

Chapter 1

Socrates and Descartes Meet the E*Trade Baby: The Impact of Early Technology on Children's Developing Beliefs about Knowledge and Knowing

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ABSTRACT

*Personal Epistemology is the study of an individual's beliefs about the nature of knowledge and the process of knowing (Hofer & Pintrich, 1997). The study of epistemology has been debated for centuries from Socrates to Descartes; it was later revived in the field of educational psychology by William Perry (1970). Technology plays a significant role in all aspects of children's life today, and this role will only increase in the future. The potential benefits of technology for young children's learning and development are well documented (Wright & Shade 1994). Therefore, parents and teachers of young children have a responsibility to critically examine the impact of technology on children and be prepared to use technology to benefit children. When it comes to technology the generation gap is undeniable; what does this gap mean for teaching and learning in early childhood? Further, what does it mean for teachers and parents while our youngest learners tip the scale as their worlds are enmeshed with information, communication, and media technology? Does the E*Trade baby represent our future children?*

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INTRODUCTION: CHANGE, IT'S NOT JUST ABOUT WEATHER ANYMORE

Change is clearly a challenge when working with teachers. Too much educational research is tired, trite, and recycled – seldom moving us forward in our ability to successfully reform schools and to passionately engage children in meaningful learning (Shields, 2007). *Personal Epistemology* This may influence professionals in educational environments to ignore research and continue to approach teaching and learning through the lens of outdated approaches. Technology has forced all levels of educators to rethink how we approach instructional decisions. If we are to change our beliefs about teaching and learning we must think of the interplays of time and space that influence the socio-cultural implications of the context in which we as teachers operate. We must recognize the ways in which the past has shaped our approaches but also realize the need to develop systems, identify influences, and explore how our beliefs that influence educational environments.

Can we change? Yes, we can change our ideas, conceptions, or knowledge but is a difficult process (Dole & Sinatra, 1998). It requires willingness to learn to change and desire to change. We have more tools and more knowledge about the human mind and early childhood development than at any point in history. *The Structure of Scientific Revolution* (Kuhn, 1962) popularized the concept of a “paradigm shift” (p.10). Kuhn argues that scientific advancement is not evolutionary, but rather is a “series of peaceful interludes punctuated by intellectually violent revolutions”, and in those revolutions “one conceptual world view is replaced by another” (p.41). Ellsworth (2000) believes that change is a combination of organizational approaches that develop the systemic paradigm change and that the model they comprise *is itself a system*—and that lasting change must recognize their interdependence and seek to create synergies that reinforce each of their efforts.

How we think, what we believe, and how we teach should change within the socio-cultural context of the global society. One way to think of the Information Age and all of the technology that has infiltrated our very fiber is as tools and equipment to assist us in understanding how we think and what we believe, and how we teach. We are experiencing a paradigm shift in which technologies are the catalyst that are both driving and supporting change. This chapter aims to build a deeper understanding of the value and importance of knowledge in early childhood, and build awareness about children’s developing beliefs about knowledge and the process of knowing, in light of a shift from the Industrial Age to an Information Communication Technology Age. Further, this chapter aims to demonstrate how children’s interest, enthusiasm for, and attention to new technologies may be a win-win proposition. Children’s relationships and interactions with technology forces us to take a serious look at the significance of early learning, an area which has long been minimized and underestimated and may provide better understanding about teaching and learning.

We are just beginning to discover ways in which technology can assist children’s learning. In this chapter we will discuss how to foster appropriate knowledge and beliefs about knowledge within powerful learning environments that support technology. This chapter discusses the influences of the development of epistemology in relation to our teaching and instructional approaches and use of technology.

Objectives

After reading this chapter the reader should have an understanding of:

1. How developing personal epistemology in early childhood may be enhanced by technology.

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