SELF-REGULATION IN THE PRIMARY CLASSROOM: AN ACTION RESEARCH STUDY

by

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Abstract

There is extensive research about self-regulation and how self-regulation, with its attention to a student’s ability to control his/her emotions and behaviour, has been found to contribute to better results in school and life long learning skills. This project describes my journey using action research to explore the following question: How can I successfully implement and teach self-regulation strategies in my classroom? By integrating self-regulation strategies within my Grade 1 and 2 program throughout the year, I reflected, planned, acted and assessed learning, to consider the most effective strategies for teaching self-regulation in a whole class situation. I incorporated self-regulation language and strategies into my teaching and taught self-regulation strategies that met the needs of my students. The results of my experience combined with the results from student data outline strategies I found effective and demonstrate that it is possible to teach primary students about self-regulation. This study shares the structures and strategies that I found most effective for developing self-regulation with primary students.
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Chapter 1

It was January 7, 2013 and school was starting back after the Christmas Break. I now found myself in a new role: Grade 1 teacher. I was taking over for the Grade 1 teacher who had retired in December. I knew all the students as I had been working as a primary Learning Assistance teacher prior to January, and had spent much of December getting to know the students. I knew they would be a challenge, and knew that a new classroom and teacher would be a big change for many of them. I had everything set and was ready to go, names on tables, names on cubbies, supplies on tables and the day planned. They all came in that Monday morning excited to be back at school and excited for their new class. It took a few days to settle into the new routines and get to know each other on a student-teacher relationship, as opposed to being the Learning Assistance teacher they all wanted to work with in one on one or group pull outs. I was now the teacher they had to stay in class with all day. The dynamic of our relationship had changed.

I recognized early on that many students were having difficulty sitting still, focusing on a task, and controlling their emotions and behaviour. This was making it hard for many of them to engage in learning, which also made it hard for me to teach. How can you teach a group of students who are disengaged and cannot focus on you for five minutes? I kept asking myself what I could do to keep them more engaged. How could I help them become more focused on learning? The more I observed my students and thought about the behaviours I was seeing, the clearer it became that many of these students were having a difficult time self-regulating. I knew about self-regulation and immediately started to wonder if this was the reason many of my students were having a hard time focusing and engaging. Was their inability to regulate
themselves having an affect on their ability to engage in learning and develop positive relationships with their teachers and peers?

**Personal Context**

The experience I had with this particular Grade 1 class guided me to think about self-regulation and how self-regulation strategies can be taught to primary students. As I began the next school year with a Grade 1 and 2 combined class, I knew I wanted to dig deeper into the area of self-regulation and learn how to implement these strategies in the classroom. My experiences have led me to question why so many of our primary students entering school are unable to regulate, and realized that we need to help students develop the skills necessary for self-regulation. Through my personal experience as a classroom teacher and Learning Assistance Resource Teacher I have seen the struggles many students have when trying to focus on learning or having to conform to the rules of a classroom. I strongly believe that children need to be able to monitor and regulate themselves in order to learn. I believe that children are capable of learning about self-regulation in the primary grades. I am hopeful that we can teach our students these skills and that students will carry these skills with them as they move through school to help them become self-regulated individuals and learners.

Self-regulation is important within the field of Special Education. For many struggling students the ability to self-regulate appears to be a significant concern. Students who are unable to control their emotions and behaviour or hold their attention appear to have more challenges when it comes to school and learning. In the DSM IV (American, 2000) mental health disorders for children and adults are described and many of the learning, behavioural and emotional diagnosis refer to attention, focus and self-regulation difficulties. Our classrooms are filled with a variety of students and learning needs, including students with and without designations. It is
important to teach all students self-regulation strategies and allow them to select those that work, in order to target specific strategies for specific students in a general classroom setting without singling out or stigmatizing individual students.

**Learning and Life**

Self-regulation is not just a skill needed for school; we all use our own self-regulation skills every day to help regulate and control our feelings, emotions, energy and ability to complete tasks. Self-regulation not only applies to the school setting but is also an essential life skill. I strongly believe that it is essential for self-regulation strategies to be taught to students at a young age. My experience as a classroom teacher and as a Learning Assistance Resource Teacher has led me to believe that we can teach primary students about self-regulation offering them self-regulation terminology and providing strategies to help them be more in control of themselves and their learning.

**Self-regulation**

It is important to fully understand what the term-self regulation refers to. Shanker (2013) defines self-regulation using ideas from Baumeister and Vohs (2011), summing up their descriptions of self-regulation as the ability to

1. attain, maintain, and change one’s level of energy to match the demands of a task or situation
2. monitor, evaluate, and modify one’s emotions
3. sustain and shift one’s attention when necessary and ignore distractions
4. understand both the meaning of a variety of social interactions and how to engage in them in a sustained way
5. connect with and care about what others are thinking and feeling – to empathize and act accordingly. (p. x)

Shanker (2013) takes these descriptions of self-regulation and breaks them into what he calls the Five Domains of self-regulation: The Biological Domain, The Emotional Domain, The Cognitive Domain, The Social Domain, and the Prosocial Domain. These domains correspond to the five descriptions of self-regulation listed above, and are described throughout this paper. When you read through each of these five descriptors it is easy to see how the ability to self-regulate is an important skill needed for school and life.

Overview of Study

Self-regulation is increasingly being seen as essential for enabling children to respond efficiently and effectively to the everyday challenges they face in and out of school. The better we understand self-regulation, the better we can implement education strategies that enhance students’ capacity to learn and develop the skills necessary to deal with life’s challenges. (Shanker, 2013, p. x)

This statement provides an effective framework for my project. Its discussion about self-regulation reflects my classroom experience and my hope for my students’ lifelong success. My concern for my students’ learning inspired my topic and guided this action research project. Through my project I investigate the following question:

**How can I successfully implement and teach self-regulation strategies in my classroom?**

For this project I chose to do action research in order to implement and reflect on particular strategies that I identify and select for self-regulation learning in my primary classroom. My experience during this project has informed my practice and given me some
valuable insights about teaching self-regulation in the classroom that I can now share with my colleagues to help inform their understanding.

For this action research I looked at self-regulation strategies and programs for use in the classroom. I chose *The Zones of Regulation* (Kuypers, 2011) program as a guide to help focus my lessons for my class. Over the course of the year I chose lessons and strategies that fit the needs of the class that were based on theories and research on teaching self-regulation to children. I kept a reflective journal with focused questions (Appendix A) during the year for comments and reflections on what strategies I taught, how they went, how the students reacted, and success based on predetermined criteria. I also collected observational data about the use of self-regulation strategies in the classroom and interviewed students throughout the study. This process helped improve my knowledge of self-regulation strategies in the classroom and ultimately informed and improved my practice as a classroom teacher who believes in the importance of teaching self-regulation skills to primary students.
Chapter 2
Literature Review

Overview

This literature review explores the field of self-regulation. It outlines the historical development of self-regulation and locates self-regulation within the theories of Vygotsky and Bandura. It examines why self-regulation should be taught to school aged children and describes some of the current studies that have looked at self-regulation and self-regulated learning. It also discusses where there are gaps in knowledge within this area of study.

Description of the Field

The area of self-regulation has become a common topic of discussion in schools, with many workshops and Professional Development days devoted to learning more about the topic and developing strategies for students. One of the biggest questions seems to be why self-regulation is becoming a concern and what can be done to support students in this area?

Bronson (2000) claims that there isn’t a single or simple definition of self-regulation; different words are often used to refer to self-regulation, such as impulse control, self-control, self-management, self-direction, independence, etc. Post (2006) discusses how definitions of self-regulation have “ranged from those that center primarily on control of external behaviours, i.e. adaptation and compliance, to others that focus more on the control of cognitive systems, i.e. attention control, monitored thinking, problem solving and independent learning” (p. 5). While there does not seem to be one general definition of self-regulation, there are many similarities between the different interpretations of self-regulation.

Shanker (2013) has taken other authors’ descriptions and research on self-regulation and created The Five-Domain Model of Self-Regulation. His book Calm, Alert, and Learning: Classroom Strategies for Self-Regulation (2013) outlines these five domains and describes how
they apply to students learning and the classroom setting. It is a practical resource for parents and educators seeking more insight and strategies regarding self-regulation for students. Since it is a practical resource that summarizes and describes self-regulation in children so well, it was used to guide my own practice and research on self-regulation in the primary classroom. Shanker’s (2013) Five Domains of Self-Regulation describes skills that are essential in order for students to be successful in school. Self-regulated learners have strong skills in all of these domains, where unsuccessful students exhibit signs that they need strengthening in one or more of these domains. There is a variety of research describing how important self-regulation is in order to deal with life challenges, in and out of school. It is becoming more apparent in schools that many students need to be taught these skills in order to regulate their behaviour and emotions in order to learn. It is difficult to learn when behaviour and emotions are not in control and regulated.

**Theoretical Understandings**

There have been many attempts to look back at theoretical frameworks in order to clarify and ground the research on self-regulation. The theoretical understanding of self-regulation can be dated back to the late 1800’s. At this time there were many theorists who were working on understanding self-regulation and what it meant. Post (2006), reviews educational theory periods over 115 years to see whether each period had its own particular perspective of self-regulation or if there was a progressive development from the foundations of self-regulation to current perspectives. This study used a “mixed method procedure, collecting, analyzing and mixing quantitative and qualitative data to understand the progressive development in self-regulation from 1891-to the present/2006” (Post, 2006, p. 6) when the article was published. The findings resulted in recognizing that from 1891-2006 there had been “four time periods that conceptualized the study of self-regulation: (1) precursory (prior to 1950), (2) emergent (1950-

Different theorists fit within these time periods as the idea of self-regulation grew over time.

This article outlines four periods of self-regulation. The first is the Precursory Period, 1891-1950. What the authors of this study found was that this period “relates directly to the foundations of the behavioural perspective on self-regulation that attributes external factors to self-control, and to the psychoanalytic theory’s contention that subjects are controlled by internal drives for gratification and conversely their desire to avert pain” (Post, 2006, p. 7). Ultimately this period focused largely on external factors being the main motivation for self-regulation, and how “the external environment controls the behaviour of individuals” (p. 7). The definitions of self-regulation from this period are seen through the eyes of Freud and Pavlov, where both of their perspectives “viewed self-regulation as largely attributable to external factors” (p. 7).

Thorne (as cited in Post, 2006) wrote the first article on self-regulation in 1946 stating,

“volitional behaviour and self-regulation were defined as intelligent adaptation through training and psychotherapy rather than free will” (Post, 2006, p. 8). At this time Freud, Pavlov and Thorne believed that individuals were not engaging in self-regulation on their own, but that external factors were creating individual self-regulation. As ideas around self-regulation changed a new period was entered.

The Emergent Period, 1950-1970, was viewed as a period of change, where a new direction in psychology began to emerge. It is within this period that early Cognitive Theory emerged. Cognitive Theory started transforming the study of psychology, and several other theorists now influenced the ongoing development of self-regulation. Among these theorists were Piaget and later Vygotsky. Piaget (1952) “proposed that mental self-regulatory processes was in existence to enable adaptation of the individual to the external environment and that
mental structures or (schemas) assimilate incoming information, varying in precision with the individual’s particular stage of cognitive development” (as cited in Post, 2006, p. 9). The result of these ideas lead to the Social Cognitive perspective which consequently was at the same time, the Vygotskian (1934/1962) perspective became accessible to the English speaking world. The Vygotskian perspective “emphasized the importance of social-cultural environment in determining self-regulatory process” (Post, 2006, p. 9). A shift in the views of self-regulation was now starting to take place; it is not strictly seen as being influenced by external factors, but recognizes that there are mental processes (schemas) occurring within individuals that have an effect on self-regulation. The definition of self-regulation continued to be changed as new theories and discoveries were being made.

The next period was the Contemporary Period, 1970-1990. During this time an extensive amount of work was written to establish the study of self-regulation. The authors of this study describe how this extensive research legitimized the importance of self-regulation. They describe how there were three successive intervals, which paralleled the foundations of theoretical perspectives on self-regulation.

These three chronological intervals during this time period explored self-regulation; by (1) defining self-regulation and the developmental stages (1970-1982), (2) describing the influences and effects of self-regulation (1985-1989), and (3) providing general overviews, implications, and complex analogies on self-regulation (1987-1990). (Post, 2006, p. 9)

Within these three intervals different theorists presented their work on this topic. Bandura’s Transformed Social Learning Theory attempted to reexamine perspectives. Bandura believed “learning occurred through self-evaluation, the impetus for self-regulation, without the need for
external strategies or the reinforcement of rewards, he concluded that behaviour and thinking were reciprocally determined by models and events in the environment” (Post, 2006, p. 9). This perspective of Bandura’s was quite different from the earlier perspectives seen in the Precursory Period, where external factors were viewed to control the self-regulation of individuals. A shift in perspective is definitely more apparent in this period. Late in the Contemporary Period, “Lezak in 1982 described self-regulation in terms of innate and learned programs that utilize routines and strategies to allow individuals to regulate activities” (Post, 2006, p. 9). This movement towards reflecting on the individual and her/his role in regulation of behaviours and activities led to the advancement of a new period (Post, 2006). A definite shift in thinking was now taking place.

The last period was the Expansionism Period from 1990 to present, which would be 2006 at the time the study was published. This period is referred to as Expansionism since it was a time of “expansionist fervor, and included articles, which covered linguistic, social, emotional, behavioural, cognitive, and experiential study on self-regulation” (Post, 2006, p. 10). The present models of self-regulation adopt a behaviourist perspective. Within this article the authors describe how a review of studies contended that training children to plan and regulate their own behaviour in order to act independently and responsibly, and working towards less dependence on external agents, should be the primary goal of education (Post, 2006, p. 10). We now see that the idea of self-regulation has become more internalized to individuals, where each person is in charge of his or her own self-regulation. More emphasis was now being placed on cognitive self-regulation recognizing that individuals can exert control over behaviour and goal setting. This is clearly applicable to school settings, where one of the main goals and often challenges in
teaching is to teach students to take responsibility for themselves, their behaviour and their learning. This idea is attributed to Bandura’s Transformed Social Learning Theory and his conclusion that behaviour and thinking are reciprocally determined by models and events in the environment. Studies support attempts to discover ways of encouraging students to adopt skills and attitudes associated with self-regulated learning and emphasize a need for students to develop these traits to maintain self-regulated life-long learning. (Post, 2006, p. 10)

This idea is now seen in the current work of Shanker (2013), and his Five Domains of Self-Regulation.

