Promote the Transition of Continuing Education Successfully, According to the Chang of Economic Development Mode

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Abstract

Transformation of economic development mode refers to change from dependence on increasing consumption of material resources to relying mainly on scientific and technological progress, improved labor quality and management innovation. This shift can not be separated from Continuing Education which plays a fundamental role in the process. Change in the pattern of economic growth and social change in educational management make it necessary to transform past way of economic development which is decentralized, dependent, short-term and impractical so as to serve for new economic development mode effectively. Successful transition of Continuing Education requires public policy support of the Government and combined efforts of educators, enterprise and institution workers, professional and technical personnel.

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1. Introduction

The economic development of China has entered the world top three in total amount. The economic reform in 1978 accelerated China's economical development in four aspects, such as investment, export, consumption and spiritual impetus. In the past 20 years, the policy that Chinese government encourages some people to get rich first has aroused the pursuit of material enjoyment and thus wealth effect and its driving force have played a major role, followed by the pull of governmental investment and stimulation of consumption policy. However, desires for material of ordinary people have become weak after the year 2000 and the function of investment, export and consumption is strengthening. The three aspects are all of material level and need substantial capital investment and consumption of material resources. At the same time, this also brings a lot of problems such as environmental pollution, waste of resources and lack of stamina. This developmental way which is unsustainable and also dose great harm to society and environment is what Chinese government does not want to see and can not tolerate for a long time. So while economy is rapidly developing Chinese government proposed that economic developmental model soon be transformed into scientific model. Chinese government brought forward a new path of industrialization with Chinese features which means transition from dependence mainly on consumption of material resources to relying mainly on scientific and technological progress, improved quality of workers and management innovation. This is new demand for education, especially for continuing education which links closely to production and technical personnel engaged in it.

2. Transition of economic model from mainly depending on increased consumption of material resources to relying mainly on scientific and technological progress, improved quality of workers and management innovation provides a rare opportunity for continuing education.

Continuing education plays a basic role in the transition of economic model from mainly depending on increased consumption of materials to relying mainly on scientific and technological progress, improved quality of workers and management innovation. Marx once pointed out in one of his works "Das Kapital": " With the large-scale industrial development, creation of real wealth will depend less on work time and consumed labor, but depend more on ... ... the general level of scientific and technological progress or application of science in production. " Though China has achieved a continuous high-speed economic growth for 29 years, it also has paid a heavy price for resources and ecological environment, producing a series of new contradictions and problems, in particular, too high cost of resources and environment. In addition, for lack of independent innovative ability, core technology, independent intellectual property rights, world-renowned brands and low standardized products rate, China has to rely more on

the comparative advantage of cheap labor in exchange for modest benefits. For example, although the output of products made in China such as color TV sets, mobile phones, desktop computers and DVD players is the highest in the world, the key chips are mostly imported. Chinese companies have to pay 20% the price of each mobile phone, 30% of computers, 20% to 40% of CNC machine tools to foreign patent holders.

International competition in science and technology is becoming fiercer, labor supply in China appears new problems and pressure on resources and environment is increasing, so China has to rely more on scientific and technological progress, improved quality of workers and management innovation to drive economic development, which supplies arena for continuing education. The features of continuing education make it irreplaceable in promoting scientific and technological progress, improving the quality of workers and management innovation. Basic education is more about knowledge while continuing education is on ability and creation. Continuing education which combines knowledge, capacity and production closely provides condition and foundation for creating new productivity and technical ability, which basic education could not achieve.

