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SELF-REGULATION AND SELF-ADVOCACY SKILLS IN A FIFTH GRADE
MATHEMATICS CLASSROOM

by

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A capstone submitted in partial fulfillment of the
requirements for the degree of Master of Arts in Education.

Hamline University

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CHAPTER ONE

Introduction

Overview

Social emotional learning has recently been at the forefront of many educational discussions. In my district, administrators and parents recognize how important this type of learning is. Weissberg and Cascarino (2013) agreed that the same recognition is occurring at the national level. From what I have observed in my own classroom, academic knowledge may form the bricks of learning, but it is social emotional learning that is the mortar. Before discussing how these two concepts work together, it is important to define social emotional learning (SEL). The Center for Academic, Social, and Emotional Learning (CASEL) (2018), an organization that provides many resources for teachers and administrators, defined SEL as the process through which humans learn to manage emotions, set and achieve positive goals, feel empathy, establish positive relationships, and make responsible decisions. In other words, it is everything that sets children up to succeed at school.

When I think of behavior issues in my fifth grade mathematics classroom, almost all of them can be traced back to a lagging social or emotional skill. For example, a child may start interrupting their peers who are working because they do not understand a problem and do not know how to ask for help. Or, a child may get up and go to the bathroom to avoid facing a challenging problem because it requires multiple steps and a

period of focus. Based on my professional experience, I know that teachers need to take a more proactive role in teaching social emotional regulation skills. Throughout this project, I will be looking at what the research recommends for incorporating SEL into the school day, specifically during mathematics. With this in mind, my research question is *how can social emotional learning strategies around self-regulation and self-advocacy be integrated into mathematics instruction at the fifth-grade level?*

At this stage in the research, many classrooms are trying to make moves to incorporate the direct teaching of social emotional skills, but are struggling to do so (Blad, 2017; Dugas, 2017; Weissberg & Cascarino, 2013). With limited time in a school day, I am seeking methods to incorporate the explicit instruction of these skills into mathematics instruction because that is where emotional regulation issues are observed. Many of the students that are in my math class struggle to focus and follow multi-step directions. Some simply struggle with anxiety. The subject of math can be challenging in nature, and I have seen this lead to avoidance behavior that is often disruptive to the entire learning environment.

In this first chapter, I will be exploring both my personal and professional experience with SEL and math. By reflecting on my own schooling and my experiences as a teacher, I will provide background and support regarding the importance of incorporating SEL into a math classroom and why there is a need for it. Later, examples are included that explore my recent successes with SEL in the classroom and what they

mean for my project. Finally, there is an explanation of the rationale for this project based on my own experience in education and students that have come through my classroom. This project will be helpful to other educators and administrators looking to incorporate SEL skills into their schools. My long term goal for this project is that my students benefit from direct instruction in both self-regulation and self-advocacy during math time.

Personal and Professional Experience

Although I grew up in varied educational settings across multiple state and district borders, my experiences in school were very much the same. It was easy for me to excel in the classroom environment and I was the student that other students, and sometimes teachers, relied on for help. Math class was my happy place because it came naturally to me, and it was enjoyable to think of ways to connect the numbers to each other. Reflecting back, it really does not make any sense that I was so successful. Based on my childhood, there was a higher chance for me to struggle in school. My family likes to joke that we paid all of our hardship dues early on. Through a difficult divorce, a dysfunctional paternal relationship, a cross-country move, and a handful of family deaths, I maintained normalcy at school. It was my sanctuary because no matter what was going on in my life, school was predictable and comfortable. As an adult, I now realize that one of the reasons that led me to succeed against some unfavorable odds was having some very strong social and emotional coping skills.

My mom likes to brag that at one of my first parent-teacher conferences, the teacher told her that every single kid in the class felt comfortable working with me. I was a safe and neutral person by being patient, accepting, and not losing self-control. Although it came naturally to me, I recognized that it did not come naturally to some of my peers. Some of my classmates would become disruptive or act out when they did not understand a concept or had a bad morning at home. Sometimes it seemed like they would disrupt class for no apparent reason at all. It was interesting to me why following expectations was so hard for some while it came so naturally to others. My peers would say that school just was not for them and I could not comprehend how they had arrived at that conclusion. Even as a student, I wanted to be a teacher who created a safe and calm environment for my students so that everyone could say that school was for them.

As an educator, I have a much wider perspective on the issue. Some students simply have lagging social emotional skills. A child that struggles in math class may also struggle to emotionally regulate and advocate for themselves. Based on what I have observed, those two areas of difficulty are frequently coupled together. Often, it seems like a question of which lagging skill is affecting the other. This makes sense, as McClelland and Cameron (2011) explained, because practicing self-regulation requires students to focus on a task with surrounding distractions and to solve multi-step problems with their working memory. If they are lagging in any of these areas, math class would prove to be extremely challenging.

Fifth grade is also a unique time in a child's life. They are the leaders in the school. Some have started puberty and their hormones are raging, while others will not be starting it for quite some time. They begin the year excited to learn and are still buying in to the elementary school experience, but by June they are completely ready for more responsibility and freedom. Test, Fowler, Wood, Brewer, and Eddy (2005) and Douglas (2004) agreed that the upper elementary years are critical in the development of self-advocacy, and so it is important to provide students with plenty of choice socially and academically. With all of these factors considered, it is no wonder that many students find themselves struggling to emotionally regulate and self advocate.

One of the reasons that I would like to explore how SEL will work in a math environment is because I teach grade-level math. This means that fifth grade students are working through a fifth grade math curriculum. Students working from the 90th-98th percentile are in accelerated math and working at a sixth grade level, and those working at the 99th percentile are in a double accelerated course at a seventh grade level. Everyone else is in grade-level math, so it means that I teach a wide variety of students. Some of my students are working at the 11th percentile and struggling with addition, while others are at the 89th percentile and aspiring to qualify for accelerated math. With this incredible range, I tend to see a lot of behavior problems in my classroom.

For example, students arrive at my door in September dreading math. They are quick to tell me how much they dislike it and how difficult it is for them. They believe

that not being placed in the accelerated class must mean they are horrible at math. From there, it takes me months to build up their confidence and willingness to learn. Through my research, I am interested in learning some targeted strategies that will help these students feel regulated and confident to ask for help earlier in the school year. I would like to target emotional regulation and self-advocacy because those are the two skills I have seen greatly affect students' ability to learn in a math environment. If students can have more success in the classroom without behaviors getting in the way, they will be able to spend more time learning and receiving academic support.

My focus for this project will be our math time because there are a lot of factors at play during this time. As I mentioned previously, students arrive at my door already feeling defeated. Our fifth grade team has mixed ability grouping of students across the grade-level, so when the groups switch for math time everyone is aware of who is in accelerated math and who is not. For my class, I have to keep any whole group lessons brief. Many students either lack the skills or do not understand any personal benefit to staying focused in a group lesson. Immediately after, I will offer a small group session to students who would like some more coaching before attempting the skills on their own.

My first year of teaching in 2013, I watched in dismay as almost no one showed up to my small group. Did they really understand the material that well already? The answer was definitely no as I walked around and saw that nearly everyone was guessing

at the work or simply staring off into space. It was clear that a large portion of the class was struggling to advocate for themselves.

I checked in with my teammate, and he shared that students at this school generally struggle to advocate for themselves. They would rather sit there and wait for help to happen than to go out and seek it. Asking for help was a foreign concept. He believed this was because the culture of the district was competitive, and asking for help would be embarrassing in front of classmates. There was also the possibility that students were accustomed to having things completed for them and saw no need to seek support. Lastly, students might not have been taught the skills to ask for help and were not sure what that would look like. Addressing this last theory, my approach adjusted to modeling what it would look like to ask for help and to receive it. I would also personally invite students to the small group who needed more support and eventually require them to attend. After several weeks, some students started advocating for themselves, but others never quite got there. For my professional development and for the benefit of my students, the goal is for me to learn what strategies are out there to teach these skills more effectively early on in the year and throughout our time together.

It was not until the 2017-2018 school year that I really started to notice the serious effects of self-regulation, or lack thereof. Within the first week of school in September, I realized that I had several students that struggled to manage their emotions. They had very large reactions to seemingly small problems and were quick to take out their feelings

on both their peers and on me. Sometimes they would act out verbally and sometimes it would be physically. Both were disruptive to the class and caused the group to stop their learning. Although each case was unique, I took a similar approach to supporting all of them.

