Self-Regulated Learning and Children At-Risk for Learning Disabilities: Using Motivational Tactics to Support “Reading Rocks!”

by

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Abstract

This project explored self-regulation among children impacted by learning disabilities. More specifically, this thesis examined whether a remedial literacy program called Reading Rocks! offered by the Learning Disabilities Association of Niagara Region, provided participating children opportunities to set goals, develop strategies to meet these goals, and provide internal and external feedback— all processes associated with a model of self-regulated learning as pioneered by Butler and Winne (1995) and Winne and Hadwin (1999). In this thesis, I triangulate the data through the combination of three different methodologies. Firstly, I describe the various elements of the Reading Rocks! program. Secondly, I analyze the data gathered through three semi-structured interviews with three parents of children that participated in the Reading Rocks! program to demonstrate whether the program provides opportunities for children to self-regulate their learning. Thirdly, I also analyze photographic evidence of the motivational workstation boards created by the tutors and children to further illustrate how Reading Rocks! promotes self-regulatory processes among children.
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CHAPTER 1: INTRODUCTION

Learning to read for students with learning disabilities can be a challenging and frustrating task (Cowden, 2010). Typically, students with reading disabilities have difficulty discriminating letters or producing letter sounds, blending letter sounds, or whole words (Cowden, 2010). As a result of these learning-base challenges, students with reading disabilities typically lack motivation for engaging in reading-based tasks and often lose interest in literacy all together (Deci & Chandler, 1986). From a cognitive viewpoint, motivation is described as either a product or process (Wolters, 2003). When perceived as a product or state, motivation refers to a learner’s willingness to participate in and endure a task. At any given time, students have a level of motivation that they encounter, which impacts their choice, effort and persistence towards a particular task. Motivation can also be perceived as the process or processes that comprise students’ level of motivation or goal-directed behaviour. From this viewpoint, motivation is seen as the means through which the end state is determined. Learners can regulate their motivation by purposefully acting to engage in, maintain or increase their willingness to begin or complete a particular activity or goal. Therefore, motivation is a process that is tied intrinsically to learning (Wolters, 2003).

One of the most clearly outlined challenges for researchers and practicing educators is to develop, implement and disseminate effective methods for teaching reading to help all children acquire sufficient reading abilities (Torgesen et al., 2001). Current research has validated that children at-risk for learning disabilities must receive remediation techniques such as more intensive, explicit and systematic instruction in word-level skills so as to achieve adequate reading abilities and to develop their phonological awareness (Torgesen et al., 2001; Cowden, 2010). Moreover, reading comprehension is typically limited in children with reading difficulties
due to challenges with accurate and fluent word recognition (Torgesen et al., 2001). Remediation programs that also provide opportunities for students to practice self-efficacy and meaningful literacy activities foster the acquisition of literacy. This approach enables students to develop confidence in relation to reading and motivates them to be engaged in literacy (Cowden, 2010). Furthermore, remedial literacy programs that encourage self-determination by promoting intrinsic motivation and facilitating integrated internalization offer the optimal environment for children and youth at-risk for learning difficulties. Therefore, remedial literacy programs that provide opportunities for children to make choices, support their autonomy, and provide positive feedback enable children to become intrinsically motivated and in turn, they perceive themselves to be more competent in their literacy skills. Positive feedback has been shown to improve intrinsic motivation when it is administered in a context and in a manner that is non-controlling and non-evaluative (Deci & Chandler, 1986). All children, particularly those with learning disabilities, must feel capable, autonomous and supported; remedial literacy programs that take into account these factors allow them to develop a strong sense of self-determination while gaining literacy skills (Deci & Chandler, 1986).

In this thesis, I have worked to bridge a model of self-regulated learning and a model of instruction for children with learning disabilities. More specifically, I have examined the ways children with learning disabilities are engaged with a remedial program that aims to support their internal goal setting, internal feedback and motivation – all processes associated with a model of self-regulated learning as discussed by Butler and Winne (1995) and Winne and Hadwin (1999). The objective of this study was to comprehensively explore an instructional literacy program called “Reading Rocks!” offered by the Learning Disabilities Association of Niagara Region designed to support children with learning disabilities both academically and motivationally. The
specific research question associated with my research objective is: **how does Reading Rocks! support Winne and Hadwin’s (1998) model of self-regulated learning?** This study outlines how Reading Rocks! enables children to set appropriate goals, choose effective strategies and provide themselves with appropriate and valuable internal feedback when reading – all skills purported by Butler and Winne (1995) and Winne and Hadwin (1999) as significant self-regulatory processes. The thesis suggests that by engaging in such self-regulation abilities, these children will develop an intrinsic motivation to engage in literacy-based tasks that they were initially reluctant to engage with previously due to their perceived frustration and failure with the tasks.
CHAPTER 2: LITERATURE REVIEW