3. Change of economic model and reform of social management lead to transition of continuing education.

China has been provided with basic conditions for this transition. To develop continuing education, three basic conditions are needed. Rapid development of the productivity requires advanced science and technology and higher quality of labor force. Wide application of scientific and technological knowledge in production and a certain number of professional personnel are the other two conditions. Among them, the last one is the intermediary between productivity and development of science technology and also the object of continuing education, as well as decisive factor of the three. China has already had such conditions. First, from the perspective of economic development, China's GDP has reached 2.6452 trillion dollars in 2006 after nearly 30 years of rapid development, which has increased by nearly 13 times than that in 1978 when the economy started, making China the third largest economy in the world. Solid material foundation which supplies good conditions for development enables China to stand on a new starting point. Chinese Communist Party declared new targets for future 13-year development on 17th Congress that by 2020 China's per capita GDP will reach 5000 dollars and the GDP will reach 7.2 trillion dollars, industrial structure, growth and consumption patterns that can save energy resources and protect ecological environment will be formed on the whole. To achieve this grand goal, Chinese government proposed that economic model be transferred and strategies for innovation implemented, which means new and higher requirement for continuing education. Because of imperfect policies and regulations, continuing education doesn't possess important position in educational strategies in China and its contribution to economy is not given sufficient attention and scientific assessment. So Chinese government should make efforts to develop continuing education and distance education, build a learning society and supply support for economic reform. To adapt to new demand and make contributions to new goal, continuing education has to change old model which is decentralized, dependent, short-term and sloganized into new one which combines with scientific research on production, coordinates with social development and links to ability accumulation of professional personnel. Secondly, science and technology is developing rapidly. Chinese gross production of high-tech industry has reached more than 4000 billion yuan with an average annual increase of over 20% and its imports and exports account for over 30% of the total amount. In 2006, the total expenditure on developmental research was 294.3 billion yuan, accounting for 1.41% of gross domestic product and ranking fifth in the world. The number of application for invention patent of 2006 ranked the fourth in the world. Science and technology is not only navigation for continuing education, but also its content and support. In order to serve social economy, continuing education must stand on the forefront of science and technology, pass on advanced scientific knowledge to working staff and researchers as well as combine with their invention, creation, innovation and technological reform closely. Only in this way can continuing education lead and promote productivity and social civilization. Thirdly, rapid increase in qualified personnel lay a solid foundation for the transition of continuing education. From 2002 to 2006, China's compulsory education covered from 91.2% to 96% of the whole population. Higher education achieved a historic leap. During this period, the number of higher education students increased from 16 million to 25 million, ranking the first in the world. The total enrollment rate increased from 15% to 22%, showing that higher education was stepping steadily into the popular stage. In 2005, the total number of human resources of science and technology in China was about 35 million, ranking first in the world. There were 1.365 million personnel working on developmental research

then in China, ranking second in the world. The above situation doesn't match the status of China in the world's scientific and technological field. Continuing education is one of the important factors turning talent advantage into scientific and technological advantage. Scientific and technological personnel must follow developmental trend of this century in knowledge structure, scientific and technological awareness and theory, creative thinking to innovate and develop, make contributions to economic transition and improve soft power of China, all of which can be achieved through continuing education.

4. Continuing education is of much importance in economic model transition

Hu Jintao, Chinese president, declared enhancing independent innovative capacity to build innovation-oriented country as main measures for good and fast development of Chinese economy in 17th major reports of Chinese Communist Party, saying: "This is the core of national development strategies and key factor to improve comprehensive national strength." Continuing education is an important part of the system for developing social productivity, maintaining international competitiveness and innovation. Innovation can not be separated from people, especially high-quality professional personnel with theory and experience. Professional personnel who are on the first line of research and production are the main force of innovation, but also the practitioners turning technology, knowledge and abilities into practical productivity. Various types of professional personnel at all levels are necessary for transition of economic model from mainly depending on increased consumption of material resources to relying mainly on scientific and technological progress, improved quality of workers and management innovation. On the other hand, professional personnel can't be separated from continuing education. It is continuing education that enables them to obtain most advanced knowledge in the world, master the theory and practice of cutting-edge technology and maintain the sensitivity and foresight for innovation.

Technical capacity is the key factor to promote industrial upgrading, economic restructuring, model transition and independent innovative ability. Technology needs talents, especially those with certain knowledge and expertise to master and use, so these personnel are the first resource in the era of knowledge economy. The developmental practice of different countries and regions shows us that human resources have prior strategic position among various socio-economic resources. The United States succeeded in catching up with the United Kingdom by giving priority to human resources development, so did Japan to catch up with the United States. Related research shows that the wealth of western companies in developed countries is comprised of 20% material capital, 16% monetary capital and human capital accounts for as much as 64% which makes up even a higher proportion in high-tech industries. This tells us that developed countries have combined strategy of economy, education and human resources to ensure socialization for talents, globalization for competition, legalization for management, capitalization for human resources, security, stability and continuous development of talents. The reason why manpower is regarded as a resource is that human has special potential, enormous energy that can be exploited, so human resource is of great economic and social benefits. Innovative ability can't be improved and or be sustainable, without the energy input provided by continuing education,