I started by building a relationship and showing them that no matter how out of control they got, I still cared about them and would never give up on them. It was important to verbalize that as much as possible. After a couple of months, I also started to seek out strategies to fill their “toolbox” for when they felt like their emotions were bubbling over. Students met with me individually whenever they could and discussed some of the coping strategies available, such as taking a break and counting to ten. It was never perfect for them, but I did start to see some improvements by the end of the year. All of those students wrote me thank-you notes, and all of them thanked me specifically for never giving up on them. That proved to me the power of building a strong relationship with students that need the most social emotional support.

One of the most advantageous programs I used this year was Social Thinking (Winner, 2006). Social Thinking is a program that helps children and adults break down the social learning process from abstract concepts into concrete ones. This helps recipients develop positive relationships and work with others effectively. My school district began incorporating this program a couple of years ago, but in the 2017-2018 academic year my school began to officially pilot it. The teaching staff had professional

development opportunities every month, and the entire staff began using the common vocabulary. The program instructs teachers to have mini-lessons with their class on a specific term or set of phrases, and then to use it as a way to communicate and describe both expected and unexpected social behaviors. For example, one of the first concepts taught is following the group plan. The teacher might model a behavior that does not follow the group plan, and then the class would discuss how that made them feel, and why following a group plan matters in a learning environment.

Not surprisingly, the phrases caught on quickly among students and staff because they are direct and easy to grasp. Instead of telling a student to calm down, teachers are able to describe that their reaction was very big compared to the size of their problem. For my students who do not emotionally regulate, this enabled us to discuss the issue with ease. Eventually, students would have a big reaction, and then turn to me and recognize that it was bigger than necessary. This was a huge success for those students. During math time, it helped students to understand that struggling to grasp a skill or feeling confused are only small bumps in the road, not hills or mountains.

Rationale for My Capstone Project

It still feels like there is a piece missing to the puzzle. Although I enjoyed meeting with and coaching students individually, I would like to see what impact a whole-class approach would have on all of the students. This project will prepare me to implement SEL for the whole class through a series of morning meetings. Our school also uses a

program called Responsive Classroom (RC) (RC, 2018) as our management system. RC focuses on the strong connection between academic success and SEL by encouraging teachers to create a positive classroom environment. One of the features of this program is conducting a daily morning meeting with students throughout the year. Although it is not required to repeat this process with my math class, my project explores recreating morning meeting on a smaller scale to provide an opportunity to address some of the lagging self-advocacy and self-regulations skills as a whole group. It is exciting to learn what the research recommends for helping students learn skills around self-regulation and self-advocacy, specifically related to our math time.

The project I created around the SEL skills of self-regulation and self-advocacy will be important to other teachers and administrators in my school and beyond. Students struggling to self-regulate and advocate for themselves are not a problem unique to my classroom. This is happening in mathematics classrooms around the nation. Teachers who are seeking support could adapt my curriculum to their grade-level or specific class needs to aid in SEL development. Administrators who are looking to improve their school climate could use this curriculum to help teachers incorporate SEL skills into their math classes without taking away too much instructional time. My hope for this project is to be a useful tool in connecting SEL development in self-regulation and self-advocacy to a core academic subject area.

Summary

The biggest success I have had in my classroom with SEL is forming very strong relationships with my students. Even though some students have difficulty forming positive relationships, it is my mission to connect with them somehow. Through this strategy, I have been able to coach students individually on how they might self-regulate or self-advocate. However, through the literature review and through the project, my goal is to find how to incorporate strategies and lessons into my math class that will target the entire group of students. By learning what the research recommends and creating a curriculum geared towards mathematics, my project could also help other teachers incorporate SEL more often into their school day.

During this chapter, I have discussed the need for instruction on social emotional skills during mathematics. Specifically, the need to teach students about self-regulation and self-advocacy. As a young student, I noticed the benefit of having these skills myself, and recognize that they can often be the key to success in school, even when factors at home are challenging. These skills have been essential in keeping a calm and productive classroom environment throughout my five years of teaching.

I will be conducting a literature review in my next chapter. My research yielded many strategies that can be used to support these skills in a mathematics classroom. This aided my project in the investigation of how social emotional learning strategies around self-regulation and self-advocacy can be integrated into mathematics instruction at the

fifth-grade level. In Chapter Three, I will describe this project and how I used the information learned to create a curriculum of morning meetings. Finally, in Chapter Four, I will reflect on my experience researching and designing this curriculum project.

CHAPTER TWO

Literature Review

Overview

When it comes to social emotional learning (SEL), there is a lot of research available to support the incorporation of it into classrooms. For my own research question, I wanted to know specifically, *how can social emotional learning strategies around self-regulation and self-advocacy be integrated into mathematics instruction at the fifth-grade level?* In order to answer this question, I have organized my findings into four different sections. First, I will be providing a general overview of SEL and a description of two programs my school utilizes: Responsive Classroom (RC) and Social Thinking. This is important to my capstone project because it provides the foundation for my research and curriculum design. Since Responsive Classroom and Social Thinking are already a part of my school's framework, I wanted to take a look at what the research recommends regarding them. Next, I will explore self-regulation by looking at how problems with self-regulation may affect a child's academic success and what strategies are recommended to improve this issue. This is vital to answer my research question because it is one of the key elements of SEL that I am seeking to address in my math class. To address the other element of SEL in my research question, I will delve into self-advocacy in a math classroom, along with self-efficacy and self-determination, and ways that a teacher can promote it in their classroom. Lastly, I will provide other research recommendations regarding the incorporation of SEL into a mathematics classroom. These four elements will, together, answer my research question regarding the

incorporation of SEL strategies around self-regulation and self-advocacy in a fifth grade mathematics classroom.

Social Emotional Learning Overview

According to CASEL (2018), Social Emotional Learning (SEL) is the process of effectively understanding and managing emotions, setting and achieving goals, showing empathy for others, establishing and maintaining positive relationships, and making responsible decisions. For a school community, having a framework incorporated into everyday academics for SEL can be the key to promoting a positive school climate (Dusenbury & Weissberg, 2017). These two concepts work together, as once a school has a positive climate, there will be healthy SEL development and vice versa (Dusenbury & Weissberg, 2017). In fact, incorporating SEL over several years of a child's life can help prevent risky behavior (Weissberg & Cascarino, 2013). In this section, I will be discussing the components of SEL programming and the reasons that school districts value it. I will then describe the link between SEL and academic achievement. Lastly, I will describe two SEL programs that are currently being implemented in my building; Responsive Classroom (RC) and Social Thinking.

An important aspect of SEL is linking school and home in a constructive way. Dusenbury and Weissberg (2017) reasoned that when teachers and parents present a united front to their children, SEL development will be more significant. This is based on the necessity of building positive relationships. Weissberg and Cascarino (2013) stated, "SEL programming is based on the understanding that the best learning emerges in the context of supportive relationships that make learning challenging, engaging, and

meaningful” (p. 10). In accordance with my own experiences, forming positive relationships with students will allow them to feel safe practicing skills that align with SEL, especially if those skills are out of their comfort zone. Forming positive relationships with families will also help those skills carry over outside of school. In fact, Hemmeter, Ostrosky, and Fox (2006) believed that teaching SEL strategies should come third in the classroom, while building positive relationships and designing an effective learning environment come prior. RC (2018) agreed and recommends teachers to use the first six weeks of the school year to set up their learning environment and build relationships with and among their students. This will set them up in the long run to be successful in making responsible decisions and regulating their emotions.

Many teachers nationally agree there is a need for SEL in the school day, however, they still struggle to include it regularly in the classroom without full district support (Dugas, 2107; Weissberg & Cascarino, 2013). On the positive side, more schools are taking the initiative to experiment with SEL because the research supports positive outcomes such as higher academic achievement and fewer disciplinary issues (Blad, 2017). This has aided districts to get on board. Elias and Arnold (2006) believed there are eight elements for success with SEL:

- differentiated instruction,
- involving parents,
- building SEL skills gradually and systematically,
- preparing and supporting staff,
- linking SEL to academic content,

- using goal setting,
- promoting community service to build empathy, and
- evaluating regularly.

Therefore, based on my observations, it is important to consider ways that SEL can be included daily in our core subjects to better serve students.

SEL and academic success. Reviewing the research available, it is clear that there is a positive association between integrating SEL and gains in academic achievement (Blad, 2017; Dusenbury & Weissberg, 2017; Elias & Arnold, 2006). As an educator, this evidence means there are grounds to incorporate SEL into my classroom on a daily basis. Weissberg and Cascarino (2013) noted that a major study has shown that students participating in SEL have reduced emotional distress and a higher average score on certain summative assessments. According to Elias and Arnold (2006), SEL is often referred to as the “missing piece” of the education puzzle because it links academic skills to social ones, allowing teachers to educate the whole child. Successfully implementing SEL also sets students up to be successful in our future workforce (Weissberg & Cascarino, 2013).

