The economic globalization has provided a new drive to the development of the continuing education. With the strong support and promotion from the Chinese government, the continuing education in China has evolved into a new age with new contents, new approaches, new methods, and new achievements with tremendous vigor and vitality. The paper firstly analyzed both the internal and the external environments of Chinese continuing education under the context of economic globalization, and pointed out the opportunities as well as challenges of continuing education in China. Then the paper elaborated on the current status and characters of continuing education in China, and took a detailed discussion on the innovative efforts made in the continuing education by both the Chinese government and a variety of social organizations, enterprises, industries, colleges and universities.

Introduction

Along with the rapid expansion of the economic globalization, human capital is playing an increasingly important role in the global competition. Talents have become a most important strategic resource. According to the latest study by the World Bank, China’s GDP ranked fourth and its import and export ranked third in the world. China economic and social development has, to a large extent, integrated into the economic globalization. On the other hand, although China is the largest nation of manpower with a huge population of 1.3 billion, it is far from a great power of human resources. The comparatively low education level of labor force and the shortage of innovative talents impede greatly on China’s ability to participate in global competition. Under the economic globalization, it is imperative for China to improve quality of the manpower and self-innovation competence in order to maintain a
healthy, fast, and sustainable development.

As a supplement to the regular education system and one of the most effective ways to upgrade the overall competence of the human resources, continuing education has been attracting more and more attention from government, sectors and enterprises. To establish of lifelong education system and promote learning society have become an important part of China’s development strategy in the new century.

1. Opportunities and Challenges for Continuing Education in China

The cognition of continuing education in China has a long history. Xun Zi, a great Chinese ancient philosopher 2,500 years ago, proposed the concept that “there is never an end for learning”. And old sayings such as “it is never too late to learn” are well-known among the Chinese. After the founding of New China in 1949, the continuing education of China achieved great success through complementary adult education among workers and peasants, which not only broke down the traditional education frames but also provided educational opportunity for ordinary people. From 1980s, China began to reform and open up to the outside world enhancing extensive exchanges with other countries in economy, politics, science and technology, and education. Accordingly, the continuing education system in modern sense was established in China, which soon developed into a China-specific education with outstanding characteristics and remarkable efficiency, and played an important role in the social life.

Since entering the 21st century, the economic globalization characterized with knowledge economy has provided a new drive to the development of the continuing education in China. Given this, China’s continuing education with great changes between both internal and external environments has faced rare opportunities as well as fierce challenges, which appear as follows:

1.1 Economic globalization speeds up China’s economic transformation and industrial restructuring, accelerates the reform of state-owned enterprises and boosts the development of non-state ownership economy, leading to an increasing demand for employment and reemployment training. A large quantity of labor force is moving from the first industry to the second and third industries and there is more frequent labor mobility among industries, regions, enterprises and positions, thus driving the soaring demand for knowledge and skill trainings. A statistical report by the World Bank Institute in 2007 shows that 770 million laborers at different levels out of the 1.3 billion Chinese need upgrading their knowledge and skills, and each year about 10-15 million workers laid off from state-owned enterprises need reemployment trainings. Such a huge demand will surely exert a great impact on the structure, model and content of the existing continuing education of China. As a result,
people will have great demands for the continuing education resources supply in term of quality, quantity and efficiency.

1.2 Economic globalization accelerates the innovation and distribution of science and technology, such as the great stride of scientific and technological revolution represented by information technology, the shortening of the updating cycle between knowledge and technology, and that the scientific and technological achievements transforms into actual productive forces in unprecedented scale and speed. A large mount of new theories, new knowledge, new technologies, new methods and new information are having impacts on people's mind, life style and production modes. Compared with the developed countries, China is still lagging behind in professional skills, i.e. the low level of innovation capacity, the small number of scientists in areas of strategic importance and top talents in technological innovation, the lack of scientists with international influence in specialized fields, and the short of talents in specialized management, high-tech management and technological achievement transformation. Weakness in these areas aggravate the “bottleneck” of China's socioeconomic development, therefore, it is important and pressing to cultivate a large number of high-quality and innovative professionals.