Other researchers have looked extensively at different theorists and how their theories tie to self-regulation. Fox and Riconscente (2008) discuss metacognition and self-regulation in the works of James, Piaget and Vygotsky. In their examination of William James it becomes clear that it is James’s emphasis on Habit and Will that relate to the self-regulation and control of our own thoughts and behaviours (Fox, 2008). We can see that “self-regulation is essentially the inwardly directed activity of the self in controlling attention and behaviours” (Fox, 2008 p. 376). From James’s perspective this activity is either automated in the form of Habit, or requires effort in the terms of Will (Fox, 2008). Piaget also sees self-regulation in the form of Will, or control of one’s desires and emotions but also sees self-regulation in the form of intention or the deliberate direction of thoughts and problem-solving actions (Fox, 2008). As children develop they become “capable of directing their own thoughts and actions and of regulating their own desires and emotions” (Fox, 2008, p. 380). This is seen in current self-regulation teaching, where the ultimate goal is just that: for children to be in charge of their thoughts and feelings and be able to regulate those thoughts and feelings as needed in given situations. As described by Fox and
Riconscente (2008) “for Vygotsky, self-regulation takes the form of deliberate control of one’s own attention, thoughts and actions; it is an essential characteristic of human behaviour achieved by means of the social force of systems of stimuli” (Fox, 2008, p. 385). Vygotsky’s discussions about self-regulation encompass many areas such as: attention, interactions with adults both at home and at school, play and deliberate control of one’s attention, thoughts and actions. These areas all play important roles in the development of individual self-regulatory skills. More particularly, interactions in play at school are important in the development of self-regulation where the types of tasks students perform at school are critical for deliberate control of behaviour and actions (Fox, 2008). Vygotsky believed in the importance of play in the development of self-regulation. He stated that “play continually places demands of the child to act against immediate impulse… A child’s greatest self-control occurs in play” (Fox, 2008, p. 386). School as well as play in and out of school is important in the development of self-regulation in children.

For the purpose of this literature review, we will take a deeper look at Vygotsky’s perspective of self-regulation. Through Vygotsky’s studies of cognitive development, he “pointed out that the basic law of behaviour is the law of stimulus response, individuals react or respond to stimuli in the environment or stimuli within themselves” (Gredler, 2009, p. 4). If we look at current perspectives on self-regulation, we can see Vygotsky’s perspectives are well rooted in what Shanker (2013) would describe as the Cognitive Domain of self-regulation. With new and more sophisticated methods of brain research it has been possible to establish relationships between the development of self-regulation and maturation of particular areas of the brain (Bodrova, 2006). Vygotsky’s perspective describes self-regulation in terms of stages of development; he describes how self-regulation develops over time as children mature. Vygotsky’s stages of self-regulation looked at the cognitive behaviour of individuals who were
young children to adults. This led to the identification of four stages that “reflect developing mastery of one’s thinking; two premastery stages, then the stage of external regulation of one’s thinking, and finally during adolescence, internal regulation” (Gredler, 2009, p. 5). Through development Vygotsky described how children make critical transition from being “slaves to the environment to becoming masters of their own behaviour” (Bodrova, 2006). Through this process children must master specific cultural tools, including language and other symbolic systems, which they can use to gain control over their physical, emotional, and cognitive functioning (Bodrova, 2006).

From Vygotsky’s perspective the development of self-regulation starts at a young age and as children get older their skills mature. Bodrova (2006) outlines three critical conditions Vygotsky believed necessary for development of self-regulation in children. The first claims that children need to experience self-regulation and develop higher mental function on an inter-subjective (shared) plane in order to develop it on an intra-subjective (individual) plane.

In regard to self-regulatory behaviours- social as well as cognitive- it means that children need to have an opportunity to engage in other regulation, other regulation implies that children act both as subjects of another’s regulatory behaviours (as is the case of many of their interactions with adults) and as actors regulating other person’s behaviour (as might happen in the interaction with peers or younger children). (Bodrova, 2006, p. 3)

Clearly interactions with adults, peers, and younger children play an important part in the development of self-regulatory skills, and allowing these interactions is important. The second critical condition is that children learn specific cultural tools that will allow them to use self-regulatory skills independently. This involves self-talk or what Vygotsky called private speech. The idea of private speech is that the child is now taking on the same words adults once used to
regulate the child’s behaviour for the purposes of regulating their own behaviour (Bodrova, 2006). The last critical condition necessary for the development of self-regulation in children is the engagement in play. Play provides opportunities for children to practice self-regulatory skills, “from fulfilling their desires in symbolic form while at the same time delaying gratification to beginning to develop reflective competencies while taking multiple perspectives” (Bodrova, 2006, p. 3). As described earlier, Vygotsky described play as a fundamental part of development. These stages are seen in the next section as connections are made between the theories and current practice within the classroom.

**Research to Practice: Why teach self-regulation to students?**

The theories behind self-regulation provide important frameworks for implementing programs and interventions to support the development of self-regulation in children. There is growing evidence that self-regulation plays a large role in school readiness and impacts how well children do in school and later life (Bodrova, 2006). Many articles and current research on self-regulated learning state how important teaching and nurturing self-regulation in the classroom is for student development of self-regulation skills. One article states from the research “that self-regulated learning (SRL) is strongly influenced by classroom practices where teachers are considered an important source from which students learn how to learn and to create environments fostering SRL” (Vandevelde, 2012, p. 1563). There definitely appears to be an increasing body of evidence showing that self-regulated learning can be fostered in schools.

As described in the Theoretical Understandings section, the definition and understanding of self-regulation has changed since 1891. Post (2006) shows four time periods in which the study of self-regulation can be broken into. When looking at the development of self-regulation
over time and thinking about the students in classrooms today, it is clear that self-regulation is an important topic for our schools. Post (2006) outlines how the implications of the historical analysis also encourage researchers to identify the skills needed to promote the acquisition of self-regulation and find ways to help provide guidance to children so that they can learn to organize, modify, and regulate responses that enable them to become increasingly capable of proactive and conscious (metacognitive) control. (p. 12)

Post (2006) also describes how families and early childhood educators pinpointed eight skills and attitudes that were fundamental to self-regulatory practices including constructively using physical energy, effortful control/inhibition of impulses, stability/consistency, communication of feelings, needs, and wants, patience/‘persistence’, optimism, controlling reactions to events, and empathy for others. (p. 12)

These eight skills can all be found within Shanker’s (2013) Five Domains of Self-Regulation. It is up to families, caregivers, and educators to become more attuned to the self-regulation needs of children. Educators and parents need to “be active role models demonstrating self-regulatory skills and supporting opportunities for each child to learn and practice these self-regulatory skills and attitudes for conscious metacognitive control on a daily basis” (Post, 2006, p. 12). Providing more evidence why the teaching of self-regulation is extremely important.

In order to understand why it is important to teach self-regulation to students, one has to look at how self-regulation is applied to children. Bronson (2000) describes how primary school children have greater self-regulatory capacities than younger children. It is at this time that children are becoming more aware and able to chose their own strategies and reach their own
goals. Like Vygotsky, Bronson (2000) outlines developmental milestones in primary students through four areas of self-regulatory development: “1) social and emotional behaviour, 2) prosocial dispositions and behaviour, 3) cognitive self-regulation, and 4) motivational self-regulation” (p. 227). Bronson’s four areas of self-regulatory development clearly relate to Shanker’s (2013) Five Domains of Self-Regulation, 1) The Biological Domain, 2) The Emotional Domain, 3) The Cognitive Domain, 4) The Social Domain, and 5) the Prosocial Domain (p. xi). This relationship shows how similarities in different interpretations of self-regulation for children exist. For children the term self-regulation describes various abilities and behaviours, such as delaying gratification, being able to rapidly switch between different tasks, focusing attention and controlling one’s emotions (Bodrova, 2006). All of these abilities and behaviours are constantly at work during a child’s day, both at home and at school. Based on the perspectives of Vygotsky, self-regulation is not something that occurs spontaneously as a child matures, but is taught formally and informally within a social context (Bodrova, 2006). These contexts are varied, from family structures, school settings and peer groups. This is why the teaching of self-regulation has a place within our schools and why we need to foster and guide students in the development of self-regulatory skills.

Vygotsky’s three critical conditions can be applied to the classroom setting, and are especially essential for early childhood educators. Since it is not expected that children learn these essential self-regulatory skills on their own, scaffolding for the development of multiple aspects of self-regulation needs to occur. Bodrova (2006) describes ways this can be done in early childhood settings:

1) ensure children engage in other regulation- a truly self-regulated child does not just follow the rules but is able to generate his/her own rules in different situations. Children
need to engage in regulation by monitoring how other children follow the rules as well as having other children monitor them.

2) through the teaching and learning of specific cultural tools- including but not just limited to private speech; teaching children rhymes, chants, and games used to determine whose turn is next, as well as teaching children other social behaviours that have been passed on but may be missing from the child’s experience.

3) encouraging make-believe play. During mature make-believe play children make attempts at self-regulation by constraining their behaviour to a set of imposed actions defined by the play role. For example, a child playing the mommy role confines his/her behaviours to the actions that fit the mommy role and refrains from other objects that don’t fit the role. The child decides the limits in play. Providing opportunities for play creates opportunities for natural self-regulation development.

As children get older their self-regulation skills mature and they begin to use self-regulation skills without prompting or assistance. This relates to Vygotsky’s stages of self-regulation; as children develop they become better at managing information, choosing appropriate responses to situations, and managing themselves so they can focus and participate in learning. Bronson (2000) describes that between ages 5-7 there are noticeable increases in self-regulation where children are becoming more responsible and consciously aware of their thoughts and actions, further supporting the idea that self-regulation can be taught to children in primary classrooms, and that it is important to include this kind of instruction in daily practice.

Bronson (2000) describes how the environment also plays an important role in the self-regulatory skills children bring to school and continues to influence a child’s development in the primary years. She points out that although the family continues to be important, school and peer
experiences become very powerful during the primary years. Research shows that “learners who possess self-regulatory skills, experience more successful educational trajectories” (Vandevelde, 2012, p. 1563). Looking at the work of Vygotsky and current research we know that self-regulation is not spontaneously acquired, but that it can be shaped and developed by strategy instruction and participation in environments where students have the opportunity to control their own learning (Vandevelde, 2012). Current research also supports Vygotsky’s stages of self-regulation and maturation over time. Vandevelde (2012) describes that “progressively more research has been reported indicating that young children can and do engage in SRL-activities which develop and become more sophisticated as they proceed their school career” (p. 1563) or as Vygotsky describes as they get older and mature. Therefore the evidence supports the idea that self-regulated learning can be fostered by instructional guidance in primary school (Vandevelde, 2012).

Self-regulation affects the life-long learning potential and emotional well being of students. Zimmerman (2002) describes how students who do not have the ability to self-regulate during learning find it difficult to learn; as a result it becomes more difficult for these students to become life long learners. Much of the research shows us that the ability to self-regulate varies significantly across individuals from poorly developed to well developed (Pelco, 2007). Those students who experience problems regulating their emotions, attention, and behaviour struggle adapting to home and school expectations. These are the students who require more interventions in order to learn effective self-regulation strategies. Pelco (2007) states “given the results of the research accumulated to date, it is becoming clear that children who have difficulty regulating their emotions and behaviour experience more conflict in relationships with parents, teachers, and peers and show lower academic achievement than do their more regulated peers” (p. 37). If
this is the case, then self-regulatory teaching is needed in classrooms. The question now becomes what has and is being done to implement this kind of teaching in schools?

**Current Studies**

Much of the research on self-regulation describes how there have not been a lot of studies conducted on the impact of teaching self-regulation to primary aged children. There appear to be more studies conducted with high school and university students in the area of self-regulation and self-regulated learning than elementary (Cleary et al, 2008, Effeney et al, 2013, Payton, 2008). Although there have been some studies conducted with primary school children (Pelco, 2007; Dignath et al, 2008, McGlauflin, 2010) the research explains how more need to be conducted. All of the studies show how self-regulation and self-regulated learning should be incorporated in school settings through classroom teaching as well as small group or individual teaching depending on the needs of the students.

Pelco (2007) describes a longitudinal study of 200 kindergarten children. The researchers of this study observed these children for one year and found that student behaviours (negative emotions, poor self-regulation) early in the year impacted the relationships they made with peers and teachers. Those students who exhibited poor self-regulation skills at the beginning of the year showed more negative teacher-peer relationships and lower achievement at the end of the year than their more regulated peers (Pelco, 2007). This study shows that there is a correlation between self-regulation, school success and teacher/peer relationships. From this study it becomes clear that elementary schools should be providing students with direct self-regulation and learning-related social skills instruction starting in Kindergarten and proceeding through the grades.
In 2008 a report published by the Collaborative for Academic, Social and Emotional Learning (CASEL) summarized three large-scale reviews of research on the impact of social and emotional learning programs on elementary and middle school students. The three reviews included 317 studies and involved 324,303 children, over two different time periods and settings (during the school day and after the school day) and for different types of student populations (those without any identified problems and those with early identified problems) (Payton, 2008). The programs researched were designed to promote various social and emotional skills. CASEL describes social and emotional learning as the process through which children and adults acquire the knowledge, attitude and skills to:

- recognize and manage their emotions
- set and achieve positive goals
- demonstrate caring and concern for others
- establish and maintain positive relationships
- make responsible decisions
- handle interpersonal situations effectively (Payton, 2008, p. 6)

Thinking back to Bronson (2000) and Shanker’s (2013) definitions of self-regulation, all of these social emotional learning components fit into their stages and domains and are essential skills for independent self-regulation. CASEL has created their own five groups of core social and emotional competencies that social emotional learning programs should address. Even though these groupings have different titles, the focus is the same as those of Bronson and Shanker’s. CASEL’s five groups include “self-awareness, self-management, social-awareness, relationship skills, and responsible decision-making” (Payton, 2008, p. 6). In the report CASEL states:
students who appraise themselves and their abilities realistically (self-awareness), regulate their feelings and behaviours appropriately (self-management), interpret social cues accurately (social-awareness), resolve interpersonal conflicts effectively (relationship skills), and make good decisions about daily challenges (responsible decision making) are headed on a pathway toward success in school and later life. (Payton, 2008, p. 6)

The results of the studies show that there are multiple benefits to social emotional learning programs in both school and after school environments for students with and without behavioural and emotional problems. Notably out of the six main findings, three of the findings directly support the notion that teaching students self-regulatory and social emotional skills are essential in schools and attribute to the success of our students. The three findings are:

1. Students in Social Emotional Learning (SEL) programs demonstrated improvement in multiple areas of their personal, social, and academic lives. SEL programs fostered positive effects on students’ social-emotional skills, attitudes towards self, school, and others; social behaviours; conduct problems; emotional distress; and academic performance.

