

THE CALM CURRICULUM:
THEORIES THAT INFORM PRACTICE

By

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Abstract

This capstone project examined theories and literature regarding social and emotional learning and self-regulation, and aimed to provide a link in how they support, and translate into the practice strategies of a curriculum already developed called, the CALM Curriculum (Sidhu & Elliott, 2013). The review of the literature of this project was guided by the following two questions: What is the theoretical framework that informs the CALM Curriculum, and, how do these theories translate into practice when implementing the CALM Curriculum? I developed the CALM Curriculum in response to the increase in referrals for children with self-regulation issues in the community of Chilliwack, B.C., and to help educators conceptualize self-regulation through a workshop and a curriculum that provided training and concrete practical strategies for the classroom. In this paper I provide the theory and literature regarding social and emotional learning that focus on the domains of biological, emotional, cognitive, social, and prosocial self-regulation that make up the CALM Curriculum. The CALM Workshop, presented in Chapter Three connects the research to the practice strategies of the CALM Curriculum and helps solidify educator's conceptualization of self-regulation. The findings of this project revealed that the CALM Curriculum is substantiated by solid theoretical underpinnings and current research. Recommendations for future research include a CALM 2 grounded in theory and research and including the motivational domain of self-regulation.

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Dedication

Written in honour of my parents

Gurmel and Amar Gill

and my husband and children

Gurmeet, Teij and Jeiya Sidhu

CHAPTER ONE: INTRODUCTION

My graduating project examines theories and literature about social and emotional learning and self-regulation. Early intervention programs are currently experiencing a significant increase of referrals for children with issues of self-regulation, thus posing a need for educator's to increase their knowledge on conceptualizing self-regulation. As a result, my project explores theories of social and emotional learning that help inform practice for educators and that have also framed the development of the CALM (Calm, Alert, and Learning Modules) Self-Regulation Curriculum I developed with a colleague, J. Elliott in January of 2013 (Sidhu & Elliott, 2013), described in Chapter Three of this project.

Background and Context

Over the last 10 years, early intervention programs such as the Supported Child Development Program¹ (SCDP), throughout British Columbia, Canada, have seen a steady increase of referrals from preschools and childcare programs for children with self-regulation issues that impact on children's behaviours. As a result, increased knowledge on conceptualizing self-regulation and a curriculum that addresses self-regulation needs to be considered to help shape these current practices and foster children's success to thrive in these group settings. At the same time, findings from the Human Early Learning Partnership's (HELP) Early Development Instrument (EDI), a population-level rating scale administered in Kindergarten measuring a child's readiness to learn (Janus, Brinkman, Duku, Hertzman, Santos, Sayers et al., 2007), indicates children entering Kindergarten in some school districts, including the Chilliwack School District, in BC's Fraser Valley, have demonstrated the highest level of vulnerability in the Emotional Maturity scale and Social Competency scale (HELP, 2011). As a result of the information from the research on, and implementation of the EDI and of the increased number of

¹SCDP is a provincial program that helps children with extra support needs access community early learning program such as preschool and daycare

referrals to the SCD Program for self-regulation concerns, the need to examine the issues of children's social-emotional development, especially in the area of self-regulation becomes apparent.

In this next section I define self-regulation and social and emotional learning (SEL), as well as other contributing key terms that support children's self-regulation and social-emotional development that are used throughout this project. The terms are listed below in alphabetical order.

Key terms

Emotional literacy. Refers to, "...the ability to recognize, understand, cope with and express our emotions in appropriate ways " (Gordon, 2009, p. 117).

Executive functioning. Refers to a "...family of control functions needed when you have to concentrate and think, when acting on your initial impulse might be ill-advised" (Diamond, 2012, p.335). These include cognitive flexibility, inhibition, and working memory. *Cognitive flexibility* refers to the ability to change one's perspective or approaches to a problem and having the flexibility to adjust to new demands, rules and/or priorities (Diamond, 2013). *Inhibition* refers to the ability to control one's attention, behaviour, thoughts and/or emotions "...to override a strong internal predisposition or external lure, and do what's more appropriate or needed" (Diamond, 2013, p. 137). *Working memory* refers to one's ability to hold information in the mind and furthermore, having the ability to mentally do something (e.g., problem solving) with it (Diamond, 2013).

Play. According to Whitebread (2012) play is a significantly "complex phenomenon" (p.62) and has been a term that many psychologists have struggled to define. He does however, suggest that there is universal acceptance that children do learn and develop through playfulness

activities (Whitebread, 2012; Whitebread, Basilio, Kuvalja, & Verma, 2012). Therefore, contemporary psychologists have defined these activities or different forms of play into five different categories based on the developmental process that each serves. These five areas include the following: physical play, play with objects, symbolic play, pretence/socio-dramatic play and games with rules.

Scaffolding. According to Vygotsky (1978), scaffolding is referred to as, “...problem solving under adult guidance or in collaboration with more capable peers” (p. 86) to learn a higher level skill.

Self-Regulation. Self-regulation is defined as, “[t]he ability to organize and respond to internal stimuli, as well as environmental demands. Self-regulation includes the control of body temperatures, heart rate, respiratory rate, voluntary body movements, and arousal level” (Coleman, 2006, p. 361).

Social and Emotional Learning. Defined by Zins and Elias (2007) “...is the capacity to recognize and manage emotions, solve problems effectively, and establish positive relationships with others...” (p. 233).

Zone of Proximal Development (ZPD). The Zone of Proximal Development (ZPD) is explained by Vygotsky (1978) as, “...the distance between the [child’s] actual development as determined by independent problem solving and the level of potential development as determined through problem solving and the level of potential development” (p. 86).

Personal Background

In my role as the Director of the SCD program for the Fraser Valley Child Development Centre, I have been seeking alternate tools and skills to support my staff and community child care providers to better support the increased number of preschool aged children that were being

referred to the program due to self-regulation concerns in their early learning programs. As part of my work I also carried a caseload, where I received an excess number of referrals from early childhood educators requesting consultation to help provide strategies and support to help these children manage in their community child care settings. Children were being referred for reasons including the following: having difficulty maintaining energy arousal levels, showing diminished impulse control, and struggling to modulate emotions. As a result, early childhood educators, and more specifically in the community of Chilliwack, British Columbia where I work, were requesting one-to-one adult support to work with these children. In my experience, this often tends to be a band-aid solution resulting in children and staff not dealing with the root stressors that are causing these behaviours. This was a motivation for me to further examine, and try to gain increased knowledge on conceptualizing self-regulation, and consider developing a curriculum and workshop for educators that could help them understand self-regulation. In response to the growing number of children with self-regulation issues in Chilliwack B.C. and the need for educators to have concrete strategies to practice self-regulation skills with children, a colleague and I developed The CALM Curriculum (Sidhu & Elliott, 2013) mentioned earlier in this chapter. The next section, explores the theories of social and emotional development that supports the practice strategies of the CALM Curriculum.

Theoretical Framework: Overview

The theoretical framework supporting my paper draws from the perspectives from the following three theorists: Lev Vygotsky's social constructivist approach (Vygotsky, 1978), Urie Bronfenbrenner's ecological systems theory (1994), and Albert Bandura's social cognitive theory (Bandura, 1989). Lev Vygotsky's social constructivist approach placed emphasis on the contribution of play and the development of cognition (Vygotsky, 1978) in developing children's

self-regulation. Vygotsky suggested that through play, children learn the rules of behaviour which requires that children act against their immediate impulses, therefore fostering self-regulatory development. Furthermore, he indicated that a child's learning in their ZPD was best supported in play when children are interacting with individuals in their immediate environments. Vygotsky emphasized that the practice of these every day concepts happens in the context of family and their immediate environments, and therefore, it is crucial to intertwine these learnings into their schooling experiences (Mahn, 1999). Building on this notion of valuing children's knowledge and experiences in the home, Hedges, Cullen, and Jordan (2011), discuss the importance of recognizing and integrating children's 'funds of knowledge' that they bring with them in early learning programs.

The 'Funds of Knowledge' Framework, is described by Ellinwood and Moll (2012) as, "...the knowledge base a household has accumulated from the lived experiences and social practices of its members" (p. 938). According to Hedges et al, (2001) children's learning can be exemplified when their 'funds of knowledge' are authentically fostered in their schooling environment through the integration of children's home and community interests and experiences into daily pedagogical practices. Building on these sociocultural perspectives, I introduce Urie Bronfenbrenner's ecological theory (1994) where he described that human development and learning is significantly impacted by relationships and environments.

In his theory, Bronfenbrenner (1994) referred to the most influential processes in a child's development as proximal processes (interactions between parent and child, child and child, teacher and child) that predominately occur within a child's microsystem (home, childcare, school, peer group). He also discussed environmental influences from children's mesosystems (linkages between the systems in the microsystem) that impact children's development.

Bronfenbrenner (1994) argued that, “It is within the immediate environment of the microsystem that proximal processes operate to produce and sustain development [however]... their power to do so depends on the content and structure of the microsystem” (p. 39). Moreover, Bronfenbrenner (1976, 1994) stressed the impacts of the chronosystem (events or changes over time) which can impact children’s learning; therefore, he stated that it is the responsibility of all adults involved in the child’s care to support children through these transitions. Consequently, proximal processes must be well supported in all of the child’s immediate environments to foster optimal development and self-regulation of the developing child. Finally, Bronfenbrenner stressed that children’s learning initiative and expression of self is guided by their understanding of their evolving environment including different values, goals and belief systems and goals in relation to the self (Moen, Elder, Lüscher, & Bronfenbrenner, 1995). Building on this concept of belief systems in relation to the self, I introduce Bandura’s (1989) social cognitive theory next, as this theory encompasses the perspective of self-efficacy or belief in one-self in supporting children’s learning and development.

Albert Bandura’s social cognitive theory (Bandura, 1989) emphasized the effects of environmental stressors that can influence autonomic arousal levels and self-regulation. Bandura suggested that individuals who do not think that they have control over the stressors will become distressed and experience intrusive affective arousal. Therefore, Bandura proposed that cognitive processes, such as the ability to believe in one-self (or self-efficacy), to have control over these stressors motivates an individual to self-regulate.

The theoretical work of Vygotsky, Bronfenbrenner, and Bandura informs the research work of contemporary authors Dr. David Whitebread and the review work of Dr. Stuart Shanker in dichotomizing self-regulation into distinct fundamental aspects of biological, emotional,

cognitive, social, prosocial, and motivational development (Shanker, 2012; Whitebread, 2012). There has been extensive research on all these domains of self-regulation and related programs that foster one or more areas of these domains; these programs are described in the section that follows.

The Promoting Alternative Thinking Strategies (PATHS) Curriculum

The PATHS Curriculum supports the development of children's emotional, social and prosocial self-regulation. The program emphasizes emotional literacy through children learning their own emotions and understanding other's emotions (Domitrovich, Cortes, & Greenberg, 2007). In addition, the program fosters children's understanding of modulating escalated emotions such as learning strategies on managing the emotion of anger (Izard, 2002). Finally, the PATHS Curriculum also emphasizes the benefits of the effects of a buddy system (Izard, 2002) to support children's social and prosocial skills. Similarly, the extant literature supports this notion of collaborative group work and scaffolding to support children's regulation in the social and prosocial domains of self-regulation (Cohen, 1994; Hyson & Taylor, 2011; Van de Pol, Volman, Oort, & Beishuizen, 2014).

The Tools of the Mind Curriculum (Tools)

The Tools of the Mind, or "Tools" curriculum supports children's social and cognitive self-regulation. The program reveals that social skills can be fostered through the implementation of dramatic play (Diamond, 2012) where children are learning in their ZPD through the scaffolding from adults and more capable peers (Barnette, Jung, Yarosz, Thomas, Hornbeck et al., 2008). The curriculum also highlights cognitive self-regulation (Barnette et al., 2008; Diamond, Barnett, Thomas, & Munro, 2007) and emphasizes the importance of, once again, implementing dramatic play and games to help develop children's executive functioning, and

metacognitive skills. Similarly to Tools, Tominey and McClelland (2011) also promote circle time games to support children's behavioural self-regulation. These authors studied the effects of implementing self-regulation strategies into familiar children's games and found children who had low behavioural regulation made significant gains in their executive functioning skills.

The Roots of Empathy (ROE) Program

The ROE program was developed by Mary Gordon, a teacher who started her career as a kindergarten teacher in the public school system (Gordon, 2009). The ROE program has been successful in fostering children's emotional, social and prosocial behaviours (Schonert-Reichl, Smith, Zaidman-Zait, & Hertzman, 2011). Two significant goals of the ROE program is to "...develop children's social and emotional understanding (and) promote children's prosocial behaviors and decrease their aggressive behaviors (Schonert-Reichl et al., 2011, p.2)." The ROE places significant emphasis on children's understanding of emotional literacy through a trained facilitator and learning through the child-parent relationship (Gordon, 2009).

The Alert Program

The Alert Program also provides strategies to support children with emotional disturbance by providing them the skills to regulate emotionally through the integration of the biological domain of self-regulation (Barnes, Vogel, Beck, Schoenfeld, & Owen, 2008). The Alert Program helps children with sensory processing problems recognize their arousal states and provides children strategies to react to sounds, touch and movements in their environments (Barnes et al., 2008). As a result, the Alert program may be effective in managing children with emotional disturbance, when the difficulties are related to the sensory environment (Barnes et al., 2008). The biological domain of self-regulation is also explored by Shanker's (2012) review work, as described in the next section.

Biological and Motivational Domains of Self-Regulation

Shanker (2012) and Whitebread (2012) have examined the emotional, cognitive, social, and prosocial domains of self-regulation. Through his review work, Shanker (2012) has stressed the importance of the biological aspects of children's self-regulatory learning involving the management of energy arousal levels as a result of external stressors. In contrast, Whitebread, drawing from Bandura's social cognitive theory (1989), has expanded on the motivational aspects in fostering self-regulation, including the desire to perform an action based on the individual's self-belief with executing the task. As described below, the two authors' definition of self-regulation are inclusive of these distinguishing aspects.

Shanker (2010) expanded the definition of self-regulation into five interconnected domains. These domains include: 1) Biological (e.g., regulation of physiological and psychological needs); 2) Emotional (e.g., regulation of emotions and affect); 3) Cognitive (e.g., regulation of working memory, impulse control, attention); 4) Social (e.g., rules of appropriate behavior, co-regulation; and 5) Prosocial (e.g., reflective thinking skills). Shanker further suggested that children need to develop self-control in all these domains to be optimally self-regulated.

At the same time, Whitebread (2012) defined self-regulation as the monitoring and control of all aspects of human functioning including cognitive, emotional, social, prosocial and motivational domains of self-regulation (Bronson, 2000; Whitebread & Pasternak, 2010). Whitebread (2012) defined motivational self-regulation as "...the degree of effort that the individual decides to exert in relation to any particular task" (p. 145) based on their belief or value of the task. Both perspectives will be explored to gain a better understanding of how these

authors' different views contribute to children's self-regulatory learning, and overall how these theories and research can help inform practice strategies for self-regulation.

Having described the theories and relevant research, in the following section I discuss why this topic is important to me.

Rationale and Importance

The topic of helping children with their self-regulation has been very important to me as a result of the increase of referrals we have been receiving within the SCD program and the concerns flagged by the Chilliwack School District regarding children with vulnerabilities in social competency and emotional maturity. In order to support these children and educators in their addressing issues of self-regulation, there was a need for a curriculum like CALM (Sidhu & Elliott, 2013) to help shape these current practices and foster children's success to thrive in these programs.

