

Chapter 12

Emergent Digital Literacy and Mobile Technology: Preparing Technologically Literate Preservice Teachers through a Multisensory Approach

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ABSTRACT

Higher education early childhood teacher preparation programs in the United States are guided by the National Association for the Education of Young Children Standards for Initial and Advanced Early Childhood Professional Preparation Programs (NAEYC, 2010). With technology infused throughout the standards, teacher preparation programs are confronted with the challenge of priming preservice teachers to be technologically literate educators ready to cultivate engaging curriculum for 21st century learners. It is essential for early childhood educators to bring together components from developmentally appropriate practice, multiple intelligence theory, and emergent digital literacy to form an effective curriculum plan. This chapter offers details of a teacher preparation program that utilizes a multisensory learning approach to prepare early childhood preservice teachers who are capable of infusing technology into developmentally appropriate curriculum planning.

INTRODUCTION

A young child's trajectory for academic and life success is established during the preschool years at a time when children are acquiring new habits for learning and social development (Shuler, 2009). The quandary confronting teachers is how

to engage young students with activities that are developmentally appropriate while meeting the educational requirements of their school, city, and state. Early childhood educators teaching young students are faced with the challenge of providing an engaging curriculum for children born into a technologically ubiquitous world.

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According to the National Association for the Education of Young Children (NAEYC) 2012 Technology Position statement, “Technology and interactive media are here to stay... Young children are growing up at ease with digital devices that are rapidly becoming the tools of the culture at home, at school, at work, and in the community” (p. 2). Mobile technology devices including cell phones, smartphones, tablets such as iPads, and game systems are portable devices whose use is rapidly expanding (The Children’s Partnership, 2012). Children are considered one of the largest new user groups of mobile technology, with these technology devices being both extolled and disparaged, especially in relation to their role in educational settings (Druin, 2009). Higher education teacher preparation programs need to understand the profile of the young students who are entering the school setting and prepare future early childhood teachers who are technologically literate and capable of doing so with a developmentally appropriate curriculum.

In the United States the *Common Core State Standards Initiative* focuses predominantly on English Language Arts and Mathematics, which have increasingly become the main subjects focused on in elementary school settings. Still, even as this pervasive government view infringes on the inclusion of Science, Social Studies, physical activity, and expressive arts into curriculum planning; there is increased recognition that children have and should develop multiple ways of *seeing* and *knowing*, which has provided a stimulus for schools to expand the curriculum beyond the teaching of logical/mathematical and verbal knowledge to include the multiple intelligences (Gardner & Hatch, 1989). Howard Gardner’s (2012) *Theory of Multiple Intelligence* (MI) offers possibilities for a teaching approach which targets a broad range of skills and abilities of students through multisensory experiences. This chapter will delve into how an early childhood teacher preparation program utilized a multisensory learning process

to prepare preservice teachers to understand how to create a developmentally appropriate and technologically infused curriculum.

BACKGROUND

Understanding 21st Century Learners

The impact of technology on literacy and learning has a ripple effect into the classroom environment. Literacy is a collection of cultural and communicative practices shared among members of particular groups; as society and technology change, so does literacy (NCTE, 2013). Technology has increased the complexity and intensity of literate environments; the 21st century demands that a literate person possess a wide range of abilities and competencies, many literacies (ibid). The current view of the acquisition of literacy skills began in the late 1980s, when research provided evidence regarding activities, skills, and knowledge about literacy that young children can acquire in their home environments before they reach formal schooling (Van Kleeck & Schuele, 2010). The Reading Readiness approach to reading and writing was the view that existed in elementary school settings beginning in 1925 (Johnson, 1971). “Young children were thought to be not ‘ready’ to read due to a lack of maturity. The solution was to postpone reading instruction until the child was mentally six and a half years of age” (Johnson, 1971, p. 4). In her 1966 dissertation, Marie Clay conducted research regarding the ways young children acquire literacy skills and coined the phrase *emergent literacy*. Clay considered emergent literacy as a gradual process that takes place over time from birth until a child can read and write in, what we consider to be, a conventional sense. According to Clay, literacy development begins early in life and is ongoing. “Readers and writers go through three stages of development: emergent literacy, early literacy, and independent literacy” (Slegers, 1996, p. 4). The

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