There are many ways to integrate SEL into a school or district. Dusenbury and Weissberg (2017) illustrated four approaches effective in promoting SEL. These four approaches include school-wide organizational structures, general teaching practices, free-standing lessons, and integration of SEL skills in to academics. Although all four approaches are important, my project focuses on linking SEL skills to academics through general teaching practices and targeted lessons. Within a classroom, there are many ways

to blend SEL and academic content. Hemmeter et al. (2006) recommended modeling, rehearsing, role-play, and providing regular feedback as ways to achieve the desired social and emotional behaviors. These suggestions play a key role in my capstone project. Later in this review, I will be discussing in more detail the strategies that research recommends teachers to use when integrating SEL into their academics. Another way that SEL can be integrated into daily classroom routine is by implementing Responsive Classroom (RC, 2018).

Responsive Classroom. Responsive Classroom (RC, 2018) is an SEL program that my district utilizes at the elementary level. According to Responsive Classroom (2018), it can be described as “an evidence-based approach to teaching that focuses on engaging academics, positive community, effective management, and developmental awareness” (About RC section, para. 1). All of these factors line up to the research I reviewed earlier on successfully incorporating SEL in schools through building positive relationships and promoting building-wide collaboration and support. On their website, they also indicate that independent research has found the RC approach to result in higher academic achievement.

RC is a large national program and trains over 10,000 teachers and staff every year (Stearns, 2016). Their principles consist of recognizing that social is as important as academic, process and content are interrelated in learning, cognitive growth occurs through social interaction, and the need for adults in the building and families to work together (RC, 2018; Stearns, 2016). In the classroom, there are several strategies that RC utilizes. For example, they recommend having a daily morning meeting, using interactive

modeling, creating rules as a community, and applying logical consequences to any misbehaviors (RC, 2018; Stearns, 2016). These are all strategies that my school expects teachers to implement effectively. Teachers and staff are expected to attend a one week training session so that they can effectively integrate them as soon as they start the school year. The staff also reviews the concepts, strategies, and implementation regularly through staff meetings and professional development opportunities.

Although RC has proven to be an effective curriculum, Stearns (2016) identified some potential pitfalls. For example, although RC has proven to be effective for students who are low-achieving or come from a low socioeconomic status, if it is not used consistently and correctly it can have a negative effect on academic achievement (Stearns, 2016). However, Stearns (2016) found this could be attributed to other teacher factors, such as burn out or poor leadership. If schools are going to use RC, it is important they provide support and regular training to all teachers and staff (Stearns, 2016).

Additionally, Stearns (2016) pointed out that RC can sometimes use a superficial response to a more serious problem. For example, a student might need to apologize to another student using an “apology of action” (RC, 2018). However, it is possible that this student may need a deeper intervention with a school guidance counselor if it is a recurring issue. Stearns (2016) argued that some of the teacher language in this situation can be interpreted as lacking affect because it is language that is repeated daily. Finally, Stearns (2016) asserted that prepackaged programs may not be the right solution for SEL because they do not necessarily allow for authentic human emotions and social experiences. From my own time in the classroom implementing RC, I can see where

Stearns is coming from. However, I have observed that the framework of RC and the common language is helpful for students as they move across grade-levels because they always know what to expect. I will be discussing later in my literature review what I have found regarding RC in a mathematics class. Social Thinking is a program that was piloted at my school this past academic year, 2017-2018, and will continue to develop in its implementation throughout our district.

Social Thinking. Social thinking, as a concept, is the “process by which we interpret the thoughts, beliefs, intentions, emotions, knowledge and actions of another person along with the context of the situation to understand that person’s experience” (Social Thinking, Our Mission section, para. 8). Social Thinking (2018), as a company, is a curriculum to help students develop their social competencies so that they can “better connect with others and live happier, more meaningful lives” (Our Mission section, para. 1). The tools of the program can be used to teach individuals or entire schools. Originally designed for students on the autism spectrum, it is a program that can benefit all students (Richman, 2015).

Since our building piloted the Social Thinking (Winner, 2006) curriculum, representatives from the program provided professional development to us on a monthly basis in 2017-2018. Each meeting focused on a different skill and the language that goes with it based on the Social Thinking framework. For example, we spent an entire meeting discussing the idea of thinking with your eyes (Social Thinking, 2018). After understanding the concept, we went through ways to present it to our class initially and then how to integrate it into our everyday language. The goals of Social Thinking (2018)

include sharing space with others, learning to work on a team, and developing relationships with a variety of people.

From my classroom perspective, this program adds on to the concepts of RC by providing teachers and students a common vocabulary to discuss their behaviors and how they affect other students in the room. One example of this would be the term “unexpected” (Social Thinking, 2018). When something happens that is unexpected, a teacher can let the child know it is unexpected and explain why it would be. This helps the class unpack the unwritten social rule and learn from it. From what I have seen, the terms used are non-judgemental and protect the child’s dignity. A classroom and a school are both shared spaces, so it is important for students to work and learn together effectively.

Like any pre packaged program, this program is not perfect. Richman (2015) addressed the issue that a lot of the language is built around pleasing others. Although trying not to give others “uncomfortable thoughts” (Social Thinking, 2018) is important, it should be a strategy for teamwork rather than a change in personality. In her description of conformity, Richman (2015), described how the lessons of Social Thinking aid students in conforming to social norms, but it is important for kids to maintain their neurodiversity, as well. Richman (2015) also mentioned the importance of moral courage, because sometimes socially conforming can cost an individual very little, but sometimes it is necessary to make people uncomfortable in order to break through social injustices or prejudices. Even with these factors to consider, Social Thinking does allow students to

understand behavior in themselves and others, and provides them skills to be successful academically and in the future workforce (Richman, 2015).

Summary. In this section, I have provided an overview of Social Emotional Learning. SEL should work in tandem with academic content in all ages of schooling. I also described the connection between SEL and academic achievement. Many studies have been published that connect implementation of an SEL program to gains in academic success. I also detailed two programs currently being utilized by my school; Responsive Classroom (RC, 2018) and Social Thinking (Social Thinking, 2018) . Responsive Classroom (RC, 2018) is a framework that provides a common language and incorporates a morning meeting to help schools build a positive climate. Social Thinking (Social Thinking, 2018) is a program that provides schools with language to address social behaviors and interactions. In regards to my research question, *how can social emotional learning strategies around self-regulation and self-advocacy be integrated into mathematics instruction at the fifth-grade level*, it is clear that SEL would only enhance the academic achievement of a math classroom. Based on the research, I have tools from both RC (RC, 2018) and Social Thinking (Social Thinking, 2018) that I can use to address social emotional issues that occur during math time. In the following section, I will discuss research that directly addresses self-regulation and how it affects learning in a classroom.

Overview of Self-regulation

Self-regulation is the system through which humans manage their emotions, process their thoughts and feelings, and react to them through their behavior (Blair,

Ursache, & Vernon-Feagans, 2015; McClelland & Cameron, 2011). Self-regulation falls under the umbrella of executive functioning (Blair et al., 2015). In the context of a classroom, this is important because a person who regulates themselves well will adapt easily to change and exhibit socially acceptable reactions to it (Labilloyis & Lagacé-Séguin, 2009). As I discuss the research findings on self-regulation, I will first be looking more in-depth at the components of self-regulation. Next, I will describe what poor self-regulation might mean for a student in the classroom. Finally, I will share my findings on what the research recommends for supporting students with low self-regulation skills so that they can be more successful in school.

Self-regulation has three major components; attention, working memory, and inhibitory control (Blair et al., 2015; McClelland & Cameron, 2011). McClelland and Cameron (2011) explained that attention requires an individual to focus on a task while ignoring a distracting environment. Working memory involves remembering and following directions or problem solving. Finally, inhibitory control involves the ability to stop an impulsive behavior or to choose a more adaptable one instead. Freud (as cited in Ostafin, Robinson, & Meier, 2015) explained this as the idea of the id versus the ego, or impulsive behavior versus thoughtful action. For this reason, self-regulation is part of executive functioning, and effortful control can be described as a trait of strong self-regulation (Blair et al., 2015).

From my own experience, I know that being able to regulate your emotions is an important part of everyday life. As Blair and Diamond (2008) indicated, people with strong self-regulation will have “positive social relationships, productivity, achievement,

and a positive sense of self' (p. 900). Similarly, Labillois and Lagacé-Séguin (2009) agreed that the ability to regulate oneself means that you can extend feelings of happiness while also handling unpleasant ones that arise from negative experiences. This will allow someone, including a student, to easily adapt to any environment and to respond appropriately to any unexpected problems (Labillois & Lagacé-Séguin, 2009). As a classroom teacher, it is clear to me that a child who can successfully self-regulate is going to have a much easier time in school than a child that struggles. I know this because children who self-regulate can spend more time on task than those that need a lot of redirection. Ideally, emotionality and cognitive control work together, not against each other, and so early schooling needs to address both (Blair & Diamond, 2008).