The principles of the CALM Curriculum were initially developed by drawing from my own professional experiential knowledge in order to support educators in this learning and provide them self-regulation strategies that could be implemented into their classroom environments. I then decided to draw on the extant research and the content learned within my Masters of Education program to develop a framework that would further ground, and sustain the curriculum. The importance of this project resides on its anticipated benefits of sharing this information and strategies with colleagues and educators and confidently backing the CALM Curriculum strategies with theory and the extant research. I introduce the two guiding questions that were the foundations in supporting the development of my Capstone Project and the CALM Curriculum.

Purpose and Guiding Questions

The purpose of this capstone project is to further explore theories of social and emotional development, and, in doing so, to provide a link between these theories and how they support, and translate into the practice strategies of the already developed CALM Curriculum (Sidhu & Elliott, 2013). Drawing from the theoretical framework and literature review outlined in this chapter, I present my guiding questions next.

Guiding Questions

The two questions that have guided the research and development of my Capstone Project include: What is the theoretical framework that informs the CALM Curriculum?, and, How do these theories translate into practice when implementing the CALM Curriculum?

Project Summary

In Chapter One, I described the purpose of my project identifying the need to help educators conceptualize self-regulation through a researched based curriculum. I have highlighted some key terms that I will use throughout my research followed by current practice issues I am seeing in my community of work in Chilliwack, BC. I close this chapter with my rationale, purpose, and guiding questions for my literature review. In Chapter Two, I expand on the theoretical framework and on the extant literature on the biological, emotional, cognitive, social and prosocial domains of self-regulation. In addition, I explore the possibility of a motivational domain of self-regulation supporting my capstone project. In Chapter Three, I make connections between the reviewed research and the strategies, connected to practice, that make up the CALM Curriculum. I further describe a workshop for educators based on this curriculum. Finally, in Chapter Four, I provide my conclusions, implications for practice for educators, limitations of the project and potential for future research.

CHAPTER TWO: LITERATURE REVIEW

Chapter Two expands on the theoretical framework guiding this project and of the research literature that connects to the biological, emotional cognitive, social, and prosocial domains of self-regulation, and already introduced in Chapter One. In addition, I expand on the research that supports the notion of a motivational domain of self-regulation.

Theoretical Background

As outlined in Chapter One, this project has been informed by the theoretical perspectives of Lev Vygotsky's social constructivist epistemology, Urie Bronfenbrenner's ecological theory, and Albert Bandura's social cognitive theory. I discuss these theoretical frameworks further below, and, in addition, I link these perspectives to current research that has contributed to the domains of self-regulation that make up the CALM Curriculum.

Vygotsky's Social Constructivist Theory, Self-Regulation and Learning

The early works of Lev Vygotsky's social constructivist perspective placed an emphasis on the contribution of social and cognitive development influencing children's self-regulatory processes (Vygotsky, 1978). Vygotsky indicated that play and learning is best supported in a social context and where children are challenged within their Zone of Proximal Development (ZPD) as described in Chapter One. Furthermore, Vygotsky (1978) described a child's learning process in their ZPD, as learning that stimulates a variety of internal developmental processes that can only happen when children are interacting with individuals in their environment and in collaboration with their peers. In addition, children's learning is optimized when they are challenged in tasks and have the support of adults or more capable peers, also referred to as 'scaffolding.' Consequently, Vygotsky emphasized the value of relationships, including the

practice of children's learning of every day concepts that happened in the context of family and their immediate environments, and the importance of intertwining children's knowledge into their schooling experiences (Hedges, Cullen, & Jordan, 2011; Mahn, 1999). Vygotsky also promoted the practise of this learning in pretense play where children are able to make sense of the real world and use play as a means to contextualize their thoughts of their everyday experiences, in the words of Whitebread, Basilio, Kuvalja, and Verma (2012, p. 16).

Moreover, Vygotsky (1978) emphasized the value of imaginative play as he indicated during this type of play children are naturally in their ZPD. Vygotsky stated, "...a child always behaves beyond his average age, above his daily behaviour, in play it as though he were a head taller than himself" (p. 102). In his analysis of children's imaginative play, Vygotsky determined that a primary function that children developed was their ability to exhibit immense inhibition in the rules of games and behaviour. He described that children are constantly resolving the tensions that exists in the rules of game in play situations and their thoughts of what would happen if they spontaneously acted against them. Therefore, Vygotsky contended that a child possesses the greatest self-control and will power when engaged in imaginative play. As a result, he suggested that children's engagement in imaginary play is the highest level of preschool development, due to children conceptualizing their intentions and those of others, as well as considering and choosing their motives during imaginary situations.

Building on Vygotsky's sociocultural perspective, Moll, Amanti, Neff, and Gonzalez (1992) emphasized the notion of drawing on children's 'funds of knowledge' to enhance children's interests and learning experiences. Moll et al. (1992) argued that capitalizing on children's home and community experiences provided greater learning opportunities than traditional rote learning.

The sociocultural perspectives of Vygotsky (1978), that also inspired Moll et al., (1992) later on, regarding the interaction between children and adults to support children's learning, influenced Urie Bronfenbrenner's (1994) ecological theory where he described human development being shaped by relationships and environments. His ecological theory describing the impact of relationship on the developing individual is presented in the section that follows.

Bronfenbrenner's Ecological Theory

As introduced in Chapter One, Urie Bronfenbrenner's (1994) ecological theory stressed that human development is a process between the active evolving individual and reciprocal interactions with persons, objects and symbols in their immediate environment. He suggested that the most effective interactions were those that occurred regularly over extended periods of time. Bronfenbrenner (1994) referred to these influential processes in a child's development as proximal processes. He stated that these "...proximal processes are more powerful than those of the environmental contexts in which they occur" (p. 39). Bronfenbrenner (1976) further expanded into environmental influences from children's mesosystems that also impact children's development, such as the linking of home to school and vice-versa. Consequently, he described that children's learning is a result of two relational functions including: the characteristics of the learner and the relationship they have in contexts of their everyday lived experiences (e.g., home, school, community), and, secondly, the interconnections that exist between these relationships and environmental experiences. Furthermore, Bronfenbrenner (1976, 1994) also emphasized how a child's chronosystem can impact children's learning and development. He stated that children go through many potential transitions including going to daycare/school, birth of sibling, new teachers, moving, parental divorce, death of a family member etcetera and supporting children

through these transitions are the responsibility of everyone involved in the child's education and care.

Finally, Bronfenbrenner stressed that children's learning initiative is guided by "...evolving conceptions of the environment, and the self and are expressed through differential interests, values, belief systems and goals in relation to persons, objects, and symbols in the environment and in relation to the self" (Moen et al., 1995, p. 634). Building on this concept of learning initiative, I describe Bandura's (1989) social cognitive theory next, as this theory encompasses the notion of belief in one-self and motivation in supporting children's learning and development.

Bandura's Social Cognitive Theory

Albert Bandura's (1989) social cognitive theory encompasses all domains of self-regulation, with an addition of a motivational aspect of self-regulation. Bandura stated that environmental stressors can influence autonomic arousal levels. He suggested that individuals who do not think that they have control over the stressors will become distressed and experience intrusive affective arousal. Furthermore, Bandura (1977) stressed that individual's "...emotional responses can be developed observationally by witnessing the affective reactions of others..." (p.2). He suggested that people will acquire and integrate large amounts of observed social behaviour and cognitively they will problem solve their actions based on the consequences of witnessed external influences and actions. Therefore, Bandura and collaborators stated the importance of developing moral control as these serve as regulatory influences and support the individuals understanding that their actions can contribute to harmful outcomes (Bandura, Caprara, Barbaranelli, Pastorelli, & Regalia, 2001).

Finally, Bandura (1989) placed significant emphasis on belief in oneself, or self-efficacy and motivation in determining and supporting how individuals will respond to environmental influences and stressors. Bandura (1997) highlighted motivation or the personal belief of an individual "...can bring about desired outcomes and forestall undesired ones by their actions..." (p. 125) as a crucial factor in how individual's respond to their environment. Bandura (1991) emphasized that human regulation is generated by a combination of external and internal motivational influences. He posited that individuals are influenced by external social influences; however internal self-belief, self-reflection, and capability ultimately regulate their desire to perform a task associated with an external influence. As a result, the possibility of a motivational domain will be considered further ahead in this chapter.

The previous description on the theoretical views of Vygotsky (1978), Bronfenbrenner (1994), and Bandura (1989) provides an illustration of how the work of these theorists link to the work of contemporary renowned authors Stuart Shanker (2012) and David Whitebread (2012) in terms of the biological, emotional, cognitive, social, and prosocial aspects of self-regulatory learning. In addition to considering these five domains, Whitebread also draws on Bandura's perspective of motivational impacts on self-regulation by including a motivational domain of self-regulation in his work.

Review of the Literature

In this section, I present the extant research literature on self-regulation and social and emotional learning that draws from the theoretical frameworks of Lev Vygotsky, Urie Bronfenbrenner, and Albert Bandura. The review of this research has been organized into the five domains of biological, emotional, cognitive, social, and prosocial self-regulation that comprise the CALM Curriculum. I then expand on Bandura's notion of the motivational element

of self-regulatory learning and explore the possibility of a motivational domain of self-regulation.

Biological Domain of Self-Regulation

As introduced in Chapter One, biological self-regulation is connected to the human autonomic nervous system which consists of the sympathetic nervous system (SNS) responsible for accelerating action and parasympathetic nervous system (PNS) responsible for recovery or slowing down to a rest condition (Shanker, 2012). These systems can affect how children react to environmental stressors (Mayes, 2000; Shanker, 2012) and as a result, this has significant impacts on children's development and arousal levels (Coleman, 2006). According to Shanker (2012), children can become hyper-aroused (over-stimulated) or hypo-aroused (under-stimulated) due to hypersensitivity of external stressors (visual, auditory, tactile, gustatory, and olfactory). His inquiry has revealed that educators must be vigilant to environmental stressors such as wall clutter (loud bulletin boards and ceiling mobiles) and auditory sounds (school transition bells, screeching of chairs) that may cause children to become overloaded, in which case they may shut out stimuli or become over stimulated. As a result, these children need to either up-regulate their energy arousal level or down-regulate their energy arousal level. Programs targeting children's biological self-regulation, such as the Alert Program developed by Williams and Schellenberger (Barnes et al., 2008), are designed to help children regulate their arousal level through the use of an arousal gauge. According to a study conducted by Barnes et al. (2008) children with sensory processing problems who were involved in the Alert Program demonstrated the ability to recognize their arousal state and were able to work through strategies to help them positively react to sounds, touch and movements in their environments. Although the Alert program is designed to target children's biological self-regulation, it has also improved

the self-regulation of children with emotional disturbance (Barnes et al., 2008). In the next section I further examine research that specifically supports children's development of emotional self-regulation and modulating heightened emotions.

Emotional Domain of Self-Regulation

Emotional security is formed by adults who are "...responsive, playful and sensitive to the children's emotional needs" (Whitebread, 2012, p. 33). Moreover, and as introduced earlier, children's emotional domain of self-regulation is significantly influenced by the need to develop emotional security with the primary adults in their immediate environments (Bronfenbrenner, 1994). As a result, educators must build positive relationships with children and the families in their programs and intentionally provide opportunities to link home and school experiences (Hedges, Cullen, & Jordan, 2011; Moll et al., 1992; and Whitebread, 2012). At the same time, and drawing from Bandura's cognitive theory, the emotional domain can also be influenced significantly by the affective reactions of others. Shanker (2012) and Whitebread (2012) suggested that children's emotional self-regulation can be supported by fostering children's emotional literacy. This can be done by teaching children to recognize their own emotions, recognize others emotions, and then finally being able to modulate their own emotions. Programs targeting emotional literacy, such as the Promoting Alternative Thinking Strategies (PATHS) Curriculum (Domitrovich, Cortes, & Greenberg, 2007) already described in Chapter One have demonstrated that children increased their emotional literacy as a result of the emphasis placed on their being taught about their emotions and about the emotions of others. In addition to identifying emotions, The PATHS program also teaches children to modulate their emotions using the Tucker Turtle Technique (Denham & Burton, 1996). In this technique, children learn to stop, tuck inside their shell, breathe, and take time to think of a solution. Further research into

this technique suggests children would benefit from holding themselves tight to allow them to quickly harness the energy from feeling angry, allowing children to regulate the emotion kinetically (Izard, King, Trentacosta, Morgan, Laurenceau, Krauthamer-Ewing, & Finlon, 2008). The Tucker Turtle technique is very similar to Shanker's (2012) suggestion of using the Stop Now And Plan (SNAP) cognitive behavioural approach. This approach was developed by The Canadian Safe School Network to help children think before they act out verbally or physically. A cognitive behavioral approach is based on the tenet that emotions such as anger are created by one's thoughts and beliefs and by identifying and challenging these thoughts one can alter these emotions (Edelman, 2012). Supporting children to think and becoming independent problem solvers as described in the programs above is considered a cognitive behavioural skill (Diamond, 2012; Izard et al., 2008; Shanker, 2012) and requires cognitive self-regulation. Consistent with these strategies, the following section identifies research that supports children to develop the skills and regulate in the cognitive domain of self-regulation.

Cognitive Domain of Self-Regulation

Children's development in the cognitive domain of self-regulation includes the development of metacognition and the foundations of early executive functioning skills (Shanker, 2012; Whitebread, 2012). Metacognition refers to having an awareness of your own thinking (Shanker, 2012) and executive functioning includes inhibition, working memory and cognitive flexibility (Diamond, 2012, 2013), already defined in Chapter One. According to recent research by Razza, Bergen-Cico, and Raymond (2015) children are able to develop these self-regulatory functions through novel interventions of mindfulness activities such as yoga and breathing techniques. Mindfulness refers to "the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of

experience’’ (Kabat-Zinn 2003, p. 145). Furthermore, the Center of the Developing Child Harvard University (2014), has suggested that children can exercise their executive functioning skills through playing and practicing games such as “Duck, Duck Goose,” “Mother May I,” and “What Time is it Mr. Fox.” Similarly, Tominey, and McClelland (2011) demonstrated that circle time games, such as “Freeze Dance” and “Red Light Purple Light” improved children’s behavioural self-regulation skills, such as: impulse control, working memory and attention. These circle time games are supportive of Vygotsky’s theory that posits children’s play experiences help them inhibit impulses due the rules of games and behaviour (1978). Furthermore, as demonstrated in the Tools of the Mind Curriculum introduced in Chapter One, children’s behaviours can be significantly reduced by, “...the use of more appropriate curricula that actually enhance self-regulation” (Barnett, Jung, Yarosz, Thomas, Hornbeck et al., 2008, p. 299). The Tools of the Mind Curriculum (*Tools*) emphasizes activities that promote self-talk, dramatic play, memory, and attention, therefore fostering the development of executive functioning skill, inhibitory control, working memory, and cognitive flexibility (Barnett et al., 2008; Diamond, 2012). Barnett et al. (2008) and Diamond (2012) research findings reveal that dramatic play both helps support children’s cognitive self-regulation, and is highly influential in supporting children’s social domain of self-regulation, as described in the next section.

