

ELEARNING IN CHINA – GOVERNMENT POLICIES AND PILOT UNIVERSITIES

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This article provides background information on eLearning in China, focusing primarily on its historical development and current scope. I discuss the key factors that have shaped the current eLearning systems, the expansion of pilot universities and their roles in the development of eLearning, problems currently facing the system, and potentials for future development. While eLearning is enjoying a rapid expansion in China through government and industry support, it still faces many challenges.

Introduction

The role of eLearning is now well established in China as a means of promoting a knowledge-based society. This is the result of a sequence of Chinese policies that have stressed the role of eLearning in improving education and training. Policies such as “The Core to Delivering a Learning Society” have already been implemented, and the Chinese government has produced an eLearning action plan called “Looking Toward the 21st Century Education Promotion Action Plan” to help achieve its goal of a knowledge-based society (Ministry of Education, 1999a). In 2000, the Ministry of Education (MoE) confirmed “The Rule of Temporary Implemental Management of Education Websites, Internet Education and Online Temporary Management” as the key for establishing a new educational information system. At that time, external factors also came into play as the SARS (a highly contagious respiratory disease) epidemic hit China, highlighting the potential of eLearning. Educational establishments were closed and students had to either remain on campus or to return home until the epidemic was stopped. Students and teachers continued, however, to work on homework, to take exams, and to participate in discussions via the Internet. As a result of these events, the important contribution that eLearning could make to education in the 21st century was clearly demonstrated. Successive Chinese policy developments recognize that eLearning can offer people new sources of information, improve the range and quality of education available to them, and enable all people, regardless of their physical location, to best take advantage of their learning time.

In 2003, the global economic value of eLearning was 25.3 billion dollars, with the number of eLearners increasing at a rate of 300% per year. An IDC (International Data Corporation) report (2001) predicted that the eLearning economy in China would reach 100 million dollars by 2006. However, the economic value of eLearning in China has already surpassed this figure (Huang Yong, 2004), and when we consider that the Chinese population is 1.3 billion, it is apparent that eLearning has still not been brought to fruition and that its full potential has yet to be exploited.

Background Information on eLearning in China

In the second half of the 1990's, rapid developments in electronic communication and increases in education information courses led to the development of an entire new approach to education. Universities in China began developing eLearning systems, delivering multimedia content via computer networks and satellite. At this time, the development of eLearning was promoted by several events. First, in February 1996, Wang Dazhong, president of Tsinghua University, proposed a tentative plan for the expansion of eLearning, and during the same year, Tsinghua University accepted and implemented a blueprint for eLearning (“Modernization of Long-Distance Education Project Proposal”). Second, in 1998, speeches at key political events such as the National People's Congress and the “Chinese People's Political Consultative Conference” called for the development of eLearning (Ding Xingfu, 2002). At the same time, people within China

became aware of several facts about educational policy development, including the realization that traditional education and old methods of Distance education could not satisfy the demands of social development, the need to establish a lifelong learning system and the requirements of a learning society etc. As result of changes in learning patterns both internationally and domestically, eLearning is fast becoming important not only as a model in formal and informal education, but also as a national policy in establishing lifelong learning systems and learning societies.

The Origins of eLearning

China's early eLearning technology consisted of Compact Disk (CD) delivery, satellite transmissions, and the use of CERNET (China Education and Research Network – an Internet-based delivery system). CERNET, established in 1994, is the world's largest education and research network. Its purpose is to promote Advanced Distance Learning (ADL). This network, run by the MoE, supports eLearning education, including vocational training, eLearning teaching and management, and also satellite systems.