Impact of Poor Self-Regulation in the Classroom

It is important to consider why a child might have difficulties self-regulating to begin with in school. There are many influences on a child's ability to self-regulate, including nature and nurture (Blair & Diamond, 2008; Blair et al., 2015; McClelland & Cameron, 2011). Blair and Diamond (2008) went a step further to explain that certain genotypes lend themselves better to executive functioning, which in turn leads to better self-regulation. Relationships with teachers can also have an impact on students starting from a young age as they play a key role in the management and recognition of anxiety in children (Blair & Diamond, 2008; Labillois & Lagacé-Séguin, 2009; McClelland & Cameron, 2011).

A child who struggles to regulate themselves will exhibit a variety of behaviors. This is because both stress and anxiety can inhibit a child's executive functioning and

thus make self-regulation very difficult (Blair & Diamond, 2008; Labilloy & Lagacé-Séguin, 2009). Students who are not self-regulating may have problems following directions, controlling their attention, and communicating their wants and/or needs in expected ways (Blair & Diamond, 2008). There are two main reactions to distress when a child has difficulty regulating their emotions. If there is distress due to limitations, the resulting feelings will be related to anger and frustration, while distress due to novelty will lead to feelings of fear, withdrawal, or avoidance (Blair & Diamond, 2008). Blair and Diamond (2008) further explained that students with lower executive functioning will have trouble paying attention and handing in assignments on time, while also expressing impulsive behaviors.

Unfortunately, this relationship between a student who struggles to regulate and a teacher can become a self-fulfilling prophecy (Blair & Diamond, 2008). Essentially, Blair and Diamond (2008) argued that a child who struggles to regulate themselves will elicit certain negative reactions from their teachers and peers. This will lead them to feel negatively about themselves, and thus continue to poorly self-regulate. For example, a student may feel frustrated by a math problem they are working on. Rather than asking for help from a teacher or peer, they may begin to yell or throw something. This would make the neighboring students feel uncomfortable. The child who exhibited the big reaction may notice that their peers move away from them or ignore them, and thus they will feel even worse about themselves and will likely continue to have problems self-regulating. For this reason, Blair and Diamond (2008) argued it is important to

promote self-regulation early in a child's schooling. In the following section, I will discuss the findings for ways to integrate self-regulation into a classroom.

Recommendations for Addressing Lack of Self-Regulation in the Classroom

McClelland and Cameron (2011) stated that children who are poorly regulated respond better to teachers who are sensitive and responsive. This is because there are two types of student-teacher interactions, both instructional and relationship-based, and children need both in order to feel good about themselves (Blair & Diamond, 2008). The student-teacher relationship is influential enough that teachers can affect students' appraisal of their own achievement (Macklem, 2015). It is also important for teachers to see themselves as facilitators and for them to allow plenty of opportunities for students to interact with each other (Labillois & Lagacé-Séguin, 2009). Results from a study by Emer (as cited in Labillois & Lagacé-Séguin, 2009), involving a group of adults with mental disorders, showed that classrooms that provided opportunities to interact with classmates had better learning and retention.

It is also important to consider that executive control resources are depletable, and so teachers who assign too many tasks at once will result in lower achievement (Ostafin et al., 2015). The research recommended that the best way to improve self-regulation is to focus on improving working memory and attention (Ostafin et al., 2015). One strategy that Ostafin et al. (2015) recommended is to focus on mindfulness. Mindfulness is directing one's attention to the present moment, and can be practiced through breathing exercises, affirmations, and eliminating negative thinking (Macklem, 2015; Ostafin et al., 2015). In order to discuss self-regulation as a class, teachers should ensure that students

have the necessary vocabulary to express emotion words (Macklem, 2015). Macklem (2015) explained that emotion words, such as frustrated, sad, or proud, provide the context for emotion perception and being able to connect feelings to words can have a positive effect on children's lives.

The research also recommends using goal-setting as a regular classroom strategy (Duckworth, Grant, Loew, Oettingen, & Gollwitzer, 2011; Macklem, 2015). Duckworth et al. (2011) recommended incorporating mental contrasting and implementation intention into classrooms because setting long term goals and achieving them will require the practice of sustained self-regulation. Mental contrasting is the practice of imagining a goal while naming any barriers that might come up when achieving it, while implementation initiation is a plan that names when, where, and how someone can take action to achieve their goals (Duckworth et al., 2011). Duckworth et al. (2011) conducted a study that suggested these two methods work best together, and would be easy for a teacher to incorporate at the beginning of any unit.

Other strategies for teachers to consider would be providing choice, incorporating interactive and hands-on activities, and to provide collaborative learning activities (Macklem, 2015). Macklem (2015) reasoned that these strategies will allow students to feel more in control, and thus more motivated and positive towards their learning, as well as to increase student engagement in general. Other strategies that Macklem (2015) suggests to achieve volitional regulation are to guide students in focusing on past successes and what is relevant in the moment, while disengaging in thoughts of possible failure. Students and teachers can accomplish this by making lists of tasks and goals,

asking for help when confused, using a checklist before handing in work, and paying attention to one's breathing (Macklem, 2015).

In this section, I have discussed the components of self-regulation. An individual who can successfully self-regulate will be able to easily adapt to change and to react to negative experiences in a socially acceptable way (Labillois & Lagacé-Séguin, 2009). I have also shared some of the resulting behaviors from poor self-regulation in the classroom. It is vital to a student's success in school to address any regulation issues as early as possible (McClelland & Cameron, 2011). Lastly, I covered the strategies that the research recommends to promote self-regulation in the classroom. These strategies include goal setting, mindfulness, facilitating student interactions, and forming a positive relationship with students (Duckworth et al., 2011; Labillois & Lagacé-Séguin, 2009; Macklem, 2015; McClelland & Cameron, 2011; Ostafin et al., 2015). In the next section, I will describe self-advocacy in the classroom and what the research recommends to help students advocate for themselves successfully.

Self-Advocacy

Self-advocacy is an important skill to learn not only for school, but for life. Through my research, I have discovered that self-advocacy is often associated with the terms self-efficacy and self-determination because they all share similar definitions. Self-advocacy has various definitions, but for my project, it is defined as the ability to communicate with others in order to receive help for personal needs or goals (Test, Fowler, Wood, Brewer, & Eddy, 2005). Self-determination is the ability to set and achieve goals by believing in one's own value or ability (Fiedler & Danneker, 2007).

Self-efficacy refers to one's perception of their ability to learn or complete a task (Martin & Rimm-Kaufman, 2015). Both Fiedler and Danneker (2007) and Test et al. (2005) agree that self-advocacy is a skill associated with self-determination. Building self-advocacy skills is crucial for students to have a successful transition to adulthood and self-determination is important for better post-school outcomes (Fiedler & Danneker, 2007; Test et al., 2005). Students who are self-determined are the primary agent of change in their own lives, so they will assert themselves when appropriate, take pride in their work, and self-advocate (Hart & Brehm, 2013).

One of the reasons that self-advocacy is critical for students in the middle grades is that most adolescents begin to seek independence from their parents (Douglas, 2004). I know from my own observations that students who are trying to take on more responsibility will initially need help to do so. In fact, Fiedler and Danneker (2007) pointed out that there are three different components of healthy development. Autonomy is the ability to take action on choices you make for yourself (Fiedler & Danneker, 2007). Competence is when students feel successful because of their own efforts (Fiedler & Danneker, 2007). Finally, kids need relatedness by forming positive relationships with others (Fiedler & Danneker, 2007). Even though most teachers and administrators agree that self-advocacy should be taught in the classroom, many fail to do so because of lack of training or support (Fiedler & Danneker, 2007; Test et al., 2005). However, strong self-efficacy is related to academic success (Griggs, Rimm-Kaufman, Merritt, & Patton, 2013). This makes sense, as students who believe they are capable of completing a task

will be more likely to do so. For this reason, I will discuss how self-advocacy plays a role in a mathematics classroom in the next section.

Self-advocacy in a Mathematics Classroom

A majority of the articles on self-advocacy are based on studies completed on students with disabilities. I believe this is because it is even more difficult for students with disabilities to communicate their own needs in a general education classroom. Fiedler and Danneker (2007) explained that students with disabilities often exhibit passive behavior, or a “learned helplessness,” after multiple negative experiences that lead to low self-efficacy. However, it is important to consider how self-advocacy can be encouraged in a classroom with many different types of students.