1.3 Economic globalization facilitates the cooperation and exchanges in economy and technology between China and the world. In recent years, China has seen fast and steady growth in economy, constant integration into the world's economy, and gradual increase in foreign economic and technical cooperation and overseas investment year by year. There is a great demand for international professionals who can meet the requirements of different industries. According to the statistics by the Ministry of Commerce, the gap in the number of specialized talents in foreign trade business will have reached 150,000 by 2010. It is urgent to solve the problem of cultivating of a large number of internationalized professionals mastering foreign languages, international trading rules and economic laws.

1.4 Economic globalization deepens the development of reform and opening up while continuing education will inevitably come into a new open phase. In accordance with the provisions in the WTO General Agreement on Service Trade, all WTO member countries and regions will have the rights to participate in providing education services, which aggravates the severe international competition in continuing education. Attracted by the huge demands of education and training in China, many international education and training agencies have entered into China in recent years, whose advanced education concepts, professional training and standardized management and service not only furnish us with new perspectives to learn, but poses great competition pressure on China's continuing education. Under such circumstances, the developing mode, training programs, teaching staff and services of our continuing education are all need to be improved.
In conclusion, under the economic globalization, China’s economic and social developments are more dependent on high-quality talents than ever before, and the overall competency of human resources will determine China’s future in global competition. However, the regular school education alone is far from enough for China to cultivate high-quality and innovative talents. Therefore it is necessary for China to promote continuing education extensively in order to realize national rising, national prosperity, industrial revival and personal development. With such a great historical mission, China’s continuing education needs take a positive stance to address the challenges and seize the opportunities to serve the China’s economic construction and social development better.

2. Current Situation and Development of Continuing Education in China

With the great stress laid and strong support provided by the Chinese government, the continuing education in China has recently made remarkable achievements. The scale of the continuing education has been expanded year by year with increasingly rich contents and diversified patterns. Many continuing education activities have been carried out in a variety of forms through multiple channels at different levels. China’s continuing education is making big strides towards a flourishing new stage.

2.1 Continuing Education on a Steady Rise

First, the number of people participating in the continuing education is increasing. So far, over 70 million professional & technical personnel have received the continuing education across the country; more than 60 million persons have participated in agricultural practical technology trainings; over 35 million rural labors have obtained trainings on movement; and over 90 million staff members have participated in various vocational trainings each year. Besides, the rate for community residents joining education and trainings has been growing year after year as well. In 2006, all the 51 community education pilot areas in China have provided trainings to over 13 million community residents, and in many cities, the proportion of residents receiving such trainings has reached over 60%. A learning society, in which everyone is learning, begins to take shape.

Secondly, the number of continuing education service providers has also increased. The statistics indicate that there were only over 4,000 education and training service providers in China in 1991, while in 2006, the total number of all kinds of education and training service providers has soared to over 50,000 across the country.

In the meantime, the continuing education service providers have begun to be diversified and can be mainly divided into the following types: the first type is general institutions of higher education, higher educational institutions for adults and vocational
institutions; second, privately-run education, training and consulting companies; third, corporate universities and corporate business schools; fourth, training centers affiliated to governmental organizations; fifth, all kinds of social organizations, such as academic societies, industrial associations and intermediary organizations.

2.2 Increasingly Improved Laws and Regulations

China attaches great importance to laws and regulations related to the continuing education. The Education Law of the People’s Republic of China, adopted by the National People’s Congress in 1995, prescribes the legal status of lifelong education. The Provisional Regulation on the Continuing Education for Professional and Technical Personnel, China’s first administrative regulations on the continuing education in China, was promulgated by the Ministry of Personnel in 1995, establishing the organizational structure of level-to-level administration, defining the students, tasks, contents and patterns of the continuing education, laying down rights and obligations of both employing units and professional & technical personnel, setting the minimum length of time professional & technical personnel shall spend in obtaining continuing education. It is also stipulated in the Provisional Regulation the requirements on the student registration system of the continuing education, statistics system of the continuing education work, evaluation system of the continuing education and reward system of the continuing education.

Since then, all governmental organizations and local departments have started making laws and establishing relevant systems concerning the continuing education. For instance, 12 provinces and cities, such as Beijing, Tianjin and Shandong, have published local regulations on the continuing education, and China’s first local law on lifelong education was promulgated in Fujian Province. Besides, regulatory authorities of health, education and other sectors have also developed specific regulations on the continuing education. These laws and regulations formulated by local government and regulatory authorities have clearly defined the goals, measures, tasks, obligations, as well as the examination, supervision and evaluation of the continuing education. At present, the Chinese government is planning to enact national laws and regulations on lifelong education and continuing education. China’s continuing education is being standardized and implemented according to the laws progressively.