General Framework for Self-Regulated Learning

Recently, the exploration for self-understanding and self-regulation has resulted in learning and processes associated with academic achievement (Zimmerman & Schunk, 1989). Self-regulation refers to self-created thoughts, behaviours and feelings that are devised and cyclically adjusted to the achievement of personal goals and is contingent upon self-beliefs and affective feedback. Self-regulation is considered to be cyclical as the feedback from previous performances of a task is utilized in order to make modifications during current performances (Zimmerman & Schunk, 1989). Research has indicated that there are three distinctive types of self-regulation. The first, behavioural self-regulation, refers to observing and carefully modifying performance processes, such as one's strategy for learning. The second refers to environmental self-regulation, which denotes observing and modifying environmental conditions and outcomes. The third type is covert self-regulation, which entails observing and adjusting cognitive and affective states (Zimmerman & Schunk, 1989). In academic settings, self-regulation is a type of engagement with tasks whereby students utilize a set of powerful tools, such as setting goals for improving knowledge and considering which strategies to select to achieve goals (Butler & Winne, 1995). Therefore, self-regulated learning (SRL)—a complex process that develops over time—is the self-directive, interactive process whereby learners alter their mental capabilities into academic skills and target their own cognitions, actions, emotions and aspects of the environment for their own academic achievement (Lodewy, Winne, & Jamieson-Noel, 2009), which is necessary in order to reach a level of complex, conceptual understanding (Greene & Azevedo, 2009). Self-regulated learning is essentially the application of overall models of regulation and self-regulation to topics of learning, and specifically academic learning that
occurs in schools or classroom contexts (Pintrich, 2000). As a topic of research, self-regulated learning contests cognitive theorists to elucidate why and how students learn independently, while also challenging motivational and behavioural theorists to provide insights as to what students should know about themselves and academic tasks to be capable of learning on their own (Zimmerman & Schunk, 1989). Tasks, which are essential components of self-regulated learning, will be discussed further in the following section.

Task Structure

Tasks are the fundamental instructional units in academic contexts. As a task evolves, products are generated that offer information to help students calibrate whether they are accomplishing their desired outcomes. If not, students must determine how to modify their approaches to achieve a task to reach their goals. Tasks that are challenging, unrelated and complex for students can restrain understanding and motivation. In these instances, students may require a motivational catalyst to maintain efforts in achieving a task or decide to not modify and accept the consequences (Lodewyk et al., 2009).

Models of Self-Regulated Learning

Self-regulated learning is a conscious, active and productive process whereby learners establish goals for their learning. Learners then make an attempt to observe, regulate and control their cognition, motivation and behaviour, which are directed by their goals and the contextual aspects in the environment (Greene & Azevedo, 2009). These self-regulatory activities can arbitrate the relationships between individuals, the context and their general achievement (Pintrich, 2000). Research has demonstrated multiple models of self-regulated learning obtained from a spectrum of educational and psychological models (Butler & Winne, 1995) that suggest various constructs and diverse conceptualizations; however, all of these models share some
common aspects (Pintrich, 2000). For instance, most models of self-regulated learning highlight the significance of students actively engaging in various activities, including planning their learning, applying effective strategies, monitoring their development and managing the associated task challenges. This process can ultimately result in academic success (Greene & Azevedo, 2009). Therefore, these models perceive learners as active, productive participants in the learning process. It is assumed that learners can actively construct their own meanings, strategies and goals based on the information presented in the external environment as well as information in their minds, also known as the internal environment. In this way, learners can be identified as self-regulated to the extent to which they are metacognitively, motivationally and behaviourally proactive participants in their own learning process (Zimmerman, 1989). While self-regulated learners engage in academic activities, they build upon knowledge and beliefs to create an interpretation of a task's criteria and expectations. Based on their understanding, they can then establish goals for their learning. These learners then approach the goals by utilizing strategies that create outcomes that are cognitive, affective and behavioural. Monitoring these processes of engagement and the positive outcomes they generate produces internal feedback. This provides the learner the opportunity to reinterpret aspects of the task and his or her level of engagement with it, and in doing so, direct successive engagement (Butler & Winne, 1995). Therefore, during this learning, individuals experience a self-oriented feedback loop, which refers to a cyclic process whereby students observe the efficacy of their learning strategies and respond to this feedback in numerous ways (Zimmerman, 1989). For instance, students may adjust their engagement by establishing new goals or adapting existing ones; they may re-evaluate strategies and select more productive tactics, modify available abilities or create new tactics. If external feedback is available, that supplementary knowledge may confirm, add to or
hinder the learner’s understandings of the task and method of learning (Butler & Winne, 1995). As a result, feedback plays multiple and complex roles within the self-regulation learning model, as feedback directs cognitive activities during which knowledge is shaped and restructured (Butler & Winne, 1995). The various models of self-regulation further assert that learners are not considered to be passive recipients of knowledge from teachers, parents or other authority figures, but rather, active, productive learners capable of producing their own meaning (Pintrich, 2000).

These various models also presume that learners have the potential ability to monitor, control and regulate specific features of their own cognition, motivation and behaviour as well as some aspects of their environment. It has been postulated that there is a kind of standard, also referred to as goals or reference value, against which evaluations are made so as to assess whether the process of task engagement should endure or if some type of modification is necessary. Lastly, these models believe that self-regulatory tasks are directly associated with outcomes, such as achievement and performance (Pintrich, 2000). It is evident that in order for effective self-regulation to arise, learners should be enabled to work in a context whereby they can generate their own learning episodes according to their goals (Boekaerts & Niemivirta, 2000).

**Goal Setting and Feedback: Essential Aspects of Self-Regulated Learning**

Goals are perceived as guiding principles that individuals consciously and deliberately establish to successfully direct their behaviour. Many researchers view the self as an essential aspect in comprehending an individual’s goal setting and goal striving (Boekaerts & Niemivirta, 2000). Goal setting refers to planning particular outcomes of learning or performances. The goal systems of effectively self-regulated individuals are organized hierarchically and embedded with
personal meaning as they demonstrate evidence of progress (Zimmerman, 2000). Individuals must have the ability to transform their needs, expectations and desires into intentions, which is a fundamental aspect of goal setting (Zimmerman, 2000).

