Chapter 18
The Development and Application of Regional Education Informatization in China

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ABSTRACT

Education informatization has become a significant symbol of educational modernization. Over the past 20 years, China has made remarkable achievements in the development of information technology infrastructure, resources, and personnel training. Despite the initial success on the education informatization management, China is still facing many challenges in primary and secondary schools' education informatization: ineffective digital educational resource sharing mechanism (lack of public information technology service platform), insufficient quality education resources (i.e., campus network infrastructure and teachers' information technology capabilities), poorly integrated education informationalized system management (i.e., slow deployment and limited functionality), insufficient information capabilities training for the teacher, imbalanced development in regional education informatization (i.e., funding shortage in rural areas), and lack of sustainable development policies. Thus, how to resolve these challenges and to prepare primary and secondary schools for the 21st century classroom has become an urgent issue in reaching China's ambitious goal of 100% network connection. By examining the current status of education informationalized development in three different economic areas in China, this chapter collects, complies, compares, and evaluates the application and development of regional education informatization including information technology hardware, informational network, information capabilities, and education informatization development funds in primary and secondary schools. Recommendations are

made to improve the process of education informatization development and application; to reduce the regional gaps in education informatization; to accelerate the development of network resources, network infrastructure, and informationalized platform; to improve information technology capability training; and to establish better policies for sustainable development of education informatization in China.

BACKGROUND

With the development of social and digital technologies, the way we work, learn, and live has completely changed. Education informatization, as one of the most important part of social informatization, has drawn a great deal of attention in many countries, and it is a significant symbol of educational modernization (Chinese Ministry of Education, 2012).

In recent decades, due to the ever-growing demands of innovative workers, most countries that attach importance to education, especially basic education, have accelerated the pace of education informatization. So has China. China's education informatization has undergone almost 20 years of development and has experienced three stages of development which are exploration stage of 1980s, steady development period of 1990s, and rapid growth stage of the new century. Owing to series of plans and projects, including the *2003-2007 Year Education Promotion Motion Plan* (The State Council, 2004), the *Project of "Campus Access to ICTs"* (The State Council, 2000), and the *Project of "Modern Long Distance Education in Rural Primary and Secondary Schools"* (The State Council, 2004), China has made remarkable achievements in infrastructure, resources development and personnel training. Lately, Chinese Ministry of Education published the *Ten-Year Development Plan of Educational Informatization (2011-2020)* (Ministry of Education, 2012) in 2012, which expressed the overall goals of educational informatization set to be accomplished by 2020 in China. It summarizes the current situation of education informatization in china and formulates the development plan in the next ten years. The plan points out that the

system of education informatization infrastructure has been developed and is in operation in several areas. With the ever enriching of Internet resources, information technologies are widely used in modern classroom. Meanwhile, the informatization of education management has achieved initial success. However, it should be realized there are still several challenges. For instance, the effective mechanism of digital educational resource which can be co-developed and shared nationwide has not been formed; and quality education resources which can create opportunities for promoting critical thinking, creative thought, and cooperative ability among students, are extremely insufficient. Moreover, it will be necessary to further integrate the informationalized system of education management. Furthermore, neglecting the application requirements in construction of education informatization has caused a serious consequence which confuses the minor and nonessential things with the major and essential ones and pays excessive attention to the advanced hardware devices. In order to solve these problems, Chinese government formulates specific action plans in the *Ten-Year Development Plan for Educational Informatization (2011-2020)* (Chinese Ministry of Education, 2012). To promoting the further development of informationalized management and application in education, China will focus on the development of public digital education resources and service platform. Meanwhile, China will strengthen the development and sharing of the quality digital education resources and propel the establishment of digital campus (The State Council, 1999). Furthermore, in order to promote broad use of cloud computing in education, China will build education information network and

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