2.3 Constantly Improved Government Administration System

In recent years, a government administration system, with unified planning, clear division of labor, level-to-level administration and being implemented by sectors, has been well established for the continuing education in China. The state government takes the responsibility of law-making, supervision, policy-decision and planning of the continuing education, while the regulatory organs of different sectors and local government at different
levels shall accordingly set up administrative organizations and personnel responsible for the planning, administration and coordination of the continuing education in their own departments, sectors and areas, as well as building a team of the teaching institutions and experts for the continuing education. All enterprises and institutions at the grassroots level, under the administration and guidance of the upper-level governmental organizations, shall take the responsibility of specific implementation of the continuing education and organizing a variety of continuing education activities independently to meet their own needs.

With the support of the Chinese government, a cooperation network of the continuing education gradually comes into form: first, some cooperation areas for the continuing education are established respectively in the Northeast, Northern part, Southern part, Southwestern part and Northwestern part of China; second, a cooperation and communication network is established among universities, scientific research institutions, radio and TV universities, private education and training institutions, armies and all kinds of academic organizations. Thus, to meet the needs of the society, China’s continuing education has built a working and service system which is managed and controlled by the government, shored up by different sectors, participated in by the society, organized by employing units and obtained consciously by individuals.

2.4 Enriched Teaching Contents

As the lifelong learning concept is deeply rooted among the people, the continuing education in China has begun developing into a multi-scale, multi-level and multi-pattern education. In particular, as Chinese people are changing their philosophy of consumption and life style, the roles of the continuing education has started extending from supplementing degree education program, knowledge updating and development of vocational aptitude to all aspects of social life.

Accordingly, the beneficiaries of China’s continuing education have also broadened to include all kinds of professionals, technicians and managers, as well as employed and unemployed labors, retirees, community residents and farmers. One of the key characteristics of today’s continuing education in China is its wide coverage and diversity of beneficiaries.

2.5 Constantly Innovating Means of Education

At present, a variety of technologies, such as Internet, satellite network and multimedia, are widely used in China’s continuing education. A distance education network has been built covering both cities and towns all over the country by combining computer network with satellite network, and combining CD teaching with face-to-face tutoring. The online education conducted by 68 pilot universities and colleges has already extended to 31 provinces, autonomous regions and municipalities all over China except Taiwan. More than 3,000
off-campus learning centers and teaching stations are established with over 200 majors and over 3 million students. As the world largest open university, China Central Radio and TV University (CCRTU) have built over 4,000 off-campus learning centers. Its information transmission system has covered nearly all cities and towns across the country, providing 25 IP data-based radio broadcasting programs, 8 TV programs and 8 audio programs, with a high-speed access to CERNET.

Besides, relevant government departments have provided the rural areas with CD players and satellite broadcasting systems to facilitate the teaching and learning; many governmental departments, enterprises and institutions have developed e-learning platforms; the advanced information technology has also been used in the community education, and E-learning communities have been established in many cities as well. A modern distance education platform integrating satellite TV network, computer network and instructional assistant network has already taken shape, which has effectively broadened the beneficiaries of continuing education in China and improved the efficiency of education and trainings.

2.6 Widening and Deepening the Cooperation and Exchanges

After China’s access to the WTO, the Chinese government has, in light of its commitments to the WTO, successively formulated the Regulations of the People’s Republic of China on Chinese-Foreign Cooperation in Running Schools and its implementation rules to promote the introduction of high-quality foreign educational resources, to strengthen international cooperation and exchanges in the field of the continuing education. So far, China has already developed educational cooperation with 184 countries and regions, and signed agreements on mutual recognition of diplomas and degrees with 32 countries and regions. Many universities, academic institutions and industrial associations have also launched international cooperation in a variety of forms. According to the statistics, more than 1,000 Sino-foreign cooperative schools and relevant projects have been approved by the Ministry of Education. Meanwhile, we also have started exporting high-quality educational resources to other countries. In 2004, China established its first overseas Confucius Institute in Seoul, South Korea, spreading Chinese culture and promoting mandarin in the international community. So far, China has already opened over 200 Confucius Institutes in 65 countries and regions.