Feedback is also an integral aspect of processes that comprise self-regulated learning. As the necessary steps are taken and the task develops, students begin to oversee the accumulating impact of their engagement (Butler & Winne, 1995). As these steps progress, students may come across obstacles and these self-regulated learners may be required to modify or even discard initial goals in order to manage motivation and to adjust and intermittently invent methods to make progress. As a result, self-regulated individuals may be aware of characteristics of their own knowledge, principles, motivation and cognitive processing, which allow the students to evaluate the extent to which unfolding cognitive engagement complements the criteria they set for successful learning. By establishing a plan for engaging in a task, the learner produces a standard against which successive states of engagement can be examined. In some instances, when a discrepancy exists between current and aspired performance, self-regulated learners may pursue feedback from external sources such as peers' input in collaborative settings, teachers' comments on work done in class, answers in textbooks and so forth. Research has validated that learners are more successful when they refer to feedback that has been provided externally (Butler & Winne, 1995).

**Self-Regulation, Affect and Internal Feedback**

Carver and Scheier (1990) suggest that if an individual experiences a hindrance while attempting to achieve a goal, the interruption brings about a re-evaluation of the situation. Engaging in this process of re-evaluation results in learners estimating how likely it is that they can accomplish their goal if they further invest effort, adjust their plan or do both. If confidence
or self-efficacy surpasses a distinctive threshold, then the individual attempts to modify the plan that has been directing engagement and persistently work towards the initial goal. In this stream of cognitive processing, the individual has exercised self-regulation. Students’ goals combine with motivational beliefs and affective responses to form self-regulation. If progress is accomplished at a faster rate than anticipated, then positive affect is produced about the approach that resulted to quick success. Nonetheless, if the rate of progress is lengthier than anticipated due to much effort that was required, then success can be attended by negative affect (Butler & Winne, 1995).

**Externally Provided Feedback**

Outcome feedback is the most common type of information that students obtain after engaging in academic tasks, which is also referred to as knowledge of results. This feedback describes whether or not results are correct; in other words, whether they are adequate relative to externally defined criteria or whether or not work is on a pathway that can result to achievement. When a learner views connections between task conditions, which are cues, and when those discernments are accurate, then the learner is considered to be well regulated (Butler & Winne, 1995).

Outcome feedback offers minimal guidance regarding how to self-regulate. The benefits of outcome feedback is reliant upon the learners’ attentiveness to various cues’ values and performance during the task; ability to have accurate memories of those aspects when outcome feedback is offered at the tasks’ conclusion; and ability to be efficiently tactical to generate effective internal feedback about predictive authenticity. Cognitive feedback may assist students, distinguish cues and monitor their engagement in tasks. Therefore, cognitive feedback augments learners’ regulation by allowing them to identify important cues, such as task features and
cognitive responsibilities they are engaged in while learning. Research has validated that this function of monitoring is crucial for self-regulation (Butler & Winne, 1995).

**A Specific Model of Self-Regulated Learning**

While various models of self-regulation are valid, this research project closely examined Winne and Hadwin’s (1998) sequenced paradigm of self-regulated learning, which is comprised of four primary phases that allow students to distinguish, observe and regulate the conditions, products and standards of the task. Therefore, students take into consideration information such as conditions, including the essential resources of the task, their prior knowledge of the task, potential tactics to carry out the task and their beliefs and drive for completing the task. If students experience difficulties perceiving and defining any of these phases, it may provoke learners to divert from the goals of the task, which may in turn lead to further hindrances, frustrations and anxiety towards the task (Lodewyk et al., 2009). Hence, this model emphasizes how task conditions and student qualities, including instructional cues, prior knowledge and self-efficacy, impact the way students approach a given task, set goals, establish, evaluate and control their learning (Greene & Azevedo, 2009). During these phases of learning, students participate in particular SRL processes, such as self-questioning, drawing inferences and obtaining help. An increase in students’ active monitoring processes has been found to have a drastic impact on performance. In Winne and Hadwin’s model of SRL, monitoring is at the centre of each aspect of learning, from planning through adaptation. In line with this model, research has demonstrated that students’ prior beliefs and knowledge regarding the learning task also impacts their performance, as students with precise prior knowledge of the task are expected to have complex mental models (Greene & Azevedo, 2009). The following section will explore in greater depth
the various phases of Winne and Hadwin's model of SRL that a learner experiences, as outlined in Figure 1.
Figure 1. Winne and Hadwin’s (1998) Model of Self-Regulated Learning (SRL)
Specific Processes Involved in Winne and Hadwin’s Model of SRL

Functions of Knowledge and Beliefs in Cognitive Engagement

Besides students’ epistemological beliefs, four kinds of knowledge have been explored in research on self-regulation, which include domain knowledge, task knowledge, strategy knowledge and motivational beliefs. Through exposure to academic activities and students’ memories about similar tasks they encountered previously, students are able to acquire knowledge about tasks, which encourages self-regulation (Winne, 2010). For instance, students’ views of tasks can mediate goals they choose, such as strategies they implement to learn and the desire to withdraw from the activities. Research has suggested that students’ understandings of tasks impact the goals they establish and the cues they approach and tackle as they engage with those tasks. Once tasks are completed, their knowledge about strategies, task knowledge and domain-specific knowledge is simultaneously created and developed. Students’ knowledge about strategies is essential in SRL as it ascertains boundaries for the self-regulation that can be implemented (Butler & Winne, 1995).

Selecting Goals

Students always have the autonomy to select goals, which propel their cognitive engagement. In this phase, the learners establish goals for the task they observe and construct plans for attending to it. Goals are identified by standards learners select for characteristics of cognitive processes (Winne, 2010). There are two types of task-associated goals that students select between or balance in some degree, which include learning goals and performance goals. Students that adopt learning goals are willing to gain a deeper understanding of the task’s subject matter domain. Contrastingly, students who adopt performance goals seek to improve their own and others’ perceptions of their abilities in the task. The emphasis that a student places to
learning goals compared to performance goals is linked to various prior beliefs, demonstrating the role of knowledge in forming self-regulation. Generally, students that place emphasis on learning goals over performance goals have strategic study habits. Goals are perceived to be hierarchically nested so that the acquirement of a goal at one level of behaviour (such as excelling on individual test items) allows goal achievement at the next highest level (such as succeeding on a whole test). Self-regulated learners evaluate performance relative to goals, create internal feedback regarding their rate of improvement towards goals and modify further action based on that feedback. Consequently, the goals that students select are essential in forming the unfolding SRL process. If instructional feedback is to be a factor in self-regulation and achievement, it must influence this cycle of cognitive activity by attending to the types of goals students adopt and by reinforcing processes for prioritizing, selecting and revising those goals (Butler & Winne, 1995).