Social Domain of Self-Regulation

Children who are “optimally regulated” in the social domain of self-regulation understand their own and their peers feelings and intentions (Shanker, 2012). Once again, as suggested by Vygotsky (1978), these skills are best developed in play, and more specifically, in imaginative play where learning is supported in a social context. Findings from current research confirm Vygotsky’s posits, suggesting children’s learning in their ZPD can be supported by

extending everyday classroom activities into dramatic play, as revealed from the findings from the Tools Curriculum (Diamond, 2012). In addition, research from Hedges et al., (2011) funds of knowledge framework, introduced in Chapter One and briefly described in Chapter Two, emphasized the importance of including children's home and community practices into imaginative play spaces to make learning more meaningful.

Finally, social self-regulation can also be fostered in small group activities (Shanker, 2012). In an earlier literature review of small groups, Cohen (1994) had stated that small group work promotes positive relationships as well as legitimate learning when supported by educators. Furthermore, Cohen revealed that scaffolding can be significantly effective when students are placed in academic heterogeneous groups to help foster trust and friendliness of different social groups. Current research by Hyson and Taylor (2011) and Van de Pol, Volman, Oort, and Beishuizen, (2014) also reported that teacher scaffolding in small groups illuminated student understanding of complicated concepts and increases children's social development skills. The notion of scaffolding can also be done through the implementation of a buddy system, as demonstrated in the research effects of increased prosocial behaviour from the PATHS program (Crean & Johnson, 2013) that uses a buddy system to increase helping and prosocial behaviour (Izard, 2000). The next section reveals the findings of additional research on prosocial self-regulation and the development of prosocial behaviours in children.

Prosocial Domains of Self-Regulation

Children who are optimally regulated in this domain exhibit altruistic, empathetic, and moral behaviours (Hay 1994; Shanker, 2012). Altruistic behaviours refers to "...a quest for purely motivated social actions in which the sole intent is to 'do good' to others at some sacrifice to the self" (Hay, 1994, p. 33). Again, and as highlighted by Vygotsky (1978), children benefit

from the altruistic support of a buddy or more capable peers, older children or adults to master new skills. Research conducted on the roles of buddies or peers in reading programs, i.e., “a buddy connection” reported how this connection not only help increased reading literacy but also helped promote prosocial interactions (Flint, 2010). Developing the skills of empathy is also a marker of the prosocial domain of self-regulation (Shanker, 2012). Empathy refers to “...the ability to identify with feelings and perspectives of others and... respond appropriately to the feelings and perspectives of others (Gordon, 2009, p. 30). A study conducted as a follow-up to the Roots of Empathy (ROE) program (a program already described in Chapter One) reported that children increased their prosocial skills of empathy as a result of their involvement in this program (Schonert-Reichl et al., 2011). The program supports children’s development of these skills through lessons that help them identify their emotions, perspective taking and emotional sensitivity through a trained facilitator, and through the parent-baby relationship (Gordon, 2009).

Finally, Darling (2002) expanded on Bandura’s theory (2001) that posits that children’s self-regulation in the prosocial domain requires that they demonstrate morality. Darling (2002) described morality as an ethical perspective based on “...principles or rules, rights or claims... [or] solution in terms of care for the interests of [others]...” (p. 93) and can be implemented through story telling experiences that focus on moral dilemmas. Darling’s findings demonstrated that learning about moral solutions collectively allowed for all children to understand different perspectives, and therefore critically think about the outcomes from a social justice and empathetic viewpoint.

Overall, the research literature has reported how prosocial behaviour does have a motivational component that provides incentive to perform the prosocial activity (Hay 1994; Warneken, & Tomasello 2009). Motivations may include the individual’s desire to achieve a

goal even if it is simply the pleasure upon achievement of a helping behaviour (Warneken & Tomasello, 2009). Therefore, this notion of motivational self-regulation requires further exploration and is discussed further in the next section.

Motivational Domain of Self-Regulation

Although the motivational domain of self-regulation is missing from Shanker's five domains of biological, emotional, cognitive, social and prosocial self-regulation, findings from Warneken and Tomasello's (2009), and from Whitebread's (2012) research are convincingly substantial, in terms of the need for motivation to be considered as another domain for children's development of self-regulation. Expanding on the posits of Bandura's theory (1982) that children need to have self-efficacy to focus on their capabilities, Whitebread's (2012) research demonstrated that children required motivation to complete complex tasks which were impacted by the child's beliefs about the task and their emotional response to it (Whitebread, 2012). Consequently, and as mentioned by Warneken and Tomasello (2009), in order to cultivate prosocial skills in children and build children's self-confidence, we must understand what motivates their behaviour. Therefore, further research into programs that increase motivational self-regulation needs to be considered to foster children's development in this domain.

In sum, several programs including the Alert Program and the PATHS program connect with the social constructivist, ecological, and social cognitive theoretical perspectives and link to one or more of the different dimensions of self-regulation examined through the reviewed literature. The next chapter, Chapter Three, presents an overview of how the theoretical frameworks and research conducted in each of the domains was used in supporting the structure of the CALM Curriculum.

CHAPTER 3: CONNECTIONS TO PRACTICE

In this chapter, I establish links between personal observations and examples of children with self-regulation issues in the domains of biological, emotional, cognitive, social, and prosocial self-regulation and examples from the reviewed research in Chapter Two that could address these issues. As described in Chapter One, the purpose of this capstone project is to provide a link between the theories of social and emotional development and how these translate into the practice strategies of the CALM Curriculum. The need for the CALM Curriculum was a result of my position as a director for the Supported Child Development Program (SCDP) and the increase of referrals from early childhood educators struggling to support children with social and emotional delays. Furthermore, through observations of children in their childcare programs, it became very apparent to me that a need exists for educators to gain a deeper understanding of self-regulation in order to better support these children in their programs. Chapter Three concludes with a description of a workshop framework for educators that connects the theory into practice strategies through the implementation of the CALM Curriculum.

Biological Domain

My observations of children with dysregulation in the biological domain are consistent with the literature by Barnes et al., (2008) that suggests the need to support children whose energy levels do not match the activity expectations required to be in an alert state. For example, during gross motor play, I have observed children who will not engage in the activity and often appear to be lethargic and low in energy, or as Shanker (2012) describes hypo-aroused.

‘Shelby’ a five year old preschooler has been observed during outdoor time to constantly ask her teacher, “Is it time to go in yet,” and then she stands by the entrance door of their classroom, while the rest of her peers are exerting energy on the playground. In contrast, during more

sedentary activities such as a story at circle time, I have observed many children who are unable to sit still and have too much energy, or hyper-aroused to be in a learning state. For example, ‘Sam’ a four year old boy, is constantly making his way to the middle of circle, and then he is asked to go back and sit ‘criss-cross apple-sauce’ on his mat throughout the whole activity. When providing a framework for these children’s behaviour in terms of self-regulation, it appears that they need support in understanding that their energy arousal levels are not matching the activity. Therefore, and in order to support the children, strategies are required to help shift change their level of alertness to match both these activities, as in “Sam’s” and “Shelby’s” case scenario.

Furthermore, my observations of school environments are consistent with Shanker’s (2012) literature regarding the effects of over-stimulating classrooms. I have seen classrooms that could be considered visually cluttered (busy bulletin boards and mobiles hanging from ceilings), loud for auditory sensitivities such as noisy bells and screeching chairs, and finally, increased olfactory sensations from fragrant cleaners and sanitizers. I observed a child, ‘Austin’ who would sit facing the chalk board during free play. When I sat close to him one day, I heard him say to himself “It is loud in here,” and I realized it was his way of drowning out the auditory stimulation. Based on my observations, I introduce examples of potential stressors through my workshop that may be over-stimulating to children and I invite teachers to analyze their classrooms and become more vigilant to these stressors. Being able to recognize these triggers not only helps children modulate in the biological domain, but it can also help children with emotional regulation, as I discuss in the next section.

Emotional Domain

In my observations of children who have difficulties regulating in the emotional domain they appear to react to social interactions or expectations using physical aggression and/or inappropriate language. For example, a child on my caseload would pinch or pull other children's hair and scream anytime a request was made of her. As a result, the teachers appeared to have a fractured relationship with this child and viewed her as being problematic. Based on Bronfenbrenner's (1994) principles regarding proximal relationships significantly influencing the child's development, emotional self-regulation can potentially become compromised if this relationship is unstable. Furthermore, as highlighted by Bandura (1977), children are significantly influenced by the affective reaction of caregivers, therefore, potentially impacting children's ability to regulate in this domain, especially if this relationship is already volatile. As a result, how educators model their response to situations has strong effects on how children conceptualize emotions. The literature reviewed in this capstone project strongly suggests that educators can enhance children's emotional regulation by teaching children emotional literacy and cognitive behavioural techniques to help them modulate aggressive behaviour (Denham & Burton, 1996; Domitrovich et al., 2007; Izard et al., 2008). Therefore, providing children techniques on how to modulate heightened behaviours, such as using the Tucker the Turtle Technique (Izard et al., 2008) presented in the CALM Curriculum workshop below can support children's regulation in this domain. Supporting children to use cognitive behavioural techniques also requires that they develop their executive functioning skills, such as planning, inhibition and problem solving (Diamond, 2012; Shanker, 2012). Developing these executive functioning skills is a significant aspect of cognitive self-regulation, as described in the section that follows.

Cognitive Domain

My observations of children who are having difficulty regulating in the cognitive domain of self-regulation appear to have impulse control challenges. For example, ‘Manny’ a five year old in our summer program, would have a melt-down if he had to wait his turn while playing a circle time game or he would start to cry and get angry because he wanted to be first in a line-up. As a result he would usually push his peers out of the way to get what he wanted. Many of these children also struggle when they need to problem-solve conflicts and follow routine directions, all of these difficulties are associated with the development of children’s executive functioning (Diamond, 2012). According to the literature, supporting children with these executive functioning skills requires for educators to provide opportunities for children to engage in mindfulness activities such as yoga and breathing exercises (Razza, Bergen-Cico, & Raymond, 2015) and implementing games such as “What time is it Mr. Fox” and “Duck, Duck Goose” (Center of the Developing Child Harvard University, 2014; Tominey & McClelland, 2011). Furthermore, my observations in programs also reveal no or little opportunities for children to engage in dramatic play. Many times the dramatic play area in a classroom has very little activity possibly due to the type of resources in the dramatic play area that are not promoting children’s interests. Through the literature, I have learned that children need enriched opportunities to engage in dramatic play to support their cognitive domain of self-regulation (Barnett et al., 2008). In addition, the theoretical perspective of Vygotsky (1978) also strongly suggests that imaginative play can help support social self-regulation, as discussed in the next section.

Social Domain

As mentioned above, the lack of opportunities for dramatic play is limited in early learning programs and this impacts children’s potential to learn the necessary social skills to

regulate to the rules of appropriate behaviour. My observations of children not regulated in this domain include children who appear to get angry because they do not understand their own feeling and intentions or their peers feelings and intentions. Another child in our summer program ‘Zachary’ had difficulty managing himself in the free play area. He always wanted the car or truck one of his peers was playing with or he would intentionally knock over a block castle that one of his peers was working on. Once again, scaffolding dramatic play opportunities allows children to learn these social skills naturally in their ZPD and within a social context (Vygotsky, 1978) to help them regulate to the rules of appropriate behaviour. The literature from the Funds of Knowledge Framework (Hedges et al., 2011) also suggest that dramatic play becomes more meaningful when home and community experiences are brought into this play. Therefore, children need opportunities to share their out-of-school experiences into this play within their programs. Furthermore, I also observe many children spending a lot of time in solitary play activities; however the research seems convincing that small group learning with teacher scaffolding has significant benefits on children’s learning (Cohen, 1994: Van de Pol et al., 2014) and prosocial self-regulation discussed further in the next section.

Prosocial Domain

Consistent with the social domain of self-regulation, my observations of children engaged in solitary play activities does not help promote children’s prosocial skills. For example, ‘Sandy’ one of my children on my previous caseload had communication delays and would often spend time alone at the art table or in the book corner flipping through pages by herself. Building on the posits of Vygotsky’s theory suggesting children can benefit from the modelling and supports of more capable peers (1978), ‘Sandy’ would benefit from learning multiple skills by participating in small groups or through the support of a buddy system to promote their social

and prosocial skills. I also observe little opportunity for children to build on their emotional literacy, which is a foundation to many successful social and emotional programs, such as the PATHS (Crean & Johnson, 2013; Domitrovich et al., 2007) and the Roots of Empathy Program (Gordon, 2009; Schonert-Reichl et al., 2011) that can be taught and fostered through books, songs and play. Furthermore, emotional literacy can help make connections and build on children's understanding of morality also considered a significant area of prosocial development by Bandura (2001). My observations echo findings from the literature reviewed that suggest that children's learning of morality can be supported through collective discussions of moral dilemmas and having them consider each other's perspectives from a social justice and empathic viewpoint (Darling, 2002).

Considering my observations of early learning programs, the theories and literature reviewed that have framed this project, I describe the CALM Curriculum workshop framework next (Appendix A) that I developed to guide and teach educators about self-regulation. Furthermore, the workshop provides educators practice strategies that can be implemented into their day to day pedagogical practices.

CALM Curriculum Workshop Framework

The first part of the workshop introduces my purpose and rationale for developing this workshop as described in Chapter One. I also highlight that the framework of the CALM Curriculum is based on Stuart Shanker's review work and the strategies in the program have been supported through authors and researchers who have conducted empirical research, including Whitebread, Barnes et al., Denham and Burton, Tominey and McClelland, Diamond and others. Next, the workshop presents Zins and Elias' (2007) definition of social and emotional learning and Coleman's (2006) definition of self-regulation. Finally, Shanker's refined definition

of self-regulation is provided including a brief description of the biological, emotional, cognitive, social, and prosocial domains and is the framework for the CALM Curriculum. The following section will provide an introduction to Melvin the Monkey, a puppet who ‘teaches’ the program alongside the educator, and his friend Tucker the Turtle. The remainder of the workshop would go through each of these five domains and the research that influenced the practice strategies suggested and provided in the CALM Curriculum as described next.

Biological Domain of Self-Regulation

Participants of the workshop would first learn that biological self-regulation is connected to the human autonomic nervous system which consists of the sympathetic nervous system (SNS) and parasympathetic nervous system (PNS) and these systems can affect how children react to environmental stressors (Mayes, 2000; Shanker, 2012). These environmental stressors could result in hypersensitivity of external stressors (visual, auditory, tactile, gustatory, and olfactory) (Shanker, 2012), and I would invite educators to think about these stressors in their own classrooms, including over stimulating visuals, sounds and smells. They would also learn that children may react to these external stressors through a hypo-aroused (shutting out stimuli and needing to be up-regulated) or hyper-aroused (over-stimulated and needing to be down-regulated) state to cope with these stressors (Shanker, 2012). As a result, educators would have to learn to identify these stressors and find strategies to reduce or minimize the effects for children. I would share the following example of a child who was having difficulty managing in his classroom due to environmental stressors:

“Johnny” was a five year old kindergarten child who spent most of his time at the principal’s office because he continuously flicked the lights off in his classroom. His teacher went on an extended sick leave and a teacher-on-call was brought into the classroom for three weeks. She found the classroom overly cluttered and took down bulletin boards; ceiling mobilizes and organized shelves and toys into containers. After the environmental change, the teacher reported that “Johnny” has never flicked the lights off again.

