5.4 Education

China has started on a massive effort to provide computers and access to technology to tens of thousands of primary and secondary school across the country. As part of the effort, the Ministry of Education and the National and Provincial Centers for Education Technology (NCET and PCET, the institutions responsible for implementing technology-related innovations in schools) have enthusiastically embraced World Links’ Teacher Professional Development program. This will help the teachers to use technology effectively while supporting the introduction of new teaching methods in parallel with the Ministry of Education's policies, which is to promote participatory, project-based, active and student-centered learning.

The actions being undertaken by the government and schools include the following:

- Constructing infrastructure needed for an information environment
- Developing educational resources
- Encouraging computer education
- Supporting teacher professional development
- Integrating ICT into traditional classrooms
- Delivering good educational resources into rural areas using ICT-assisted distance education methods
- Changing administration systems through ICT applications

5.4 Education Overview

5.4.1 Major initiatives

5.4.1.1 National Government Projects

- The School Connection Project: This is to enable all primary and secondary schools to have connection to the Internet and to encourage the application of ICT. The national government targeted to have over 90 per cent of elementary schools to be connected to the Internet by 2010.

- The Modern Distance Education Project: The intention of this project is to increase the bandwidth of the China Education and Research Network. The national government supports the project by providing funding and the necessary authorisations.

- The Computer Network Construction Project for Western University Campus: In 2002, the national government invested CNY 900 million (US$ 108 million) to support 152 western universities to establish campus networks and have access to the China Education and Research Network (CERNET). The project improved the infrastructure for the rural areas of China, which may be useful for other levels of education in the future.

- The Popularisation of ICT Education in Primary and Secondary Schools: The Ministry of Education started this plan in 2000 and ordered all primary and secondary schools to offer a course on ICT education during the following five to 10 years. The purpose is to have all K-12 students learn to use a computer.

- The Administration Informationisation Project: This project aims at establishing a web-based support environment for educational administration to enhance the quality of public service education administration, to improve the efficiency of educational administration and to facilitate monitoring by the society.

- The Distance Education Project for Communist Party Members Training in the Countryside: The government plans to build a distance education network, which will reach the Communist Party member learning centres in the countryside. This project will use distance education to facilitate the provision of education for country Communist Party members, schools and the general community to improve the cultural condition in the countryside.

- The Modern Distance Education of Primary and Secondary Schools in the Countryside: Started in 2003, the central government invested RMB 10 billion to buy infrastructure equipment. The aim was to enable primary and secondary schools in the countryside to make use of distance education in order to share good educational resources with the schools in developed areas.

5.4.1.2 Joint Projects Between Enterprises and The Education System

- The Rural Area Distance Education Demonstration Project: 10,000 learning centres were set up which can receive China satellite and broadband learning programmes and 5,000 sets of receiving equipment were provided to primary and secondary schools in 12 provinces in rural areas. The Li Jiacheng Fund and the Ministry of Education aim to improve education quality by supplying good teaching and learning resources. (see also: Digital Divide)

- China-U.S. e-Language Project: One of the biggest educational co-operation project in the world. Both China and the United States make use of advanced technologies such as multimedia and simulation to build a web-based learning courseware for English and Chinese instruction. The learning modes are portable media such as CD-Rom/DVD, web-based learning and combinations of the two. It is mainly targeted at high school students from 12 to 18 years who study English in China and Chinese in America.

- The China-Europe Basic Education Project in Ganshu: Started at the end of 2001, the European Union funded EUR 15 million to provide tuition assistance to students, equipped sets of desks and tables and provided computers. This project has also helped 439 primary school teachers to pursue degree programmes, provided training for 1,200 junior school teachers and set up 86 teacher learning centres. The project has now spread to 41 rural villages in Ganshu province.
5.4.2 Problems on the use of ICT

- The difficulty in integration of ICT into education: The integration of ICT into traditional classrooms is a practical difficulty in Chinese schools because of the lack of education resources and sound application methodology. Research should be carried out to develop suitable models for China that embody best practices of ICT in daily instruction and administration.

- The demand for the people who are skilled in ICT: In order to integrate ICT into education, there needs to be many more people with specialised knowledge of educational technology - particularly on the part of the teachers and the administrators. Moreover, the insufficiency of the teachers and the resources in the west increases the gap between the western and the eastern parts of the country.

- The immaturity of the educational ICT industry: There are many factors creating obstacles to the development of the educational ICT industry. These include the lack of ICT products in terms of both quantity and quality, which are needed to support the development of informationisation; the shortage of talented people; the lack of co-ordinating policies, competitive mechanisms, and evaluation of results; and the immature stage of the development of information criteria and success indicators.

5.4.3 Solutions on the use of ICT

- Invest money on village information infrastructure and staff training. Village information infrastructure level in China is very low. There are two problems: there are not enough facilities and few people can provide technical support.

- Develop resources that are relevant to the application of ICT in education. First, a national resource platform is needed to support the sharing of learning materials among regions and schools. Second, it is important to identify and spread ICT application models suitable to Chinese education. Last but not least, greater effort is needed to identify appropriate management and resource criteria to use as a basis for future development.

- Supply staff training on ICT and new education philosophy. In order to increase the application of ICT in education, it is necessary to help staff develop the requisite skills. Additionally, the ideas of relevant persons should be renewed to improve the efficiency and quality of ICT applications. The training of administration and decision-making staff is the most important task. So far there is no plan for this.

- Promote development of modern e-government. It is necessary to push forward the informationisation of educational government affairs and to build the perfect e-government system in order to improve the educational public services and administration. This will require the development of a wholesome e-government system and management mechanism, as well as e-government criteria.

References