



## **Chapter XI**

# **Technology for Management, Communication, and Instruction: Supporting Teacher Development**

Silvia L. Sapone  
California University of Pennsylvania, USA

Kim Johnson Hyatt  
Duquesne University, USA

## **Abstract**

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*This chapter introduces a pedagogically sound experience for teachers and teacher candidates as they prepare or continue to learn about the use of technology for the K-12 classroom. The authors hope that learning about fundamental technology skills will not only inform teachers about how to effectively meet the needs of a diverse student population, but also expand their knowledge base in terms of professional growth.*

*Technology changes the way teachers interact with curriculum and engage in discourse with students and their families, peers, and administrators; therefore, it is essential to address how it can be utilized for management, communication, and instructional purposes in order to enhance the learning environment. This chapter argues that districts need to develop a plan that incorporates technology training for all teachers to create a positive impact on teaching and learning.*

## Introduction

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How does one provide a pedagogically sound experience for teachers in K-12 school systems and teacher candidates at the university level as they learn about the use of technology? New technologies present us with an opportunity for reconceptualizing the pedagogy of learning. Shifts in learning paradigms due to the growth of the Internet are described as: a shift from linear to hypermedia learning, from instruction to construction and discovery, from absorbing material to learning to navigate and how to learn, from school to lifelong learning, and from one-size-fits-all to customized, self-directed learning (Tapscott, 1998; Gray, 1999). Technology has the potential to transform the way we teach, manage, and communicate. It changes the way teachers engage in discourse with students and peers, and interact with curriculum.

Today's school children are the first generation of the "digital age." They are being raised in a society that is changing rapidly as a result of the influx of new technologies. The Presidential Committee of Advisors on Science and Technology (PCAST, 1997) and the U.S. Congress Office of Technology Assessment (1995) in Washington have stated that it is incumbent on the U.S. educational system to make provisions for all children to obtain the skills that are needed to become technologically literate citizens. Therefore, what does this mean for educators?

Technology is available in our classrooms, and it is changing the way educators think about teaching and the way students think about learning. Therefore, it is important for teachers to have a good understanding of ways these technologies can best be integrated into the curriculum to meet the needs of diverse student populations. In his book, *The Road Ahead*, Bill Gates made the statement, "One thing is clear, we don't have the option of turning away from the future. No one gets to vote on whether technology is going to change our lives" (1995, p. 74). The pace of innovation in digital information and communications technologies is accelerating, promising to revolutionize how we work, live, and learn (Brown, 2000; PITAC, 1997, 2000). Since many of the students are already surrounded by technology on a daily basis, teachers alike must acquire and develop skills to understand and integrate technology into the classroom environment. Accomplishing this vision will ultimately depend on the dedication, skill, and ongoing professional development of tomorrow's teachers (PITAC, 1997, 2000). Hence, this chapter will explore various perspectives about how technology can be utilized for management, communication, and instruction in the classroom.

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