Teachers would also be encouraged to teach children their energy arousal levels so that children can learn to understand how they need to match their energy state to the activity expectations. Therefore, similar to the energy gauge developed by the Alert Program (Barnes et al., 2008), the CALM Curriculum introduces children to Melvin's Energy Arousal Gauge which helps children (through a song) identify whether they are in the red zone (lots of energy), grey zone (low energy) or green zone (ready to learn energy). The teacher would introduce the concept with Melvin at circle through the song which is available on the CALM CD. In order to solidify children's learning of the energy states, I would encourage educators to scaffold the gauge in all aspects of classroom activity. The final section would conclude with educators learning the attributes to be optimally self-regulated in this domain, which includes children having sufficient energy levels maintained through the course of the day and their ability to cope with external stressors (Shanker, 2012). Each of the domains in the workshop presentation concludes with a section about teacher modeling, as we have learned from Bandura (1977) that affective reactions of others can impact children's self-regulation; therefore, it is important to role model the response we expect from our students, especially for the emotional domain of self-regulation that is discussed next.

Emotional Domain of Self-Regulation

The workshop in the emotional domain initially emphasizes emotional security and the importance of the relationships of individuals in the child's immediate environments and linking these positive relationships with home and school and vice-versa (Bronfenbrenner, 1976). I would further build on teacher's awareness by introducing the whole notion of time from Bronfenbrenner's ecological theory (1976, 1994) and how transitions can impact children's lives

and how this becomes everyone's responsibility to support children through life transitions (new baby, divorce, death in family etc.). Furthermore, in order for children to be optimally regulated in this domain they need to be able to identify their own emotions and those of others and modulate their emotions (Whitebread, 2012, Shanker, 2012). The CALM Curriculum provides books and activities to increase children's emotional literacy. The kit also provides books and felt stories based on the emotions of Happy, Sad, Angry, Scared, Jealous, Lonely, Kindness, and Love. In addition, each child receives Melvin colouring sheets with questions where they need to answer or describe what these emotions look like and feel like for them. These colouring sheets have been pathways to other referrals as we have had children disclose disturbing thoughts including, "When I am angry I want to kill myself." Also, included in the curriculum a mirror and a dice with Melvin's emotions so that children can imitate and demonstrate what emotions look like for them and to their peers. Similar to the PATHS Program and SNAP Program, children are taught the Tucker Technique to help modulate their feelings of anger (Denham & Burton, 1996). Children learn this technique initially through a story read with Melvin's friend, Tucker the Turtle. The steps children learn for this technique include 1) Stop and keep hands, body, yelling, to oneself 2) Tuck 3) Hug 4) Breathe 5) Think of a Plan. Step Three of this technique, the self-hug, was added due to the research from Izard et al. (2008) suggesting children would benefit from holding themselves tight to allow them to quickly harness the energy from feeling angry, allowing children to regulate the emotion kinetically. Finally, to help children with Step Five (think of a plan), my colleague and I developed the concept of a solution center where children could identify through picture choices a solution to their problem. The solution center seems to be a powerful strategy as evidenced in the following example:

Two children were in a heavy dispute about a toy car they both wanted during free play time in preschool. One of the four year old boys, "Steve" suggested to his peer, "I think

we need to go to the solution center.” Both boys were able to find a solution (they decided to use a timer) to help resolve the situation.

A Melvin Count Down Strip is provided to act as a visual timer to help count down time to help children work out issues associated with turn taking and sharing. The emotional domain concludes with the key attributes needed for children to be optimally self-regulated in this domain and described by Shanker (2012) and Whitebread (2012) including: identifying their own emotions, identifying others emotions, modulating their own emotions and recovering from challenging situations.

Cognitive Domain of Self-Regulation

Once again connecting with Shanker’s (2012) and Whitebread’s (2012) posits, I introduce the cognitive domain of self-regulation through the development of two key attributes for this domain which are executive functioning and metacognition. In the first part of the workshop, I initially define the family of skills for executive functioning including: inhibition, working memory and cognitive flexibility, as defined by Diamond (2013) that are necessary to regulate in this domain. The next section provides educators practice strategies including yoga and breathing exercises that have been shown to support children’s executive functioning and metacognition (Razza, Bergen-Cico, & Raymond, 2015). I provide an example of Melvin’s stretching cards that are in the curriculum to practice yoga, and in addition, a feather on a straw that is given to children to practice their “monkey breaths.” Practicing these monkey breaths seems effective even outside the classroom, as the following example describes:

An educator being observed implementing the curriculum missed doing the practicing of the monkey breaths, “Tommy” raised his hand and told “Ms. Smith” that she missed the monkey breaths. He indicated that he needed to practice breathing because on the soccer field when he is angry he tucks and does monkey breaths to help himself calm down.

The workshop also encourages the implementation of circle time games to support children's executive functioning based on the research through the Center of the Developing Child Harvard University (2014), Tominey and McClelland (2011) and from the Tools Curriculum from Barnett et al., (2008). I introduce games that are promoted in the kit, including, "Freeze Dance," "Red Light, Green Light," "Sleeping Little Melvins," "Melvin Says," "Head and Shoulder's Knees and Toes," and "Melvin's Favourite Things." These games are highly impactful; however, at times, these can test the educator's patience, as I reflect on my own personal example below:

In the summer of 2011, I was part of kindergarten readiness project where we were going to use the summer to support children who needed help in self-regulation skills before they went to kindergarten. I had a group of five children and I decided to play "Sleeping Little Bunnies" with them. The game was going really well until the bunnies went off jumping and I couldn't get them back to the mat. As I learned about the importance of these games in my research, I now realize I made one of the biggest mistakes as an educator and told myself, "I am never playing this game again" when in reality, I should have played it every day until the children learned the skills of impulse control and the rules of this game.

Finally, to help children learn the skills of impulse control, a plastic bag with enticing items including a shaker, rhythm stick and a feather on a straw are left in front of the children. Children need to wait for Melvin to instruct them when they can use each item in the bag. The cognitive domain concludes with attributes of optimal self-regulation for this domain which include: a child's ability to focus, inhibit impulses, hold information and have self-awareness of one's own thinking.

Social Domain of Self-Regulation

The workshop presentation for the social domain self-regulation places emphasis on fostering imaginative play in classrooms that draws upon Vygotsky's sociocultural theory (1978). The intent is for participants to learn that social skills are best developed in imaginative

play when it is supported in a social context (Vygotsky, 1978). Furthermore, I introduce Vygotsky's zone of proximal development (ZPD) and his notion of children naturally being in their ZPD in imaginative play is explained. I also support educators in understanding the Funds of Knowledge Framework (Hedges et al., 2011) in regards to the importance of bringing home and community practices into children's play to help them make meaning of their worldly experiences. I share the following example that an educator provided me of how she engaged her students in creating an imaginative play space:

“Ms. Jones” shared that her imaginative play area was never used so she decided to ask her students what they would like to see in the play space. After much negotiation, the children decided they wanted a pizza place. “Ms. Jones” brought in pizza boxes, telephones and had the children write up menus. She mentioned that she had never seen the children have so much fun in this area, including setting up their play space and then acting out their different roles.

As a result, traditional kitchen areas that consist of a table and chairs, play ovens, fridges etcetera most commonly seen in my observations may need to be reconsidered or enhanced in the imaginative play center and filled with props and resources based on children's home and community interests.

Finally, in this workshop, I encourage educators to implement collective learning opportunities, such as group projects, group games or a buddy connection similar to the PATHS program (Crean & Johnson, 2013). My aim for educators is to learn that these type of collective discussions with peers not only helps children's learning but it also develops their social and prosocial skills (Cohen, 1994; Van de Pol et al., 2014). The presentation for the social domain concludes with the attributes children require to be self-regulated in this domain, including their understanding of the rules of appropriate behaviour, such as understanding their own feelings

and intentions, understanding and responding appropriately to others feelings and intentions, sharing and taking turns independently, and resolving social problems with peers.

Prosocial Domain of Self-Regulation

The workshop for the prosocial domain presents and defines the following three attributes of prosocial behaviour: altruism, empathy and morality (Hay, 1994; Shanker, 2012). Once again participants will be encouraged to implement a buddy system for their children in the class to help shape these prosocial skills. The research from Flint (2010) is presented highlighting how the roles of buddy connections in reading programs not only helped increased reading literacy but also promoted prosocial helping behaviours. I would share how in my daughter's school her buddy connection has expanded from reading together to conversations on the playground and on the bus. Similar to the Roots of Empathy program (Gordon, 2009) the CALM Curriculum also teaches emotional literacy to help promote children's prosocial skills. The workshop for this domain emphasizes the emotion of kindness through the implementation of a "Kindness Tree" to help encourage children's altruistic behaviours. The activity involves the teacher and peers noticing kind behaviours and adding bananas to the "Kindness Tree" for each random act of kindness. As described in the example below, the "Kindness Tree" has been very successful in kindergarten programs

'Ms. Johnson,' the kindergarten teacher notices 'Jayda' helping 'Sally' find her other shoe. When the commotion is all settled and the shoe is found, Ms. Johnson walks over to the banana tree and says, "Class, I am adding another banana to our tree because I saw our friend Jayda help Sally find her other shoe. Melvin will be so excited when he sees that there is another banana on the tree."

Once the tree is filled with bananas, the class is rewarded with a classroom kindness party. 'Ms. Johnson said she brings in banana muffins because they are Melvin's favourite. Educators can also use the recommended book or felt story provided in the kit, which would

increase children's understanding about kindness. The CALM Curriculum comes with other literacy materials to help foster student's prosocial development, including: "Super Tucker," (Tucker learns the importance of doing good things for friends), and, "Melvin and Tucker - Stories for Moral Development" (teaches children moral perspectives through collective discussion) similar to the findings in Darling's (2002) research. Finally, the prosocial domain concludes with key attributes that children need to have to be self-regulated in this domain, including: having an awareness of others feelings, being able to comfort others and having the desire to do the right thing. The workshop concludes with a connection to Bandura's (1977) notion, that children are influenced significantly by the affective responses of others. The benefits and advantages of educators engaged and having fun with the curriculum will result in interested, curious and motivated learners. Finally, the workshop emphasizes that the greatest impact of the program is when the strategies are infused into all areas of the classroom environment; therefore, promoting children's generalization of the strategies and optimizing their ability to self-regulate.

In Chapter Three, I have made connections with research to practice strategies that make up the CALM Curriculum. I described and provide the workshop (Appendix A) that has been developed for educators to help support their conceptualization of self-regulation through research and practice strategies that are included in the CALM Curriculum Workshop. In Chapter Four, the last chapter, I conclude with implications for practice for educators, limitations of the project and potential areas for future research.

CHAPTER 4: CONCLUSIONS

In Chapter four, my final chapter, I present a summary and reflections of my project including limitations and recommendations for investigation and practices for the future. The purpose of my project was to examine theories and literature regarding social and emotional learning and self-regulation, and in doing so, providing a link in how they support, and translate into the practice strategies of the already developed CALM Curriculum (Sidhu & Elliott, 2013). The CALM Curriculum was developed, as a result of increased referrals to early intervention programs and the need for educators to conceptualize self-regulation through a curriculum that would provide training and concrete practice strategies within the classroom. The following questions helped guide my Capstone Project: “What is the theoretical framework that informs the CALM Curriculum,” And “How do these theories translate into practice when implementing the CALM Curriculum?” I summarize and reflect on my findings addressing my guiding questions, limitations encountered and include recommendations for future investigations.

Summary and Reflections

The theoretical framework and literature review in this project, supported my guiding question number one by revealing the theoretical underpinnings and research on the biological emotional, cognitive, social and prosocial domains of self-regulation that framed the development of the CALM Curriculum. In addition, I explored the possibility of a motivational domain of self-regulation. The literature reviewed also revealed that there are several programs that are linked to the different dimensions of children’s self-regulation. However, none of the research found on any one program incorporated all six aspects of self-regulation, described in Chapter Two of this project. The CALM Curriculum, however, does integrate and link the

research of five domains of self-regulation including: biological, emotional, cognitive, social, and prosocial self-regulation.

Moreover, in Chapter Three, I support guiding question number two on translating these theories into practice strategies, through the implementation of the CALM Curriculum, and through a workshop developed for educators that helps solidify the connection. Based on the review of the literature, I provide a few examples from Chapter Three, of ways in which the CALM Curriculum offers educators practical strategies to help support children's self-regulation in each domain. In the biological domain, similar to the Alert Program's "How is your engine running" (Barnes et al., 2008), CALM provides Melvin's Energy Arousal Gauge which helps children match their energy levels to the expected activity. The emotional domain uses strategies similar to the PATHS program which helps children understand aspects of emotional literacy (Domitrovich, Cortes, & Greenberg, 2007) and modulating emotions using the Tucker Technique (Denham & Burton, 1996; Izard et al., 2008). Similarly, the cognitive, social, and prosocial domains provide concrete research based strategies that can easily be implemented by educators and their co-facilitators Melvin the Monkey and Tucker the Turtle. Through the puppets, games, and play children are given the resources and tools to help them self-regulate in all five domains of self-regulation.

Concluding Thoughts

My capstone project has provided me with the theoretical underpinnings and current research supporting me with the tools to substantiate a workshop for educators, linking the research and theoretical practices to the practice strategies of the CALM Curriculum (Sidhu & Elliott, 2013). The research and literature from this project has supported the development and credibility of my program, thus allowing for the curriculum to be sustainable. The process has

helped me develop a well-constructed training workshop for educators that will increase their conceptualization of self-regulation, and in addition, educators can benefit from implementing concrete practice strategies that are provided in the curriculum into their daily pedagogical practices. In closing, as a result of my Capstone Project and the continued implementation of the CALM Curriculum, I look forward to building the capacity of our educators by increasing their knowledge and skills in self-regulation, and ultimately supporting the learning potential of children by giving them the tools to thrive in their schooling and lifelong endeavours.

Limitations and Directions for Future Research

In this section, I reflect on the limitations that I encountered in my investigations and directions for further research. The plethora of research and literature I encountered on each of the self-regulation domains went beyond the scope of my graduating paper. These studies could definitely be further explored to increase conceptualization of self-regulation and possibly identify more practice strategies to help children thrive in their early learning programs. As my graduating paper focused mainly on the five domains of biological, emotional, cognitive, social, and prosocial self-regulation that provided the framework for the CALM Curriculum, the motivational domain of self-regulation needs to be considered for future research in terms of supporting educators on practice strategies that support children's motivation in completing tasks. Finally, although the notion of self-regulation has been explored extensively through the years, dating back to at least Vygotsky's socio-cultural theory (1978), self-regulation has only recently being explored through community programs and school districts (Sherlock, 2013). Therefore, as new research in the area becomes available, continued exploration into this topic needs to be examined to support our educators with training and practice strategies that provides optimum support for children's potential to thrive in their classroom environments.

Opportunities for further research are possible in the development of the CALM Curriculum. The capstone project provided me research and literature to support the practice strategies and credibility of the CALM Curriculum; however CALM as a Curriculum needs to be researched in terms of its effectiveness and rigor, perhaps by using a case comparison design to determine whether the curriculum makes a difference in children's ability to self-regulate. Also, after exploring and reviewing the extant research, A CALM 2 Curriculum needs to be considered expanding on the notion of a motivational domain of self-regulation.