When it comes to math, students with high self-efficacy are more likely to persist in difficult problems or tasks (Martin & Rimm-Kaufman, 2015). This is because, as Martin and Rimm-Kaufman (2015) commented, learning math is a cumulative task, so once you fall behind it is difficult to catch up. In addition, students initially rely on internal resources when tasks become difficult to push through. However, if they are lacking internal resources, they will rely on external ones, such as a student-teacher relationship (Martin & Rimm-Kaufman, 2015). For this reason, Griggs et al. (2013) found that upper elementary students who found their teacher emotionally supportive were more likely to report higher self-efficacy. Similarly, Martin and Rimm-Kaufman (2015) reported that math classrooms where teachers provided a high amount of emotional support had students report higher emotional engagement, regardless of their self-reported levels of self-efficacy. They also found that students considered to be at a

higher risk benefited more from classrooms with emotional support than students that were not at risk (Martin & Rimm-Kaufman, 2015).

Lastly, a study was conducted by Griggs et al. (2013) on the Responsive Classroom approach and fifth grade math students. Although the RC approach did not seem to affect students' self-efficacy in math, it did help students in science (Griggs et al., 2013). However, Griggs et al. (2013) did find that for students with high math anxiety, the schools that utilized RC reported higher self-efficacy. They believed this is because RC encourages teachers and students to focus on progress and not product, thus leading to higher self-efficacy (Griggs et al., 2013). In conclusion, Griggs et al. (2013) stated that, "associations between SEL practices and math and science self-efficacy during the elementary years remain understudied" (p. 361). For that reason, I believe my project is important for teachers and students. Math can be one of the most difficult subjects for students, and keeping their social and emotional well-being in mind could make a huge difference for students who struggle. With that in mind, I will explain some of the recommendations I have found for promoting self-advocacy in the classroom based on my research.

Research Recommendations for Promoting Self-advocacy

According to the research, there are a variety of ways to support students and to promote self-advocacy in school. In general, Martin and Rimm-Kaufman (2015) explained that teachers should be supportive organizationally with clear expectations and routines, instructionally with modeling and feedback, and emotionally with positive interactions. Teachers can also assist students by helping them to interpret their feelings

when they encounter a challenge (Martin & Rimm-Kaufman, 2015). Besides teacher support, at-home support from parents is just as important to a child learning self-advocacy (Hart & Brehm, 2013; Kleinert, Harrison, Fisher, & Kleinert, 2010). Both support systems can work together by promoting a growth mindset and helping children connect their effort to their results (Martin & Rimm-Kaufman, 2015).

Test et al. (2005) have created a conceptual framework that names four key components for a child's self-advocacy development. The first component, knowledge of self, involves helping students identify their like and dislikes, as well as their strengths and weaknesses (Test et al., 2005). The development of knowledge of self happens the earliest in a child's schooling, while the second, knowledge of rights, will happen during the upper elementary years (Test et al., 2005). Knowledge of rights as a citizen is helping students understand what laws and resources are available to them and how they can access them (Test et al., 2005).

Test et al., (2005) explained that the third component, communication, is essential for self-advocacy because it involves skills such as negotiation, persuasion, problem-solving, and assertion. Finally, students must also be given opportunities to practice leadership. Leadership is the last component to develop, and it means that students not only understand themselves, but can represent a group of similar people and advocate for them as well (Test et al., 2005).

Within the classroom, the research was overwhelmingly clear that in order to build strong self-advocacy skills, students need to regularly utilize goal setting (Fiedler & Danneker, 2007; Hart & Brehm, 2013; Kleinert et al., 2010; Palmer & Wehmeyer, 2003).

Hart and Brehm (2013) highlighted that “goal setting is an integral component of self-determination and its related behaviors” (p. 42). There are a variety of ways to incorporate goal setting into an academic setting, but Palmer and Wehmeyer (2003) outlined three of the most important steps. First, students should decide what they want to know or accomplish (Palmer & Wehmeyer, 2003). Second, students should name any barriers they may encounter to reaching their goals, and decide how they can overcome them (Hart & Brehm, 2013; Palmer & Wehmeyer, 2003). Finally, they should reflect on their progress and adjust their goals as needed (Fiedler & Danneker, 2007; Kleinert et al., 2010; Palmer & Wehmeyer, 2003). Douglas (2004) reiterated that students will need regular check-ins and reminders regarding their goals so that they do not forget about them throughout the school year.

In summary, I have explained the different elements of self-advocacy, including self-efficacy and self-determination. Self-advocacy is related to academic success and should be a priority in classrooms (Griggs et al., 2013). I explained that students with high self-efficacy in a math classroom will be more likely to persist in the face of a challenge (Martin & Rimm-Kaufman, 2015). Lastly, I shared my findings regarding the promotion of self-advocacy in the classroom. It was clear that teachers need to regularly incorporate goal setting as a means to develop self-advocacy (Fiedler & Danneker, 2007; Hart & Brehm, 2013; Kleinert et al., 2010; Palmer & Wehmeyer, 2003). This idea was critical in the creation of my project. In the next section, I will dig deeper into some of the general strategies that the research recommends for incorporating SEL into a mathematics classroom, many of which also promote self-regulation and self-advocacy.

Strategies for Incorporating SEL into a Mathematics Classroom

There are a lot of ways to incorporate SEL into an academic content area. Elias and Weissberg (2000) explained this is because “the very nature of school-based learning is relational” (p. 187). CASEL (2013) agreed and furthered this point by saying that SEL skills can be explicitly taught, integrated with academics, or be a part of teacher instructional practices. Many available SEL programs use a combination of these elements (CASEL, 2013). Additionally, utilizing SEL programming will improve academic performance because it will lead to more time on task and less time dealing with behavior problems (Zins, Weissberg, Wang, & Walberg, 2004). Besides more time on task, teachers that address students’ emotional blocks, specifically in mathematics, will help students to stop imposing self-limiting beliefs (Kulkin, 2016). Teachers can accomplish this by focusing on mastery goals rather than performance based ones (Kulkin, 2016). With mastery goals, the value is placed on effort and improvement rather than ability (Kulkin, 2016).

The research on SEL in the classroom reiterates the importance of the student-teacher relationship. The quality of a student-teacher relationship is equally as important to academic success as instructional practices (CASEL, 2013; Elias & Weissberg, 2000; Ottmar, Rimm-Kaufman, Berry, & Larsen, 2013). Merrell and Gueldner (2010) went a step further to explain that the student-teacher relationship is directly relevant to a child’s emotional regulation because a teacher that is warm and encouraging will help to model this behavior for their students. As a teacher it is necessary to continue to treat all children with this warmth, even if a child regularly

exhibits disrespectful behavior (Merrell & Gueldner, 2010). Modeling this type of relationship is equally as crucial among adults within the school building so that students can witness their emotional competence (CASEL, 2013).

In mathematics, the student-teacher relationship is as vital as any other subject (Ottmar et al., 2013). Ottmar et al. (2013) explained that “for students, succeeding in mathematics requires not only learning the prescribed content, but also developing the necessary social and self-regulatory interactions that contribute to their mathematical understanding and ability to solve problems” (p. 435). There are many options for teachers to help students achieve this. For a rich math learning environment, teachers should facilitate math interactions through math discussions and selecting useful tasks, and they should also facilitate social interactions among students (Ottmar et al., 2013). It would be ideal for students to have frequent opportunities to practice SEL skills in a variety of settings and problems (Merrell & Gueldner, 2010).

One of the most natural ways to blend SEL and mathematics is through problem-solving (Elias & Weissberg, 2000). Li, Li, and Moschkovich (2013) supported this because problem solving involves overcoming a barrier and finding a solution. A teacher should strive to help students see themselves as problem solvers (Elias & Arnold, 2006). Kulkin (2016) confirmed this is because math challenges lead students to creativity, questioning, and discovery. One way to model problem solving is to use conflicts or arguments as they naturally arise in the classroom (Zins et al., 2004). Zins et al. (2004) illustrated problem solving negotiations as describing what you want, how you feel and why, and then taking the other person’s perspective in order to come up with

possible solutions. One popular program, Social Decision Making and Social Problem Solving, outlined a strategy called FIG TESPN (Zins et al., 2004):

- Feelings cue me to problem solve
- I have a problem
- Goals give me a guide
- Think of many possible things to do
- Envision the solutions
- Select the one that delivers the best outcome
- Plan the procedure
- Notice the outcome

This strategy could be used in conflict resolution or while solving a math problem.