Selecting, Adapting and Generating Tactics and Strategies

Once learners choose goals, they must partake in actions to accomplish them (Winne, 2010). Throughout the first few phases, self-regulating learners metacognitively observe attributes of their work and implement metacognitive control to make modifications (Winne, 2010). If tasks are familiar, learners may take action automatically. However, if tasks are unfamiliar or if hindrances occur while attempting to accomplish a goal, self-regulated learners consider arranging strategies that can result in achievement towards goals. Some tasks are typically familiar and well refined; however, in situations of new tasks or unexpected challenges, students may need to adjust or create new strategies, which strongly provoke self-regulation. Strategies are frequently organized based on the cognitive purposes they serve and particular learning objectives they meet. There are two types of action control strategies, which include motivation
control strategies and emotion control strategies that both safeguard task engagement and
monitor the student in assigning and managing resources for development. Motivation control
strategies augment the motivational basis of objectives and regulate the characteristics of goals
and tasks, as well as liable outcomes. Emotional control strategies are beneficial in achieving
emotional states that might interrupt action, such as feelings of anxiety, inadequacy or other
dmotions associated with previous academic experiences (Butler & Winne, 1995).

**Monitoring**

Monitoring is a crucial aspect of SRL as it is the cognitive process that evaluates states of
development relative to goals and provides feedback that can direct further action. The internal
feedback that monitoring creates is conditional information that bridges previous performance to
the next step of engaging with a task. It is at these pivotal points whereby self-regulation can
assist learning and feedback. Internal feedback that students create by associating evolving states
of a task to goals generates conditional knowledge that is the foundation for future action.

Cognitive or behavioural products are generated by three successive events, which include
viewing task conditions in regards to existing plans that merge knowledge and beliefs together;
adopting goals; and utilizing strategies. Cognitive feedback regarding these cues can augment a
learner’s calibration, which can encourage self-regulation and learning (Butler & Winne, 1995).

Achievement calibration, which is the association between students' beliefs regarding what
they have performed and their actual accomplishment, is vital in effective self-regulation. It has
appeared to be inadequate in the majority of students, specifically lower achievers who may be
over-confident on challenging tasks and less confident on easier tasks. Research has
demonstrated that students generally self-regulate and calibrate tasks successfully when they
utilize their knowledge and beliefs to generate ideas regarding the characteristics and demands of
a task and make constant and efficient modifications derived from those perceptions. Therefore, as students engage in tasks, they self-regulate their learning in a variety of ways that include meta-cognitively identifying the task and carrying out tactics by obtaining knowledge from their own working memories and from monitoring factors related to the task and themselves. This feedback provides the opportunity for students to form verdicts, and thus calibrate about progress and mastery and in turn, decide whether to sustain a similar pattern of tactics or alter approaches to attend to gaps in processing the task and generating task products (Lodewyk et al., 2009). By acquiring strategies that are appropriate for the task and setting and being motivated to utilize them, learners implement self-regulatory skills and therefore have the capacity to master a task (Zimmerman, 2000).

The following section will review current literature on effective literacy acquisition, the primary and secondary characteristics of learning disabilities as well as the role of goal setting and feedback among students with learning disabilities.

**Effective Literacy Acquisition**

Most researchers and educators have asserted that learning entails the active process of integrating and organizing information, creating meaning and monitoring comprehension that requires high levels of focus, effort and persistence even among the most capable students (Meece, 1994). Of all the different types of learning, learning to read and write continues to be a hallmark skill that fundamentally defines the degree of success students can attain academically throughout their school career (Chard, Ketterlin-Geller, Baker, Doabler, & Apichatabutra, 2009). Literacy is a complex set of skills that encompasses the interconnected processes of reading and writing. Reading entails decoding, accurate and fluent word recognition and comprehension of a word, phrase, sentence and text, which includes making inferences and analyzing texts (Chard et
Writing requires instant letter formation, accurate and fluent spelling, sentence structure and the capacity to generate a variety of different text structures with cohesion and clarity (National Assessment of Educational Progress, 2008). According to the National Reading Panel (NRP) report, there are five areas that are vital to effective early reading instruction, which include phonemic awareness, phonics, fluency, vocabulary and comprehension (Roberts, Torgesen, Boardman, & Scammacca, 2008). Effective reading acquisition is a process whereby children learn to utilize various cues in identifying words in text with text-based cues, prior passage context and previous knowledge to generate hypotheses about a text (Tunmer & Greaney, 2010).