2. SEL interventions were effective in both the school and after-school setting and for students with and without presenting problems.

3. SEL programs were effective when conducted by school staff, suggesting that these interventions can be incorporated into routine educational practice. (Payton, 2008, p. 7)

These three findings support the idea that self-regulation skills can be taught and included in regular classroom activities and can become regular classroom practice for the teacher. Showing that these types of programs do not need to strictly be done in small group or individual settings. When done effectively they can be incorporated into the classroom and become part of the
regular routine. The result from CASEL showed that all students benefited from the SEL programs. From the positive impacts of these studies CASEL recommends, “well-designed programs that simultaneously foster students’ social, emotional, and academic growth be widely implemented in schools (Payton, 2008, p. 8).

When looking at different studies conducted in the area of self-regulation, one has to be very clear about what the study is looking at and what definition or area of self-regulation is being examined. The research presented by CASEL examined the social emotional aspect of self-regulation. Other studies (Leidinger et al. 2012, Effeney et al. 2013) focused more on academics and the use of study skills, self-management skills, and motivation in regards to self-regulation. Even though different studies have examined different aspects of self-regulation, the results still stay the same: regardless of the definition or area of self-regulation being examined, there is strong evidence that supports the teaching of self-regulatory skills in the classroom. The evidence also supports the idea that young children already can and do engage in activities of self-regulating their learning (Dignath, 2008). Further proving that implementing the teaching of self-regulation in primary grades is possible.

Dignath, Buettner and Langfeldt (2008) present the results of a differentiated meta-analysis of 48 treatment comparisons resulting from 30 articles on enhancing self-regulated learning amongst primary school students, they also note that these results should not be generalized to older student populations (Dignath, 2008). The results of this study show that self-regulated training programs proved to be effective at the primary school level and that “providing students with knowledge and skills about how to self-regulate their learning helps them to self-initiate motivational, behavioural, and metacognitive activities in order to control their learning” (p.102). Although the results of the studies support the benefits of teaching self-
regulation strategies to primary students the authors of this research conclude, “despite numerous intervention studies to teach students strategies for self-regulated learning conducted in this field, a composition of the optimal characteristics of such interventions is difficult to find” (p. 103). Further research is needed to detail the effective application of these strategies in the classroom.

Finding research that was similar to the research conducted in my class was challenging, as there is very little research about how to effectively teach self-regulation to primary students. There was one action research pilot study that aimed to “teach self-regulation of learning related social skills to first graders utilizing the coordination of the body, mind and breath of students” (McGlauflin, 2010, p.4). This study consisted of sixty-first graders in four classrooms at a public elementary school. The students were offered a 30 minute class for 28 weeks, and were taught specific skills: respect for self, others and school; listening, following directions; self-control; being calm and alert; maintaining a positive attitude; and appropriate behaviour in groups at various times of the school day. Data was collected with beginning and mid year surveys of teachers, midyear survey of parents, and end of the year student surveys, as well as anecdotal observation by staff and parents. Through the data collected, “teachers cited the need for learning related social skills (such as following directions, listening, self-control) and remarked that self-regulation was vital and that no other learning can take place without it” (McGlauflin, 2010, p. 5). This is also supported in the work of Shanker (2013), where he describes that students need to be calm and alert in order to learn. In order to be calm and alert students have to be able to regulate themselves. The results of this study were positive, demonstrating that the group showed improvement in self-regulation through the day and students were using strategies they had learned to regulate themselves.
Gaps in Knowledge

Identifying the gaps in knowledge within the studies researched is key to determining where further research is needed within the field. Many of the articles and studies on self-regulation identify gaps in knowledge and these gaps are very similar. Although there is a lot of research on self-regulation strategies and what to do for students to help develop self-regulation and self-regulated learning, there is very little research on how to implement these strategies in the classroom. There is also a lack of research on the experience and effectiveness of these programs within the classroom that relates an individual teacher’s experience implementing self-regulation and self-regulated learning.

Many researchers in the field of self-regulation have pointed out that after studying the literature on how to promote self-regulated learning, there is still a gap in the research about how teachers can bring self-regulated learning into the classroom (Dignath, 2008). In her article, Vandeveld (2012) describes that students in today’s classrooms are not being prepared to learn on their own and external regulation prevails over self-regulation. This shows a definite need to find ways to incorporate self-regulated learning in the classroom and how to best influence the implementation of self-regulated learning in educational practice (Vandevelde, 2012). As pointed out in Vandeveld’s (2012) study, “although much of the current literature provides information on the characteristics of learning environments stimulating SRL, there is still a gap in the research about how teachers can bring SRL into the classroom and how teachers can be supported to do so” (p. 1570). More workshops and information are needed within schools regarding the importance of self-regulated learning in the classrooms. Teachers need to learn ways to incorporate self-regulated learning into their practice as well as ways to identify students who are struggling with self-regulation and need more direct interventions in this area. There are
many different programs available that support self-regulation but there is very little evidence of how to best implement these programs in a whole classroom setting. Through the research and different studies it becomes clear that teachers understand that they need to support their students self-regulation to improve learning, but many are still unsure about how to do that (Dignath-van Ewjik, 2012). This is the gap that I set out to examine within my own action research; How can I successfully implement and teach self-regulation strategies in my classroom? My study examines the practice of teaching self-regulation strategies from a teacher’s perspective (my experience), examining the best way to introduce self-regulation and what strategies work best with primary students (my class).
Chapter 3

Theoretical Framework

For the purpose of this study I have chosen to do action research in order to explore the following research question:

**How can I successfully implement and teach self-regulation strategies in my classroom?**

Rooted in action research is the intent of improving your professional practice, gaining more knowledge in the particular area you are researching and immersing yourself in the research experience. Action research is a very personal journey and way of doing research. McNiff and Whitehead (2010) describe how the “aims and purposes of action research are about improving learning for improving practice” (p. 7). Through the process of action research you create knowledge within the area of study you choose through the lived experience of your study. They explain that action research involves: 1) a commitment to educational improvement; 2) a special kind of research question, asked with educational intent; 3) putting the ‘I’ at the centre of the research; and 4) educational action that is informed, committed and intentional (McNiff, 2010). These four descriptors of action research are the guiding principles behind this action research project.

Knowledge is created throughout the journey of the action research. In action research the researcher does not know everything all at once. Action research allows the researcher to create knowledge about their own experience as they inquire into how to improve their practice.

**Cycles**

McNiff and Whitehead (2010) describe how action research tends to take a cyclical form as “it involves a continuous process of acting, reflecting on the action, and then acting again in new ways in light of what you have found so that it becomes a cycle of action-reflection”
(McNiff, 2010, p. 95). They then describe how, when action research is viewed as an ongoing process, it can be seen as a cycle of cycles. Bruce (2013) describes action research as a cyclical process where the researcher inquires about a topic or question, then plans, acts, observes, reflects and then readjusts the plan and continues the cycle again in response to the environment. My research study fits into this action research method model with its cycles of question, plan, act, reflect, revise, and then repeat in order to improve my practice and teach my students about self-regulation. The cycle was repeated many times during the course of the research, with a focus on the development of particular aspects of self-regulation, a valuable contribution of this research.

The process of action research requires the researcher to clearly think through the purpose of their research, considering what they hope to achieve, and how they plan to get there. McNiff and Whitehead (2010) outline a set of critical questions to help guide the action research process, improve an aspect of practice and theorize (offer explanations for) what they are doing in a rigorous and systematic way (McNiff, 2010). These critical questions helped guide my research and work within the cycles of action research.

McNiff and Whitehead’s (2010) critical questions are as follows:

- I review my current practice;
- I identify an area I wish to improve;
- I ask focused questions about how I can improve it;
- I imagine a way forward;
- I try it out, and take stock of what happens;
- I modify my plans in light of what I have found, and continue with the action;
- I evaluate the modified action;
• and I reconsider the position in light of the evaluation. (McNiff, 2010, p. 95)

These questions were used to help outline and direct the cycles of my action research.

Critical Question 1 - I review my current practice:

As described in Chapter 1, the main reason I chose self-regulation as a focus for this project came from my previous experience with a Grade 1 class that was filled with students who were unable to self-regulate. This particular group of students were having difficulty sitting still, focusing on a task, and controlling their emotions and behaviour. They had a hard time engaging in learning, which made it hard for me to teach. The more I observed this group of students and thought about what I was seeing, the clearer it became that many of these students were having a difficult time self-regulating. This experience made me really think about the need for self-regulation teaching in the classroom and how I could introduce it into my Grade 1 and 2 combined class.

Critical Question 2 - I identify an area I wish to improve:

I recognized that a change in my teaching practice and program might address the students’ self-regulation skills, so I decided to work on implementation of strategies through the classroom routines. As a primary classroom teacher, I have had experiences with students who are struggling to regulate their behaviour and emotions in order to focus on learning. I wanted to dig deeper into the area of self-regulation and learn how to best implement the strategies in the classroom.

Critical Question 3 - I asked focus questions about how I can improve it:

The main question for my research became: How can I successfully implement self-regulation strategies in my primary classroom? Using action research methodology I designed my research with this question in mind to guide, examine and improve my practice in order to
find ways to effectively teach self-regulation strategies to primary students. During my research I also asked myself some supplementary questions to help guide my focus: How can I improve independent student use? What did I notice about student use of self-regulation strategies? and What did I notice about student understanding of how and when to use these strategies? The goal of my research was to explore teaching strategies and independent student use of self-regulation strategies in the primary classroom.

Critical Question 4 - I imagine a way forward:

Every research needs to start some place. My start was with my Grade 1 and 2 combined class. I had many ideas in mind about what I wanted to do with my class and what I wanted to teach them about self-regulation. The first step was to get to know my class and then develop a plan of what I would teach based on the needs in my class. As my research started it easily flowed into cycles, starting with my main question, leading into different cycles of plan, act, reflect, revise, and then repeat. This cycle was repeated six times during the course of my research and kept the research moving forward.

Critical Questions 5-8

• I try it out, and take stock or observe what happens;
• I modify my plans in light of what I have found, and continue with the action;
• I evaluate the modified action;
• And I reconsider the position in light of the evaluation:

The following is a list of the six cycles I went through. These cycles are discussed in more detail in Chapter 4.

Cycle 1 - A place to start-getting to know the needs of the class.
Cycle 2 - Setting the stage- using The Zones of Regulation
Cycle 3 - Tools for Learning
Cycle 4 - Re-teaching Tools for Learning
Cycle 5 - Emotions and Tools for Calming
Cycle 6 - Bringing it All Together

Participants

This study was completed with an action research format. As a result, the main participant in this study was myself. I was the researcher and the participant. I completed my action research in my Grade 1 and 2 combined classroom. The students in my class were integral to the study because of our teacher/student relationship, and because improving my practice directly affected them in the lessons and activities on self-regulation. Teacher self-reflection journals were used to explore my general observations, decision making, planning and teaching as I implemented a variety of self-regulation strategies as part of my daily classroom activities. The criteria I generated to demonstrate improvement focused on the goals of my lessons, plans and achievement, and thus varied as a result of changing needs of students.

The students in my class were also participants in my study. In order to ethically use data on students in my class parent consent forms were sent home to all the parents/guardians of students in my class. I initiated contact with the parents/guardians of students in my class by sending home an Information and Consent Form. These documents were sent home in a sealed envelope addressed to the parent/guardian in student planners, which were used daily for communication between home and school. Parents were instructed to return the signed consent forms (in the return envelope provided) to a box in the office labeled with my name. The forms were kept in the box and remained unopened until the end of my study. At the end of the study the forms were opened and I was able to determine which students’ data could be included in my
study. During the study I collected data on all the students in my class fairly without knowing which student data would be used. This helped to ensure there was no bias towards students whose parents/guardians agreed to be in the study.

I taught my students different self-regulation strategies in the hopes that they would use the strategies to help with their self-regulation. Students were not aware that they were participating in research since the teaching of self-regulation was a part of my regular program and all students were a part of it. All of the students in my class participated in the same activities, and were observed and questioned in the same way. All of the students in my class were automatically involved in the project since my decisions affected the learning experience of each of them. Not all of the students in my class were used as research participants; only those students whose parents/guardians approved became research participants. There were 22 students in my class; all 22 of these students engaged in the lessons and activities I taught. I collected data on all students, but only the data of students who had parental consent have been used in the results section of my project. Out of my class of 22 students, 16 were given parental consent to be participants in the data interpretation and sharing part of my study. 73% of the students in my class have data included for the purposes of this research. The other six students will not have any specific data about them shared for the purposes of this research, but were involved in the whole class experience.

Data Collection

Data for this study were collected with the following instruments: reflective journal, checklist, and student interviews. Qualitative and quantitative data were collected. Qualitative data were collected in the form of a standard question/answer sheet created to guide my reflections, leaving an area at the end for reflection. Reflections were made once or twice a week
depending on how many lessons were conducted that week, for a period of 8 months.

Observations were noted each week as necessary. In order to create consistency within these reflections, a reflection question sheet was used to guide the reflections. My reflections were designed to look at why a lesson or strategy was or was not successful based on the specific context of my class and provide some opinions about factors that may have come into play.

Some of the questions I looked at in my reflections included:

1) What was the goal of the lesson? What were the planned strategies?

2) Why was the strategy/lesson successful or why was it not successful?

3) What did I notice about changes in the class in general after the lesson/strategy was taught?

4) What did I notice about student use of self-regulation strategies and their understanding of how and when to use these strategies?

5) Were students able to use self-regulation strategies appropriately?

