Chapter 5
Unrevealing the Pattern of Interrelationships Among Learning Behaviors, Executive Functions, and Social Functioning in Preschool-Age Children

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ABSTRACT

Over the past twenty years, educational scholars have concentrated on determining factors such as socioeconomic position, emotional intelligence, personality, self-esteem, and executive functions as significant key factors of academic achievement in elementary and high school (Matešić, 2015). The important component that influence academic and social accomplishment are Executive functions (EF). The metacognitive processes known as executive functions (EFs) plan activities for the future, organize subgoals, and direct behavior toward goals. There is a research consensus that the building blocks of

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executive functions (EFs) include working memory, inhibition, and cognitive flexibility (Diamond, 2013; Miyake et al., 2000; Miyake & Friedman, 2012).

INTRODUCTION

Research and education specialists have identified two significant determinants of academic success and effective school adjustment. One is self-regulation (e.g., McClelland & Wanless, 2012), and the other is executive function (EF; e.g., Fitzpatrick et al., 2014). EF is the term used to describe the cognitive processes involved in purposefully managing one's attention, thinking, behaviors, and impulses to carry out goal-directed actions. In early childhood, EF, a multi-component framework that includes working memory, inhibition, and cognitive flexibility, develops the fastest (Diamond, 2013, Zelazo & Carlson, 2012). Children's EF is crucial because, as they go through the grades, their academic success and abilities demand more sophisticated cognitive processes such as EF.

Along with cognitive capacity, affective abilities like self-regulation are also necessary for learning. According to Fantuzzo et al., (2004), self-regulated learning, also known as learning-related behaviors (LRBs), is a constellation of students' learning-related behaviors and dispositions as well as an effective skill that reflects one's self-regulation in managing behavior, emotion, motivation, and attention for learning. Academic accomplishment is significantly predicted by LRBs, including perseverance, attentiveness, and a desire to learn (McDermott et al., 2014; Musu-Gillette et al., 2015). A developmental neurobiological model of children's school preparation (Blair, 2002) posits that self-regulated learning involves both emotionality and cognitive processes, which are interconnected in the cerebral cortex.

According to Aunola et al., (2002), learning behaviors are traits and observable patterns that children exhibit during learning activities. To continue doing seatwork, attempt new tasks and challenges with curiosity and openness, put effort into finishing a task, and concentrate on lessons even when they feel bad or discouraged, children must develop their emotional and behavioral self-regulation skills while participating in learning activities (McDermott et al., 2012, Nicholls et al., 1989, Salonen et al., 1998). Positive Learning-related behaviors may be protective or predictive during the transition to primary school, according to accumulated research. Positive learning-related behaviors may serve as a protective element in the link between EF and academic achievement, whereas poor learning behaviors may serve as a risk factor (Wolfe & Bell, 2004).

According to an increasing amount of data, children who have stronger Learning related Behaviors typically exhibit higher academic achievement throughout time. Learning-related Behaviors proficiency in preschool children predicts kindergarten reading and math success (Welsh, Nix, Blair, Bierman, & Nelson, 2010). The fifth-grade reading and math proficiency of children is predicted by their Learning related Behaviors in the fall of the kindergarten year (Claessens et al., 2009, Razza et al., 2015). From kindergarten to third grade, Learning-related Behaviors predict progress in math achievement (DiPerna, Lei, & Reid, 2007). From kindergarten to fifth grade, the same link holds for reading and arithmetic (Li-Grining et al., 2010). There is no doubt that EF is critical in learning because EF is directly involved in information processing and cognitive control to connect cognition with action. Though the literature indicates that EF is one of the most robust predictors of academic achievement, ATLs might play a significant mediational role in the association between EF and academic achievement

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