Components of Reading

Research has asserted that phonological awareness skills and emergent print knowledge are the clearest early indicators of word reading development (Tunmer & Greaney, 2010). Phonological awareness is the explicit knowledge and understanding of speech sound segments utilized in a language. Phonological awareness skills enable the acquisition of spelling-to-sound associations that develop the foundation of early decoding skill development. Measures of emerging print knowledge have also proven to be strong indicators of early word reading ability. One of the most effective print knowledge predictors of imminent word reading skill is letter-name abilities (Tunmer & Greaney, 2010). This is usually assessed through various tasks such as rhyming, alliteration, blending of syllables, blending of speech sounds, segmenting of syllables, segmenting of speech sounds and manipulation of syllables and speech sounds (Davis, Lindo, & Compton, 2007). Therefore, effective readers understand that spoken words can be broken down into phonemes, which are units of speech and that the letters in a written word characterize these sounds (Tunmer & Greaney, 2010). Phonological processing entails encoding phonological
information, gaining access to and carrying out mental operations on phonological awareness and retaining phonological information in working memory (Tunmer & Greaney, 2010). Reading comprehension depends on more than just accurate and fluent word recognition, as an individual’s ability to efficiently build a mental representation of a text’s meaning is dependent upon the individual’s ability to access vocabulary, grammar and pertinent background knowledge (Davis et al., 2007).

Any discrepancies in these abilities can inhibit learners from becoming fluent readers (Pavlidou, Kelly, & Williams, 2010) and underdeveloped reading skills have serious consequences for students, families and society (National Assessment of Educational Progress, 2008). Students that are at-risk for learning disabilities experience measurable challenges in early reading acquisition and difficulties with word identification. Basic deficits in alphabetic coding are the primary causes of these challenges, which are due to phonological skill deficiencies. Therefore, students that experience a phonological core deficit lack phonological awareness, which essentially means they have difficulties with decoding while reading. This core deficit can have a significant impact on long-term reading achievement. Consequently, early reading interventions typically place emphasis on enhancing students’ phonological awareness, decoding skills, identification of sight words and fluency (Chard et al., 2009).

**Learning Disabilities Defined**

Students identified at schools with learning disabilities compose over 50% of the special education placements and represent the largest group of identified children (Grolnick & Ryan, 1990). Developing understandings of the etiological origins of learning disabilities, such as dyslexia, has been a prevalent topic of interest among researchers (Hoskyn, 2008). The following
section will thoroughly examine the primary and secondary characteristics of learning disabilities.

**Primary Characteristics**

According to the Learning Disabilities Association of Canada (LDAC), learning disabilities refer to a heterogeneous group of disorders marked by significant challenges in the acquisition and use of listening, speaking, writing, reading, reasoning, coordination, attention, memory, communication, mathematical abilities and/or social competence. This life-long condition is intrinsic to the individual and caused by minor dysfunction in the central nervous system (Shaw, Cullen, McGuire & Brinckerhoff, 1995) among those with average to above average intelligence (Wiener & Siegel, 1992). Therefore, learning disabilities are not caused primarily by visual, hearing or motor impairments, emotional disturbances, developmental delays or environmental disadvantages (Wiener & Siegel, 1992). The LDAC definition is widely recognized and has impacted several of the definitions accepted by provinces (Wiener & Siegel, 1992). A direct manifestation of a central nervous system dysfunction is a deficit in phonological processing (Kavale & Forness, 2000). For example, individuals with a central nervous system dysfunction, such as dyslexia experience reading difficulties, particularly with fluent word recognition, spelling and decoding capabilities (Lyon, Shaywitz, & Shaywitz, 2003) due to impairments in phonological processing (Pavlidou, 2010). This impacts cognitive processes and therefore achievement (Deci & Chandler, 1986). Learning disabilities are also characterized by a discrepancy between reading achievement and intellectual potential as these individuals have average to above average intelligence, yet experience challenges in areas, such as reading, writing, spelling, spoken language, numeracy and spatial orientation (Tunmer & Greaney, 2010). As a result of processing deficits, individuals with learning disabilities also experience
difficulties with self-regulatory behaviours, social perception and social interaction although these alone do not signify a learning disability (Shaw et al., 1995).

Secondary Characteristics

Current literature on learning disabilities suggests that children at-risk for learning disabilities have at some point experienced substantial failure and negative aptitude feedback at school (Grolnick & Ryan, 1990). Once these adverse experiences become internalized, many of these children exhibit poor academic self-concept and also demonstrate lower scores in academic self-regulation and are therefore, less motivated for on-task performance (Gadeyne, Ghesquière, & Onghena, 2004). A history of school challenges, failures and negative feedback from peers, parents and teachers contribute to a reduction of a child's sense of initiation and appreciation for school and literacy, which in turn, undermines their desire and willingness to learn (Grolnick & Ryan, 1990). Moreover, while children with learning disabilities are within the range of average intelligence, the discrepancy between their intelligence and academic achievement has demonstrated to contribute to high levels of frustration and a lower sense of ability (Lincoln & Chazan, 1979). Children with learning disabilities typically feel they lack autonomy in their academic endeavors and hence, have a tendency to experience lower self-efficacy, less positive self-concept and more adverse motivational patterns, lower self-esteem, greater levels of academic frustration and less inclination to assume responsibility in their learning compared to non-struggling readers (García & Caso, 2004). Such self-views, therefore, result to a refrainment of academic challenges and a decrease in attempts to master cognitive tasks as these struggling readers believe they lack the capacity to succeed even with great effort, which contributes to their low self-efficacy (Margolis & McCabe, 2004). This may limit the potential opportunities for children to experience success (Lincoln & Chazan, 1979).
Student Motivation and Self-Regulation