Over the duration of this study I collected a variety of data to help show my experience and what I learned about teaching self-regulation strategies in a primary classroom. Student qualitative data were collected through one-on-one interviews with my students. Over the study I was able to conduct two larger interviews with my students. These two large interviews gave me the chance to sit down individually with my students to gain a deeper insight into what they had learned about self-regulation, the zones of regulation, and self-regulation strategy use in the classroom. These interviews were conducted once a week, with 2 or 3 students being interviewed each time. These interviews were conducted over a period of five months. I conducted these interviews with all the students in my class, but only those who have parental consent to be part of my study were shared as part my findings. Quantitative data were collected in the form of a checklist after self-regulation strategies were taught. The checklist was used to track student use
of the strategies taught; for example collecting data on how many times students use fidgets, wiggle seats and alternate seating during the day. These data were collected once a week starting in March until the beginning of June for a period of 14 weeks. I was looking for an increase in the numbers and trends across the class with respect to their use of self-regulation strategies, more specifically self-regulation tools (fidgets, wiggle seats, alternate seating).

All of the data collected from my own reflections, observations, student interviews and checklists provided evidence that contributed to the planning cycles in action research. This data was also used as assessment criteria in order to see if I was achieving my goal of discovering: How can I successfully implement and teach self-regulation strategies in my classroom?

**Data Interpretation**

At the end of the time frame allowed for self-regulation strategy lessons the reflective journals were read through and common themes examined, the goal being to make meaning of the data collected. The results have been compiled into selections based on common themes and the experience was looked at closer. The reflective journal provided information about how well the teaching of self-regulation strategies went and whether the teachings of these strategies lead to the effective use of these strategies for the students. My reflections were triangulated with the checklist observing the use of self-regulation strategies in the classroom and student interviews.

Triangulation is a process in which the data are looked at from a range of perspectives, usually three (McNiff, 2010). For the purpose of this study triangulation will come from the reflective journal, checklist and student interviews. In order to come to these conclusions I looked at my interviews and examined the student responses to find any evidence of the students having internalized the self-regulation strategies and tools taught. From the checklist I looked at trends over the 14-week period in which student use of classroom self-regulation tools was
recorded. A checklist was kept once a week for a period of 14 weeks recording the amount of
times students used particular tools that day. All three forms of data allowed me to crosscheck
the impressions from my reflections with student interview and observable behaviour, thus
increasing the reliability of the findings.

**Limitations**

Because this study is action research and the findings are related to my own experience there will be limitations within the study. The findings in this study are limited to one person, one situation, and one classroom. The findings cannot be generalized to all Grade 1 and 2 teachers and classrooms.

**Significance**

Using the method of action research and this particular design as you follow cycles during the research is very valuable. The design of following cycles, where you plan, act, reflect, and repeat helped keep my attention focused on my question throughout the year. I was constantly reflecting and evaluating my own learning as well as what the students in my class were learning from the lessons I was providing. The opportunity to reflect, revise, and act in repeated cycles allowed more time and focus on my question rather than attempting and assessing one intervention. The research was constantly evolving to better meet the needs of my class, allowing me to respond to the on going needs of my students, and reflect deeply on my personal experience creating an authentic and naturalistic class experience. Action research worked best for answering my research question by allowing me to use the cycles of plan, act, reflect, and repeat while constantly focusing my attention on my question.
Chapter 4
Results/Findings

It is valuable to develop successful strategies in primary classrooms that build self-regulatory skills. These skills allow students the ability to control their emotions, behaviour, and attention in order to manage the school day and engage in learning. Dignath and Buettner (2008) conducted a meta-analysis on intervention studies at primary and secondary school level. Within their study Dignath and Buettner (2008) describe how there is an increasing body of evidence showing that self-regulated learning can be fostered by instructional guidance at primary school. Dignath (2012) explains how teachers can design a learning environment that foster’s students’ self-regulation. Through action research I set out on a journey to incorporate self-regulation teaching into my Grade 1 and 2 combined classroom in order to improve my practice and teach primary students about self-regulation.

Using Shanker’s (2013) five aspects of self-regulation as a framework I set out to see if I could teach Grade 1 and 2 students about self-regulation and teach them different strategies they could use to stay regulated. I decided to use The Zones of Regulation program (Kuypers, 2011) because it takes into account the different aspects of self-regulation as described in Shanker’s Five-Domain Model of Self-Regulation (2013), which includes:

1. The Biological Domain (Temperament)
2. The Emotional Domain (the realm of feelings and moods)
3. The Cognitive Domain
   - display effortful control
   - sustained attention, not easily distracted
   - attention switching, ability to transition between tasks
   - inhibit impulses
   - able to deal with frustration, delay, distractions
4. The Social Domain: able to develop and use socially desirable behaviours
The Prosocial Domain: the development of empathy and values and morals. (p. xi-xv)

The program is “designed to help students find success at school by gaining skills in consciously regulating their actions, which leads to increased control and problem solving abilities” (Kuypers, 2011, p. 1). Through the program students learn when they are in different states, called ‘zones’. Each of the four zones is represented by a different colour: blue, green, yellow, and red. These zones are used to categorize states of alertness and emotions. Students learn about each colour zone and what they represent.

- The Blue Zone is used to describe low states of alertness, such as when one feels, sad, tired, sick, or bored. This is when one’s body and/or brain is moving slowly or sluggishly.
- The Green Zone is used to describe a regulated state of alertness. A person may be described as calm, happy, focused, or content when in the Green Zone. This is the zone students generally need to be in for schoolwork and for being social. The Green Zone shows control and can also be referred to as our calm, alert, and ready to learn zone.
- The Yellow Zone is used to describe a heightened state of alertness; however, a person has some control when in the Yellow Zone. A person may be experiencing stress, frustration, anxiety, excitement, silliness, nervousness, confusion, and many more slightly elevated emotions and states when in the Yellow Zone (such as wiggly, squirmy, or sensory seeking). The Yellow Zone is starting to lose some control.
- The Red Zone is used to describe extremely heightened states of alertness or very intense feelings. A person may be experiencing anger, rage, explosive behaviour, panic, terror or elation when in the Red Zone. Being in the Red Zone can best be explained by not being in control of one’s body. (Kuypers, 2011, p. 9)
Students learn strategies to stay in a green zone or how to move from one zone to another depending on how they are feeling. The lessons teach students how to read others facial expressions, recognize emotions and how others react to their behaviour. Students also learn calming techniques and problem solving skills. The program is designed for students who struggle with self-regulation. For the purpose of fostering self-regulation in my whole classroom I decided to use this program as a starting point for introducing self-regulation to my students.

The program is designed for small groups of students needing to learn self-regulation skills. I used specific parts of the program and adapted them to suit the needs of my whole class. I used the parts of the program I believed targeted the specific needs of the students in my class. There were some students in my class that needed more instruction in the area of self-regulation than others but those students were never singled out in a whole class approach. Overall the use of the program was beneficial to all of my students and to myself. It created a classroom environment where students felt safe to share their feelings and a place where feelings were respected and where students tried to help each other when they recognized someone wasn’t in their green zone.

As discussed in Chapter 3 this research project was designed as action research. Since it was designed as action research the goal was for me to improve my practice in the area of self-regulation within my classroom. Since action research is cyclical this research went through many cycles throughout the course of the year. It is within these cycles that changes were made, knowledge was gained and data was collected about how to best teach Grade 1 and 2 students about self-regulation. Student responses during interviews, classroom observations, and self-reflection guided my learning and helped improve my practice over the course of this research. McNiff and Whitehead’s (2010) description of action research shows it’s cyclical nature, where
you take on the continuous process of acting, reflecting on the action, and then acting again in new ways in light of what you have found during research. Looking back over the year and the lessons on self-regulation and teaching that went on in my classroom the cycles of action research are evident, demonstrating the constant act of planning, reflecting, revising and repeating in order to move forwards to improve practice.

**Cycle 1- A Place to Start- Getting to Know the Needs of the Class**

The first cycle of my research started at the beginning of the year. The first steps in getting this project underway was to really start thinking about my class in terms of their self-regulation needs. I started the year as I would with any class, establishing class rules and routines as a group and having the students take ownership of what kind of a class they wanted to have to create a classroom where all students felt comfortable and safe. I did this by letting my students take ownership in describing the kind of class they wanted to be a part of. Brooks (2003) states that his experience speaking with students and parents has “convinced me that motivation, cooperation, and resilience are fortified when students feel they have some say in what transpires in the classroom” (Concluding Remarks, para. 1). By allowing my students to have a voice about what kind of classroom they wanted I hoped to foster a sense of belonging and feelings of acceptance and show that their opinions are important. Brooks (2003) describes how “if students are afforded realistic choice, and are encouraged to voice their opinion, and that they feel these opinions are acknowledged and validated high levels of intrinsic motivation, excitement about learning, and respect will dominate in the classroom environment” (Concluding Remarks, para. 1). You could see this happen within my class as students shared their ideas during the classroom discussion. They were listening to each other and respecting the ideas of their peers and adding to these as the discussion went on. We started with a class discussion and the students shared
ideas around this statement, “I want a classroom…” This really helped set the stage for establishing our classroom rules and routines. Here’s a sample of what my Grade 1 and 2 class developed at the beginning of the year.

I want a classroom…. that is quiet, that is fun, that is respectful, that works together, that takes turns, that puts up their hands, that shares, that is helpful, that is friendly, that helps each other, that works together, and that wants to learn.

From here we created a class chart and were then able to sum up the chart in six statements to hang on the wall for reference. The chart was posted and referred to frequently throughout the year. Having this up helped students remember their responsibility to the class, and gave us something to refer back to on a regular basis throughout the year. The process of including my students in creating classroom rules tied to my ideas around self-regulation in the classroom since students have to be able to control themselves in the classroom in order to create the classroom they have described they want.

We discussed a few common themes to maintain as a list on the wall throughout the year; in the action research cycle this would be referred to as act. The list we created stated:

In our classroom WE:
Keep our hands to ourselves
Put up our hands
Listen and work
Are helpful and positive
Share and take turns
Have fun!

My reflections after this process showed that from the beginning of the year my class was engaged in the class discussions and everyone contributed to making the class list. Here is a reflection from my journal from the first few weeks of school after having gone through the described process of creating our classroom environment:
I am amazed at how this group of students has been able to articulate what they want in their classroom. Many of these Grade 1 and 2 students already have a good understanding of the kind of classroom environment they want. This was really shown in their responses to the statement I gave for them to complete. Being able to make statements about wanting a class that is respectful, works together, shares, etc. and being able to articulate what that means to them is quite impressive for students this age.

The real benefit of working together is that it creates a respectful classroom environment where everyone gets a voice and gets to have something they view as important shared with everyone. I was strictly facilitating the discussion and working with my students to help create and maintain the kind of classroom they wanted. Of course my expectations are also put along with the students. Looking back at the process, I would not have made any sort of revisions as the start to the year was really great, though I may approach this differently in the future with a different group of students. When looking back at my reflection journal I can see that the process worked for this group of students:

The experience of creating classroom rules and routines with this group has been a lot of fun. It has been great to see the students work together to come up with ideas about the kind of classroom they want to create. After having the rules up for the first few weeks of school it is clear that many of the students have really taken these rules to heart. I have overheard students reminding others who shout out that we need to remember to put up our hands and have seen many students help each other find pencils and felts and other tools in order to complete jobs. Having a combined class is great too, in that the Grade 2 students have seemed to take on a role of helping the Grade 1 students stay organized.

The cubbies in our class are quite small and some Grade 1 students were having
difficulties fitting their backpacks, coats and shoes in their cubby. Many Grade 2 and some Grade 1 students have been helping these students when they are having difficulty. It is always fun to see how the students come together as a group at the beginning of the year. They all seem to be responding well to their class-generated list.

Being able to create a supportive environment where my students felt safe to share their ideas about what kind of classroom they wanted gave them a sense of ownership and belonging in the classroom. Brooks (2003) describes how when students have input they often take greater responsibility and accountability for their actions. Therefore, creating supportive environments can help facilitate self-regulation within our students. After the rules and many routines of the class had been established I moved into the next cycle of my research.

**Cycle 2- Setting the Stage- Using The Zones of Regulation**

Next began cycle two, building upon what was previously set up and moving forwards to maintain the rules and routines that had been created in the classroom and to start giving my students the tools they needed to work within those rules and routines. In order to do this I had to start to think about my class in terms of their self-regulation needs. Getting to know my class and identifying their needs took at least two months. During this time I kept thinking about what I really wanted to achieve with my students and how I could get there.

The plan for cycle two was based on ideas from Shanker (2013) and *The Zones of Regulation* (Kuypers, 2011) program. I chose to use these ideas in order to put more ownership on my students in terms of their self-regulation needs for controlling their emotions, behaviour and learning. My goal was to teach my students how to recognize in themselves how they were feeling and what they needed to do for themselves in order to as Shanker (2013) describes be calm, alert, and learning. Shanker (2013) outlines how we want to help students achieve optimal
self-regulation, a state of clam, focus and alertness appropriate for learning in a classroom (p. xi). How we do that is going to be different for all teachers, students and classrooms.

Very early in the school year I made a decision that I didn’t want to implement a behaviour modification or punishment/reward system in my classroom, where students are given rewards for good behaviour and others receive punishments for what is viewed as bad or unacceptable behaviour. My goal was to teach my students how to monitor their own behaviour and emotions through the day, taking responsibility for their internal regulation as opposed to relying on external regulation. Successful internalized self-regulation strategies have nothing to do with imposing external regulation through punishment or reward (Learn Magazine, 2012). External approaches often have a negative effect on students, creating negative emotions like fear, anger, and shame, which consumes energy and impairs concentration and attention (Learn, Magazine, 2012). Working with students to develop internal regulation has a positive effect that will last a lifetime. Students learn about the tools needed to regulate their emotions, behaviour and learning; which as neurobiological research shows, internal motivation produces neurochemicals in the brain that actually provide fuel for the brain and give it energy (Learn Magazine, 2012). This doesn’t mean that there were never consequences for inappropriate behaviour or breaking school rules, but the goal was for my students to take the responsibility of being in charge of their behaviours, emotions, and self-regulation in the classroom. Many researchers of self-regulation in the classroom have found that teachers need to not only model the strategies, but also provide specific strategy information so that students become aware of the how, when, and why to apply these strategies (Vandevelde, 2012). Using The Zones of Regulation (Kuypers, 2011) I was hoping to do just that, give my students the tools they needed to understand their feelings and how to manage them in and out of the classroom. I wanted to
ensure that my students had opportunities to learn what their bodies feel like when they are calm, since as Shanker (2013) describes there is a very close connection between calmness, alertness, and learning.