In September 1994, the MoE decided to invest funds totalling 4 hundred million RMB into the development of eLearning and appointed four universities (Tsinghua University, Hunan University, Zhejiang University, and Beijing Post and Communications University (BPCU)) to pilot programs. The experimental units began operation in 1998. These universities followed four policies established by the government: (1) no enrollment limitations, plans, or quotas should be implemented; (2) entrance examinations should not be the national ones, but should be set by the universities; (3) the subjects should be chosen by the universities; and, (4) the duration of study should be flexible. It can be seen that the four government policies gave the pilot universities comprehensive rights in determining their own goals for eLearning. The differing routes taken by the universities as they commenced the introduction of eLearning programs are well illustrated by considering these pilot programs.

In 1998, these four universities altogether recruited 9,000 students into degree courses. Tsinghua University recruited 1,700 graduate students and Hunan University 3,500 students. In two years Zhejiang University recruited 3,000 undergraduate students and more than 200 postgraduate students. BPCU recruited 600 undergraduate students (China Education and Research Network, 2000). Most of the students were interested in obtaining degrees, and, as a result of these programs, the government was able to set up eLearning at high-level universities and to provide communication technology through them. An important first step in the establishment of eLearning in China had clearly been reached.

In 1999, the MoE emphasized the development of eLearning, and discussed expanding degree education, non-degree education, eLearning teaching modules, eLearning management mechanisms, and the construction of network resources (Yuan Ji, 2000). Nevertheless, it is important to recognize that there is still a noticeable gap between the development of eLearning in China and that of the USA and other developed countries. This gap can be attributed to economic and educational disparities, both of which have had a definite impact on the spread of eLearning. Already between 1997 and 1998, 34% of US universities had started to employ eLearning (1,690 universities from among 5020). (For further information see: <http://www.Hubtvu.edu.yuanyantiandi>). In comparison it can be said that China has just emerged from its entrance to the eLearning arena

eLearning requires teaching modes which consist of video conference system, Web courseware, Satellite TV, CD-Rom, E-mail, BBS, Chat room, others (Fax, Telephone, Concentrated Exam). Each pilot university has adopted at least 3 or 4 of the modes shown, and they are nearly always combined with traditional face-to-face instruction.

Expansion of Pilot Universities in eLearning – Operation systems

Government policies to support eLearning and increase Internet users have directly influenced the spread of network education. From 1999 to 2000, the MoE confirmed the choice of 30 Pilot Universities plus the Central University of Broadcasting and Television (CUBT). CUBT can be

considered as having the largest distance education program in the world. It was already using satellite networks and cable TV in its adult education teaching programs, and when later appointed by the government as one of the Pilot Universities, it upgraded its systems to include the use of CERNET and CHINANET.

By the autumn of year 2000, Web Institutes were well established with full autonomy for recruiting students and issuing degrees such as B.A., M.A., Ph.D degrees. Up to the present time, the combined investment from universities and corporations working together with universities, such as China Learning Web, Aopeng, and OZTIME, is approximately 1.84 billion RMB (<http://www.prcedu.com>). The role of industrial connections in the healthy development of eLearning in China has been discussed widely. In 2000, the authoritative, high profile magazine Finance and Economics published an article “The Online School is Swimming in the Industry Market,” with the subtitle “China eLearning University: Thirty-one Universities and Industrial Capital Together Build a Degree Education System.” As a result of these developments, eLearning is now not only focused on the higher education field, but is also open to secondary education and to services associated with domestic and international organizations.