Finally, in terms of recommendations for practice, the current demand for the program requires that the agency hosting the CALM Curriculum needs to consider exploring funding prospects. There is significant potential to expand this program beyond the scope of current local communities of the Fraser Valley, in B.C. Canada and could potentially benefit many more teacher's and children's understanding of self-regulation.

References

- Bandura, A. (1977). Social learning theory. Englewood Cliffs, N.J.: Prentice-Hall
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37, 122-147. doi:10.1037/0003-066X.37.2.122
- Bandura, A (1989). Regulation through cognitive processes through perceived self-efficacy. *Developmental Psychology*, 25, 729-735. doi:10.1037/0012-1649.25.5.729
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50, 248-287. doi:10.1016/0749-5978(91)90022-L
- Bandura, A., Caprara, G. V., Barbaranelli, C., Pastorelli, C., & Regalia, C. (2001). Sociocognitive self-regulatory mechanisms governing transgressive behavior. *Journal of personality and social psychology*, 80, 125. doi:10.1037/0022-3514.80.1.125
- Barnes, K. J., Vogel, K. A., Beck, A. J., Schoenfeld, H. B. & Owen, S. V. (2008). Self - regulation strategies of children with emotional disturbance. *Physical & Occupational Therapy in Pediatrics*, 28, 369-387. doi: 10.1080/01942630802307127
- Barnett, S., Jung, K., Yarosz, D., Thomas, J., Hornbeck, A., Stechuck, R., & Burns, S. (2008). Educational effects of the Tools of the Mind curriculum: A randomized trial. *Early Childhood Research Quarterly* 23. 299-313. doi: 10.1016/j.jecresp.2008.03.001
- Bronfenbrenner, U. (1976). The experimental ecology of education. *Educational Researcher*, 5, 5-15. doi:10.2307/1174755
- Bronfenbrenner, U. (1994). Ecological Models of Human Development. In *International Encyclopedia of Education*, 3, 37-43.
- Center on the Developing Child Harvard University. (2014). *Enhancing and practicing executive function skills with children from infancy to adolescence*. Retrieved from

http://www.developingchild.harvard.edu/resources/tools_and_guides/enhancing_and_practicing_executive_function_skills_with_children/

Cohen, E. G. (1994). Restructuring the classroom: Conditions for productive small groups.

Review of Educational Research, 64, 1-35. doi:10.2307/1170744

Coleman, J. G. (2006). *The early intervention dictionary: A multidisciplinary guide to terminology*. Bethesda, MD: Woodbine House.

Crean, H. F., & Johnson, D. B. (2013). Promoting alternative thinking strategies (PATHS) and elementary school aged children's aggression: Results from a cluster randomized trial.

American Journal of Community Psychology, 52, 56-72. doi:10.1007/s10464-013-9576-4

Darling, L. (2002). Moles, porcupines, and children's moral reasoning: Unexpected responses.

Early Years: An International Research Journal, 22, 91-103.

doi:10.1080/09575140220151440

Denham, S. A., & Burton, R. (1996). A social-emotional intervention for at-risk 4-year-olds.

Journal of School Psychology, 4, 225-245. doi:10.1016/0022-4405(96)00013-1

Diamond, A. (2012). Activities and programs that improve children's executive functions.

Current Directions in Psychological Science, 21, 335-341.

doi:10.1177/0963721412453722

Diamond, A. (2013). Executive functions. *Annual Review of Psychology*, 64, 135-168.

doi: 10.1146/annurev-psych-113011-143750

Domitrovich, C., Cortes, R., & Greenberg, M. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum.

The Journal of Primary Prevention, 28, 67-91. doi: 10.1007/s10935-007-0081-0

- Edelman, S. (2002). Managing stress a cognitive behaviour therapy approach. *Judicial Officers Bulletin*, 14(2), 11-12. Retrieved from <http://search.informit.com.au.ezproxy.library.ubc.ca/fullText;res=AGISPT;dn=20021807>
- Ellinwood, K., & Moll, L. (2012). Funds of knowledge. In *Encyclopedia of Diversity in Education*. (pp. 938-939). SAGE Publications, Inc.
doi:<http://dx.doi.org.ezproxy.library.ubc.ca/10.4135/9781452218533>
- Flint, T. K. (2010). Making meaning together: Buddy reading in a first grade classroom. *Early Childhood Education Journal*, 38, 289-297. doi:10.1007/s10643-010-0418-9
- Gordon, M. (2009). *Roots of empathy: Changing the world child by child*. Thomas Allan Publishers: Toronto, Ont.
- Janus, M., Brinkman, S., Duku, E., Hertzman, C., Santos, R., Sayers, M., Schroeder, J., & Walsh, C. (2007). *The early development instrument: A population-based measure for communities: A handbook on development, properties, and use*. Offord Centre for Child Studies: Hamilton, Ontario.
- Hay, D. F. (1994). Prosocial development. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, 35, 29-71. doi:10.1111/j.1469-7610.1994.tb01132.x
- Hedges, H., Cullen, J., & Jordan, B. (2011). Early year's curriculum: Funds of knowledge as a conceptual framework for children's interests. *Journal of Curriculum Studies*, 43, 185-205. <http://dx.doi.org/10.1080/00220272.2010.511275>
- Human Early Learning Partnership. (2011). *Community Summary EDI Wave 4 (2009/10 – 2010/2011)*. Retrieved from http://www.earlylearning.ubc.ca/media/uploads/comsum/2011/sd33_w4edi_communitysummary_15sep11.pdf.

- Hyson, M., & Taylor, J. L. (2011). Caring about caring: What adults can do to promote young children's prosocial skills. *YC: Young Children*, 66(4), 74-83.
- Izard, C. E. (2002). Translating emotion theory and research into preventive interventions. *Psychological Bulletin*, 128, 796-824. doi: 10.1037/10033-2909.128.5.796
- Izard, C.E., King, K.A., Trentacosta, C. J., Morgan, J.K., Laurenceau, J.P., Krauthamer- Ewing, E.S., & Finlon, K.J. (2008). Accelerating the development of emotion competence in Head Start children: Effects on adaptive and maladaptive behavior. *Development and Psychopathology*, 20, 369-397. doi.org/10.1017/S0954579408000175
- Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice*, 10, 144–156. doi: 10.1093/clipsy.bpg016
- Mahn, H. (1999). Vygotsky's Methodological Contribution to Sociocultural Theory. *Remedial and Special Education*, 20, 341-350. <http://dx.doi.org/10.1177/074193259902000607>
- Mayes, L.C. (2000). A developmental perspective on the regulation of arousal states. *Seminars in Perinatology*, 24, 267-279. doi:10.1053/sper.2000.9121
- Moen, P., Elder, G. H., Lüscher, K., Bronfenbrenner, U., & PsycBOOKS. (1995). *Examining lives in context: Perspectives on the ecology of human development*. (pp. 619-647) Washington, DC: American Psychological Association. Retrieved from <http://www.its.dept.uncg.edu/hdf/facultystaff/Tudge/Bronfenbrenner%201995.pdf>
- Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, 31(2), 132-141. Retrieved from <http://www.jstor.org.ezproxy.library.ubc.ca/stable/pdf/1476399.pdf>

Razza, R. A., Bergen-Cico, D., & Raymond, K. (2015). Enhancing preschoolers' self-regulation via mindful yoga. *Journal of Child and Family Studies*, 24, 372-385.

doi:10.1007/s10826-013-9847-6

Schonert-Reichl, K., Smith, V., Zaidman-Zait, A., Hertzman, C. (2012). Promoting children's prosocial behaviors in school: Impact of the "Roots of Empathy" program on the social and emotional competence of school-aged children. *School Mental Health*, 4, pp 1-21.

doi:10.1007/s12310-011-9064-7

Shanker, S. (2010). Self-Regulation: Calm, alert, and learning. *Education Canada*, 50(3), 4-7.

Retrieved from <http://www.cea-ace.ca/education-canada/article/self-regulation-calm-alert-and-learning>

Shanker, S. (2012). *Calm, alert and learning: Classroom strategies for self-regulation*.

Toronto, Ontario: Pearson Education Canada.

Sherlock, T. (September, 2013). B.C. school districts adopt new strategy to help students stay alert: Log rolling and ear muffs: coming to a school near you? *The Vancouver Sun*.

Retrieved from

<http://www.vancouversun.com/health/school+districts+adopt+unique+strategies+help+students+stay+alert/8860653/story.html>

Tominey, S., & McClelland, M. (2011). Red light, purple light: Findings from a randomized trial using circle time games to improve behavioral self-regulation in preschool. *Early Childhood Education and Development*, 22, 489-515.

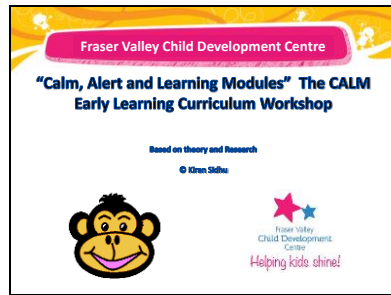
doi:10.1080/10409289.2011.574258

- Van de Pol, J., Volman, M. Oort, F., & Beishuizen, J. (2014). Teacher scaffolding in small-group work: An intervention study. *Journal of the Learning Sciences*, 23, 600-650.
doi:10.1080/10508406.2013.805300
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. (In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Cambridge, MA: Harvard University Press.
- Whitebread, D. (2012). *Developmental Psychology and Early Childhood Education*. London, Sage.
- Whitebread, D., Basilio, M., Kuvalja, M., & Verma, M. (2012). *The importance of play: A report on the value of children's play with a series of policy recommendations*. Brussels, Belgium: Toys Industries of Europe.
- Zins, J. E., & Elias, M. J. (2007). Social and emotional learning: Promoting the development of all students. *Journal of Educational and Psychological Consultation*, 17, 233-255.
doi: 10.1080/10474410701413152

APPENDIX A

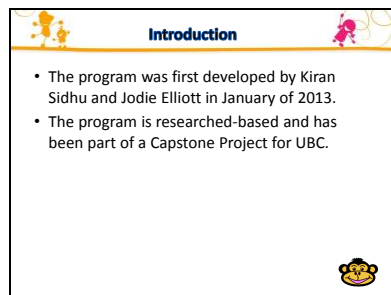
THE CALM WORKSHOP

Slide 1



Thank you for attending the Calm Alert and Learning Modules Training Sessions also referred to as the CALM. This workshop provides you the theory and research that supports the practice strategies of the CALM Curriculum.


Slide 2



I introduce myself – I have been working with the Fraser Valley Child Development Center Supported Child Development Program for over 20 Years. I have my Early Childhood Diploma and Child and Youth Care Bachelor's Degree and this workshop was part of my Masters in Education for Early Childhood Education through UBC.


Jodie Elliott has been with the Supported Child Development Program for 10 years. She also has her Early Childhood Education Diploma and her Bachelors in Child and Youth Care through the University of the Fraser Valley. She is the creative mind in the development of the CALM Curriculum.

Slide 3




Purpose

- The program was developed due to the increase of referrals for children with social and emotional delays to the Supported Child Development Program in the community of Chilliwack, B.C.
- The Human Early Learning Partnership (HELP) through UBC Early Development Instrument (EDI) results also demonstrated high rates of vulnerability for children in the Emotional Maturity and Social Competence scales (2011).




Over the last 10 years, early intervention programs such as the Supported Child Development Program (SCDP), throughout British Columbia, Canada, have seen a steady increase of referrals from preschools and childcare programs for children with self-regulation issues that impact on children's behaviours. At the same time, findings from the Human Early Learning Partnership's (HELP) Early Development Instrument (EDI), indicates children entering Kindergarten in some school districts, including the Chilliwack School District, in BC's Fraser Valley, have demonstrated the highest level of vulnerability in the Emotional Maturity scale and Social Competency scale (HELP, 2011).

Slide 4



Rationale

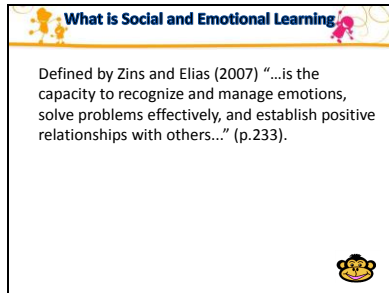
- As a result of the increase of referrals and children having difficulties with social and emotional learning, the need for a self-regulation curriculum became apparent.



As a result increased knowledge on conceptualizing self-regulation and a curriculum that addresses self-regulation needs to be considered to help shape these current practices and foster children's success to thrive in these group settings and that is why Jodie and I developed the CALM Curriculum. We also know that educators are busy; therefore we wanted to provide educators a kit with concrete strategies to practice these strategies within their programs.


I then explain to participants that the framework of this Curriculum is based on Stuart Shanker's review work and the strategies in the program have been supported through authors and researchers, who have conducted

Slide 5



What is Social and Emotional Learning

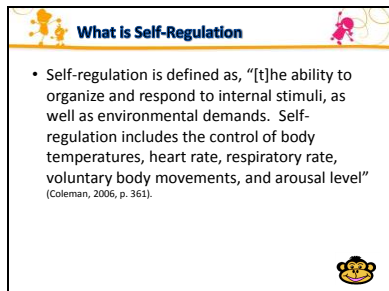
Defined by Zins and Elias (2007) "...is the capacity to recognize and manage emotions, solve problems effectively, and establish positive relationships with others..." (p.233).



empirical research such as David Whitebread, Tominey and McClelland, Mary Gordan, etcetera. These works would all be introduced later.


In order to fully understand how to support children's social and emotional learning and self-regulation we must understand what this terminology means. Social and emotional learning has been defined by Zins and Elias (2007) "...is the capacity to recognize and manage emotions, solve problems effectively, and establish positive relationships with others..." (p.233).

Slide 6



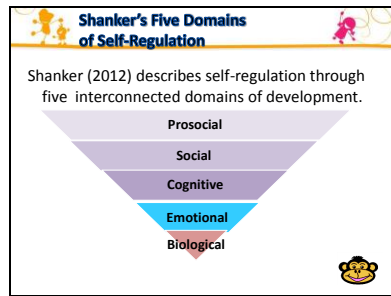
What is Self-Regulation

- Self-regulation is defined as, "[t]he ability to organize and respond to internal stimuli, as well as environmental demands. Self-regulation includes the control of body temperatures, heart rate, respiratory rate, voluntary body movements, and arousal level" (Coleman, 2006, p. 361).



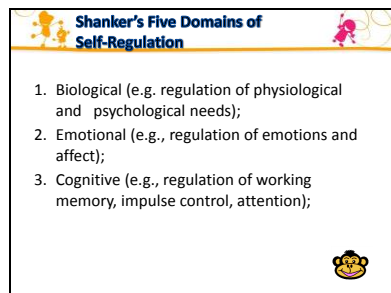
Self-Regulation has been defined as, "[t]he ability to organize and respond to internal stimuli, as well as environmental demands. Self-regulation includes the control of body temperatures, heart rate, respiratory rate, voluntary body movements, and arousal level.

Slide 7



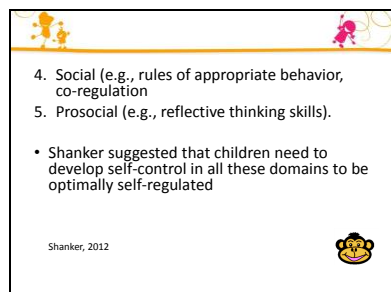
Shanker (2010) refined the definition of self-regulation into five interconnected domains.