Motivation, or the willingness to commence and sustain goal directed activity, is impacted by self-efficacy. Researchers interested in students’ motivation have suggested that motivation is essential to students’ use of self-regulated learning strategies as well as their school achievement (Wigfield, 1994). Knowledge of cognitive and metacognitive strategies is not sufficient to encourage student achievement, as students must be motivated to utilize these strategies (Wigfield, 1994). Literacy researchers have increasingly considered motivation to be essential to understanding children’s literacy learning (Nolen, 2001). Individuals are more likely to invest in activities they are interested in or find valuable, if their environment is secure and supportive (Margolis & McCabe, 2004). Additionally, research has indicated that perceived competence is minimized in the absence of successful experiences; children at-risk for learning disabilities, therefore, tend to perceive themselves as less competent (Lincoln & Chazan, 1979). Developmental models envisage a progression from external to internal orientation. As children develop they internalize what they have experienced. Children experiencing difficulties with learning and reading in school due to phonological processing and specific neurological impairments have a tendency to rely more on external sources of feedback, such as teachers, grades and marks (Lincoln & Chazan, 1979). Therefore, many struggling learners associate academics with failure and frustration and consequently have low self-efficacy for academics (Margolis & McCabe, 2004). Research has, therefore, indicated that motivation is not solely a stable trait within an individual, as motivation is also dependent upon environment, domain and context (García & Caso, 2004). If students’ self-efficacy is intact, they will be more willingly inclined to accomplish the task in the future and work harder because they will believe they can succeed. Intrinsic motivation refers to performing a task by its own merit, where the gratification
is inherent in the task itself. Individuals with intrinsic motivation seek challenging activities that provide information regarding their capabilities and capacity. Extrinsic motivation denotes performing the task to receive an external reward. Individuals with extrinsic motivation are not concerned about the task itself (García & Caso, 2004).

Research has demonstrated that intensive, high-quality literacy instruction can assist students who are struggling with their literacy succeed by enhancing their self-efficacy (National Assessment of Educational Progress, 2008). These instructional programs must have well-defined objectives, goals, content and materials (National Joint Committee on Learning Disabilities, 2007) that encourage appropriate learning strategies, reinforce effort and persistence, peer modeling and promote learners to create personally significant goals (Margolis & McCabe, 2004). To improve intrinsic motivation towards literacy, educators and other professionals are encouraged to set high but realistic goals, disregard negative expectations regarding the children and devise an individualized intervention program that ensures success (García & Caso, 2004). Educational contexts, such as intervention programs, must allow children to feel competent, autonomous and supported in order for them to develop self-determination while improving their literacy abilities (Deci & Chandler, 1986).

**Motivational Factors in the Progression of Self-Regulated Learning: Intervention Programs**

There are a variety of motivational factors that can promote or constrain self-regulated learning (Pintrich & Zusho, 2002). Competently applying principles that enhance motivation is essential as many struggling readers actively avoid literacy and reading instruction and respond passively and in disengaged manners (Margolis & McCabe, 2006). Therefore, it is of particular importance that interventions centred on developing literacy abilities among students with
learning disabilities also emphasize strategies for self-regulation and focus on the students’ level of motivation (García & Caso, 2004). Such interventions should aspire to adjust to each student’s individual level and promote positive beliefs among students regarding their ability to manage their literacy acquisition and also to develop a positive, supportive environment that fosters intrinsic motivation. These interventions must take into consideration students’ choices and goals they wish to pursue as well as conditions that enhance students’ motivation to foster student engagement (García & Caso, 2004). Individuals are generally motivated to take on activities that provide optimal challenges that are not considered too easy or too difficult. Research has indicated that children are naturally enticed by activities that are slightly above their current ability levels. Therefore, fostering such experiences requires the curriculum to be individualized for each child (Deci & Chandler, 1986).

Children also have the ability to develop self-determination in environments that support their needs and provide opportunities for them to make choices. In these environments, children are encouraged to think independently, implement their own plans and ideas and work at their own pace. In turn, these children become intrinsically motivated, perceive themselves to be competent, which improves their self-esteem dramatically. In order for children to be academically successful, they must be able to see and track their own success. Positive feedback has been demonstrated to play a crucial role in augmenting intrinsic motivation (Deci & Chandler, 1986).

The Role of Efficacy and Competence

Research that has assessed the effectiveness of interventions for students with learning disabilities has determined the instruction appropriate for the learner’s independent levels to be the most effective. Struggling learners are not aware of how to approach academic tasks as they
do not know what learning or cognitive strategies to utilize or how to use them. Therefore, these learners must be taught explicitly and systematically the strategies that promote success. First, tasks must be sequenced from easy to challenging. Second, the steps to accomplish the goals must be modeled and explained in clear and simple steps. Third, feedback must be provided regarding the learners' progress. Fourth, there must be ample opportunities for guided practice with task-specific feedback regarding ways to correct errors (Margolis & McCabe, 2004).

Moreover, a vital aspect of self-regulated learning is the monitoring of performance in regards to progress towards a goal. As students evaluate their progress, their understanding or performance, they will have the capacity to then utilize this information to help them control or change their behaviours to meet their goals. Students that believe they have the ability to perform or learn a task are more likely to report making use of self-regulatory strategies as well as perform better on the task (Pintrich & Zusho, 2002).

*The Role of Interest and Value Notions*

Self-regulation is a process that requires much mental effort and time commitment. Students who are more personally invested and interested in an activity and also view it as being personally valuable are more inclined to utilize self-regulatory strategies. Research has validated that high interest and value beliefs help students generate goals for their learning that restrain some of the costs and emphasize the benefits of self-regulation (Pintrich & Zusho, 2002). Therefore, it is crucial that instruction is linked to the learners' interests and goals. Unless tasks and materials are interesting or valuable to struggling readers, they are unlikely to become fully engaged in the tasks, particularly if the work is challenging or anxiety provoking (Margolis & McCabe, 2006). Setting goals is one way tasks can become interesting and important. If readers believe that tasks and materials can assist them in achieving goals they value, it will become
more captivating and motivating and consequently, these learners will exert more effort if they believe they can succeed (Margolis & McCabe, 2006). Moreover, when learners’ voices are heard, particularly regarding their personal goals, values and interests, their self-efficacy will increase (Margolis & McCabe, 2004).