Figure 1: The eLearning Systems in China

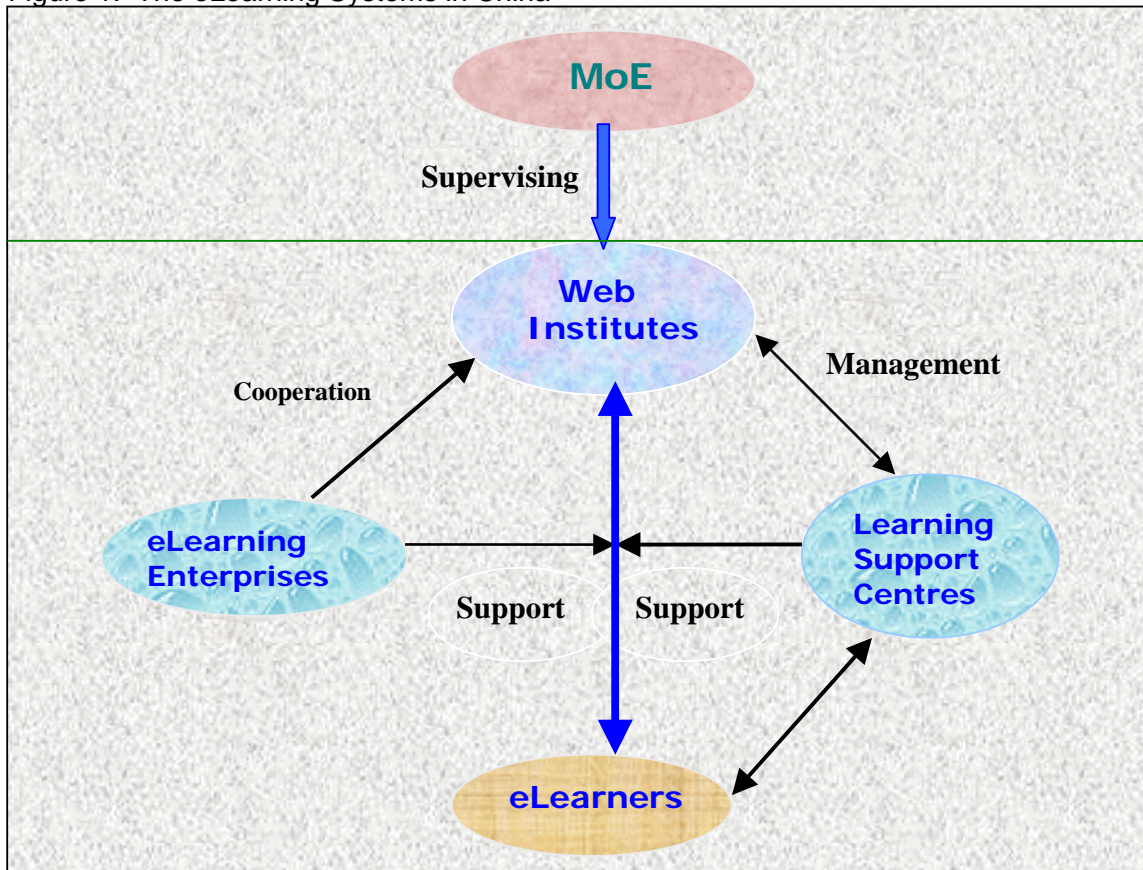


Figure 1 illustrates the main parties making up the eLearning sector, and indicates their function and role. They are discussed in turn below.

MoE

The Department of Science & Technology and the Department of Higher Education in the MoE are in charge of eLearning education management. The Higher Education Department carries out most of the management, evaluation, and supervision of the entire system and the process of

running each school. The eLearning management system is therefore shaped through the MoE, provincial educational administration departments, and Pilot Universities. In an effort to develop an effective supervision system, the Higher Education Department of the MoE started, for the first time, a process of selective inspections and investigations by experts from the MoE as well as local experts at eLearning centres in Guangdong, Fujian, Hunan, Zhejiang, Shanxi, and Sichuan provinces. After investigation was done by experts from MoE, they evaluated the expanding work situation in Web Institutes and Learning Support Centres. As a result of the reports from these expert groups, which discussed the problems associated with running schools, the MoE produced three documents in order to address the problems reported at Web Institutes in universities.

Important eLearning rules and regulations concerning management and supervision were enacted by the MoE in 2003 and 2004. Through policies and regulations, such as “Temporary Rules for the Management of Learning Support Centres, 2003”, “Notice on criteria for the Management of Learning Support Centres, 2003”, and “Notice on standardize the Management of Learning Support Centres, 2004,” the MoE has increased the standardization of management and enhanced the quality of education in the Learning Support Centres of the Web Institutes.