Another significant strategy for blending SEL and mathematics is to incorporate grouping and social interactions as part of the classroom routine. Zins et al. (2004) and Elias and Arnold (2006) reminded us that humans are small group beings and that incorporating teamwork, small group discussions, and group projects can go a long way in building a cooperative learning classroom. One way to build a caring community is by incorporating a morning meeting at the beginning of math class (Elias & Arnold, 2006). Elias and Arnold (2006) referred to this as setting the stage because it is important to meet as a class before each new learning. The teacher can ask a simple question about the next topic and have all students take a turn to share in order to ease any anxiety (Elias & Arnold, 2006).

Throughout the lesson, Elias and Arnold (2006) also pointed out that interactive learning should continue through pair-shares, fish bowls, and concentric circles. All of these activities require students to discuss the learning together and to model learning for each other. Finally, teachers should wrap-up the class with a reflection in pairs, small groups, or individual journals, and then a whole-class debriefing (Elias & Arnold, 2006). The whole group debriefing is a key part of the learning process because it builds metacognition among students and gives them a chance to share what they learned and which learning processes helped them the most (Elias & Arnold, 2006).

Throughout my research, Responsive Classroom was mentioned on a consistent basis for providing a framework for teachers to incorporate SEL. Elias and Weissberg (2000) attributed this to the fact that RC highlights positive interpersonal relationships at school. The Common Core standards now expect teachers to facilitate certain social skills with math skills, but many of the math curriculums provided to teachers do not include these (Ottmar et al., 2013). For example, the Common Core State Standards Initiative (2018) stated that students are expected to make sense of a problem and persevere in solving it. Ottmar et al. (2013) suggested that RC is a great solution for this problem because the strategies of interactive modeling and guided discovery help students connect their goals to their math work. Interactive modeling is specifically helpful for students because it provides them ways to practice self-regulatory behavior and interact with each other through student and teacher demonstrations (Ottmar et al., 2013). Teachers should also include activities for students to practice these skills and receive feedback on their progress (Elias & Weissberg, 2000). Furthermore, Ottmar et al. (2013) found through

their study of third grade math classrooms that teachers who integrated RC practices used more standards based teaching practices. So, it is clear that RC practices do have a place in mathematics classrooms.

In addition to the strategies I have already mentioned, there are several more techniques recommended that teachers can include in their math classrooms on a regular basis. Elias and Weissberg (2000) shared that using role-play is critical for developing SEL. This is because it helps children learn and practice tricky social situations with immediate feedback for improvement (Elias & Weissberg, 2000). You can also use role playing to brainstorm possible solutions to a problem with the entire class (Elias & Arnold, 2006). From my own experience, I can see using role playing as a valuable activity prior to any partner or small group work so that there is minimal frustration.

Elias and Arnold (2006) also suggested connecting feelings to word problems. For example, you might ask a student if they would feel more frustrated losing a basketball game by $222 \div 11$ points or $2 \times 60 - 17$ points (Elias & Arnold, 2006). In this way, students are connecting feelings to math problems and it opens the door for them to practice SEL. Another exercise the research recommends is breathing (Elias & Arnold, 2006; Zins et al., 2004). Breathing deeply to calm the brain before a test or to help clear your mind in the middle of a tough problem can be a useful strategy (Elias & Arnold, 2006; Zins et al., 2004). Teachers may also consider using journals, checklists, and worksheets as visual cues to help children remember SEL skills they have learned (Elias & Weissberg, 2000).

In summary, there are many strategies available for teachers to use in their math classrooms. In addition to forming a positive relationship with their students, teachers should also demonstrate their own self-efficacy and use standards-based teaching practices (Ottmar et al., 2013). There should be plenty of opportunities for students to interact with each other and practice the SEL skills they are learning in a math environment (Ottmar et al., 2013). Problem solving and grouping are important elements to consider when designing a lesson (Elias & Arnold, 2006; Zins et al., 2014). RC also provides a strong framework for incorporating SEL into mathematics (Ottmar et al., 2013). Lastly, teachers may consider strategies such as role-playing, journaling, breathing, and connecting feelings to word problems (Elias & Weissberg, 2000; Elias & Arnold, 2006; Zins et al., 2004). In the next section, I will discuss what this research means in regards to my research question.

Rationale for the Research

The purpose of this literature review was to answer my research question, *how can social emotional learning strategies around self-regulation and self-advocacy be integrated into mathematics instruction at the fifth-grade level?* Based on what I have read, I know that there are a number of ways to accomplish the integration of SEL in a mathematics classroom. Although I looked at self-regulation and self-advocacy separately, I noticed that a lot of my resources recommended similar strategies. To me, that means a strategy that promotes self-regulation tends to also promote self-advocacy and SEL in general.

For example, one of the major strategies that was repeated throughout the research was goal setting. Fiedler and Danneker (2007) recommended that students need to make a goal, make a plan, and then reflect on their struggles and successes. Goal setting is something that I incorporated into my capstone project since it was mentioned so frequently in the research. Although my research question seeks to uncover strategies specific to fifth grade, I noticed that most strategies recommended could be adapted to any age level. I think that a lot of the adapting is up to the teacher's discretion because I could see all of the strategies recommended being beneficial to any age range. However, I designed my project to provide strategies at a level appropriate to fifth grade.

Summary

In conclusion, this literature review has covered four major topics related to my research question of how to integrate SEL strategies around self-regulation and self-advocacy in a fifth grade mathematics classroom. Through my first topic, I provided an overview of SEL and described two programs that are currently being implemented in my school; Responsive Classroom (2018) and Social Thinking (2018). Next, I explored the research regarding self-regulation and then self-advocacy in the classroom. I described strategies specific to each of these SEL elements that teachers can use to promote the development of them. Lastly, I connected the recommended strategies back to a fifth grade mathematics classroom.

In the next chapter, I will provide an overview of my capstone project. The curriculum project utilizes many of the strategies that the research has recommended throughout the literature review in response to my research question, *how can social*

emotional learning strategies around self-regulation and self-advocacy be integrated into mathematics instruction at the fifth-grade level? The curriculum is designed through a series of morning meetings that will occur in a fifth grade math classroom. The concepts pull from the framework of RC (2018) and will be organized using the Understanding by Design guide (Wiggins & McTighe, 2011).

CHAPTER THREE

Project Description

Introduction

Through my experience as a fifth grade classroom teacher, I learned that social emotional learning (SEL) is something that needs to be taught and practiced regularly. However, I felt that my students were struggling with two elements of SEL during their mathematics time. These two elements, self-regulation and self-advocacy, became the focus of my capstone project. In order to better serve these students, I asked, *how can social emotional learning strategies around self-regulation and self-advocacy be integrated into mathematics instruction at the fifth-grade level?* Through my literature review, I gained knowledge of techniques and strategies that could be applied to a fifth grade mathematics classroom and designed a curriculum around their integration.

In this chapter, I will begin by describing the research that provides a rationale for my curriculum and the incorporation of Responsive Classroom (RC) (Responsive Classroom, 2018) and Social Thinking (Social Thinking, 2018) programs. I will also describe the curriculum model, Understanding by Design (Wiggins & McTighe, 2011), that best served my needs for the project. Next, I will describe the setting and audience for my curriculum. I will also explain the components of my curriculum guide and the assessments I will use to measure student progress. Finally, I conclude with a timeline for completing my project.

Research Framework

Many of the articles I used in my literature review promoted the use of Responsive Classroom (Dusenbury & Weissberg, 2017; Griggs, Rimm-Kaufman, Merritt, & Patton, 2013; Stearns, 2016). Since my school already uses this program as a framework, it is the basis of my lessons. Responsive Classroom (RC, 2018) recommended that teachers hold a daily morning meeting with their students. A typical morning meeting consists of a whole-class greeting, message discussion, sharing, and an activity or game. This is an expectation in my school, so students are already familiar with the routine. Since they will have had a morning meeting in their homeroom classes, it would make sense for this to be a meeting that lasts between 20-35 minutes and is completed only once a week in their mathematics class. Responsive Classroom encourages teachers and students to focus on progress and concept mastery, rather than performance (Griggs et al., 2013). My project promotes this idea through building strong teacher-student relationships.

I also utilized some of the common language from Social Thinking (Winner, 2006) to support the lessons, such as size of the problem and flexible thinking. These concepts need to be taught early on in the school year, and are meant to help students interact with each other successfully (Winner, 2006). Math classrooms provide many opportunities for partner and group work, so it is important to use these concepts to help children learn and discuss math concepts with each other. All of the concepts I incorporated in my literature review were formatted into lessons using the curriculum framework of Understanding by Design (Wiggins & McTighe, 2011).