For struggling learners that deem themselves to lack the ability to succeed, teachers and instructors may need to create value in the learning by temporarily providing struggling readers with extrinsic, age-appropriate reinforcers that they value, desire and will work to obtain so they become engaged in the task. This will then foster a strong, persistent belief that with moderate effort they can become successful (Margolis & McCabe, 2006). The most effective extrinsic reinforcers are those that are the smallest and most natural and are changed on a consistent basis. It must be implemented every time learners correctly apply and utilize a strategy and it must be explained to them why they earned the reinforcer. From the start, tangible, extrinsic reinforcers must be combined with common social and verbal reinforcers such as task-specific praises (Margolis & McCabe, 2004).

The Role of Goal Orientation

The combination of personally significant goals with the belief that with sufficient effort these goals are achievable is the ultimate source of motivation. For goals to constructively impact self-efficacy and motivation, they must be personally important to struggling learners, short-term, specific and realistic. To maintain motivation, struggling learners require credible feedback regarding their progress towards attaining their goal. Personally significant goals are those that students want to achieve and will make a crucial difference in their lives. Struggling learners are more likely to attain goals that are important to them and they perceive to be achievable (Margolis & McCabe, 2004). Short-term goals are necessary for struggling learners
so as to prevent loss of motivation. Frequent, explicit and apparent feedback regarding learners’ progress on short-term goals can help them remain encouraged and motivated which in turn, enhances self-efficacy and motivation. Moreover, specific, short-term goals can be measured easily, enabling struggling learners and instructors to evaluate progress regularly against a clear standard. For instance, if learners set their general criterion or standard for academic activities to be learning and improving, then as they keep track of their performance and make attempts to control and regulate it, this standard can direct these learners towards the use of more self-regulatory processes (Pintrich & Zusho, 2002). Teachers and instructors can also educate struggling learners to monitor their work by recurrently demonstrating think-alouds when evaluating struggling learners’ work and teaching them to utilize simple self-evaluation forms and rubrics (Margolis & McCabe, 2004).

Present Study

In the present study I attempt to bridge a model of self-regulated learning and a model of support for children with learning disabilities. Specifically, I examined how an instructional literacy-tutoring program designed to support children with learning disabilities called Reading Rocks! offered by The Learning Disabilities Association of Niagara Region improves children’s literacy acquisition, but also how participating children are actively engaged in motivational and self-regulation exercises that ultimately enhance their self-efficacy. While participating in Reading Rocks! children have opportunities to set appropriate goals, select effective strategies and provide themselves with appropriate and effective internal feedback, which are all skills that contribute to important self-regulatory processes as outlined by Butler and Winne (1995) and Winne and Hadwin (1999). By engaging in such self-regulation learning through the Reading Rocks! program, it was hypothesized that these children would develop intrinsic motivation to
engage in literacy-based activities that they were initially reluctant to engage in previously due to their perceived incompetence, frustrations and failure with these tasks.
CHAPTER 3: METHODOLOGY

Overview

My research is a qualitative study that focused on examining the effectiveness of the Learning Disabilities Association of Niagara Region’s primary, one-to-one literacy program designed to support children and youth at-risk for learning disabilities, called Reading Rocks!. This tutoring-based program targets areas such as phonological awareness, print awareness, letter-sound understanding and more advanced skills, such as comprehension, problem-solving and memory strategies, which are all skills recommended by research agencies, such as the National Reading Panel. In this study, I examined whether Reading Rocks! facilitated participating children’s internal goal setting, internal feedback and motivation—all processes associated with a model of self-regulated learning proposed by Butler and Winne (1995) and Winne and Hadwin (1998). To support this research endeavor, I examined changes in participating children’s motivation, self-esteem and engagement in literacy by interviewing children’s parents before participation in the Reading Rocks! program, during the program and after having participated in the program.

I chose to adopt a qualitative methodological approach as I was interested in examining the impact of the Reading Rocks! program and whether children and youth developed an intrinsic motivation to engage in literacy after having participated in this program. Hence, I aimed to accomplish this by gaining a deep understanding of the experiences of the parents of children who have participated in the program. Qualitative researchers seek to gain a deeper understanding of the social world, particularly through personal narratives (Tanggaard, 2009).

To achieve my research objectives, my research protocol had three major components. First, I thoroughly described the Reading Rocks! program by describing the various components and structure of the program. This description is important as understanding the foundations
upon which Reading Rocks! was designed is fundamental to bridging the two models of learning disabilities and motivation. The second component encompassed interviews with parents of children who participated in the Reading Rocks! program. The purpose of these interviews was to establish whether their children experienced the motivational components of the program that were designed to be consistent with the model of self-regulated learning as established by Butler and Winne (1995) and Winne and Hadwin (1998). The third component included photographic evidence of the workstations designed by the tutors for the children in the program. The photographs of the workstations presented another perspective in how Reading Rocks! attempted to bridge a model of learning disabilities with a model of motivation and self-regulated learning.

**Program Description**

An integral feature of my thesis is a description of the Learning Disabilities Association of Niagara’s Reading Rocks! program. Describing the program is essential in that it allowed me to fully understand the ways in which the program represents Winne, Butler and Hadwin’s (1998) self-regulation model. As such, I dedicated a whole chapter in the thesis to comprehensively describe the reading process as well as the Reading Rocks! program. More specifically, in the chapter that follows, I thoroughly identified and described each essential literacy component of the program as well as the motivational features of Reading Rocks!, such as the ways children are provided with opportunities to set goals and receive feedback on their learning.