Web Institutes

By August 2005, China had established a total of 68 universities with Web Institutes. Almost all of the expansion took place in the first two years after the establishment of the initial 31 Pilot Universities (2001 – 2002). Since 2002, only one further Web Institute has been established as seen in Table 1. This is a consequence of the investigations by experts over the last few years, in which the Chinese government supervised and evaluated the management of Web Institutes and assured the standardization of eLearning quality.

Table 1: The Development of Web Institutes

	1999	2000	2001	2002	2003	2004	Total
Web Institutes	5	26	14	22	1	0	68

Zhang Yaoxue, “Research and Consideration of eLearning in Universities.” China Distance Education (data information), 2004.

Through the popularization of eLearning, the number of students engaged in it has already passed 10% of the total number of university students in the whole country (the number of university students in the whole country is about 19 million). In 2003, even though traditional universities carried out large-scale recruitment activities, the enrollment of eLearners constituted 17% of the total recruitment throughout the entire country during the same year (Zhang Yaoxue, 2004a). This was the highest level of recruitment during the 8 years of eLearning expansion.

At present, the Web Institutes in Pilot Universities are starting more and more master’s level courses, including subjects such as engineering, management, medicine, literature, agriculture, and so on. There are now 18,000 courses available, covering ten fields of study and 158 different specialties (Expert Group, 2005). At the end of 2003, 34 of the Pilot Universities set up non-degree education projects. In total, the 210 projects recruited 185,353 Learners who made use of the resources or studied on the courses. Although China initially focused most of its attention on degree education through eLearning at the beginning, both degree education as well as non-degree education are currently undergoing a major expansion.

eLearning Enterprises

During the development of eLearning, eLearning Enterprises have played a special role in supporting Web Institutes, and as early as 1998, some of these enterprises anticipated the promising future of the eLearning market in China. They began cooperating with Web Institutes and provided technical support and management services. For instance, Zhonghua Learning Web

(<http://www.prcedu.com>), Aopeng, and OZTIME began to cooperate with well-known pilot universities. This cooperation resulted in links between eLearning and the marketplace. In 1998, Hong Cheng, a science and technology development company, cooperated with Renmin University Web Institute and later expanded to include 5 other Web Institutes. At that time, already more than 19 Web Institutes were users of Hong Cheng technology. At the end of the 1990's, many universities, especially famous pilot universities, began to offer enterprise training through eLearning, providing excellent faculty and educational resources.

Learning Support Centres

Learning Support Centres are crucial for Web Institutes and play a vital role in the running of the eLearning system. In practice, the Learning Support Centres provide services such as recruitment of students, teaching services, tutoring of satellite classrooms, management for faculty, staff, and students, and maintenance of eLearning facilities in their local areas. Learning Support Centres are directly linked to the Web Institutes in the universities as shown in Figure 1. The Web Institutes in the Pilot Universities and in CUBT each established their own Learning Support Centres and directly supervised each of them. In 2001, the number of Learning Support Centres stood at 966. By the end of 2003, the number had increased to 2,347, which was a remarkably rapid increase of 1,381 centres. (Zhang Yaoxue, 2004).

The Learning Support Centres developed along with the eLearning education market and became an indispensable part of eLearning. In March 2002, the MoE publicized the "eLearning Support Centres (Platform) Temporary Management Plan." The document provides details of the procedures each centre is required to follow regarding applications, construction, examinations and approvals. The Learning Support Centres directly participated in the establishment of the eLearning system, providing a local learning site for the Pilot Universities.

eLearners

A large number of eLearners engage in self-study via the Internet, satellite, teleconferencing, and network classrooms. eLearners often go to the Learning Support Centres established by the Web Institutes or use different types of learning resources and establishments in order to carry out self-study, collaborative learning, or group discussion. The Pilot Universities established courses in 158 different specialties, in total, offering a curriculum of 1.8 million classes. These classes are provided for in-post personnel, undergraduate students, and postgraduate eLearners. In 2004, there were 915,000 in-post personnel eLearners, and about 1,323,000 undergraduate eLearners, and 11,000 postgraduate level eLearners (Zhang Yaoxue, 2004).