Slide 8



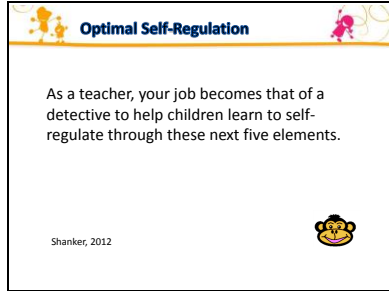
These domains include: 1) Biological (e.g. regulation of physiological and psychological needs); 2) Emotional (e.g., regulation of emotions and affect); 3) Cognitive (e.g., regulation of working memory, impulse control, attention) (Shanker, 2012)

Slide 9



4) Social (e.g., rules of appropriate behavior, co-regulation; and 5) Prosocial (e.g., reflective thinking skills). Shanker suggested that children needed to develop self-control in all these domains to be optimally self-regulated (Shanker, 2012)


Slide 10



Optimal Self-Regulation

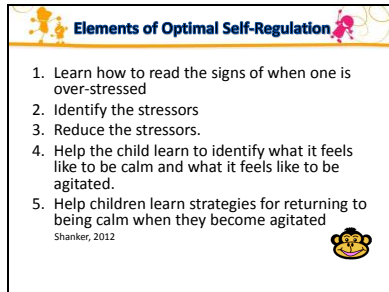
As a teacher, your job becomes that of a detective to help children learn to self-regulate through these next five elements.

Shanker, 2012



It is important as educators that we become detectives and support children's regulation through these next five elements described next. In my work and own investigation I have found that to come from a curious perspective helps me understand why children may be behaving or reacting a certain way.


Slide 11



Elements of Optimal Self-Regulation

1. Learn how to read the signs of when one is over-stressed
2. Identify the stressors
3. Reduce the stressors.
4. Help the child learn to identify what it feels like to be calm and what it feels like to be agitated.
5. Help children learn strategies for returning to being calm when they become agitated

Shanker, 2012



- I have understood how to read the signs of when one is over-stressed. I look for signs such as becoming fridity, pacing, that can be observed in the child.
- I try and figure out what the stressor is, simply by asking the child "Are you OK?" or investigating possible stressors.
- Once I figure out the stressor, I try and reduce it (Eliminate or reduce the stressor, or find adaptations for the child.
- I have children experience feeling calm such as the practice strategies provided in the program
- Finally, I provide children strategies so that they can return to being calm when they are agitated – this also taught in the curriculum.

Slide 12



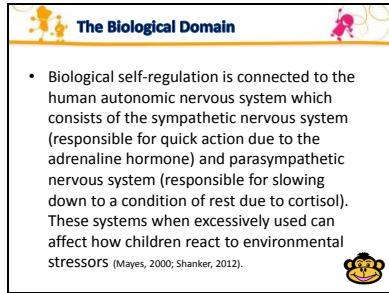
I introduce Melvin by playing “Where is Melvin” on the CD which comes with the curriculum. I have him talk in my ear and have him ask me why these people are all here watching us. I reply, “Well Melvin. These people are not watching us; they are here to learn how you teach children about self-regulation.” I have him talk in my ear again and I reply “Of course Melvin, I can introduce Tucker and no they didn’t bring you any bananas!” After introducing Tucker, I let everyone know that Melvin and Tucker are the teachers of the program and they teach children how to self-regulate in the five domains of self-regulation.

Slide 13



The first domain we are going to discuss is the Biological Domain of Self-Regulation. Shanker (2012) describes this as the regulation of physiological and psychological needs.

Slide 14



The Biological Domain

- Biological self-regulation is connected to the human autonomic nervous system which consists of the sympathetic nervous system (responsible for quick action due to the adrenaline hormone) and parasympathetic nervous system (responsible for slowing down to a condition of rest due to cortisol). These systems when excessively used can affect how children react to environmental stressors (Mayes, 2000; Shanker, 2012).


A quick synopsis on how the internal mechanics of the biological self-regulation works is that it is connected to the human autonomic nervous system which consists of the sympathetic nervous system and the parasympathetic nervous system. The sympathetic nervous system is responsible for quick action due to the release of the adrenaline hormone (Shanker, 2012). For example if Sally has to do some public speaking she may have a quick adrenaline rush, where she feels her heart beat faster, palms might get sweaty etc. The parasympathetic nervous system releases the hormone cortisol which is responsible for slowing down the system to a condition of rest (Shanker, 2012). A child that excessively has been watching T.V. or daydreaming is an example of this. When these systems are excessively used they can affect how children react to stressors and they can become hyper-sensitive (Mayes, 2000; Shanker, 2012). The next slide looks at environmental stressors that can impact children's biological self-regulation

Slide 15

Biological Domain

- This may exhibit as children who are hypersensitive (extremely sensitive) to auditory (bells), visual (wall clutter), tactile olfactory(smell) or gustatory (taste) input.

Shanker, 2012



Children may become hypersensitive to auditory (school transition bells, screeching of chairs) visual (busy walls, mobiles from ceiling, bright paint), tactile (clothing, arts and crafts material) olfactory (smells of fragrances, soaps, fruits) and gustatory (taste of certain foods) (Shanker, 2012).

Slide 16

Promoting Biological Self-Regulation

Change the classroom environment and/or add quiet spaces

Shanker, 2012



photo credit: Brandon Public Library Sleepover 065 via photopin Brandon Public Library Sleepover 065 via photopin



As we learned earlier, children benefit when we become detectives and this means that initially we must assess and analyze our classroom environments for stressors. Once we have done what we can to eliminate or reduce the stressor, than we must provide the child adaptation to cope with the stressor (such as a tent in the classroom).

Slide 17

Biological Domain

Busy classrooms may be over-stimulating and a the child may become hypo-aroused or hyper-aroused.

Shanker, 2012





photo credit: IMG_1771 via photopin IMG_1771 via photopin

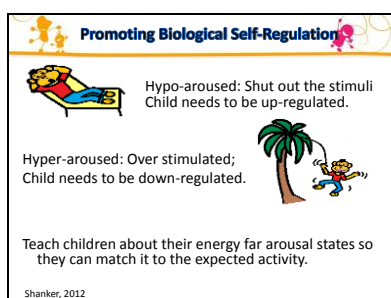


Notice the busyness of the classroom, for some children this may be over-stimulating and they may become hypo-aroused or hyper-aroused (Shanker, 2012). Adapting the environment can make a huge difference as observed with Johnny in this case scenario I am about to describe:

"Johnny" was a five year old kindergarten child who spent most of his time at the principal's office because he continuously flicked the lights off in his classroom. His teacher went on an extended sick leave and a

teacher-on-call was brought into the classroom for three weeks. She found the classroom overly cluttered and took down bulletin boards; ceiling mobilizes and organized shelves and toys into containers. After the environmental change, the teacher reported that “Johnny” has never flicked the lights off again.

Slide 18

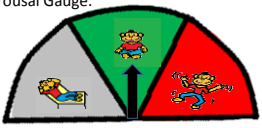


Children even with adaptations may have difficulty with understanding how to change their energy levels to meet the demands of the activity. For a child who is hypo-aroused they tend to shut out stimuli and appear to be in a low energy state, for example “Sally” may not have the same energy levels during outdoor play and may sit in front of the door, asking “is it time to go in yet” Sally needs to learn to up-regulated her energy to match the activity level outside. Children who are hyper-aroused seem to have excessive energy to cope with stressors and need to learn to down-regulate their energy state (Shanker, 2012). For example “Sam” is hopping up and down during a more sedentary activity at circle. Sam needs to down-regulated his energy to match the expected activity. You may have “Sally’s” and “Sam’s” in your program that you are thinking about right now that react in the same way.

Slide 19

Promoting Biological Self-Regulation

- Children learn to identify their energy arousal levels with the Melvin's Energy Arousal Gauge.



- Video Clip illustrating Melvin's Energy Arousal Gauge

Similar concept to the energy gauge developed by the Alert Program, a researched based program by Williams and Schellenberger (Barnes et al., 2008) uses "How does your engine run", CALM helps children (through a song) identify whether they are in the red zone (lots of energy), grey zone (low energy) or green zone (ready to learn energy). Children initially learn this at circle through Melvin who has the teacher play songs that have the children go into the red zone and grey zone. When Melvin wants the children to pay attention to a story, he requests that they all move their body energy into the green zone. The teacher is then responsible to scaffold the learning into all areas of the program, such as when it is time for gym or outdoor play letting the children know it is time to be in the red zone.

Insert Video Clip of Tyra Laslo (Kindergarten Teacher) using the gauge asking children what energy zone they needed to be in during a transition to gym time.


Slide 20

Key Attributes of Biological Regulation

Children who optimally self-regulate in this domain demonstrate attributes of:

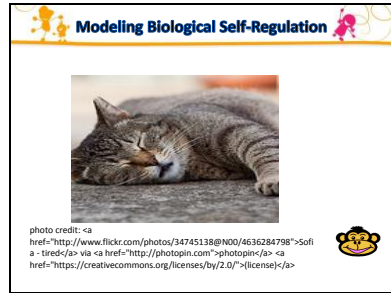
- sufficient energy on waking up, which is maintained through the course of the day.
- remaining calm amongst distracting visual, auditory, olfactory stimuli.

(Shanker, 2012)



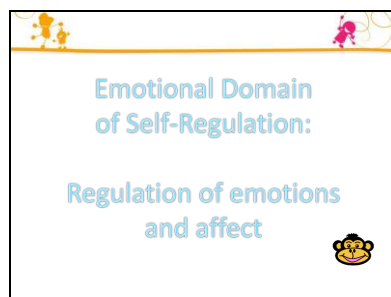
To conclude this area of biological self-regulation, we want children optimally regulated in this domain by having sufficient energy levels through-out the day that match the activity expectations and we also want children to have the coping strategies to stay calm amongst environmental stressors such as visual, auditory etcetera (Shanker, 2012).

Slide 21



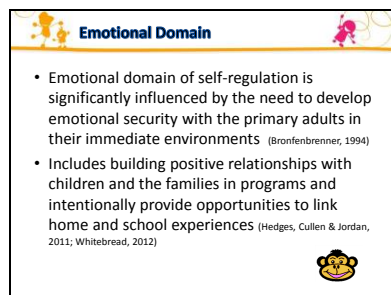
I have also learned that as educators we must model the energy level ourselves. If we are looking like this during a high level energy activity expectation, we are giving our children mixed messages.

Slide 22



The next domain I introduce to you is the emotional domain of self-regulation, which according to Shanker (2012) is the regulation of emotions and affect.

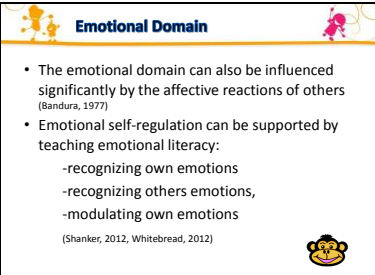
Slide 23



The emotional domain of self-regulation is significantly influenced by the need to develop emotional security with primary adults in their immediate environments as based on theoretical perspective of Bronfenbrenner's (1994). Bronfenbrenner's ecological systems theory stressed that human development is a process between the active evolving individual and reciprocal interactions with persons, objects and symbols in their immediate environment. Bronfenbrenner (1994) referred to these influential processes in a child's development as proximal processes. Furthermore Bronfenbrenner

suggested the positive impact on children's development when home and schooling experiences are linked and vice-versa. Educators can build positive relationships with children and families in programs by connecting home and community within school experiences as researched through the work of Hedges, Cullen, Jordan, 2011 & Whitebread, 2012.


Slide 24



Emotional Domain

- The emotional domain can also be influenced significantly by the affective reactions of others (Bandura, 1977)
- Emotional self-regulation can be supported by teaching emotional literacy:
 - recognizing own emotions
 - recognizing others emotions,
 - modulating own emotions

(Shanker, 2012, Whitebread, 2012)




The emotional domain can be influenced significantly by the affective reactions of others (Bandura, 1977). Therefore, how we model our response to situations has significant impacts on children's self-regulation. Emotional self-regulation can be supported by teaching emotional literacy. Emotional literacy refers to, "...the ability to recognize, understand, cope with and express our emotions in appropriate ways "(Gordon, 2009, p. 117).

This includes teaching children how to recognize their own emotions, recognize others emotions and modulate their own emotions (Shanker, 2012; Whitebread, 2012).


Through my research, I have learned that teaching children emotional literacy skills can be done through songs, free play, role modeling and literature. Researched based programs such as the Promoting Alternative Thinking Strategies (PATHS) (Domitrovich, Cortes & Greenberg, 2007) and the Roots of Empathy Program (Gordon, 2009) emphasize emotional literacy as part of their programs. CALM also has a strong

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Promoting Emotional Self-Regulation

- Teaching Emotions: Emotional literacy can be learned through songs, free play, and literature (Domitrovich, Cortes, & Greenberg, 2007; Gordon, 2009)

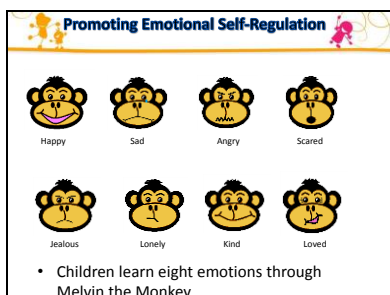



Books by Trace Moroney



emotional literacy component in the program. The CD in CALM has “If you’re happy and you know it” and responses to how one may appropriately react to a feeling. For example, “If you’re sad and you know it, tell a friend” and “If you’re angry and you know it, take a breath.” During free play it is important to acknowledge feelings as they happen so that children can conceptualize how they feel in the moment. I have also learned that literature is also a great resource in helping children understand emotions. The curriculum comes with felt stories and books that introduce children to eight emotions introduced by Melvin in the next slide.

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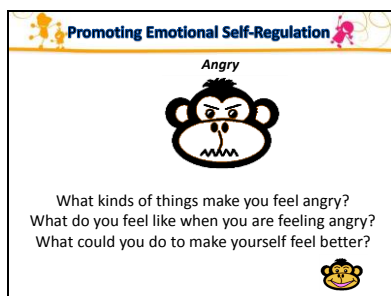
Melvin models the following eight emotions for children. His picture is at the back of each emotion book so that children can see what Melvin looks like when he has one of the eight feelings. (My children’s developed the eight emotions of Melvin the Monkey).

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Children also learn the emotions through a dice game. They roll the dice and they practice the emotion in the mirror and the child’s peers guess what emotion the child may be feeling.

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The CALM Curriculum also comes with colouring sheets for children. They include questions such as: What kinds of things make you feel angry? What do you feel like when you are feeling angry? What could you do to make yourself feel better? These questions help the child, us as educators and parents know what these emotions mean for the child. Some of the questions for the emotions begin to have children look at prosocial behaviours, such as in the happy emotion, one of the questions include: "What can you do to make others feel happy?"

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Shanker (2012) suggests using the SNAP program to help children modulate escalated emotions. The three steps in the program include STOP NOW And Plan – these are described in the next slide.

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Promoting Emotional Self-Regulation

- **STOP** – “Things I can do to STOP myself (calm my body) from making problems bigger.”
(Snap fingers, take deep breaths, put hands in my pocket, take a step back, count to 10.)
- **NOW, AND** “Things I can say to myself to keep calm and help me to make the right choice”
(Calming thoughts/coping statements)
- **PLAN** “Once I have stopped and calmed down, what can I do?”
(Pick a plan that will work for me)

Shanker, 2012



Stop cues the child to calm their body from making problems bigger. The child is encouraged to snap their fingers, take deep breaths, put hands in their pocket, take a step back or count to 10.