The Chinese government has always put great emphasis on international exchanges in the field of the continuing education for professional & technical personnel. In recent years, we have taken full advantage of foreign high-quality resources of continuing education by sending potential professional & technical talents in key positions to further their study overseas. Meanwhile, we have also sent over 500 professional teachers to Africa, helping
African countries to train professionals and talents in the fields of economic management, agriculture, medical heath, culture and education, customs and diplomacy. The China Association for Continuing Engineering Education (CACEE) has taken an active part in various activities organized by the International Association for Continuing Engineering Education (IACEE) and assumed due responsibilities. A closer relationship between the continuing education in China and the international continuing education has been made by sending delegations to participate in IACEE conferences, recommending relevant Chinese enterprises and organizations to join IACEE, introducing excellent thesis to IACEE conferences, and meanwhile absorbing advanced concepts and experiences of the continuing education from IACEE’s other members.

3. Innovation and Characteristics of the Continuing Education in China

With the Chinese government’s promotion and support, together with the active participation of enterprises, industries, colleges and universities and a variety of social organizations, innovative efforts are constantly made in the continuing education in China, which, under the orientation of meeting the demands of talents, has initially formed into a development pattern featured Chinese characteristics with a balance between efficiency and fairness.

3.1 Government Promotion and Policy Support

The emphasis placed and support provided by the Chinese government is the key factor for the rapid development of the continuing education in China in such a short period of time. The Chinese government plays roles of planner, promoter, coordinator and supervisor during the development of the continuing education.

First, the strategic position of the continuing education has been clearly defined. Entering the 21st century, the Chinese government has been attaching strategic importance to the continuing education. To develop the continuing education and to carry out national projects of the continuing education are even written into the CPC’s work report and the nation’s “Eleventh Five-year Plan” respectively, consolidating the position of the continuing education in China’s economic and social development.

Secondly, the planning and coordination for the continuing education has been stressed, and it is explicitly proclaimed by the government to strengthen the planning and coordination for lifelong education, to optimize and integrate a variety of education and training resources, to utilize the society’s learning resources, cultural resources and educational resources in a comprehensively manner, and to build and complete a wide-covered and multi-tier network of education and training. In addition, the guidance and
requirements have been put forward to give a comprehensive plan to the continuing education and to coordinate relevant resources.

Thirdly, the key tasks of continuing education have been identified. The Chinese government has identified three kinds of talents, namely the party and governmental officials, enterprise operation managers, and professional technicians, as the key targets of China's continuing education in the new era. Centered on capacity building and highlighting the cultivation of innovative, the Chinese government has further identified the key tasks of the continuing education and carried out some large-scale continuing education activities.

Fourthly, the pilot project of the continuing education has been organized and implemented. In 2005, the Personnel department of the Government has launched “the knowledge updating project of professional and technical talents”, with an aim to train 3 million innovative medium-and-high-level professional and technical talents standing on the heels of pioneering technologies in five key sectors including modern agriculture, modern manufacturing, information technology, energy technology and modern management within 6 years from 2005 to 2010. Since the project was launched, over one million persons across the country have participated in professional & technical trainings within the project framework.

During the implementation of the project, all relevant departments in local areas and regions have actively developed innovative working methods and have accumulated many good experiences. A series of practical guidebooks, training outlines and teaching materials have been developed, some well-known Chinese and foreign entrepreneurs have been employed as visiting professors for the project, and a team of trainers in the area of modern management has been established. Besides, Ministry of Agriculture has invited over 100 foreign experts to deliver lectures in China. China Association for Continuing Engineering Education (CACEE) has constructed a national information-based service platform for the continuing education to conduct a variety of activities, such as on-line distance learning, registration, communication and enquiry service. Moreover, some training centers for engineers specializing in automobile, equipment manufacturing, chemical engineering and textile have been erected in Shanghai by some large manufacturing enterprises, such as Shanghai Automotive Industry Corporation (Group) and Shanghai Electric Group Co., Ltd.