The MoE, Web Institutes, eLearning Enterprises, Learning Support Centres, and eLearners all have their own roles to play in the eLearning Market, but they remain dependent upon the support of each other. The MoE is continuing to invest funds, resources, and time into the eLearning system in China in order to provide quality eLearning experiences for all learners. As a result, Web Institutes are continuously expanding the scope and coverage of eLearning. eLearning Enterprises continue to grow and aid in the development of hardware and software resources. Learning Support Centres are actively recruiting students and aiming to provide quality teachers and quality teaching support. eLearners, the base of the eLearning system, are growing in number every year and continue to push for new developments on all levels.

Current Problems and New Government Policies

Computers, the Internet, and multimedia technology have become the core of electronic information technology and have spread at an immense speed throughout the entire world. Statistical data from CNNIC (China Network Information Centre) indicate that in April 2005, Chinese Internet users already numbered one hundred million, with 41,600,000 computers connected to the Internet. CNNIC also found that Internet users in China spend about 13.2 hours per week online (CNNIC, 2005). Since the population of China is 1.3 billion, this means that fewer

than 10% of the total population are currently Internet users, and that there is still much room for an increase in Internet use in China. Nevertheless, the Internet is already affecting people's lives and influencing their work and their learning.

Since the MoE established the eLearning system, it has faced many problems in all areas, including supervision, management, evaluation, and quality assessment. The assessment of eLearning quality presents especially difficult problems for the MoE. The policies directed at these problems have improved the quality of eLearning education and have given direction to the development of eLearning. Nevertheless, the MoE still faces a number of problems in the development of eLearning.

- **Insufficient Connectivity:** CERNET and other commercial networks provide Internet access in big and medium sized cities; however, Internet connections in homes, companies, and work places are not very widespread. China is still not able to fulfill its "eLearning Anywhere" plan.
- **No Standards for Management:** There is a lack of standardization in management regarding issues such as student recruitment, examinations, and cooperation between enterprises and Pilot Universities, and this has led to many difficulties in the development of eLearning.
- **Limited Sharing of Resources:** The problem of resource sharing is focused in two main areas: software and hardware. The independent nature of the Web Institutes did not easily lend itself to the sharing of software resources and this failure to share led to dissatisfaction among learners.

Faced with these problems, as well as with the findings of the expert group investigation carried out in 2003, the pilot universities came to terms with their situation in 2004 and made a decision to improve eLearning quality, management, and supervision in accordance with the MoE's requirements.

Through MoE, the Pilot Universities have started to enhance their management system, to oversee very strictly the recruitment of students, to provide quality assessment of teaching, and to standardize entry and exit examinations. In 2005, the MoE put forward a series of new policies for eLearning (Liu Ying, 2005):

- Use Provincial Education Committees to evaluate existing Learning Support Centres and to inspect and approve new Support Centres.
- Strictly manage entrance processing and reinforce degree requirements. From 2005, ensure that eLearners at the Bachelor's level must take the National examination, which includes computing, English, mathematics, and Chinese.
- Introduce electronic enrollment and maintain electronic records of students who pass the national examinations.
- Establish an evaluation system in each Web Institute.
- Use CUBT to establish a Public Resource Sharing Service.
- Strengthen International eLearning cooperation.

These types of government policies to standardize educational management and quality assurance system have helped to maintain and popularize eLearning in China. eLearning is developing in step with the the Chinese economy. Government support has been indispensable during this development process.