In cycle two my action was to teach my students about the Zones in *The Zones of Regulation* program. Kuypers (2011) created *The Zones of Regulation* program to categorize states of alertness and emotions into four coloured zones, blue, green, yellow, and red. To summarize; the Blue Zone describes low states of alertness, when one feels, sad, tired, sick, or bored, the Green Zone describes a regulated state of alertness, when we are in our calm, alert, and ready to learn zone, the Yellow Zone describes a heightened state of alertness such as stress, frustration, anxiety, excitement, silliness, nervousness, confusion, squirm, or sensory seeking, and the Red Zone describes extremely heightened states of alertness or very intense feelings such as anger, rage, explosive behaviour, panic, terror or elation.

To make this easier for students to understand and relate to, the zones are compared to a stoplight. When you are in the Green Zone (green light) you are good to go, or as Shanker (2013) describes you are calm, alert, and learning. A Yellow Zone (yellow light) means you need to slow down and think about how you feel and what you can do to return to Green. A Red Zone (red light) means you need to stop and regain control to move back to green. The Blue Zone is the rest area, you have to take a break and re-energize. Many classrooms use the stoplight system for behaviour modification. Green-good, yellow-warning, red-basically means you are in trouble. I have even used it myself. But, I never found it was extremely successful for teaching my students to be more responsible for their behaviour and how they were feeling. I was the one regulating student behaviour externally, which resulted in my students becoming upset, frustrated, and often shutting down for a period of time. They were not in charge of their self-
regulation; there was no ownership for the student to make a different choice or think about what they needed to do to regulate their behaviour. It wasn’t a system I fully liked using, but used because it was what was out there and I wasn’t sure what else to use. This project really made me rethink the use of the stoplight and how I can use it for the purpose of self-regulation.

This year I used my stoplight to represent The Zones of Regulation (Kuypers, 2011). Beside each colour on the stoplight I posted the pictures from The Zones of Regulation (Kuypers, 2011) that showed the different feelings you may have when in each zone. Instead of me moving students from the green, yellow and red zone, the students became responsible for placing themselves in the zone they were feeling. Through the use of the Zones program my students learned that it is ok to have different feelings and move through the zones during the day, but that it is what we do when we are in a yellow, red, or blue zone that is important. I think it allowed my students to be themselves and have a range of feelings and behaviours without worrying they were going to get in trouble for them. For example, a grade 1 and 2 classroom can often be filled with silly behaviour. Silly behaviour (yellow zone) isn’t bad behaviour but there is a time and place for it. Using the zones helped me address these silly behaviours within my classroom and tell my students that it is all right to act silly when the time is appropriate, but that our goal in the classroom is to be in the green zone so we are ready to learn. I think it helped students think about their behaviour. When they were being silly they had to think about what they needed to do to bring themselves back to their green- calm, alert and ready to learn zone. It put more ownership on the student for regulating his or her behaviour to be in a green zone, than on me trying to figure out how to get the silly behaviour to stop.

Using the stoplight as a reflection of self-regulation and the four Zones was not only beneficial to my students but also for myself. I taught the students about each zone as the
program lessons outlined and we worked on our *Zones of Regulation* (Kuypers, 2011) booklets, drawing ourselves and describing how we look and feel in each zone as well as how others see us when we are in different zones. We talked as a class about how to use our Zones Stoplight. Every student was given a star with his or her name on it, students checked in each morning, placing their star in the zone they were feeling. Most students started every day feeling in a green zone—their calm, alert, and learning zone. If a student placed his or her star in yellow, red, or blue it was a good indicator for me to check in with that student and inquire into why he or she was feeling in that zone, and how he or she could work on getting back to green. Besides green, the most common zone students placed themselves in at the beginning of the day was blue. When I asked students why they were feeling in a blue zone that morning, the common responses related to feeling tired, not having slept well, being woken up too early that morning, or feeling sad because they missed their Mom and/or Dad. These responses were very beneficial and gave me insight into how to start the day with my students.

As the students learned more about the different zones, the language of zones became the everyday understanding of how students were feeling. We used green zone language in terms of feeling happy, being ready to learn, being respectful and listening to others. Yellow zone language was used when students were frustrated with others, if the class was noisy, or students were being silly and not focused. Red zone language was used when students were extremely upset, angry, or had hurt feelings. The blue zone was referred to as the tired or sad zone. You could frequently hear students saying, “I feel in my yellow zone because…” and then a description of why he or she was feeling that way. It gave me language the students could relate to and I could tell my class when I was feeling in a yellow zone; feeling upset because the class
was being too loud, or no one was listening when they should be. It gave my students a way to understand my feelings through the day as well as their own and their peer’s feelings.

After students had learned about the Zones in Me I conducted short interviews giving students a scenario and asking them what zone they would feel in based on the scenario. Their responses showed understanding about the feelings within the zones and how they could relate the zones to experiences in their own lives. In order to share my interview data I have broken my interviews in sections based on the questions and will share student responses for those questions together. Here are some interview questions and responses from students in my class relating to the zones:

Teacher: What zone might you be in when you are playing with a friend?

Students: If you get hurt when playing you would feel in the blue zone, you’d feel sad.

Yellow, because you might be silly and having fun.

Green, you might be calm playing dolls with your friend.

Blue, if your friend was playing with their iPad and you had to play alone.

Teacher: How might you feel when you are asked to put away something you are doing?

Students: Yellow, sometimes I feel frustrated because I’m not ready to put it away.

Yellow or blue, I’m disappointed in my Mom and sad I have to clean up what I am playing with.

Sad, blue, I want to keep playing.

Teacher: How would you feel if your pet went missing?

Students: Really sad, I’d be in my blue zone.

Disappointed and in my yellow zone, hoping to find my pet soon.
These responses show how the students in my class were able to share their knowledge of the zones and how they were able to apply their knowledge of the zones to life experiences.

Through the different lessons and class discussions about the different zones, it became clear to me that my students were very good at explaining different triggers that caused them to feel in a yellow, red, or blue zone. During a class activity on yellow zone triggers, some common ideas came up for when students felt in a yellow zone, such as; when I feel excluded, when people don’t let me play, and when my brother or sister takes my things or bugs me. It was great to hear my students describe what causes them to feel in these different zones. Being able to recognize what causes those feelings is part of being able to learn strategies to help with the emotions felt when in those zones. This will be discussed further in Cycle 5- Emotions and Tools for Calming.

In order to find out what my students had learned about self-regulation and the zones I asked different interview questions during the course of my study to gain understanding about their knowledge. The following interview question was designed to give me an idea of my student’s understanding of the term self-regulation. It went like this:

Teacher: *What have you learned about the big word we talk about- self-regulation? What does it mean to you? What do you think of when you hear this word?*

Students: *It means be calm.*

*Keeping your hands to yourself.*

*To pay attention.*

*You control your own body, that you listen. How you are feeling.*

*You listen, you are quiet.*

*I don’t remember what self-regulation means. (This was very interesting because she uses the tools all time and is always sharing ways to use the tools during class discussions).*
I think of it means you’re calm, you’re not fooling around, and you’re definitely not talking when the teacher is talking. Self-regulation means you’re ready to learn.

Not sure.

Something that can help you, self-regulation helps you work.

Can’t remember.

When you say self-regulation I focus, I can’t really focus when others are talking- I lose control a little.

It means you think of yourself.

While I was conducting these interviews it became obvious to me after the first few students that the word self-regulation was causing some trouble. Even though we had talked about this word a lot and had it written on the board, it didn’t appear from these interviews that it was a term that was really sticking with my students. We revisited it as a class after the interviews and many were still a little stuck until we started associating it with our tools for learning and our zones. From the results of this interview question it became quite clear that it’s important to ensure students are comfortable with the terminology you are using about self-regulation so they can internalize it and make connections easier. Although these responses do show that some of the students had some understanding of the term, they weren’t able to go into a lot detail, which could also be related to the fact that they are in Grade 1 and 2 and are just learning about self-regulation as well as learning how to describe their learning and share what they know. But it could also be attributed to the fact that self-regulation is a big word and the students had a hard time linking this word with the tools for learning and the zones. The knowledge from this interview helped me to rethink my teaching of self-regulation and gave me a focus for moving forwards in terms of using the word self-regulation in the classroom. Once the zones had been
clearly established in the classroom and the students had a good understanding of what feelings belonged to which zone I could start teaching the strategies that were directly related to the zones. Next I started planning how to teach the strategies and which strategies I wanted to teach first based on the needs of the students in my class.

**Cycle 3 - Tools for Learning**

From here I entered the third cycle of planning, acting, reflecting and revising. The bulk of my self-regulation lessons did not formally start until school returned in January due to the process of waiting for ethics approval. At this point students were really clear with the Zones and our own class Zones stoplight. The language and the stoplight were being used on a regular basis and students were able to move their stars in and out of the different zones throughout the day as their feelings changed.

Something I did early in January before starting my formal lessons on self-regulation tools was put out the noise cancelling headphones. Kids Enabled and Sensory Smart Parent are two websites that describe the use of noise cancelling headphones for students in order to block out noise to focus and concentrate. One day I put the noise cancelling headphones out in a bin to see what would happen when students found them. I had only informally mentioned to the students what they were for; overall students seemed to know when to use them and when not to use them. Looking back at my reflective journal I described how:

_Today I put out a bin of noise cancelling headphones. I have informally mentioned to the students what they are for, but we have not had any formal lessons on them. Of course when one student noticed them he had to tell his peers about it and they became the talk of the class. I was surprised that once the students noticed them they didn’t all rush to try them out. Through the day I noticed a few students get up to try them, and even had to_
assure one student that it was ok if he wanted to use them. They seemed to use them at appropriate times, one student used them during quiet reading and two students used them during writing time. There weren’t any fights over them and students put them back when they were finished the activity they were using them for.

It was interesting to watch students take the tools and use them before they had been discussed in class. It showed me that the students in my class were aware of their classroom environment and that students are capable of seeking their own self-regulation tools when needed, without having had a formal lesson on the tool. The formal lessons on the self-regulation tools followed.

In order to introduce my students to the different self-regulation tools we would now be exploring in our classroom I wanted to provide students with a situation they could relate to in order to see how the tools could be used. Based on my experience with primary students and my knowledge of this particular group of students I recognized that one of the best ways to introduce them to something new was through the use of children’s literature. Many children’s books provide good examples of characters that have self-regulatory struggles and success. The value in using these types of stories is “that our students become participants in the lives of the storybook characters, sharing their problems and wanting them to make the right choices as they think about what they would do in a similar situation” (Greengrass, 2010, p.2). This group of students was able to relate to and make connections to the characters in the stories and find connections from their own experiences to these characters. There are many books available that tie to the idea of self-regulation and there are others that can be used to promote self-regulation and lead to engaging discussions with students about self-regulation.

As a starting point for introducing and discussing the use of self-regulation tools in our classroom I read my class a really great book written by Barbara Esham (2008) titled *Mrs.*
Gorski I think I have the Wiggle Fidgets. This story is about a boy named David who has a hard
time controlling his body and as a result always seems to cause some sort of trouble. During the
story David figures out his own tools to use to help cure him of the wiggle fidgets and he shares
his solutions with his parents and teacher. The students in my class seemed to really relate to
David and were able to describe what happened to David when he was unable to control his own
body. During the story students were asked questions and their responses amazed me, as they
were able to recognize the challenges David was having controlling his wiggle fidgets and
describe their own experiences with the wiggle fidgets. Later in the day I was able to have quick
interviews with the students about the story. Here are some of the responses during those
interviews:

Teacher: What is your body doing when you are paying attention?

Students: Sitting at your desk or on the carpet and listening.

Not wiggling at your seat.

Your body is quiet and listening.

You’re not hyper, you have the brain power to listen.

Teacher: Do you ever feel like you have the wiggle fidgets? What do you do to control
them?

Students: I feel the wiggle fidgets a lot. I take deep breaths and sit on my chair with my
hands in my lap- and put distractions away.

When my hands keep wiggling I sit on them and that helps me.

Observations I made after the story were that many students were becoming aware of their own
wiggle fidgets. Students were recognizing when their wiggle fidgets were making it hard for
them to focus and when they were being distracting to others. Some students were also telling
their peers when their behaviour was being distracting to them. It was really exciting to see
students starting to recognize this in themselves and others. Through class discussions about what the wiggle fidgets were there seemed to be general consensus amongst the students that wiggle fidgets occur when you are uncomfortable, when you can’t stop wiggling, when you’re hyper and can’t slow down, and if you have trouble sitting on your chair or on the carpet. Judging from the class discussion and ideas about having the wiggle, it was pretty clear they all had a good understanding on what the wiggle fidgets were. The next part was to teach the students about the tools they could use to help control those wiggle fidgets.

Over the next couple of weeks we talked about the different tools in our class that are designed to help us focus, listen and be in our green- calm, alert and ready to learn zone. We talked about how the tools are designed to help our bodies so our brains can focus, learn, and work. The tools in my class included, fidgets, wiggle seats, yoga ball, noise cancelling headphones, weighted blanket, and a quiet workspace at the back of the room or at the table in hall. We discussed as a class how each tool should be used and when they should be used, referring to them as tools for learning, not toys. If they were being used as toys the student would be informed the tool was not doing its job and would be asked to put it away. We talked about how a tool should not be used all day but just when you feel your body needs a distraction so your brain can focus and learn. The tools were only to be used during the particular task and then returned when you didn’t need it or when that task was finished. For example, a wiggle seat was not meant to be at a student’s desk all day, it was to be used when someone was having a hard time sitting still at your table and she or he needed a tool to improve focus. We discussed how using a tool too much could cause your body and brain to adapt to the tool, and as a result it may no longer do the job it was meant to do.
After introducing my class to all of the tools for learning and discussing how to use the tools, I spent the next couple of weeks observing their response to the tools. I looked at my observations of the class and my own reflections to plan out where to go next. From my reflection journal some of my observations included:

Some students are getting distracted with and have to be reminded what the purpose of a fidget is- we need to have another discussion about the use of this tool.

Today we needed a reminder about the use of the yoga ball and that it doesn’t belong on the carpet during lunch hour or read aloud time. If students need the ball during read aloud they should be sitting at their table or on the edge of the carpet so they are out of other students’ way.