All local personnel departments, by taking this opportunity, have resolved quite a few practical problems and promoted the development of the continuing education in an all-round manner. For example, Gansu Province has adopted the legislation of the continuing education during the project; Qinghai Province has trained 1,872 professional & technical personnel and managers for Sanjiangyuan Area (source area of three rivers) by adhering to two key tasks, namely, the knowledge update project and the talent-cultivation project for the
Sanjiangyuan Area. In addition, many eastern developed provinces and cities, such as Jiangsu, Shanghai, Fujian, Qingdao and Guangzhou, have organized advanced training courses for supporting their counterparts in western provinces, which have facilitated the exchange of experiences between eastern and western areas and fostered a number of high-calibre talents for western China.

3.2 Centralized Planning for Industries with Independent Enterprises

Industrial enterprises are an important force ensuring effective and smooth implementation of the continuing education in China. At present, most industrial enterprises in the country have already established their own internal training systems, capable of training their staff members at their own wills in accordance with their actual needs. Staff trainings become spontaneous voluntary needs of industrial enterprises. In some large high-tech enterprises in China, staff trainings have already been extended to target all employees. Taking the field of energy technology as an example, the top four enterprises in the petroleum and chemical engineering industry and the top five in the power industry have already completed trainings for all their professional & technical personnel, with the number of trainees exceeding tens of thousands per annum and training expenditures no less than RMB 100 million Yuan or even exceeding RMB 1 billion Yuan.

For the continuing education of industrial enterprises, industrial associations are playing a bridging role between the government and enterprises, assuming important responsibilities of implementing and executing, organizing and guiding, planning and regulating, monitoring and evaluating as well as providing consulting and coordination services, and are ensuring an orderly development of the continuing education for all industries. So far, there are around 60,000 industrial associations in China, most of which have been carrying out continuing education activities for their own industries to different extents. Among them, the national industrial associations of electric power, transportation, railways and steelworks have achieved remarkable performances in staff trainings. Particularly, the continuing education conducted by the China National Coal Association (CNCA) has experienced a rapid development and established its own working system with characteristics of the coal industry within a very short period of time. Having incorporated over 600 well-known experts and scholars from governmental departments, education institutions, and scientific research centers and manufacturing plants in the industry, CNCA has built a team of continuing education experts and trainers for the coal industry. Moreover, a curriculum system of professional training for 43 subjects including coal mining, safety, machinery and electronics, geology, coal–chemical industry, coal power, etc. has been developed in accordance with the key projects, major programs and important tasks of the coal industry. Besides, CNCA has also developed a modern system of distance education and training network for the coal industry nationwide, which covers half of the key
state-owned coal enterprises, broadcasts over 2000 hour courses to staff of the coal industry each year and provides them with knowledgeable, instant, effective and independent training services. It is also the earliest industry to provide distance education and trainings by modern information technology in China.

To sum up, the continuing education of industrial enterprises in China display some main characteristics as follows: first, the enterprises have organized diversified trainings and learning activities themed on production, operation and management, technological breakthroughs and innovations, R&D of new technologies and their promotion; secondly, local enterprises are keen on setting up corporate universities, with nearly 100 large companies including Meng Niu and Haier setting up their corporate universities; thirdly, distance learning has grown very fast in enterprises, and some industries such as IT, coal and finance have taken the lead to start E-learning trainings; fourthly, great efforts have been made in promoting staff trainings and career education in a bid to create learning enterprises, with emergence of nearly 200 learning pilot enterprises up to now; and fifthly, a university-enterprise cooperative pattern of the continuing education has been developed for cultivating talents. For example, the China University of Petroleum (CUP) has so far trained 80,000 professional & technical personnel for the petroleum and chemical industries, and together with China National Petroleum Corporation (CNPC), China Petroleum & Chemical Corporation (CPCC) and China National Offshore Oil Corporation (CNOOC), has established the China petroleum distance training network; Beijing Jiaotong University (BJU) has fostered and trained over 20,000 professional & technical personnel for the railway, highway and electric power industries, and assisted the Ministry of Railways (MOR) in developing the distance training programs for the professional technicians in the railway industry.