Now and cues the child to use self-talk and use calming thoughts and coping statements.

Plan cues the child to find a plan that works for them (Shanker, 2012)



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Promoting Emotional Self-Regulation

Tucker Turtle Teaches SNAP

- **Stop** – Keeps his hands, body and yelling to himself
- **Now And** – tuck and take three deep breaths
- **Plan** – Thinks of a solutions

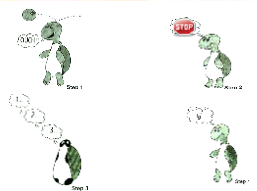
<http://csefel.vanderbilt.edu/resources/strategies.html>


Similar to the SNAP program; other social and emotional programs such as the Promoting Alternate Thinking Strategies (PATHS) uses the Tucker Turtle technique to teach children to Stop and keep their hands body and yelling to themselves; Now And – Children then learn to tuck and take three breaths; Plan – Tucker encourages children to find solution (Denham & Burton, 1996).

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Promoting Emotional Self-Regulation



<http://csefel.vanderbilt.edu/resources/strategies.html>



Tucker demonstrates here how he gets hit by a ball. He stops and keeps his body, hands and yelling to himself. Tucker Tucks and takes three breaths and then is thinking of a solution.

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Promoting Emotional Self-Regulation

- Tucker and Melvin teach the Tucker Turtle Technique steps for CALM



- Video Clip illustrating children practicing the Tucker Turtle Technique

In the CALM Curriculum, Tucker Turtle adds an additional step which includes a hug due to the research by Izard, King, Trentacos, Morgan, Laurenceau, Krauthamer-Ewing, & Finlon (2008) that suggests children would benefit from holding themselves tight to allow them to quickly harness the energy from feeling angry, allowing children to regulate their emotion kinetically. Children really benefit from this technique as I describe in this example


An educator being observed implementing the curriculum missed doing the practicing of the monkey breaths; "Tommy" raised his hand and told "Ms. Smith" that she missed the monkey breaths. He indicated that he needed to practice breathing because on the soccer field when he is angry he tucks and does "monkey breaths" to help himself calm down.

The Video Clip of Tyra, practicing the techniques with children during circle time when they are able to learn the strategies to this cognitive behavioural technique.


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Promoting Emotional Self-Regulation

Develop a Solution Center



Example of Cards for a Solution Center
<http://csefel.vanderbilt.edu/resources/strategies.html>



Melvin's Count Down Strip can be used as a timer for a problem solving strategy

The CALM Curriculum also adds a solution center concept for children so that they have some problem solving strategies when they need to think of a plan. The curriculum comes with solution cards and a count-down strip so that children have the tools to negotiate problem solving skills.


The solution center has worked well with many of our children as demonstrated in the following example that I will share:

Two children were in a heavy dispute about a toy car they both wanted during free play time in preschool. One of the four year old boys, "Steve" suggested to his peer, "I think we need to go to the solution center." Both boys were able to find a solution (they decided to use a timer) to help resolve the situation.

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Key Attributes: Emotional Domain

- Ability to identify ones emotions, others emotions and modulate own emotions
- Emotional Resiliency – Recover from challenging situations (Shanker, 2012)



The key attributes in the emotional domain of self-regulation is that children know how to identify their own emotions, others emotion, modulate their own emotions and recover from challenging situations (Shanker, 2012).

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Modeling Emotional Self-Regulation

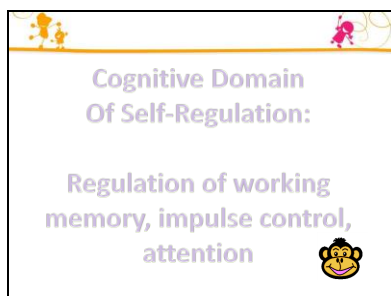


photo credit: Roaring Lioness via photopin license



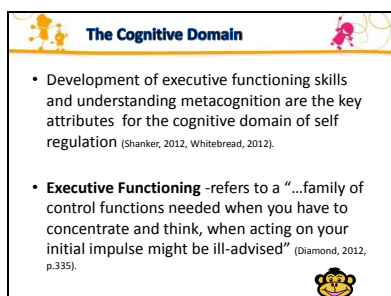
I have realized through the research the importance of remembering to model our own emotional regulation. We all have days when we feel like this picture but it is important for children to see and hear us identify how we are feeling and modulate our emotions effectively.

Slide 37



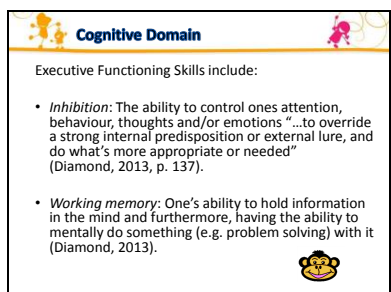
Next is the Cognitive Domain of Self-Regulation. According to Shanker (2012) this domain requires regulation of the working memory, impulse control, and attention.

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Children's development in the cognitive domain of self-regulation includes the development of metacognition and the foundations of early executive functioning skills (Shanker, 2012; Whitebread, 2012). Executive functioning refers to a "...family of control functions needed when you have to concentrate and think, when acting on your initial impulse might be ill-advised" (Diamond, 2012, p.335).

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Diamond (2012, 2013) explained that these control functions include inhibition, working memory and cognitive flexibility.


Inhibition is defined as the ability to control ones attention, behaviour, thoughts and/or emotions "...to override a strong internal predisposition or external lure, and do what's more appropriate or needed" (Diamond, 2013, p. 137).

Working Memory is defined as one's ability to hold information in the mind and furthermore, having the ability to mentally do something (e.g. problem solving) with it (Diamond, 2013).

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Cognitive Domain

- *Cognitive flexibility*: The ability to change one own perspective or approaches to a problem and having the flexibility to adjust to new demands, rules and/or priorities (Diamond, 2013).
- **Metacognition** – the awareness and understanding of one's own thinking (Shanker, 2012)



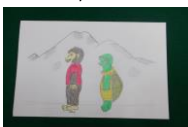


Cognitive Flexibility is defined as the ability to change one own perspective or approaches to a problem and having the flexibility to adjust to new demands, rules and/or priorities (Diamond, 2013).

And metacognition refers to the awareness and understanding of one's own thinking (Shanker, 2012).

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Promoting Executive Functioning and Metacognition Skills

- Activities such as stretching and breathing exercises are encouraged can help foster inhibition, working memory and cognitive flexibility (Razza, Bergen-Cico & Raymond, 2015)


According to recent research by Razza, Bergen-Cico & Raymond (2015) children are able to develop these self-regulatory functions through novel interventions of mindfulness activities such as yoga and breathing techniques. In the CALM Curriculum Melvin and Tucker model stretching exercises and regular breathing exercises called “monkey breaths.”

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**Promoting Executive Functioning
and Metacognition skills**

Vygotsky (1978) placed emphasis on games with rules. He suggested a primary function that children developed was their ability to exhibit immense inhibition in the rules of games and behavior, therefore fostering self-regulatory development.




Lev Vygotsky's social constructivist theoretical approach placed emphasis on the contribution of play and the development of cognition (Vygotsky, 1978). Vygotsky suggested that through play, children learn the rules of behaviour which requires that children act against their immediate impulses, therefore fostering self-regulatory development.

The CALM Curriculum also promotes games such as: "Melvin Says" similar to "Simon Says" and "Melvin's Favourite Things" replicates the game guess what's missing by trying to remember which one of Melvin's favourite things was taken away. The game "Red Light, Green Light" is also provided to help children learn the skills to stop their body when the sign says stop. The colors change on the signs to ensure children continue to pay attention to what they see. The CALM Curriculum CD also has the song "Head and Shoulder Knees and Toes" which changes into the chicken dance to keep children's attention. Also, there is a melody for "Freeze Dance" on the CD however teachers are encouraged to play tunes from their own personal devices (Ipods) that are appropriate for children and bring familiarity from their home and community experiences (Hedges et al., 2011). *(One class we observed played "Freeze Dance to "Call Me Baby" by Carly Rae Jepsen, the children and teacher were fully engaged!)*

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Promoting Executive Functioning and Metacognition skills

- Circle time games can help children learn the skills to: focus, pay attention, delay gratification and control impulses (Tominey and McClelland (2011).
- Implement games such as: "Melvin Says," "Head and Shoulders Knees and Toes," "Freeze Dance," "Sleeping Little Monkeys," "Melvin's Favorite Things," and "Red light, Green Light."
- Video Clip: In Brief: Executive Function: Skills for Life and Learning 
- Video Clip illustrating "Freeze Dance"

The Center of the Developing Child Harvard University (2014), builds on the posits of Vygotsky's theory and suggests that children can exercise their executive functioning skills through playing and practicing games such as "Duck, Duck Goose, Mother May I," and "What Time is it Mr. Fox". Similarly, Tominey and McClelland (2011) demonstrated that circle time games, such as "Freeze Dance" and "Red Light Purple Light" improved children's behavioral self-regulation skills, such as: impulse control, working memory and attention.

I learned how important these games were the hard way:

In the summer of 2011, I was part of kindergarten readiness project where we were going to use the summer to support children who needed help in self-regulation skills before they went to kindergarten. I had a group of five children and I decided to play "Sleeping Little Bunnies" with them. The game was going really well until the bunnies went off jumping and I couldn't get them back to the mat. As I learned about the importance of these games in my research, I now realize I made one of the biggest mistakes as an educator and told myself, "I am never playing this game again" when in reality, I should have played it every day until the children learned the skills of impulse control and the rules of this game.

The CALM Curriculum promotes games such as: "Melvin Says" similar to "Simon Says" and "Melvin's Favourite Things" which replicates the game guess what's missing by trying to

remember which one of Melvin's favourite things was taken away. The game "Red Light, Green Light" is also provided to help children learn the skills to stop their body when the sign says stop. The colors change on the signs to ensure children continue to pay attention to what they see. The CALM Curriculum CD also has the song "Head and Shoulder Knees and Toes" which changes into the chicken dance to keep children's attention. Also, there is a melody for "Freeze Dance" on the CD however teachers are encouraged to play tunes from their own personal devices (Ipods) that are appropriate for children and bring familiarity from their home and community experiences (Hedges et al., 2011).

Video clip

Link http://developingchild.harvard.edu/resources/multimedia/videos/inbrief_series/inbrief_executive_function/
This video clip illustrates executive functioning through interviews that discuss what executive functioning means and how it can be developed, including games as illustrated in the next video clip

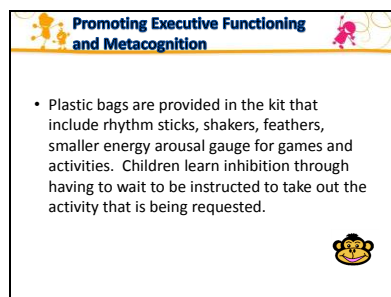
Video Clip of Tyra Laslo (Kindergarten Teacher) playing "Freeze Dance" with her students using her Iphone to play the song "Call Me Baby" by Carly Rae Jepsen. Tyra and children appear to be fully engaged in the song (as it based on their funds of knowledge" and playing the game where they are going to have to learn to keep their body still when the music stops.

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As mentioned earlier the CALM Curriculum comes with signs for the game “Red Light, Green Light” and other colours for signs to keep children focused on the rules of the game, even when the rules change!

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The CALM Curriculum provides each child with a Ziplock bag and a rhythm stick, shaker, a feather on a straw and a miniature arousal gauge for games and activities in the program. Children learn the skills of inhibition through having to wait to be instructed to take out only the activity that is being requested.

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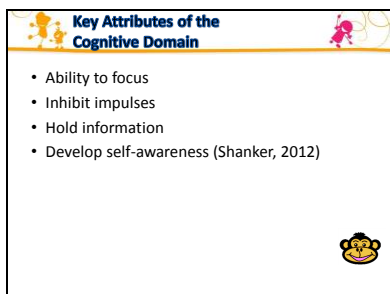
The slide here shows an example of what children have in front of them but are not allowed to use it until they are instructed to do so by Melvin the Monkey.

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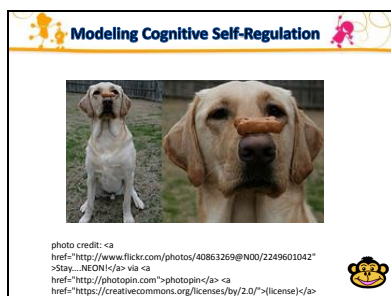
There are lots of activities to build children's executive functioning skills. Let's try an exercise to see how well you can control your impulses. In this slide only call out the colour of each word you see. Not easy, is it? Once our brain is programmed to see things a certain way, we need to train it to think differently.

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The key attributes of the cognitive domain of self-regulation are for children to have the skills to focus, inhibit impulses, hold and store information and develop self-awareness, or the ability to think about their thinking (Shanker, 2012).

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Of course modeling cognitive self-regulation requires that we too think about things before we act on them.

I will end this section with questions, a discussion and a review of key points and take a 15-20 minute break.

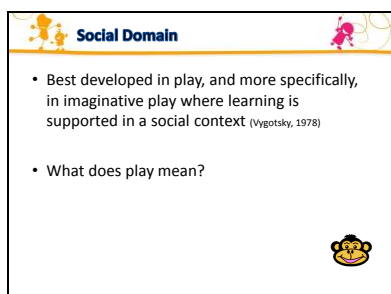
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I will bring everyone back by asking if anyone had any question or comments and then introduce the Social Domain of Self-Regulation

The next domain is the Social Domain of Self-Regulation. According to Shanker (2012) this requires regulation of the rules of appropriate behaviour and co-regulation.

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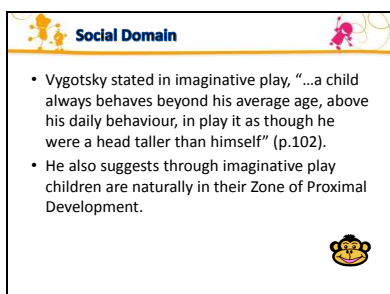
According to Vygotsky (1978) learning the rules of appropriate behaviour is best learned and developed in play, and more specifically imaginative play where learning is supported in a social context.

What is Play?

According to Whitebread (2012) play is a significantly “complex phenomenon”(p.62) and has been a term that many psychologists have struggled to define. He does however, suggest that there is universal acceptance that children do learn and develop through playfulness activities (Whitebread, 2012; Whitebread,


Basilio, Kuvalja and Verma, 2012). Therefore, contemporary psychologists have defined these activities or different forms of play into five different categories based on the developmental process that each serves. These five areas include the following: physical play, play with objects, symbolic play, pretence/socio-dramatic play and games with rules.

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Social Domain

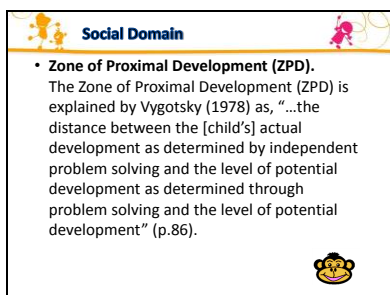
- Vygotsky stated in imaginative play, "...a child always behaves beyond his average age, above his daily behaviour, in play it as though he were a head taller than himself" (p.102).
- He also suggests through imaginative play children are naturally in their Zone of Proximal Development.