Some of my other observations at that time show that at the beginning students were frequently asking to use the yoga ball and wiggle seats, but more teaching was needed about how to use these tools, as some students would take the ball or wiggle seat and use it all day. The question I then had to think about was, is the tool currently being seen as a novelty or do the students really need it that long?

The following findings are from student interviews where I asked students a question about the tools for learning and self-regulation strategies they had been learning and using in the classroom.

Teacher: What self-regulation/tools for learning strategies have you been using to help you focus?

Students: Fidgets, I squeeze, the ball when I’m wiggling on my chair. The weighted blanket makes my back comfortable. The wiggle cushion- I wiggle around on it. I know I need a tool when I’m wiggling around.

I hold on to my seat really hard and count to 10 when I’m frustrated.

Sometimes a fidget helps me focus and watch.
The wiggle seat- it helps so I don’t tip my chair. Sometimes the weighted blanket it helps me relax and I can focus on my jobs. (Teacher: Why does it make you feel relaxed?) Because it’s really heavy.

The wiggle seat always helps me-sometimes I have a hard time sitting on my chair without wiggling around-the wiggle seat lets me wiggle. The yoga ball let’s me roll, instead of the chair. The fidgets-they help my hands work better, my hands move around a lot-they help my hands stay in control.

Fidgets- when you think in your writing- I squeeze a squishy ball/foam handle really hard so I can think more.

Ignore people who are talking.

Fidgets they help me learn on the carpet when your teaching- sometimes I get distracted with other people, but when I have one it helps me focus. When I’m angry I can just squeeze it hard.

On the carpet I use my hands and play with them or a fidget. At my chair I use a ball or wiggle seat, it helps me not tip in my chair.

I’ve been using a fidget-when my hands are touching things I know to get a fidget. When I sit with the wiggle cushion/yoga ball they help me move a little so I don’t have to lift my chair. When I want to be hugged I use the weighted blanket.

I self-regulate, I try and think of myself to focus.

The student responses to this question showed me that my students were learning how to use the self-regulation tools for learning and that they had an understanding of why these tools worked for them and how they could use the tools. These responses help support the fact that self-regulation strategies can be taught to primary students at the Grade 1 and 2 level and that they are capable of reflecting on their use of these tools.

**Cycle 4- Re-teaching Tools for Learning**

After reflecting and revising I entered into cycle four, which took into consideration classroom observations and self-reflection of my student’s response to the self-regulation tools they had learned about. Through my observations and self-reflection it became clear that
constant re-teaching and re-enforcing was needed. I had to remind myself that these tools were new to my students and that they were learning how to regulate their behaviour as well as learn how to recognize and find ways to meet their own self-regulation needs. The plan for the fourth cycle was to re-teach based on the needs of the class.

This re-teaching wasn’t in the form of long lessons, but just 5-15 minute classroom discussions on the use of the tool. If I saw an issue that needed to be addressed regarding the use of a tool, we addressed it immediately. It was hard to predict what kind of issues would arise with the tools, but being flexible allowed me to teach the use of these self-regulation learning tools as needed. My reflection journal shows that students had to be reminded that they didn’t need to ask to use a learning tool and that they could take one when they felt they needed it. It took a while for my students to recognize that they didn’t have to ask all the time, probably because they are constantly asking permission for various things in the classroom, so not having to ask for something was new for them. My reflections also show that constant reminders were given to students that the use of the learning tools should go unnoticed by others and were not meant to cause disruptions to the class. If a student had a fidget and it was obvious to everyone a quick reminder would be given to remind the student how to use the tool properly. I wanted the students to have the chance to use the tools they felt they needed with opportunities for learning to use them properly; this is why a quick reminder would be given to the student so they had the chance to work with the tool appropriately.

After looking back through my reflections I was able to look at common trends around the use of the tools. One trend plays to the idea of, if one person has it, I should have something to. My reflections describe how when the tools were first introduced it was quite noticeable that if we were doing a carpet activity and one student got up to get a tool we had to discuss how
there was no need for others to follow, because this is what sometimes happened. There were
times when one student would quietly go get a fidget and two or three students would follow;
this was very distracting to myself while teaching and to the other students who were listening. It
made me wonder if the students who followed actually needed the tool or if they were just
reminded that there was something there and the, “If they have one then I want one,” mentality
set in. Since the introduction of these tools to the whole class was new there may have been a
novelty effect. I started to watch to see if students were using the tools when they needed them
and which students were using them because they wanted to use them and not because they
needed it. This was hard to distinguish, because it is really the student who can tell you if they
feel they need the ball or wiggle seat or if they just like to use it because they like it. Interviews
with my students about the use of the tools gave me more insight into novelty vs. need and how
they felt about the tools and what tools worked for them.

What I did realize was that teaching the use of the tools is ongoing depending on the class
and what they are doing with the tools. I had to have many classroom discussions over the rest of
the school year about the tools. Revisiting the reason for them and when they should be used
depending on what was happening in my classroom in regards to their use.

After spring break the students had been away from school for a week and it is always
interesting to see what they remember and what they have forgotten about class rules and
routines when they return. We took some time to work on their Zones of Regulation booklets-
my reflection journal states that “the students still seem to be pretty good at describing what their
body and face may look like in these zones and what makes them feel in these zones.” It was
good to see that they hadn’t lost this knowledge since it was such a large part of our classroom
environment. I also made class observations on the use of the self-regulation tools they had been
learning about before the break. Here are some observations taken from my reflective journal on the use of self-regulation tools after spring break:

This week I notice that many students are not using the tools for the appropriate reasons—some students get the tool before a job is started, they go to the shelf and take the tool without trying to first work at their table. Many students are keeping the tool for extended periods of time, through the morning, through lunch, all afternoon and other students are commenting on this type of frequent use. Why is it that the tools are being used this way now, when there was not sign of them being used this way before spring break? Are the tools seen as exciting, and is it possible to eliminate the excitement of the tools. These tools are not new; they have been in the class for a while now. I think we have to readdress the tools, why we have them in our class as well as when and how we should use them.

Another interesting observation that came from my notes was how some student behaviours had changed in regards to the use of the tools.

Some students were acting differently than they had before, showing behaviours that demonstrated that they needed a tool by constantly leaning back on their chairs. When asked to set their chairs back on the floor, and try to stand or kneel at their table for a short period of time these students get frustrated saying they can’t and that they need the tools, wiggle seat or yoga ball. Before these students would just get a tool when needed instead of seeking out a response from me. I wonder if they are developing behaviours to ensure they get to use a tool instead of continuing to recognize when they should get a tool.
From my reflections after spring break it became clear that we needed to dig deeper into the use of the tools and I had to do some re-teaching on the tools and their purpose in the classroom. Based on the last reflection it was clear that we needed to talk about behaviour and that using the tools was at their discretion; for example if a student was going to constantly lean back on the chair he or she wasn’t showing proper use of the chair and it wouldn’t automatically result in being able to use the yoga ball or wiggle seat all day. Being able to recognize these types of seeking behaviours is part of really getting to know your students and their needs. In this case these students seemed to think that constantly leaning back on their chair would lead to me giving them the yoga ball or wiggle seat to use all the time. It did not; instead my response was “If you are having a hard time keeping the chair legs on the floor you need to try kneeling or standing since sitting is obviously not working.” After a few of days of this response the constant chair leaning disappeared and these students went back to using the tools when they felt they needed them.

Since the use of children’s literature for teaching self-regulation was successful I decided to continue using other children’s literature to re-teach my students about self-regulation tools. During the re-teaching cycle and throughout the rest of the school year I used many different books. Another book I used during this re-teaching cycle was *Arnie and his School Tools: Simple Sensory Tools that Build Success* by Jennifer Veenendall (2008). As soon as I read the first couple of pages students were already showing me their hand signal for making connections. It was easy to recognize that my students could relate to the character in the story and wanted to share their connections. After the story we spent more time talking about the use of the tools for learning. Students who consistently use the tools were eager to share with the class the tools he or she uses and how he or she uses them. The common reasons students used the yoga ball
seemed to be because it helped them when they couldn’t keep all the legs of their chair on the floor, and they liked that they could move around on the ball while still working at their desk. The common reason students liked the wiggle seats were because it helped them move on their chair and keep working when they couldn’t sit still. Other students who used the weighted blanket described how they could put the blanket on their lap or they put it behind their back on their chair. They liked the feel of the weighted blanket with comments that it was soft, felt like a hug and just made them feel cozy. While talking about the noise cancelling headphones it became clear that the students who used this tool used it when they were having a hard time focusing on work when others were talking. It helped block out distractions and helped students think when they needed quiet space. During this discussion time we also talked about the hand fidgets, and how they can be used as a tool for learning. We talked about when we would use the hand fidgets and how we would use them. One student in the class helped out with this since he already had a hand fidget he was using while I was reading the story. He showed the class the fidget he had and I asked the class if anyone knew he had it; they all responded no. I then asked the class if he was playing with the hand fidget; again their response was no. I asked the students if his use of the hand fidget was distracting to them; again their response was no. This showed me that he was using the fidget appropriately and no one else had any idea he was using it, which is the goal, to use the tools discretely without distracting others. It was great listening to the students teach each other about the tools and how to use them as tools for learning. It showed me they had learned the purpose of the tools and had been trying them out and figuring out how the tools work for them.

What I really enjoyed about how this lesson went was how it involved all students sharing their ideas about the tools we have in our classroom and how to use them. The discussion
time was successful because it became more about the students sharing what they know about the use of the tools and me facilitating and guiding the discussion. There were still further discussions throughout the year on each tool to ensure students understood the proper use of the tools and when they should be looking for a tool to help them. This cycle didn’t necessarily end, as the teaching of the tools continued on as needed, data was also being collected and my own reflections were being made on student use of the tools.

In order to track student use of the tools in the classroom I kept a checklist. This data was collected one day a week for a period of 14 weeks. I was looking for an increase in the numbers and trends across the class with respect to their use of self-regulation strategies, more specifically self-regulation tools (fidgets, wiggle seats, alternate seating).

The results of the following tables show how many times the tools were being used in a day. While the daily usage for each tool is not excessive there are increases in the use of the different tools over the course of the 14 weeks. Overall, students didn’t use the tools a lot; they were being used when they felt they needed them. The rate of increase in the use of tools occurs at week 5 and there continues to be steady use of the tools in the following weeks. This could be due to student comfort levels with the tools. The teaching of the tools had taken place and now students had a better understanding of how to use the tools and were taking responsibility for using a tool if they felt they needed it.

The following 6 tables show the rate at which each tool was used over the 14-week period. The tables show the rate at which most tools were used increased around week 5.
Table 1

Classroom Self-Regulation Tools
Student Use of Fidgets
Weeks 1 - 14

Times Used in One Day

Increases in the use of fidgets occurred in weeks 5, 6 and 8.
Table 2

Classroom Self-Regulation Tools
Student Use of Yoga Ball
Weeks 1 - 14

Times Used in One Day

Increases in the use of the yoga ball occurred in weeks 7-10. The yoga ball was very popular with a small group of students who used it regularly.
Table 3

Classroom Self-Regulation Tools
Student Use of Wiggle Seat
Weeks 1 - 14

Times Used in One Day

Increases in the use of the wiggle seat occurred in weeks 5, 9, and 10.
Table 4

Classroom Self-Regulation Tools
Student Use of Weighted Blanket
Weeks 1 - 14

<table>
<thead>
<tr>
<th>Weighted Blanket Times Used in one day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 14</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>0</td>
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</tbody>
</table>

Times Used in One Day

There are no notable increases in the use of the weighted blanket or quiet workspaces over the 14-week period, other than Week 9. From my own classroom observations and reflections this is most likely due to the fact there were only a few students who frequently used these tools. The weighted blanket was popular with one student in particular who used it quite frequently.
Table 5

Classroom Self-Regulation Tools
Student Use of Quiet Workspace
Weeks 1 - 14

Times Used in One Day

There does not appear to be a drastic increase in the use of the quiet workspace over the 14-week period. The quiet workspace I was tracking was a quiet table that sat outside our classroom door. Again it was only a few students who frequently asked to use this space, mostly during writing, math, or quiet reading time.
Increases in the use of the noise-cancelling headphones are seen in weeks 9, 10, 11 and 14. Students mostly used the noise cancelling headphones during quiet reading, writing, and other quiet working times. There were 3 sets of noise cancelling headphones available in my classroom.

The increases in the use of the tools were largely seen in the mid range of weeks observed. This could be due to a few different factors, such as the students were becoming more comfortable with the tools in the classroom, students were becoming more comfortable using the tools independently, and students were recognizing their own regulation needs for those tools. The same group of 5 or 6 students frequently used the tools in the classroom. There were students in the class who never used any tools and others who may have used a tool a handful of
times over the year. Some students gravitated more towards the wiggle seat or yoga ball while others used the noise cancelling headphones. It seems that students who felt comfortable with a tool used that same tool frequently. For example students who didn’t like the noise in the classroom during writing or working times would often be seen getting the noise cancelling headphones to use at those times. There definitely seemed to be tools students preferred over others, the tools they used were very clearly related to the student’s self-regulation needs. The results of the checklists show that there was an increase in student use of the self-regulation tools over this period of time, supporting the notion that students can be taught how to use the tools and when given exposure to the tools in the classroom will make use of them. As described earlier in cycles 3 and 4, the teaching of these self-regulation tools for learning was ongoing and revisited as needed. My goal was to teach my students how to use these tools effectively and independently in order to support their self-regulation needs.

With the students now fully underway using their tools for learning in order to maintain their own self-regulation I was able to move into a fifth cycle, focusing more on teaching students strategies for calming down.

**Cycle 5- Emotions and Tools for Calming**

The fifth cycle’s focus related back to *The Zones of Regulation* (Kuypers, 2011) program and teaching students about their emotions and how to use calm down strategies. Shanker (2013) states, “constantly helping students to develop emotion-regulating skills should be a core element in our teaching and mindset toolkit” (p. 33). We need to teach our students about their emotions and how to understand how they are feeling, why they may be feeling that way, and what they can do to work through it. Bronson (2000) also points out that primary school children are better able to regulate their emotions and behaviour than younger children. Primary aged students are
able to understand that emotions need to be regulated and can interpret what is causing arousal and what needs to be done about it (Bronson, 2000). Therefore, they are better able to do something about it. As a result it is possible to teach primary students strategies to regulate these emotions and have control in those situations. Using *The Zones of Regulation* (Kuypers, 2011) I set out to teach my students about emotions and self-regulation strategies they could use to help them in different situations.