Potentials of eLearning in China

eLearning now includes many branches of education, especially continuing education and adult education. Even though it has already developed to a high degree, it is still in need of much reform, upgraded resources, advances and innovations, as well as the establishment of a new continuing education system. eLearning in China, which is led by the government, by social support networks and by universities, is still rapidly developing and making great achievements in modern communication technology.

Using eLearning to Establish a Learning Society

China has called for the promotion of lifelong learning and the establishment of a Learning Society. eLearning is the best tool for the realization of these goals. eLearning provides “Anytime, Anywhere, Any curriculum” individualized learning. Its coverage is extensive and flexible, and allows for the multiple transmissions of education resources. Learning conditions are not reliant upon time; learners are provided with education services and resources and can further their education at any time they choose. A Learning Society educates people according to their working or living needs; learners can study when they want to in order to continually improve themselves. Many kinds of education and training that make up a Learning Society, such as farmer education, senior citizen education, military education, and education for women, can be effectively carried out through eLearning. eLearning has come to be seen as the most effective method for establishing a Learning Society in China.

Using eLearning to Help Alleviate Poverty

eLearning in China makes use of the Internet, satellite, cable TV, digital TV, and CD-ROM. Through these technologies, eLearning can be easily transmitted to poverty-stricken areas to help spread high quality education resources and provide certified training for skilled and unskilled workers. In this way, people who live in poverty-stricken areas can receive educational opportunities through eLearning. For instance, The Education Aiding Poverty Project was initiated through Tsinghua University’s eLearning Teaching Centres. This project brought educational resources to China’s agricultural communities, which make up 80% of China’s population. The main tenet of the project was “To Eliminate Poverty and Spread Knowledge.” eLearning is one the fastest and most efficient ways to bring education resources to all areas of China regardless of economic levels.

Using eLearning to Provide Enterprise Training

The Chinese government has also taken enterprise training through eLearning into consideration. In 2003, the Department of Small and Medium-Sized Enterprises in the National Development and Reform Commission (NDRC), in collaboration with the Foundation of Small and Medium-Sized Enterprises in the Ministry of Finance, jointly launched a small and medium-sized enterprise training project. It provided management training and support for the development of small and medium-sized enterprises through eLearning. Currently Shidai Guanghua, Hejun Chuangye, and Nanfang Telecom have each, in succession, participated in eLearning enterprise training. National Telecom and other large electrical enterprises have established their own eLearning management platforms and provide eLearning enterprise training for their employees. Along with the expanding demand for eLearning in the Chinese market, enterprise training has shown extraordinary potential for further development.

eLearning Management Law

The lifelong learning system in China does not yet have laws concerning the establishment of management organizations, policy making, and quality guarantee mechanisms. Even though efforts have been made to standardize eLearning, it is still in the research stage, and rules concerning eLearning have not been completely effective. So far, eLearning rules and statutes are all based on departmental regulations. eLearning needs to conform strictly to policies and legal regulations, in order to make it truly a part of the legal system and to guarantee the quality of education.

Conclusion

Up to now, Web Institutes have appeared in 68 Pilot Universities in 8 years and have established more than 2,347 Learning Support Centres that use software and hardware in

education. New educational resources, databases, and electronic libraries have been created, and in expanding eLearning, many kinds of online teaching and learning support systems have been utilised. The Pilot Universities, the eLearning enterprises and the Learning Support Centres have already become an important part of eLearning, and despite the slow-down in the past 2 years, it is likely that more universities will start offering eLearning.

The development of eLearning in China has not only occurred in higher education; it has also been rapidly adopted in primary and secondary education, through collaboration with domestic as well as international institutes. Currently the eLearning market gives clear priority to degree education, but it has also expanded to include non-degree education. A key goal of eLearning in China has been to promote higher education for adults, providing them with further educational opportunities. It has already achieved a great deal in bringing education to all parts of China, and it certainly has a bright future in China since it offers so many opportunities to help China's population.

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Curriculum Vitae

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