Learning the rules of appropriate behaviour is best learned and developed in play, and more specifically imaginative play where learning is supported in a social context (Vygotsky, 1978).


It is through imaginative play that Vygotsky (1978), suggests that children are naturally learning in their Zone of Proximal Development (ZPD). The Tools of the Mind Curriculum (Tools) which is based on Vygotsky's theory extends everyday classroom activities into dramatic play (Diamond, 2012).

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Social Domain

- **Zone of Proximal Development (ZPD).** The Zone of Proximal Development (ZPD) is explained by Vygotsky (1978) as, "...the distance between the [child's] actual development as determined by independent problem solving and the level of potential development as determined through problem solving and the level of potential development" (p.86).



The Zone of Proximal Development or ZPD is explained by Vygotsky (1978) as, "...the distance between the [child's] actual development as determined by independent problem solving and the level of potential development as determined through problem solving and the level of potential development" (p.86).

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Promoting Social Self-Regulation

- Bringing in children's *Funds of Knowledge* into dramatic play (Hedges et al., 2011).
- Promote collaborate learning experiences by facilitating group games and shared projects (Cohen, 1994; Van de Pol, Volman, Oort, & Beishuizen, 2014).
- Implementation of a buddy system to help promote social behaviours and helps increase learning (Crean & Johnson, 2013; Flint, 2010)
- Video Clip illustrating Dramatic Play



I have learned that it is important to include children's funds of knowledge (experiences at home and community that contribute to the child's identity) into the imaginative play spaces at school to contextualize their learning and make it more meaningful (Hedges et al., 2011). This is also known as bringing children's "funds of knowledge" into the classroom. The 'Funds of Knowledge' Framework is described by Ellinwood and Moll (2012) as, "...the knowledge base a household has accumulated from the lived experiences and social practices of its members" (p.938). Ms. Jones explained to me what a difference it made in her classroom when she implemented children's interests into their dramatic play area.

"Ms. Jones" shared that her imaginative play area was never used so she decided to ask her students what they would like to see in the play space. After much negotiation, the children decided they wanted a pizza place. "Ms. Jones" brought in pizza boxes, telephones and had the children write up menus. She mentioned that she had never seen the children have so much fun in this area, including setting up their play space and then acting out their different roles.



Social self-regulation can also be fostered in small group activities. In a study conducted by Cohen (1994) he stated that small group work promotes positive relationships as well as legitimate learning when supported by educators. More recent research by Pol et al. (2014) also reported that

teacher scaffolding in small groups illuminated student understanding of complicated concepts.

Finally the implementation of a buddy system, as demonstrated in the research effects of increased prosocial behaviour from the PATHS program can also promote social skills (Crean & Johnson, 2013; Flint, 2010).

Video Clip illustrating Kindergarten teacher Tyra Laslo's classroom turning their housekeeping corner into a pizza place. Discussing how children in this scenario have rules that they need to follow based on the role they are playing. For example, there are some children making pizza, taking orders one is the delivery person. Each of these children has a different role that they need to conform to.


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Key Attributes of the Social Domain


Understand the rules of appropriate behaviour, which include:

- Understand own feelings and intentions
- Understand and respond appropriately to others feelings and intentions
- Shares and take takes turns independently.
- Can resolve social problems with peers

Shanker, 2012, Whitebread, 2012



The key attributes in the social domain of self-regulation is for children to have the skills to understand the rules of appropriate behaviour which include: understanding their own feelings and intentions, understanding and responding appropriately to others feeling and intentions, share and take turns independently, and resolve social problems with peers (Shanker, 2012, Whitebread, 2012)

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I have come to realize that we as adults find it difficult to follow the rules of appropriate behaviour. How many of us enjoy the long line-ups at the grocery store, and Walmart. Consumers are smart, they distract us with magazines to help us cope with the stressor. We also need to ensure we support our children in building these skills so that they too can cope with stressors making it easier to follow the rules and perhaps even making some of these expectations fun (dancing in a line-up).

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The last domain is the prosocial domain of self-regulation. According to Shanker (2012), this requires regulation of reflective thinking skills.

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Prosocial Domain

- Children who are optimally regulated in this domain exhibit altruistic, empathetic, and moral behaviours (Hay 1994; Shanker, 2012).
- Altruistic: refers to "...a quest for purely motivated social actions in which the sole intent is to 'do good' to others at some sacrifice to the self" (Hay, 1994, p.33).




According to both Hay (1994), and Shanker (2012), children who are optimally regulated in this domain exhibit altruistic, empathetic and moral behaviours.

Altruism refers to "...a quest for purely motivated social actions in which the sole intent is to 'do good' to others at some sacrifice to the self" (Hay, 1994, p.33).

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Prosocial Domain

- Empathy refers to "...the ability to identify with feelings and perspectives of others and... respond appropriately to the feelings and perspectives of others (Gordon, 2009, p.30).
- Morality refers to an ethical perspective based on "...principles or rules, rights or claims... [or] solution in terms of care for the interests of [others]..." (Darling, 2002, p.93)



Empathy refers to "...the ability to identify with feelings and perspectives of others and... respond appropriately to the feelings and perspectives of others (Gordon, 2009, p.30).

Morality refers to an ethical perspective based on "...principles or rules, rights or claims... [or] solution in terms of care for the interests of [others]..." (Darling, 2002, p.93)

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Promoting Prosocial Self-Regulation

- Implement a buddy system in your classroom, either, peer to peer, or whenever possible having older children come into the classroom and scaffold learning with younger children (Flint, 2010)







photo credit: Book Buddies253 via photopin (license)





Through my experience and my recent research I have realized the importance of implementing a buddy system in the classroom, either, peer to peer, and whenever possible having older children come and scaffold learning with younger children (Flint, 2010). My daughter's school uses the buddy system for their reading program. I hear my daughter tell me about interaction they have on the playground and on the bus. I can understand through her experience how this connection can extend into other areas of the program.

Research conducted on the roles of buddies or peers in reading programs, i.e., “a buddy connection” reported how this connection not only help increased reading literacy but also helped promote prosocial interactions (Flint, 2010)

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Promoting Prosocial Self-Regulation


- Teach Emotional literacy (Gordon, 2009). Infuse your classroom with teaching random acts of kindness by using the kindness tree.

Similar to the Roots of Empathy program (Gordon, 2009) teaching emotional literacy is a significant aspect of the CALM Curriculum. Children learn through a Melvin’s Kindness Tree about performing random acts of kindness to those around them. Peers and teachers acknowledge a child performing a kind act and a banana goes up on the kindness tree. Once the tree is full of bananas five times over the class participates in a kindness classroom party. Ms. Johnson shares with me her experience of using the Kindness Tree in her classroom.


‘Ms. Johnson,’ the kindergarten teacher notices ‘Jayda’ helping ‘Sally’ find her other shoe. When the commotion is all settled and the shoe is found, Ms. Johnson walks over to the banana tree and says, “Class, I am adding another banana to our tree because I saw our friend Jayda help Sally find her other shoe. Melvin will be so excited when he sees that there is another banana on the tree.”

She also shared they have banana muffins for their Kindness Party because they know how much Melvin loves bananas!

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Promoting Prosocial Self-Regulation

- The children are introduced to a book about kindness. Children learn what kindness looks like, what it feels to be kind and how they can be kind to others.




Book by Trace Moroney

The children are also introduced to a book about kindness. Children learn what kindness looks like, what it feels to be kind and how they can be kind to others.

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Promoting Prosocial Self-Regulation

- Read the book included in the kit regarding friendship called "Super Tucker" where Tucker learns about being good to others.




The Curriculum also includes a story called "Super Tucker" where children learn how Tucker became a super-friend after changing his behaviours and doing good things for others.

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Promoting Prosocial Self-Regulation

- Read books about moral dilemmas – Provided in kit – Promotes collaborative problem solving (Darling, 2002)



- Video Clip illustrating scenario and collective discussion

The CALM Curriculum also includes Melvin and Tucker – Stories for Moral development. Similar to the research from Darling (2002), the stories provide a moral dilemma for children to think about. Children are encouraged to participate in collective discussions where they can listen to perspectives and critically think about the outcomes from a social justice and empathetic viewpoint.


The video clip is of Tyra reading the tent scenario which isn't big enough for both friends and the children having discussions about who should be allowed to stay in tent based on their moral reasoning.

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Key Attributes of Prosocial Self-Regulation

- Is aware of feelings of others; helps and comforts
- Demonstrating altruism and desire to do the right thing.

Shanker, 2012, Whitebread, 2012



The key attributes of the prosocial domain of self-regulation is for children to be aware of the feelings of others and comforting others and having the desire to do the right thing.

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Modeling Prosocial Self-Regulation



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Finally, the take-home message that I try to convey to you that as the adults in the child's life we need to model prosocial behaviours. Random acts of kindness not only provide children with an understanding of this attribute but it can also just provide us and someone else a feel good moment!

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CALM Curriculum and Social Learning

- When promoting the five domains of self-regulation, remember:
 - ➔ Children learn optimally when they are interested, curious and motivated.
 - ➔ Scaffold learning into all areas of the learning environment – children learn by doing and through lived experiences.
 - ➔ Have FUN!!! Your enjoyment and positive role modeling is contagious.




I think it is important that we remember, as mentioned by Bandura (1977), that children are influenced significantly by the affective responses of others --therefore, making the curriculum fun, so that children are interested, curious and motivated and infuse this learning and fun into all areas of your classroom environment.

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Limitation of the CALM Curriculum

My graduating paper focused mainly on the five domains of biological, emotional, cognitive, social, and prosocial self-regulation that provided the framework for the CALM Curriculum.

During my research, I learned the importance of considering a motivational domain of self-regulation for future research and supporting educators on practice strategies that support children's motivation in completing tasks.



The CALM Curriculum has been based on the biological, emotional, cognitive, social and prosocial self-regulation. The theoretical perspectives of Bandura (1982), and the research from Whitebread (2012), Warneken and Tomasello (2009) seems convincingly strong that a motivational domain of self-regulation needs to be considered. Thanks to this investigation I have come to the conclusion that we need to understand what motivates our children to learn. What gives them a feeling of self-efficacy or self-belief that provides them motivation to complete tasks?

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Direction for Future Research... CALM 2?

After exploring and reviewing the extant research, A CALM 2 Curriculum needs to be considered.

A research based curriculum that provides a framework to expand on the notion of a motivational domain of self-regulation



CALM 2 is definitely a project that needs to be considered and expand on the notion of a motivational domain of self-regulation. The value of the curriculum is apparent based on the ongoing request to implement CALM and questioning whether there will be an extension to the program.

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Thank you for being here today, and I appreciate your time and interest in the CALM Curriculum. Questions or comments.

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THANK YOU

- For More Information Regarding the CALM Curriculum
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If you have any questions or comments, please feel free to call me or e-mail me.

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References


Bandura, A. (1977). Social learning theory. Englewood Cliffs, N.J.: Prentice-Hall

Bronfenbrenner, U. (1994). Ecological Models of Human Development. *International Encyclopedia of Education*, 3, 37-43.

Center on the Developing Child Harvard University. (2014). *Enhancing and practicing executive function skills with children from infancy to adolescence*. Retrieved from http://www.developingchild.harvard.edu/resources/toolsandguides/enhancing_and_practicing_executive_function_skills_with_children/

Coleman, J. G. (2006). *The early intervention dictionary: A multidisciplinary guide to terminology*. Bethesda, MD: Woodbine House.

Crean, H. F., & Johnson, D. B. (2013). Promoting alternative thinking strategies (PATHS) and elementary school aged Children's aggression: Results from a cluster randomized trial. *American Journal of Community Psychology*, 52(1), 56-72. doi:10.1007/s10464-013-9576-4



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References


Darling, L. (2002). Moles, porcupines, and children's moral reasoning: Unexpected responses. *Early Years: An International Research*

Denham, S. A., & Burton, R. (1996). A social-emotional intervention for at-risk 4-year-olds. *Journal of School Psychology, 4*, 225-245.

Diamond, A. (2012). Activities and programs that improve Children's executive functions. *Current Directions in Psychological Science, 21*(5), 335-341. doi:10.1177/0963721412453722

Diamond, A. (2013). Executive functions. *Annual Review of Psychology, 64*(1), 135-168. doi:10.1146/annurev-psych-113011-143750

Domitrovich, C., Cortes, R., & Greenberg, M. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum. *The Journal of Primary Prevention, 28*(2), 67-91. doi: 10.1007/s10935-007-0081-0



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References


Ellinwood, K., & Moll, L. (2012). Funds of knowledge. In *Encyclopedia of Diversity in Education*, (pp. 938-939). SAGE Publications, Inc. doi:<http://dx.doi.org/10.4135/9781452218533>

Gordon, M. (2009). *Roots of empathy: Changing the world child by child*. Thomas Allan Publishers: Toronto, Ont.

Hedges, H., Cullen, J., & Jordan, B. (2011). Early years curriculum: Funds of knowledge as a conceptual framework for children's interests. *Journal of Curriculum Studies, 43*(2), 185-205. <http://dx.doi.org/10.1080/00220272.2010.511175>

Hay, D. F. (1994). Prosocial development. *Journal of Child Psychology and Psychiatry, and Allied Disciplines, 35*(1), 29-71. doi:10.1111/j.1469-7610.1994.tb01132.x

Human Early Learning Partnership. (2011). *Community Summary EDI Wave 4 (2009/10 – 2010/2011)*. Retrieved from http://www.earlylearning.ubc.ca/media/uploads/comsum/2011/s033_wed01_c_communitysummary_15sep11.pdf



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References

Izard, C.E., King, K.A., Trentacosta, C. J., Morgan, J.K., Laurenceau, J.P., Krauthamer-Ewing, E.S., & Finlon, K.J. (2008). Accelerating the development of emotion competence in Head Start children: Effects on adaptive and maladaptive behavior. *Development and Psychopathology, 20*, 369-397.

Mayes, L.C. (2000). A developmental perspective on the regulation of arousal states. *Seminars in Perinatology, 24* (4), 267-279. doi:10.1053/sper.2000.9121



Razza, R. A., Bergen-Cico, D., & Raymond, K. (2015). Enhancing preschoolers' self-regulation via mindful yoga. *Journal of Child and Family Studies, 24*(2), 372-385. doi:10.1007/s10826-013-9847-6

Tominey, S., & McClelland, M. (2011). Red light, purple light: Findings from a randomized trial using circle time games to improve behavioral self-regulation in preschool. *Early Childhood Education and Development (22)* 3, 489-515. doi:10.1080/10409289.2011.574258

Shanker, S. (2012). *Calm, alert and learning: Classroom strategies for self-regulation*



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References

Van de Pol, J., Volman, M. Doot, F., & Beishuizen, J. (2014). Teacher scaffolding in small-group work: An intervention study. *Journal of the Learning Sciences*, 23(4), 600-650. doi:10.1080/10580406.2013.805300

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Cambridge, MA: Harvard University Press.

Whitebread, D. (2011). *Developmental Psychology and Early Childhood Education*. London, Sage.

Zins, J. E., & Elias, M. J. (2007). Social and emotional learning: Promoting the development of all students. *Journal of Educational and Psychological Consultation*, 17(2-3), 233-255.