3.3 Focusing on Talent Cultivation in Rural Areas

China is a large agricultural country, and there are 750 million out of its 1.3 billion population in rural areas, among which 21.48 million people under extreme poverty are facing shortage of food and clothing. Inadequate education is the fundamental reason for their poverty. According to the statistics, the illiterate and semi-illiterate population accounts for 7.4 percent of rural labor forces in China, while those with middle-school or lower-level education account for 80 percent. Therefore, education and training for the rural areas is a key task for China’s continuing education, which also forms another main characteristic of China’s continuing education at the current stage.

With the government’s support in terms of policy, investment and regulations, innovative efforts have been continuously made to the education and training pattern for the rural areas. Under the leadership of the governmental departments and with a wide participation of social organizations and great support from all kinds of schools at all levels, a
mechanism integrating relevant training resources as well as a multi-channel fundraising mechanism has been established. As for means of education, based on the current situations of poverty-stricken areas, multiple of information transmission patterns including satellite network, computer network, cable TV network have been employed, allowing for co-sharing of excellent education resources and providing necessary technical support for organizing large-scale education and training activities cost-effectively. For training contents, to meet the needs of different groups of people in the rural areas, a diversity of education and training activities have been carried out, such as trainings on agricultural science and technologies, trainings on vocational techniques, trainings for peasant entrepreneurs, as well as imparting general knowledge of culture, health and hygiene, pre-natal and post-natal care. Not only has these tailored and practical trainings significantly enhanced vocational skills and educational level of the rural population, but has directly given an impetus to social and economic development in the countryside.

These years, the education and training in rural areas has taken new features in China. Tsinghua University, and some other colleges, based on their own rich educational resources, has been carrying out large-scale educational and training activities against the poverty-stricken areas. Tsinghua University has set up a three-level resource-transmission system by county, town and village in which university as a resource center, and 210 distance teaching stations for educational poverty alleviation by a kind of resource-transmission way based on information and communication technology (ICT) and supplemented by face-to-face mode. Relying on the above teaching stations, Tsinghua University has been focusing on the competency building and training of three types of people, which includes party and government cadres, teachers from primary and secondary schools and peasants; what's more, it has developed and integrated more than 2,000 courses in reference to the practical needs of social economic development of the local poverty-stricken areas, and the number of total beneficiaries has up to 450,000 and achieved good social benefits.

Conclusion

With a gradually deepening reform, the continuing education is playing an increasingly prominent role in the modern society. Today, China's continuing education enters into a new stage with new contents, new approaches, new methods, and is making new achievements and exhibiting tremendous vigor and vitality.

Looking forward to the future, the continuing education in China has a promising prospect, but it requires arduous efforts. The China Association for Continuing Engineering Education (CACEE) will undertake its due international responsibilities, continue to strengthen academic exchanges and cooperation with United Nations Educational, Scientific
and Cultural Organization (UNESCO), International Association for Continuing Engineering Education (IACEE) and foreign intermediary organizations of continuing education, and actively conduct pertinent academic activities focusing on hot topics and challenging issues in the field of international continuing education, and share with other countries its useful experiences and practices in developing continuing education. Meanwhile, the China Association for Continuing Engineering Education (CACEE) will also actively carry out international training cooperation in a well-planned manner by a combination of “inviting in” and “going global”, and further accelerate the process of internationalization of China’s continuing education by introducing and exporting excellent education resources. Through unremitting efforts, the Chinese government is striving to make contributions to the development of continuing education in the world.

Reference


Curriculum Vitae

Professor Hu Dongcheng graduated from the Department of Electrical Engineering of Tsinghua University in 1970. He joined the faculty of the Department of Automation in
THU after graduation. From 1994 to 1996, he was the department dean and the director of the post-doctoral center of the discipline of automatic control in the Department of Electrical Engineering, Tsinghua University. From 1999 to 2004, Prof. Hu was the Vice President of Tsinghua University. From 2004 on, he serves as the Vice Chairman of the University Council and the Vice Chairman of the Academic Committee in Tsinghua University respectively. From 1998 till Now, he also serves as the Dean of the School of Continuing Education, Tsinghua University. Moreover, he is currently the Vice Chairman of the China Association for Continuing Engineering Education; the Vice Director of the Experts Steering Committee of Knowledge-updating Project for Professional and Technical Personnel of Ministry of Personnel; the Vice Director of the Steering Committee of Cultural Essence Education in Colleges and Universities of Ministry of Education, etc.