other countries in the world. With respect to quality of the human power the sector produces, the desire to improve educational quality through complementary indicators such as forging the sector to be really praxis-oriented, enhancing the overall quality and practical experiences of teachers, completion of assessment mechanism, selecting models to motivate large number of institutes, and mobilizing more resources to the sector by adopting group schooling, to name a few are explicitly reflected in those policy intents, and these intents are driven by the demand of China's economy in the new times. However, due to myriad reasons such as actual resource shortages invested in HVE and the limited time for the society to take HVE as seriously as general higher education, immense challenges and concerns remain when the general public takes a thought of HVE as an educational sector. This leaves a necessity to analyze the gap between policy intents and policy outcomes in future work.

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Received: 10 June 2018

Revised: 9 September 2018

Accepted: 10 September 2018