Project Format

I used the Understanding by Design (UbD) curriculum model from Wiggins and McTighe (2011) to plan my SEL lessons. UbD is a three stage model. The first stage involves identifying the desired results of the unit (Wiggins & McTighe, 2011). At this step, the designer will identify the essential questions of the unit and decide what knowledge, skills, and transfer goals are important for students. In the second stage, the curriculum designer will outline the evidence needed to determine if students have reached their goals from the first stage (Wiggins & McTighe, 2011). This usually includes the types of formative and summative assessments needed. Finally, in the third stage, the educator will design the learning plan. This includes all of the activities, experiences, and lessons that will help students reach the desired results (Wiggins & McTighe, 2011).

For my project, I followed the three stages of UbD that I just described. In the first stage, I decided what knowledge, skills, and transfer goals were important based on two essential questions: what can I do when I am stuck and how can I calm down when I am frustrated? Next, I formulated the assessments that were useful in understanding students' progress. I describe these assessments in more detail later in this chapter. Finally, I spent a majority of my time in stage three, designing the learning plan for this project. As Wiggins and McTighe (2011) noted, "whenever new material is presented in such a way that students see relationships, they generate greater brain cell activity" (p. 6). My goal in stage three was to help students see relationships between these SEL skills

and their success in math class. In order to achieve this, it was important to consider who the curriculum is intended for.

Setting and Audience

The curriculum I developed is for a fifth grade mathematics classroom in a second ring suburb of a major metro area in the upper midwest. The elementary school I teach in is one of six in the district. Each school has a regular program and an immersion program. At my school I teach in the Spanish immersion program. Students receive their math instruction in Spanish only if they are in grade-level math in fifth grade.

Grade-level math refers to students learning through a fifth grade curriculum. Students who qualify are placed on an accelerated track that uses sixth and seventh grade material.

For my intended group, this also means that I will deliver the curriculum in Spanish.

However, with the purpose of this project in mind, I developed the curriculum in English so that it is available and applicable to a larger audience.

According to the Department of Education in the state where the school is located, there are 668 students at this school and it is rated one of the top elementary schools in the state. In 2017, 82% of students were proficient in math, compared to 59% statewide. The student to licensed teacher ratio is 15:1. Only nine percent of students receive free or reduced lunch and 86% of the students are White. Thirteen percent of the student population is part of the Special Education program, while there are very few English Language Learners.

This curriculum project is important for my building because all of the teachers are currently implementing Responsive Classroom (RC, 2018) and attempting to

integrate Social Thinking (2018) language this upcoming academic year. The curriculum I designed uses elements of these two programs in a way that supports and enhances the academic work of a typical mathematics classroom. Although the intended setting is a fifth grade classroom, the strategies I shared can easily be adapted to meet the needs of other grade levels. So even though my main audience would be fellow fifth grade math teachers, any teacher looking to incorporate SEL skills into their math rooms could use this curriculum and change it to meet their needs.

As I have mentioned previously, I developed this curriculum for students in my fifth grade math class. This group can consist of 15-30 students with a wide range of abilities, but the class size varies year to year. Most students range in age from ten to eleven years old. Students in this class have to score below the 90th percentile on the NWEA MAP test. Students with test scores at the 90th percentile or higher are in the accelerated math classes. This is important for my project, because many students are aware of their placement and are either striving to grow into the accelerated track, or know it is out of the realm of possibility for them. This can be a large stressor for students and can lead to anxious feelings or low self-efficacy. In the following section, I will describe my curriculum project that provides students the language and skills to cope with these feelings.

Project Description

I created a curriculum guide that fifth grade teachers can use with their math classes to build SEL skills. I developed a series of 15 morning meetings for teachers to include at the beginning of their math classes once a week for the first semester of the

school year. The first semester is a crucial time for teachers to build relationships with their students and to understand their individual needs. This information can be used to better tailor teaching practices in the second semester. The meetings resemble the framework provided by Responsive Classroom (RC, 2018) but use different topics and delivery methods depending on the lesson. These meetings incorporated several strategies that promote self-regulation and self-advocacy related to math, but mainly focused on setting and achieving goals. The plan circles back every few weeks to check in with students and help them adjust their goals as needed.

Setting goals was one of the major themes I discovered in my literature review for promoting both self-regulation and self-advocacy (Duckworth, Grant, Loew, Oettingen, & Gollwitzer, 2011; Elias & Arnold, 2006; Macklem, 2015). The meetings align with the fifth grade Everyday Math curriculum (Bell et al., 2007) as applicable, since that is the curriculum implemented in my school building. Some lessons target building positive relationships among peers, while others provide an opportunity to practice a new SEL skill. As I have mentioned, I incorporated some of the common language from the Social Thinking program (Winner, 2006) to help students navigate partner and group work. Students have a chance to role-play and practice any necessary strategies together before they use them individually, in partners, or in small groups.

In terms of assessment, I included a pre-test and post-test to gather feedback from students on how they are feeling about their own regulation and advocacy skills. Palmer and Wehmeyer (2003) pointed out that self-assessment can be a powerful tool in helping students learn about themselves and reflect on their own progress. I revised a test that had

already been created by Panorama Education (2015). This test included a variety of statements about self-regulation and self-advocacy. Students will select how those statements align with their beliefs about themselves, either agreeing or disagreeing. At the end of the first semester, they will retake the same assessment and see if they made any progress towards better self-regulation and self-advocacy. This will be useful feedback for the teacher in case they need to target any specific needs in future meetings.

Besides the pre- and post- test, there are only formative assessments through observation in this curriculum. Any teacher implementing this curriculum will need to focus on growing their own relationship with their students, as well as tailoring the curriculum to meet the needs of the students in their classroom. Wiggins and McTighe (2011) explained that, “a good unit is not a rigid plan but a flexible framework in which we are always prepared to adjust based on feedback” (p. 25). For example, a teacher may notice that students are working well together and exhibiting calm behaviors, yet still struggle to raise their hands when they need help. This would be a good opportunity to meet about self-advocacy and to model ways in which students can ask for help. It is possible that the class may need to revisit an old lesson on this skill, or the teacher simply needs to bring it back to everyone’s attention. By building a curriculum of morning meetings around SEL, I want to provide teachers the flexibility to choose lessons based on the needs of their classrooms. This will be especially important if a teacher chooses to continue this routine in the second semester. With this in mind, I will share my intended timeline for the project in the following section.

Timeline

I have worked to design the curriculum during the fall semester of 2018. During the semester, I worked on the three phases of UbD and received feedback from peers on my project. The curriculum is intended for use in the first semester of the school year. Since I have not completed it by then, I will use elements of it in the second semester of AY 2018-19 with my own class. I will address problems with SEL as they arise during the fall semester while I build positive relationships with my students. I will utilize goal setting in the fall to encourage self-advocacy and self-regulation and continue it in the spring once I have the lessons fully designed. I am planning to share the curriculum with my teammates this year, and we will be able to fully implement the curriculum in the fall of 2019.

Summary

In this chapter, I have described my project and how it relates to my research question, *how can social emotional learning strategies around self-regulation and self-advocacy be integrated into mathematics instruction at the fifth-grade level?* I have outlined the frameworks and the curriculum model I based my project on: Responsive Classroom (RC, 2018), Social Thinking (Winner, 2006), and Understanding by Design (Wiggins & McTighe, 2011). I used the UbD model (Wiggins & McTighe, 2011) to design my curriculum in three stages. I have also discussed the setting and audience this project is intended for and my timeline for implementing it. I have completed the capstone project as of December of 2018. In the next chapter, I will reflect back on my capstone experience and make recommendations for future research projects in this field.

CHAPTER FOUR

Conclusion

Overview

Through my experiences as a fifth grade teacher, I have seen how students who struggle to regulate their emotions and advocate for themselves also struggle to succeed academically. These two lagging skills have particularly affected my mathematics classroom because they take away from students' time on task. Based on these observations, I created a curriculum of 15 lessons that integrate a morning meeting with our fifth grade math curriculum in order to answer my research question of *how can social emotional learning strategies around self-regulation and self-advocacy be integrated into mathematics instruction at the fifth-grade level?*

In this chapter, I reflect on the capstone process and my learnings as a researcher and writer. I also reflect back on the literature review in order to make new connections to my project and to discuss some of the sources that were most influential on my work. Next, I discuss the implications of my project in my classroom and for the teaching profession in general. Later, I consider some of the limitations of the project and make suggestions for future researchers. Finally, I explain the plan for sharing my project.

Reflection on the Capstone Process

I have grown more as a researcher, writer, and lifelong learner than I could have ever anticipated. As a teacher, I am more in tune with my students' social emotional needs and more responsive to them than I have ever been. I am able to identify students

that are struggling with self-advocacy and self-regulation quickly and feel confident that I have strategies to help them address those lagging skills immediately, individually or as a whole class. I learned the importance of incorporating and revisiting goal setting with my students, as well as the impact of interactive modeling when it comes to advocacy and regulation. I am bringing more mindfulness strategies into my classroom and helping students deescalate in moments of frustration. This has been tremendous in my growth professionally.

