

## Chapter 46

# The Instructional Context of Critical Thinking Development in Early Childhood Education: Theoretical and Curriculum Perspectives

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### ABSTRACT

*This chapter will outline the roles of teachers within early childhood learning environments and how they may promote children's critical thinking skills. Further discussions about how children's cognitive development may be fostered is also addressed. Theoretical frameworks are integrated as well to further decipher and understand how children's critical thinking skills may be promoted within early childhood learning environments. In addition, several curriculum models in early childhood education that are focused on the Montessori, Reggio Emilia, Tools of the Mind, High Scope, and Waldorf approaches are presented and applied to how they may enhance children's critical thinking skills as well as their overall development.*

### INTRODUCTION

This chapter will focus on the essence of critical thinking and how its application within early childhood environments may foster children's cognitive, social and emotional development. In addressing the practices that promote children's critical thinking skills, theoretical constructs will be outlined. Furthermore, developmentally appropriate practices and concepts associated with these principles will be described and applied to how critical thinking skills may be promoted within early childhood education environments. Curriculum models will also be highlighted in terms of their characteristics and how they may influence children's development of critical thinking skills.

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## **BACKGROUND**

Children's social, emotional, cognitive, and physical development may greatly be influenced by their environments and experiences they gain within these settings. To begin the discussion of how factors within children's environments may affect their critical thinking skills within early childhood contexts, it is important to consider how nature and nurture both interact to influence this potential. Children's ability to engage in critical thinking skills may depend upon a combination of both nature and nurture.

### **Nature and Nurture**

Nature refers to genetics, while nurture is associated with children's environments. Genetics is thought to greatly influence children's temperament, or outward traits and expressions. Nurture has also been found to impact children's behaviors and developmental characteristics. When focusing on both nature and nurture, it is important to consider brain research that has been conducted on young children. According to Feldman (2015), children's early experiences shape their brains. Therefore, the types of experiences that infants have is important for further understanding their brain development, which in turn has been found to be associated with their learning potential. More specifically, developing secure attachments with sensitively attuned caregivers is a key element in ensuring that children's overall development is nourished. Sensitive attunement entails caregivers who consistently respond to their children and are in tune with their needs and routines. By having secure attachments, children's brains have been found to develop in a healthy manner (Dozier, Peloso, Lewis, Laurenceau, & Levine, 2008). A key to establishing healthy attachments between caregivers and children relate to the development of trust. When children have developed a sense of trust with their caregiver and they know their needs will always be met, their stress levels may be lower, as compared to children who do not have this sense of security. Higher stress levels have been found to be related to elevated cortisol levels in the brain. Cortisol is synonymous to a toxin in the brain, as may inhibit normal brain development that occur within synapses and neurons.

In addition to the discussion of nature, the role of temperament may be considered. Temperament is thought to originate primarily from children's genetics. Thomas and Chess (1977) created various categories of temperaments that children may identify with. Temperament may be defined as characteristics and personality traits that children exhibit. There are three common types of temperament, which include: easy, slow to warm up, and difficult. An "easy" temperament may be characterized by children who are adaptable and have fairly stable moods and routines. In comparison, a "slow to warm up" temperament type may include children who are slower to adapting and may have greater variability in their expressions of moods. The other temperament type is "difficult." Children whose characteristics align with difficult may have greater fluctuations of moods and may be wary of change or exhibit protest for changes in routines or schedules.

Juncheng (2014) further discussed these concepts and indicated that individuals' abilities to engage in critical thinking skills may be associated with their temperaments. For example, individuals who are open-minded and exhibit a sense of wonder about their environments may do better in critical thinking skills problems, as compared to others whose temperaments are difficult. Hence, every individual is unique and their critical thinking skills may vary based upon nature and nurture.

In relation to children's environments, or the factors related to nurture, it is important to consider how these components may be connected. According to Bronfenbrenner's (1977) ecological systems theory, certain components have the more direct and others less direct influence on children's growth

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