Information and Communication Technology in Education: Getting Chinese Connected for Learning

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ABSTRACT

This article provides an overview of the current development of information and communication technology (ICT) utilized in Chinese education. Specifically, the article describes and discusses the impact contemporary ICT has on Chinese elementary and secondary education, as well as the existing challenges in ICT application. The article also examines ICT's application in higher education, particularly in distance education, and the issues that have to be dealt with. The article discusses the potential for further developing education with ICT. In addition, it makes recommendations with regard to providing better education with ICT in China.

Keywords: China, Chinese Education, Distance Education, Education, Information and Communication Technology Application

INTRODUCTION

In January 2012, China Internet Network Information Center reported that about 513 million Chinese had used the Internet regularly as of December 31, 2011. This places China as the country with the most Internet users in the world. About 38 percent of the Chinese population has used the Internet, which is above the world average of 30 percent. This means that today Chinese use information and communication technology (ICT) more extensively in their life, including in education. With increasingly sophisticated ICT, it is easier for Chinese learners to receive distance education than before (Wang, 2010). However, when compared with the United States where about 76 percent of the population use the Internet regularly (Miniwatts Marketing Group, 2011), the gap is still great.

In terms of ICT use there are also obvious gaps within China between urban areas and rural areas, and between eastern regions and western regions. The eastern regions refer to the provinces and municipalities directly under the national government in eastern China where most major cities are located and population density is higher. The western regions refer to the 14 provinces and ethnic autonomous regions in western China which have only 23 percent of the country’s population but 56 percent of its area (Wang).

While proportionately Chinese lag behind developed countries in using the Internet, the increase in the number of Internet users in 2011 is about 4 percent (China Internet Network Information Centre, 2012), higher than that in
most developed countries. As more Chinese go online, the Internet has grown in importance as a venue for business, entertainment, as well as education. According to a report from CIConsulting (2011), the 2010 Chinese network education market was 44.1 billion yuan (approximately 6.9 billion US dollars), and it continues to grow.

When China joined the World Trade Organization (WTO) in December 2001, it made promises to open up its education market, particularly higher education market (WTO, 2002). China is the only country among Economic and Social Commission of Asia and Pacific members that has extended its commitments to liberalize access in all five subsectors of education services (Raychaudhuri & De, 2007). As Chinese are more involved in international affairs, Chinese educators’ awareness of internationalization has increased in recent years. They realize that they need to develop a strong sense of service to establish the necessary education system to meet the requirements of economic and social change to catch up with developed countries. The interaction between Chinese educators and international colleagues has been increasing.

The gap in education between China and developed countries is obvious. In 2011 the Chinese mean years of schooling is 7.5, compared with the United States’ mean years of 12.4 (United Nations Development Programme, 2011). According to a study by the World Bank, the Chinese population from preschool to tertiary education is nearly 260 million and the labor force of 750 million needs to upgrade its skills (Dahlman, Zeng, & Wang, 2007). Combined, the Chinese population that needs formal education and upgrading skills exceeds one billion. Clearly, the demand for education in China is huge and the potential of the education market is great (Wang, 2010). Within China, because of income disparities, the gap in education attainment between eastern regions and western regions is wide with western regions lagging behind. The needs for education spending were estimated at 6-9 percent of gross domestic product (GDP), but the actual expenditures were about 5 percent (Dahlman, Zeng, & Wang, 2007), significantly lower than the average of 6.2 percent of the Organization of Economic Cooperation and Development (OECD) countries (OECD, 2007).

In China, formal education from grade 1 to grade 9 is compulsory, which is referred to as basic education. Education from grade 10 to grade 12 is not compulsory, but 82.5 percent of the relevant age group was enrolled in secondary school in 2010 (Du, 2011). Since China opened up and started a comprehensive reform in 1978, more youth receive higher education. However, in 2010 the Chinese higher education participation rate was 26.5 percent (Du), still much lower than that in developed countries. Besides, many Chinese are not happy with the current provision of education, and many Chinese students are not interested in learning (Sang, 2010). Chinese educators understand that to catch up economically with developed countries, Chinese have to catch up educationally, when utilizing contemporary ICT may be helpful.

In November 2006 the Ministry of Science and Technology and the Ministry of Education launched the Public Service Demonstration Project for Digital Education. They hoped to advance key technologies in providing digital education to the general public, promote equity and accessibility, and contribute to the establishment of a life-long learning system. By the end of 2007, a rural distance education network was established, benefiting over 100 million elementary and secondary students in the central and western regions. The national government has invested huge amounts of money to implement the “rural distance education project” and “connecting all villages project” to make ICT available across the country (Sang, 2010).

The Ministry of Education estimates that from 2007 to 2050 about 25 million to 30 million people per year need various types of continuous education (Dahlman, Zeng, & Wang, 2007). It is impossible for the traditional means of education to fulfill this huge task. Distance education with ICT can and should play a greater role in meeting this demand. In addition, per student cost for distance education with ICT is lower than that for face to face programs (Zhou, 2007).
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