The lessons I used came directly from *The Zones of Regulation* (Kuypers, 2011) program and were adapted to suit the needs of my class. The first lesson I started with was “Caution! Triggers Ahead” (Kuypers, 2011) -which sets out to help students gain awareness that they are more successful if they can stay in their green zone and have students recognize their personal triggers that lead to the yellow or red zone (Kuypers, 2011). This was a really great lesson, which turned into more of a class conversation about a time they felt in their yellow zone and what caused them to feel that way. We started by reviewing how we feel when we are in the green and yellow zones. We then talked about why it’s important to be in our green zone and what being in a green zone feels like. Next we discussed what our triggers are - and that triggers are things that cause us to move to our yellow, red or blue zone. I showed a picture of a caution sign and the students were able to relate the sign to the yellow zone. We talked about how when you are in your yellow zone you need to take caution and be aware of how you are feeling so you don’t move into the red zone.

I had the students close their eyes and picture a time they felt in a yellow zone and what caused them to feel that way. After they thought of a time they turned to a partner and shared their yellow zone feeling. We then came back together as a class and had a class discussion. Because it’s important for students to listen to each other and be respectful of each other’s
feelings we sat in a circle so we can all see each other and used a stuffed monkey as a speaker’s tool. When a student was given the monkey it was their turn to speak and everyone else followed appropriate listening procedures while listening to the speaker. All of the students shared a time they felt in a yellow zone and were able to clearly articulate what caused them to feel that way and why. There seemed to be common themes in the stories: students felt in their yellow zone when they were hurt, when someone didn’t want to play with them and when someone lied. They were able to use language of frustrated, sad, hurt and upset. It was amazing to see the respect students showed each other during this time. Even the quietest students in the class shared an experience, which showed me everyone felt safe enough to share these feelings and experiences. The stories were about their experiences and their emotional regulation, which became more meaningful than me doing the sharing and talking.

After the discussions I felt my students had a really good understanding of how they felt in the different zones and that they were seeing the importance in understanding their triggers and the triggers of others. From here it was time to learn about the strategies we can use when feeling in a yellow, red, or even blue zone. I used another lesson from *The Zones of Regulation* (Kuypers, 2011) titled Exploring Tools for Calming, which focuses on having students try out calming strategies that can help their mind and body. During these lessons students had the opportunity to learn how calming strategies helps regulate their zones. There were four calming strategies. What I hoped would only take two lessons, took about four lessons in order to get in depth with each strategy and have students practice and reflect. Notes from my reflections show that this type of lesson took longer with the whole class for various reasons:

The challenge with teaching these kinds of lessons to a whole class is that it is really difficult to focus on practicing the strategies with a full class of students. There were
constant distractions from students who got off task and that distracted the students who were trying their best to practice. If I were able to break the class into 3-4 smaller groups and teach the strategies in these smaller groups there would be more opportunity for conversation and time to watch each student practice the strategy. It was harder to do this with a whole class, many students were not as comfortable sharing, many students got distracted and I didn’t have everyone’s attention 100% of the time. I just hoped I had the attention of enough to make an impact and had to remember that I was giving them some tools they can take away and use what works best for them.

Smaller groups for this lesson would have been beneficial but I did not have the resources available to adequately teach these strategies to small groups so I had to continue doing the best I could teaching the whole class. With future classes I will ensure I have the resources to into smaller groups for these lessons. With that in mind the lessons with this class had to continue.

In order for students to use these calm down strategies they had to understand and be able to do the deep breathing associated with the strategies. When I asked students if they knew what deep breathing was many of them started breathing loudly with short breaths. We then discussed and practiced how to take a deep breath. We used a volunteer who laid on the floor and put her hands on her tummy. We talked about filling our bellies with air through our nose just like you are filling a balloon and then described how you release that air slowly and quietly through your mouth. Student volunteers showed their deep breathing and they had the chance to work with a partner and use a breathing buddy (a stuffy placed on their chest while laying down) to see the body movement when deep breathing. The students loved the breathing buddies and working with a partner. After some practice we returned to the circle and more student volunteers wanted to show the class how well they could do their deep breathing. Notes from my reflective journal
describe how; “I was impressed with how well they handled this activity, many students were really concentrating and focusing on their breathing. All the students wanted to show off their deep breathing. My students seem to be showing they understand how deep breathing can calm their body and mind.”

Since not all strategies work for all students it was important to teach a variety of calming strategies students could practice so they had some choice of what works for them. The four calming strategies I taught came from The Zones of Regulation (Kuypers, 2011) program. They were, “The Six-Sides of Breathing, Lazy 8 Breathing, Calming Sequence, and Counting to 10” (Kuypers, 2011). We practiced each strategy in class and talked about each strategy and why students thought that strategy would work for them. My students were very confident sharing their experiences and when they had used a calm down strategy and what they used. Many students had their own strategies that they already used so teaching these strategies added more to their toolbox. Students who had no strategies for helping them calm down now had an idea of what they could do when they found themselves in a yellow, red or blue zone.

I conducted a set of interviews after the lesson on calm down strategies to see what my students had learned about being calm and using strategies to help calm themselves. Here are the results of those interviews:

Teacher: How do you know that you are calm? What do you look like? How does your body feel?

Students: I feel happy, good, great-ready to learn. I’m looking up and listening.
I’m breathing slowly and I’m not being silly.
Relaxed and ready, I’m not talking.
I’m sitting quietly, relaxed and not doing anything that will make me upset. I’m calm when I’m relaxed. I’m focused, I’m ready to do stuff at school.
I feel good. I feel ready to learn. I look happy.

My body feels happy. My body is staying still. I’m not usually calm; I’m usually excited so I don’t always know what it feels like to be calm. I’m usually excited to see what is going to happen next.

Relaxed and patient, face looking normal no major face alerts.

Based on these responses most students were able to describe how their body felt when they were calm. You will notice the comment from one student who states, “I don’t always know what it feels like to be calm. I’m usually excited to see what is going to happen next.” This response is very reflective from this student. This is a student who has a difficult time self-regulating, where his body is constantly taking over and he is always fidgeting, distracted and gets off topic. The fact that he can express he doesn’t always know what calm feels like showed me that he does have an understanding of what is happening for his body. It gave me hope that I could continue to work with this student to help him recognize his calm state. We worked on it for the rest of the year; some days were more challenging than others for him to find a calm state.

As one can see from the student responses, all the students had a different way of describing what calm meant to them. Self-regulation strategies are important skills that contribute to life long learning. Learning effective self-regulatory strategies for emotions will help my students in and out of the classroom and will hopefully be developed and used beyond the learning experience.

For my final set of interviews I wanted to know what my students had learned about calm down strategies and how these strategies are beneficial for self-regulation. The following interview questions show my findings:

Teacher: “How does knowing different types of calming strategies help us?”
Students: *Six-sides of breathing is helping me- when I’m frustrated I can do it on my desk. I used it when people weren’t listening and I did the six-sides of breathing. I wanted to do the job quickly.*

*I can settle down.*

*I’m not sure.*

*They help me. They can make me feel calm.*

*They help me breath- be relaxed, calm, and ready to learn.*

*The fidgets help me- I can squeeze them, it helps me calm down- once I squeeze it makes me feel better.*

*The weighted blanket- it lays on me, weight on my bones it makes me calm down.*

*I can’t remember.*

Overall the student responses from this question showed that some students were able to recognize why it was important to know different calm down strategies. Although the responses are not extremely detailed or elaborate they still show what my students learned about why these strategies are important. The two students who didn’t have an answer for this question were able to answer the other two questions and even though they didn’t have an answer for this question still demonstrated a good understanding of calm down strategies. The following interview question shows what calm down strategies my students learned:

Teacher: *Can you tell me about some of the calm down strategies you have learned?*

Students: *Lazy 8 breathing, six-sides of breathing, (you breath in-hold- breath out, and do it again) (he demonstrated the technique for me). They both work really good.*

*Lazy 8, you breath in, hold, and out- you follow the path of the 8.*

*Lazy 8- breath and hold, squeeze and count. (calming sequence)*

*Lazy 8, and the one that has the repeat- squeeze hands, rub head and legs. (calming sequence)*

*Sit on the chair and pull up, fidgets.*
Lazy 8- showed with hand- breath in, breath out- with finger like an 8. Counting to 10. The triangle when you hold. (This student knew the idea but not the name – six-sides of breathing.)

Lazy 8 breathing, I make an 8 in my head- go around and breath in and out.

The results of these responses show that my students remembered the calming techniques and how they worked. As one can see from the responses some students could explain the strategy but forgot what it was called. Their ability to name it was less important than their ability to use it. These interview responses continue to show that it is possible to teach these strategies to primary students. The question remains as to whether students are able to internalize these strategies and use them when they feel out of their green zone. This is what I hoped to discover with my final interview question.

Teacher: *Can you think of a time you have used a calming technique?*

Students: *I wanted to cook something and my mom said no, I was upset. So I went on the couch and did lazy 8.*

*Yesterday after school I was hungry- I had to wait for dinner, I was mad- I had to use my techniques, I went to my room and counted down from 10.*

*I’ve used counting to 10. When my brother was bugging me- I went in my room, to have some space and calm down.*

*Yes at my house. This student didn’t want to share what technique he used.*

*At home when I’m upset I go in my room, lay on my bed and count to 10.*

*I sometimes count to 5 or by 10s to 100. Snuggling my stuffies helps from my yellow to my green zone.*

The results of this final interview question show that some students were able to tell me about a time they used a calming technique or about calming techniques that work for them. Even though every student in the class was not able to give an answer these responses do show that primary
students are able to describe calming techniques that work for them and what they do when they are upset.

**Cycle 6- Bringing It All Together**

The sixth and final cycle focused on bringing everything the students had learned over the year together. The students had been working with their Zones of Regulation books through the different cycles and now had the chance to look at all the strategies they had learned and add them to their Zones books. *The Zones of Regulation* (Kuypers, 2011) program has a lot of great reproducibles to use and we used the Zones Tool Reproducible for this final activity. The reproducible has visuals of different self-regulating strategies such as; fidgets, breathing techniques, go for a walk, noise cancelling headphones, quiet workspace, etc. We talked about each strategy and students decided which zone they felt that strategy would work best for them. I made it clear that the students didn’t have to use all of the strategies on their sheet, just the ones that had meaning to them. It was interesting to hear conversations amongst the students as they worked through this process. I could see that the majority of my students had an understanding of these strategies and how they have or how they could help. We were able to celebrate the learning that had occurred and how the students were becoming very good at regulating themselves during the day. I can only hope that these students will continue to use these strategies both in and out of school.

Overall the results from my and observations show positive responses from my students demonstrating that self-regulation strategies can be taught in the primary classroom. All of the lessons were conducted with the whole class and the results show what many of the students learned.
My action research cycles focused on:

- Zones of Regulation, being self-aware and using the classroom stoplight to demonstrate awareness of self.
- Using children’s literature that presented characters learning and using self-regulation strategies.
- Effective use of tools (fidgets, wiggle seat, etc.) both taught and revisited during the year as needed.
- Teaching calming strategies.
- Teaching what it means to be calm and ready to learn, how your body feels.
- Recognizing emotions in self and others.

Student learning about self-regulation included:

- Self-awareness of the zones and using the class stoplight to check-in during the day.
- Effective tool use (fidgets, wiggle seat, etc.)
- Emotional awareness, recognizing emotions in self and others.
- Learning, practicing and using calming strategies.
- Recognizing what their bodies feel like when they are calm and ready to learn.
- Being respectful of others learning needs and ways to self-regulate.

Through this project I set out to investigate the following question: How can I successfully implement and teach self-regulation strategies in my classroom. Through my own reflective journal, student interviews, and checklists, the results show that teaching self-regulation strategies in a primary classroom is possible. However, it has to be an ongoing process over the course of the school year that is adjusted to meet the needs of the students to ensure the students are learning how to best use the strategies being taught. In the last chapter I will outline
my conclusions from the study and provide recommendations based on my experience for other teachers who want to teach self-regulation in their own primary class.
Chapter 5
Conclusions and Recommendations

Conclusions

Self-regulation is an important learning skill whose value is being recognized across educational fields. This study explores one experience of building self-regulatory skills with primary students in a whole class environment. The purpose of this study was to look at how I could successfully implement and teach self-regulation strategies in my classroom. Through my experience of teaching self-regulation strategies, reflecting on my teaching, observing my class, and conducting interviews with students it can be concluded that it is possible to teach these strategies to primary students. Self-regulation skills became valuable for students within my classroom.

As described in my literature review, Bronson (2000) strongly pointed out that although the family continues to be important, school and peer experiences become very powerful during the primary years. This is a good reason why it is important to incorporate self-regulation in the classroom. During my study it was interesting to watch as students helped and supported each other throughout the day. During lessons and class discussions students respectfully listened to their peers ideas and experiences in the area of self-regulation and made connections to their peers with their own experiences. Since the self-regulation learning and awareness in our classroom was a whole class experience, it may have helped build the supportive relationships amongst students in my class. No one was been singled out or was given different tools from other students; everyone was learning how to use the tools together and knew that they were available to everyone. Having these discussions helped foster a caring environment and showed how powerful peer relationships are even at a young age. This finding supports my views that there is value in teaching self-regulation to a whole primary classroom. It builds community,
respect and support for each other within the classroom. Through my study I noticed students became aware of their own needs as learners, but that they also became aware of and respectful of their peers’ needs as learners. Many students would be able to tell you which students liked to work in quiet work spaces, which students were sensitive to noise in the class and liked to use the noise cancelling headphones, which students had trouble sitting on the carpet, or which students liked to use the yoga ball or wiggle seats at their chair to help focus during seat work. This type of understanding, caring and acceptance is essential when creating classroom environments where students feel comfortable using the self-regulation strategies that work for them.

From my experience during this study it became clear that there are many important factors to consider before teaching self-regulation strategies to your students. One of the most important conclusions to this study was that before you can teach self-regulation strategies you have to establish the self-regulation needs of the class. Another conclusion I came to during this study was that once you have determined the self-regulatory needs of the class and what strategies you are going to teach your students you have to consider how you will present these strategies to your students.