Before I started this journey, I was terrified that I would not be able to complete all of the requirements. Prior to this program, the longest paper I had ever written was 10 pages. However, I learned that if you take the time to properly take notes and organize them, the research can make the writing easy. I found that I even enjoyed the research process. It was beneficial to not only use the online databases for scholarly articles and books, but I was also able to utilize the campus library for books on SEL. I was surprised to find how many of my friends and colleagues wanted to point me in the direction of an article or book when they discovered what my capstone project was about. It showed me how large a network of educators I have in my life and how beneficial that can be for my profession.

I also discovered that I am able to write. I used to be a fairly confident writer, but once I became a teacher I found that I was only teaching how to write and grading papers for my writing class. I was not practicing the art myself anymore. Knowing that I was going to write the longest paper of my life was fairly intimidating, but I learned that if I scaffolded it for myself and broke it into sizable chunks, just like I would for my

students, that I was more than capable of doing it. I also found myself enjoying the writing process. I learned that sometimes I just need to get the words down even if I feel like they are not correct. I took the time to edit and revise each section until I felt proud of what was written and confident in my word choice.

Lastly, it is empowering to take the time to solve your own problem when you are a teacher. As an educator, I often think about possible solutions, but my plate is usually too full to seek out any answers. This process enabled me to focus on researching a problem that has been affecting my students for years. Although I received support from colleagues, classmates, and professors, a majority of the answer seeking was completed independently. I learned how to sort out the important information and how to use it to create a project that could potentially be impactful for students. To me, that is incredibly exciting.

Literature Review Connections

While there were plenty of resources available to share the importance of incorporating SEL into the school day in general, there were only a few sources that specifically impacted my project. When it came to designing my curriculum, one of the recurring themes that I included was goal setting. This was based on the advice provided by Palmer and Wehmeyer (2003) that students should first decide what they want to know or accomplish, then identify any barriers to this goal and how to overcome them, and finally to reflect on their progress and adjust the goals as needed. For the self-advocacy component of my curriculum, this general outline was crucial. I made sure that students set goals early on in their math classes and then provided opportunities for

them to revisit their goals, identify the steps needed to attain them, and adjust them every few weeks based on their own progress. Surprisingly, this ended up being the skeleton of my project. Students start the curriculum by setting goals and revisit these goals to adjust them every few weeks.

For building self-regulation strategies into a mathematics classroom, Ostafin et al. (2015) and Macklem (2015) pointed me to mindfulness. Mindfulness can include breathing exercises, directing one's attention to the present moment, affirmations, and eliminating negative thinking (Macklem, 2015; Ostafin et al., 2015). I incorporated all of these suggestions into my project through various lessons and activities completed between goal setting sessions. As teachers, we show kids that sometimes they need to take a break in order to regain control of their emotions. However, we do not always explicitly teach calming strategies for when those moments occur. After talking to an educator and friend who works in a neighboring school, I realized that incorporating the mindfulness strategies I was reading about would provide students with a variety of ways to cope with their emotions during math class and the rest of their day. This was a new connection for me because I originally did not think I would be including any mindfulness tools into my project.

Another important resource in designing my project was a book by Elias and Arnold (2006). They shared that it is important for teachers to set the stage for their classroom by coming together as a class before each new learning. The idea of incorporating a morning meeting into a mathematics classroom is the foundation of my capstone project. Elias and Arnold (2006) helped me understand that humans are social

beings and so it is important to incorporate many social interactions in order to create a cooperative learning environment. I already knew that it was important for fifth graders to interact in their learning environment, but I had not realized the importance of it in each subject matter. I had always thought that math was more of an individual subject area. Although each child needs to be able to work independently, my project helps provide opportunities for kids to socialize about math and to build trusting relationships with each other.

Implications

My capstone project has the potential to benefit many upper elementary school teachers and students. Although I designed the project for a fifth grade mathematics classroom, many of the recommendations I discovered in my research could apply to any grade level and in any subject area. The learning activities in my curriculum could easily be adapted to another grade level and the basic ideas, such as goal setting and relationship building, apply to daily life in any classroom. Even though my project will be utilized during math time, the skills that students learn and practice can be applied to the rest of their day. To me, that is the most exciting part. I was able to include lessons on a variety of topics that the research recommended. Students need to be able to self-regulate and self-advocate throughout their entire lives. My hope is that they learn these skills at a young age and are set up for social emotional success as they develop.

Another benefit of the project is that it can be divided into parts by design. Educators that are looking for different greetings can use the greetings I provide in their homerooms. Teachers that are looking for activities to build relationships can take

specific activities from the project to use in their own way in their own classroom. If a teacher is only looking to have students set goals, they can take pages from the student journal I have created and adapt it to fit their classroom. My hope is that part or all of the project is both helpful and useful to many educators.

Limitations

There were a couple of limitations while designing my project. One of the major limitations was keeping to the designated time. Originally, I had planned to design mini-lessons that would last no longer than 15 minutes. However, once I got started, it became clear that 15 minutes was simply not realistic. A traditional morning meeting can take anywhere from 20-35 minutes. Since I was planning to keep all of the elements of an actual morning meeting (greeting, sharing, activity), I decided that the time frame of 20-35 minutes per meeting was more realistic. I could not see the lessons working with any of the elements missing. If a teacher truly could not make the time, there is always the possibility of choosing a shorter greeting or cutting out the activity or game portion of the lesson. My goal was to make these lessons very adaptable to the specific needs of the teacher and classroom that are utilizing them.

Although the intention of holding a meeting once a week with a math class still rings true, I understand that carving out around 30 minutes every week is a big ask of teachers. To me, this would be the biggest limitation in carrying out the curriculum. There is generally a lot of pressure on teachers to carry out as much of the curricular content as possible. However, I believe the benefits of incorporating SEL skills will outweigh the loss of time directly spent on the mathematics curriculum. Additionally,

many of the lessons include a math connection that can help to justify the amount of time used to develop these skills and relationships.

Suggestions for Ongoing Research

I have enjoyed developing a project that incorporates SEL skills into a specific curricular area. However, I know that my project is only a small piece to the puzzle of incorporating SEL into all aspects of school life. In regards to future researchers, I think it will be important to continue finding simple ways to embed SEL skills and discussions into classroom routines that already exist. Just like daily life, SEL is something that happens right alongside everything that we do. As I mentioned in my first chapter, SEL is the foundation to all that we do. If educators and researchers can figure out a way to directly instruct students in these competencies while also covering curriculum, they will be setting up more students for success who may have otherwise struggled in the school environment. If another project were to be created based on my own, I would suggest finding more methods of SEL and curriculum integration among the rest of the subject areas. There will never be more time in a school day, so the more seamlessly that SEL strategies can be taught, the more they will support academic curriculum that is already being taught.

Sharing My Project

I plan to first share this project with my students as I use it to kick off my future math class in the next academic school year. I will also share my project with my teammates and colleagues prior to the next year. I am lucky to work in a building where all of the teachers are already looking for ways to integrate SEL into their math classes.

By speaking with my colleagues, I will share my ideas and my project so that we can all make a difference with our students. One of my teammates teaches the same level math that I do, while many other teachers in my building could simply adapt some of the mathematics content to fit their own grade level. I am also planning to have my project uploaded to Hamline University's Digital Commons. I am hoping that any interested parties will be able to access my work through that public format.

Summary

This entire capstone process was centered around answering my research question of *how can social emotional learning strategies around self-regulation and self-advocacy be integrated into mathematics instruction at the fifth-grade level?* I needed to answer this question because of the experiences I was having in my own classroom. I had watched students struggle to complete math problems because they did not know how to work through their frustrations and self-regulate. I had seen students struggle silently because they were not sure how to ask for help. Through the literature review, I was able to design a project that directly teaches students strategies to self-regulate and self-advocate around mathematical concepts. The project incorporates goal setting, mindfulness, and relationship building among students and teachers. Although there were some limitations to the project, such as keeping to the intended time limit, this project will benefit my own students and many other students as it is implemented.

In conclusion, the capstone process has changed me as a learner, researcher, writer, and educator. I have proven to myself that I am capable of finding the solution to my own problems in the classroom. I have learned how to use my resources to look for

answers, how to write to effectively communicate my ideas, and how to make learning a lifelong journey. I began this process terrified that I could never write anything longer than 10 pages, and I am finishing this process feeling like I could do it all again. I have also grown in my confidence as an educator. This project has helped me to see myself as a teacher leader and to feel like my ideas are both valid and important. This directly benefits me, my colleagues, and my students. As educators like myself continue to incorporate SEL into their academic content areas, I predict that more and more students will thrive.

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