Enterprises are the cells of economic development and also the main force to transform economic mode successfully. To realize this transition, continuing education is necessary for enterprises, which supplies them with continuous competitiveness. In order to enhance competitiveness, enterprises often invest in human, finance, material, technology and information and investment in human is the most important of the five for it brings the greatest reward. Taking the example of Motorola Company, each dollar spent in training manpower can produce 30 dollars in three years. According to U.S. economists, 40% of the competitiveness of enterprises results from equipment, plant and skilled workers employed, while the other 60% from education. The proportion of high-skilled personnel in most enterprises in China is relatively low, only about 5%, while 40-50% in developed countries. Therefore, either from the macro aspect of economic transition model, or from the micro aspect of enterprise development, continuing education is one of the important means for promoting economic transition. Furthermore, the function of continuing education is irreplaceable.

5. Support of public policies is necessary for successful transition of continuing education.

The characteristic of dispersion makes it difficult for continuing education to regulate effectively on its own developmental law. Only through outside intervention and support, especially comprehensive means such as public policies, law, investment and evaluation can take continuing education into the track of scientific development.

5.1 Law protection.

Establishing a sound legal system for continuing education is the basis for successful transition. Continuing education started rather late in China and is still in developing stage. Enterprises and individuals can't understand continuing education deeply and their initiative of participation is not strong enough. Laws are needed to provide regulation and guidance, on the one hand to protect the right of technical personnel to participate in continuing education, on the other hand to develop their awareness of participation. Such countries as the United States, Britain, France, Japan, Malaysia established law of continuing education or lifelong education as early as seventies in last century, while there is not yet national law and regulations of continuing education in China, lagging behind 40 years .If China doesn't catch up immediately, transforming economic model will be an empty promise.

5.2 Fund support.

As a social undertaking of public welfare, continuing education needs the three beneficiaries including government, enterprises and individuals to work together. Government investment which is basic and leading mainly refers to policy tilt through the interest-oriented function of public policy and guiding the community to fund continuing education. Government funds should be used as orientation input, subsiding continuing education for key industries and enterprises, supporting the training institutions and course development. Enterprises investment is the guarantee for continuing education. Enterprises are the largest and the most direct beneficiaries of continuing education for professional personnel serve production and sales and contribute their intelligence to enterprises finally. Therefore, enterprises should increase investment on the employees' intelligence and ability, enhancing their quality of science and technology and innovative capacity to provide unlimited intelligence for development. Although enterprises should fund continuing education at the proportion of 1.5% pre-tax expenses according Chinese government, in fact, this was not fully realized because of the independence of enterprise management. Individual investment of technical personnel is complement for individual strength is limited after all and asking for too much individual investment may hurt their enthusiasm.

5.3 Mechanism innovation.

At present, there isn't unified and effective management model for continuing education in China. It is necessary to strengthen the leading role of government by means of legislation, administration, finance, circulating funds, projects and so on to combine continuing education with new projects, technological innovation, employee incentives and welfare, forming the social atmosphere that enterprises and talents participate actively in continuing education. In course development, we can learn from the experience of Australia to draft unified content , methods, standards and assessment for continuing education, establish related laws and regulations, combine achievement of continuing education with employment, promotion and incentives of skilled personnel so that a complete set of management model from course start to training process and result assessment is formed.

5.4 Interactive mechanism between continuing education and jobs.

The current serious global financial crisis brings great losses to both enterprises and life. Faced with this unexpected crisis, many enterprises take measures such as downsizing, pay and investment cuts which hurt the enthusiasm of employees and their unified confidence to overcome the crisis and thus are detrimental rather than beneficial to long-term development. Government should guide and encourage enterprises to take advantage of the opportunity that crisis brings and alternately arrange the temporary surplus of labor and expertise to attend continuing education, so that improve the overall quality of staff and their innovative capacity necessary for knowledge-based economy and accumulate intelligence for future development. Every country should establish interactive mechanism between continuing education and jobs, take training of continuing education as "reservoir" for technical personnel. When enterprises reduce production and surplus posts appear, the "reservoir" can absorb surplus staff to participate in con-

tinuing education and when the production task is urgent and positions are vacant, skilled personnel can be selected from the "reservoir" to meet the developmental demand. This requires countries to establish developmental fund, accumulating funds in prosperous period and control continuing education scale when facing crisis to meet the learning needs of more people. Interaction between continuing education and jobs can ease the employment pressure on government to some extent, improve enterprises' capability to deal with crisis and its aftereffect, satisfy the learning demands of workers, enhance their ability and thus it is a win-win interest pattern.