**Recommendations**

Based on the conclusions and experiences during my study there are some recommendations I can make for other teachers who are interested in teaching self-regulation in a primary classroom. Since my recommendations are based on my experience with one particular group of students I cannot say that the experience will be the same with another group, or that the way to introduce self-regulation with another group of students should be done the same way I did with this particular group of students. But I can use my conclusions and experience to offer
recommendations for others interested in incorporating self-regulation teaching into their primary classroom.

**Knowing Your Class**

Based on my first conclusion I would strongly recommend that teachers interested in teaching and incorporating self-regulation in their classrooms get to know their students and then establish what the self-regulation needs of the class are. Using Shanker’s (2013) Five Domains of Self-Regulation 1) The Biological Domain, 2) The Emotional Domain, 3) The Cognitive Domain, 4) The Social Domain, and 5) the Prosocial Domain (moral) a classroom teacher can look at each domain and observe their class to establish which areas appear to be strong for their students and which areas need development. For my class, after observations and getting to know the student, it was clear that many of these students needed support in the Emotional, Cognitive, and Social Domain of self-regulation. By taking the time to get to know the needs of my students I had a much better idea of where the self-regulation focus for my class should be. From there I had a good place to start when looking for resources, lessons, and other materials to use within my classroom. I looked for resources, lessons and materials that focused on the emotional, cognitive, and social domain of self-regulation. Part of my recommendation is that once you have established the areas of development you can use Shanker’s recommendations for teaching strategies or look for self-regulation programs and materials that pertain to those areas.

**Language of Self-Regulation**

Once you have established the self-regulation needs of the class and decided which strategies you will be working on, you can then start to think about how you will present and teach these strategies within your classroom. When teaching self-regulation to primary students I would also recommend that teachers use appropriate self-regulation terminology the students can
relate to. Since I was teaching the students in my class about *The Zones of Regulation* (Kuypers, 2011), my students were learning language associated with self-regulation and learning how to identify and describe their emotions and behaviour. Since the language of Zones was something we used in the classroom everyday, students became well versed in the terminology and were able to recognize and describe their own feelings in these Zones. For my class, the green, yellow, red and blue zone language was common between all students and they understood each other when describing which zone they were in. I was also able to use this language with my students when I was feeling in a yellow, red, or blue zone. Since my students understood what the language meant, they could relate how they felt when they were in those zones to their peers and my own feelings. When other students or myself used the zones to state how we were feeling many students responded in a way that showed understanding and caring. For example if I was not feeling well for some reason, I would tell my students I was in a blue zone and why I was in a blue zone, and many of them would react in a way that showed understanding of those feelings. Some students could be heard reminding others, remember Ms. W isn’t feeling well so let’s make sure we work quietly or let’s make sure we are listening. It gave my students and myself an equal playing field, understanding that we all have feelings and emotions, good days and bad days, and that it’s ok for that to happen, but it’s what we do and how we manage those feelings that’s important.

**Tools for Learning**

Since many self-regulation strategies require access to different tools for learning, I strongly recommend that students have access to these tools in the classroom with instruction in how to use them and how they are designed to help with independent self-regulation. I introduced tools for learning in my class to help students who may need more specific tools to
help with their self-regulation needs. Some of these tools for learning were as simple as having a basket of fidgets in the classroom; a basket filled with various hand held items that students could hold in order to keep their body busy so their brain could learn. Some fidgets in my basket included squishy balls, pieces of cord, pieces of fabric, felt, plastic rings, hair curlers, and handle squeezes to name a few. Fidgets do not have to be complicated or expensive; they should fit in a child’s hand so they can be held, squished, rolled around, etc. Many students in my class started bringing their own small objects from home to use as a fidget, such as Lego men, small bouncy balls, rocks, or other objects they felt helped them. It is important to stress that students need to remember that if it’s used as a tool for learning they may keep it; if it becomes a toy it has to be put away. This can be a hard distinction for some students to make, but it is very important if students are to learn and understand the purpose of a tool for learning, it cannot be used or seen as a toy. Other tools for learning that I would recommend for the classroom include, noise cancelling headphones, wiggle seats, yoga ball, weighted blanket, beanbag chair, and stretchy exercise bands to wrap around a student’s chair legs. While these are just some suggestions of tools I have had experience with and have used in my own classroom, there are many other ideas out there for self-regulation tools. These types of tools are usually taught to students who are already recognized as having a need for the tool, perhaps through part of an IEP. Teaching the tools to a whole class de-mystifies these tools, and creates an atmosphere that allows students to choose to use them as needed within a supportive environment. Since the tools were available to all students in my class they did not seem to pay as much attention to the students who were using the tools; they knew if they needed to use the tools they had access to them.

In order to create an environment that fosters self-regulation I would recommend that classroom teachers create classroom environments where students are comfortable manipulating
and moving around the classroom in order to meet their self-regulation needs. In order to do this my classroom had a variety of tools for learning placed in accessible locations around the room. Students need to understand what tools are available to them, how to access the tools and when the appropriate times for using them are: all necessary components when teaching the tools to a primary class. For example, during read-to-self and writing time, my students knew what the expectations were, but were also free to move around the classroom and sit in different locations or use different tools if they desired. During read-to-self time it was very common to have students sitting or lying on the floor, sitting or lying under tables or the teacher’s desk, or sitting in other quiet spaces throughout the room where they felt comfortable. The expectation was that students had to stay in their spot for the 10-15 minute reading time with enough materials to last the whole time, starting with 5 minutes and building up over the year. Students worked on reading stamina and focus during this time. At the end of the reading time we had a quick check in time where students used hand signals to show if they met the expectations, if they had an area to work on, or if they weren’t able to meet the expectations, making the students accountable for reflecting on their own learning and self-regulation. They also had to say to a partner or myself what they would work on the next day. During writing time you could often see students wearing the noise cancelling headphones if they found the noise in the room too distracting. Some students often felt more comfortable if they were able to lie on the floor or sit at a different location in the room, or at the quiet table in the hall. Other students might be using a wiggle seat or yoga ball to help focus at their seat. It’s important to note that not all of the tools may be used all the time, but the students in my class knew that they were accessible to them throughout the day and they could use them when they needed.
**Using Children’s Literature**

There are a variety of ways self-regulation strategies can be introduced to students. From my experience during this study I found children’s literature to be extremely effective for introducing self-regulation topics and strategies. We know that primary children love to be read to and love-reading books, so, why not use this to teach self-regulation? There are a variety of children’s books available that are written about characters having trouble self-regulating and through the stories these characters are learning to use tools to help them. For this reason one of my main recommendations is to use children’s literature to teach self-regulation strategies to primary students. Julia Cook and Barbara Esham are authors whose stories are based on self-regulation and social-emotional topics for children. Their characters are easy for children to relate to and the students in my class really enjoyed the stories we read and getting to know the characters. They would often refer to these characters when we had classroom discussions about the topics and strategies that were discussed in the books. These stories not only reach out to the students who are struggling with self-regulation or have social-emotional difficulties, but they also reach out to the students who have good self-regulation skills but become easily frustrated with those who don’t. The stories not only teach students about self-regulation strategies but also teach students about acceptance, giving them a look at how students who have a difficult time must be feeling.

**Student Accountability**

Accountability is another part of self-regulation that needs to be addressed when teaching these skills to primary students. If students are not able to take responsibility for their learning and behaviour and be accountable for their learning and behaviour during the day it will be more difficult for them to build independent self-regulation skills. I recommend incorporating quick
check in times during the day. One-way to do this is to create class hand signals that represent: I did my best for the whole time, I still need to work on this, and I had a difficult time. In my class we used thumbs up, side, and down to represent these three areas. It was a quick way for me to ask students to self-reflect on their learning and their own self-regulation. It gave me a snapshot into how the students felt they did during a particular activity. I could use my own observations of students and compare those with the quick check in to see which students were able to evaluate themselves accurately. It gave me a chance to talk to the students I felt may not have been as accurate in their quick self-evaluation in order to understand their thinking behind their reflection, asking them to tell me about what they had been doing, and then working together to come up with some strategies to try next time. One observation I made was that it was that the students who frequently had difficulty self-regulating who would give themselves the thumbs up, possibly because these particular students had a difficult time recognizing their own need for self-regulation. The quick check in times created a quick opportunity for me to follow up with those students needing extra support and guidance with their self-regulation.

**Teacher Awareness**

Early in my study I came to the conclusion that my own self-regulation in the classroom has an affect on my students regulation and their regulation has an affect on me. Bronson (2012) describes how teaching young children self-regulation first requires strong teacher regulation and that children can learn how to regulate their own thoughts, feelings, behaviour and emotions by watching and responding to the self-regulation of the adults around them. From my experience during this study, this was very true. During the year I was very conscious of what was happening in my life outside of school and the stress of school life that carried over into my moods and emotions. There were times when personal situations were having an impact on my
emotions, feelings, and behaviour. Early in the year I discovered that on the days I was tired, I was easily frustrated and reacted differently than on days when I felt well rested. There were days when personal life emotions were impacting my regulation in the classroom, and I became very conscious of trying not to let those emotions play into how I reacted and treated my class. This was not an easy thing to do: there were days when I was able to overcome and regulate myself better in the classroom than others. I had to always keep in mind that my reactions to situations were also teaching my students how to react in similar situations; if I was not acting in a regulated manner I was not modeling good self-regulation for my students. Vandevenlede (2012) describes how teacher’s own self-regulatory competence is important, because teachers who are incapable of self-regulating their own learning will have a difficult time modeling, developing, and stimulating these capabilities in their students. The process of action research provided me with a focused, systematic method for building teacher awareness and skill with self-regulation, as well as exploring strategies for supporting students.

In order for teachers to think about their own self-regulation I recommend following Shanker’s (2013) Five Domains of Self-Regulation and determining their areas of strength and areas of improvement. Teachers also need to think about how they react to their students on days when they are not feeling as, The Zones of Regulation (Kuypers, 2011) would say “in your green zone”. I know for myself, when I was frustrated, not feeling well, sad or upset-within the yellow, red or blue zones my reactions were often different than when I felt in my green or “good” zone. My patience was affected; I found I spoke to my students in a different manner and things that normally would not bother me really seemed to frustrate me more. As I became aware of this I was able to use my own self-regulation strategies to help ensure that my feelings were not affecting my class.
**Method**

Action research is a valuable method for developing reflective teacher inquiry to integrate new theories, strategies or awareness into practice. As this project began to unfold it amazed me how naturally what I was doing in my classroom fit into the cycles of action research; plan, act, reflect, repeat. This cycle guided me as I implemented and taught my students about self-regulation. The method of action research provided a systematic research structure to guide my experience incorporating self-regulation in my classroom. It gave me the opportunity to teach my class about self-regulation, through different lessons. If a lesson didn’t go well or if something needed to be changed I had the opportunity to reflect and re-plan and try again. Since the nature of action research allows you to try again I didn’t find myself getting extremely upset if something didn’t go as planned the first time; I reminded myself that it was part of the process and part of improving my own practice.

**Issues for Further Investigation**

Since the topic of self-regulation is becoming an important topic in education and special education there needs to be further investigation in the value of teaching these skills in a primary classroom. Further investigation is needed to show how self-regulation influences classroom learning and how self-regulation is tied to life-long learning. From my research it became apparent that self-regulation instruction is important in the classroom but there are still very few studies on how best to implement these practices in the classroom. This area definitely needs further investigation in order to support and guide teachers in how to best implement self-regulation instruction in the primary classroom. Further investigation is needed on how teaching self-regulation strategies in the classroom impacts student ability to regulate their emotions, behaviour and learning.
More research is needed to improve teacher training and the implementation of self-regulation strategies within a primary classroom. Moreover, further research should be done looking at the effectiveness of using self-regulation programs in the primary classroom for whole class teaching. Perhaps, this could be done as a comparative study of different self-regulation programs and/or strategies.

Since this area of investigation is just starting to evolve it would be interesting to conduct a study that followed the teaching of self-regulation to one group of students starting in primary and continuing on through their school career. It would be interesting to see what impact the progression and development of self-regulation had on creating independent self-regulated learners.

**Limitations**

Before stating the conclusions of this study it is important to consider its limitations. It is important to remember that this study was conducted with one group of students and one teacher’s experience with that particular group of students. Although the results from this study show that teaching self-regulation to primary students is possible, it cannot be assumed that the way in which this particular group of students was taught would be as effective with a different group of students. The lessons and strategies taught to this group of students were designed with the needs of these particular students in mind. Another class of students may have different needs. Action research is about individual improvement of practice, and teachers who choose to replicate this study should consider the student needs and resources in their own contexts.

**Implications**

From the results of this study it can be concluded that self-regulation strategies can be taught in a primary classroom. When teaching these strategies to primary students there needs to
be opportunity for teachers to teach and re-teach the strategies as needed. Students need opportunities to practice the strategies they have been taught along with positive encouragement of strategy use.

The evidence presented in this research shows that there is a large variety of research demonstrating the importance of self-regulation and the need for self-regulation strategy instruction in the primary classroom. This study provides potential methods and strategies for embedding whole class instruction in self-regulation within a primary program, ensuring that the strategy instruction relates to the needs of the class. Based on this first hand experience I continue to believe in the value of teaching self-regulation to our students.

**Conclusion**

Through this action research project I was able to look at self-regulation in the primary classroom and teach strategies to my class. This is significant for the field of education and self-regulation since it shows the possibilities of self-regulation instruction in the primary classroom. Although the results of my study are specific to one particular group of students the lessons and strategies could be taught to other groups of students in a way that meets the needs of that particular group. I encourage other primary educators to explore, develop, and extend this research to support their students in developing self-regulation strategies as part of their learning.
References


Bruce, S. (2013, May 29). *Action research in special education*. Video retrieved from http://www.youtube.com/watch?v=0gUrPmGWbYE


References


References


References


References


Appendix A

*Self-Reflection Focus Questions*

Date: ___________________ Lesson: ___________________

1) What was the goal of the lesson? What were the planned strategies?

2) Why was the strategy/lesson successful or why was it not successful for this particular group of students?

3) What did I notice about changes in the class in general after the lesson/strategy was taught?

4) What did I notice about student use of self-regulation strategies and their understanding of how and when to use these strategies?

5) Are students able to use self-regulation strategies appropriately?