Chapter 2
Computer Technology in Taiwan Kindergartens

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ABSTRACT

Taiwan has become a global high-tech center. The success of becoming the leading country of high-tech and information technology is accredited to the efforts of the government and of all citizens. In addition, Chinese highly value in academic success, and this has contributed to the success of Taiwan. Parents believe the success of life is rooted in a good education, especially in the early years. This chapter presents an overview of early childhood education in Taiwan and explores how Chinese culture had influenced the value of parents' expectation in education, as well as how children learn through the use of technology. The last part of the chapter discusses the discrepancy between current early childhood education situations and teachers' professional development.

INTRODUCTION

Determining the best methods for adapting school curriculum to address the continuous changes in society has always been one goal that schoolteachers and administrators endeavor to achieve. This task has become even more difficult than before because today's students, growing up in an environment of rich digital media and advanced technologies, have available more sophisticated ways of learning. Prensky (2001a) has highlighted the discrepancy of learning methods between today's generations and their previous generations, which is called "digital immigrants." Today's generations are digital media literate. Their experiences of communicating, processing information, and socialization through digital technology will be brought into the schools, impact traditional instructions and teachers' roles in the classroom as well (Foreman, 2003; Prensky, 2001b; Tapscott, 1998).

Knowing how to read and write is not enough to survive in a rapid changing society. The traditional meaning of literacy includes the ability to read and write. However, as technology advances, we are

moving towards an age that strongly demands technological literacy beyond the traditional meaning of basic reading and writing skills (Kajder, 2004). Knowing how to get information from the vast data base on the Internet is imperative; and this competence should be enhanced in schools. Papert (1998) asserts that technology should not only be used to empower the quality and content of learning; but also, and most importantly, it should be used as an integral tool to cultivate innovative knowledge, which is considered a necessity for functioning in a modern society (Shaffer & Gee, 2005). Thus, to better prepare students with skills to adapt to the changing world, schools are encouraged to integrate technology into the teaching and a learning process in an early stage.

Taiwan has been a leader in the production of electronic semiconductors since 1999, and has become a global high-tech center today (Babb, 1999; Taiwan Review, 2004). Its output of electronic/ computer products, such as personal computers, monitors, and scanners, has given it prominence in the world community (Babb, 1999). According to Dahl and Lopez-Claros (2005), Taiwan was ranked as the world's fifth most competitive economic country and has become a leader of the widespread use of information and communications technologies. Under the impacts of economic globalization; the government, parents, and educators in Taiwan strive to maintain the competitiveness of its citizens. They are strong proponents and advocates and catalysts in providing education for computer literacy and the knowledge of information technology. Indeed, technological education has been flourishing in Taiwan. For instance, new curricula and objectives of curricula emphasizing technological literacy and foreign language proficiency have been implemented since 2000. Computer literacy has become an important core curriculum in all levels (Ministry of Education (MOE, 2003; 2005a). The government has even promoted media as a second curriculum (MOE, 2006) to reinforce students' education in information and internet technology.

In addition to government's reforms and policies, Chinese cultural values and parents' expectations have also contributed to the flourish of technology education. Having long been influenced by Confucianism, which honors scholars and literati in the Chinese society, most parents highly value children's academic achievement and take this goal as their responsibilities (Zhang & Carrasquillo, 1995; Lin & Tsai, 1996). In this sense, parents are desperate to educate their children at early ages. They expect them to succeed academically and become well-rounded persons in the future. Children in their early ages are taught to read, write, and to do simple arithmetic skills before they begin school (Schneider & Lee, 1990; Zhang & Carrasquillo, 1995). It is common that kindergarteners are taught to read and write and some are assigned written homework (Lin & Tsai, 1996). In addition, children are sent to attend all kinds of skill classes after schools to meet their parents' expectations. These lessons include dancing, drawing, mental arithmetic, piano, English, or even computer skills and such lessons can easily be found in kindergarten curricula in Taiwan. To meet parents' needs, not only has English been requested as a common course in kindergarten, but computer classes have also been included to recruit new students in many private kindergartens. In fact, as Fang (2003) argues, with the prevalence of computers, many young children have ample opportunities to access computers at home. Young children already have possessed various background knowledge related to multi-media and computer technologies before they attend preschools or kindergartens.

Accessing internet or playing with computer software/video games is a very popular leisure activity for children and young adolescents in Taiwan (Tseng & Liang, 2002). Besides its entertaining function, computers have been considered as multifunctional learning tools and toys to help children's cognitive development in many studies. Yang (1998) accredits its family educative function of computer software. He believes computers are

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