**Interviews**

To provide detailed accounts and evidence of whether Reading Rocks! promoted self-efficacy and self-regulated learning among vulnerable readers, I conducted three semi-structured, open-ended interviews with parents of children at-risk for learning disabilities that participated in
the Reading Rocks! program. Interviews, which are based on verbal interchanges between the interviewee and interviewer (Varga-Atkins & O’Brien, 2009), are a valuable methodology as they enable the researcher to gain a deeper understanding of the themes of the daily world from the perspective of the subjects (Tanggaard, 2009). Interviewing is perceived as a social setting for the production of multiple dialogues, comprised of numerous voices that cross one another simultaneously to construct knowledge regarding personal narratives and social life (Tanggaard, 2009). Interviews provide personal meaning for individuals and as a result, there is no one stable and true story about participants. As a researcher, I have classified general themes and components from the SRL model and supported this through actual unique experiences of individuals that have directly experienced the program. In this way, readers may be able to identify with the stories, look for similarities and differences between the readers’ stories and those of others and even learn from them. My aim was that these interviews may help us further understand how the impact of Reading Rocks! can be discussed, analyzed and inferred by the participants (Tanggaard, 2009).

I conducted the interviews in a relaxed manner and in the form of conversations, and I made a conscious effort to monitor and restrict my input so as to avoid dominating the process (Seibold, 2000). The interviews took between 45 minutes to an hour and were audio recorded and later transcribed. I began the interviews by explaining to the participants that the audiotapes would be kept in a locked drawer and destroyed upon completion of the study. I also informed the participants that in order to maintain confidentiality and anonymity, pseudonyms would be utilized when transcribing the data. Each interview began with a series of introductory, icebreaker questions regarding the child’s general experiences and attitudes towards school and literacy and how they became involved with Reading Rock! before moving towards more
specific questions regarding aspects of the program. This general to specific format was viewed as the ideal format for an interview as it provided participants with an opportunity to become comfortable with the interview process before being asked particular questions regarding the main focus of the interview (Esterberg, 2002). These questions were followed by inquiries pertaining to the children’s experiences with school and literacy before, during and after participation in Reading Rocks!. Additionally, I asked questions regarding children’s abilities to set goals as a result of the program, how Reading Rocks! provided a source of feedback and whether their child’s ability to set goals supported their learning and self-esteem. Another essential question to ask was centred around how children approach tasks upon completion of Reading Rocks!. I had some probes prepared, such as whether the children appear more motivated and engaged, however, the parents were able to discuss this without my need to probe. Furthermore, I framed many of the questions in an open-ended manner that provided the participants the opportunity to elaborate on their answers and share as many details and experiences.

**Photographic Evidence**

In conjunction with the in-depth, semi-structured interviews, I also utilized photographic evidence to explore how Reading Rocks! demonstrated the SRL model and the various themes of the model. Vision is a dominant yet undervalued way of understanding in Western society (Hansen-Ketchum & Myrick, 2008). Cameras and photographs are progressively becoming prevalent in daily life and photo research methods add to the value of the visual to encapsulate and utilize visual data in the production of knowledge. Furthermore, photography has been utilized in numerous ways as a source of data and impetus for discussion (Hansen-Ketchum & Myrick, 2008). Therefore, I incorporated various photos of the motivational workstations and
boards created by tutors and children in Reading Rocks! to further reinforce and illustrate whether Reading Rocks! promotes and encourages goal-setting and feedback among the children and hence fosters their self-regulation and self-efficacy. I selected photographs that had been taken at the Reading Rocks! program throughout previous year as well as from the Fall 2011 session.

**Participant Selection and Recruitment**

*Participant Selection*

The participants in this study included three parents of children that were enrolled in the Learning Disabilities Association of Niagara Region’s one-to-one literacy program called “Reading Rocks!” located in the Niagara Region in Southwestern Ontario, Canada. These children participated in “Reading Rocks!” from October to November of 2011, for a total of eight weeks and sixteen sessions. They were provided with one-to-one instruction in a number of literacy skills for two hours per week. To be eligible to participate in the program, children and youth were not required to be officially diagnosed with a learning disability, however, they must have demonstrated evidence of significant reading-based needs (i.e. below 25 percentile on the Test of Early Reading Ability or evidence of falling behind grade level in their literacy) and children must not have low incidence disabilities, such as profound sensory impairments, severe intellectual impairments, developmental disabilities, autism and so forth. To determine eligibility for the program, caregivers completed a Program Application Form, which was then screened by the LDANR staff. Once their child was deemed eligible for the program, the families were notified of their child’s acceptance by the LDANR. Following this process, each child was assigned to a fully trained tutor to address his or her specific literacy-based needs.
For my study I chose to interview parents. This methodological approach was adopted as current research has elucidated the powerful effect that families can have on children’s individual literacy achievement. It has been found that including caregivers in literacy programs has made a significant and sustaining impact on children’s literacy acquisition and achievement (Senechal & Young, 2008; Timmons, 2008). Studies have clearly demonstrated that parent involvement has a positive impact on children’s reading acquisition (Darling & Westberg, 2004). As parents learn about the essential skills necessary for reading and self-efficacy towards reading, they are better equipped to support their children’s reading acquisition and motivation for reading (Darling & Westberg, 2004). Furthermore, I chose to interview parents specifically as they have personally experienced and witnessed their child’s literacy struggles and journey before participating in Reading Rocks! as well as the changes in their child’s life resulting from participating in the program. However, it is important to recognize that another approach may have been to interview or conduct focus groups with children. Although this was not within the scope of the current study, future research should consider this type of children-centered approach.

Recruitment

Participants were recruited using a convenience sampling method, whereby they were selected at the convenience of the researcher. As only three parents were interviewed, the results will not be generalized to a larger population. The in-depth interviews enabled me to gain a deeper understanding of the impact Reading Rocks! had on individuals. I consulted with the Program Facilitators of Reading Rocks! to determine which parents were exceptionally supportive and proactive in their children’s participation in the program throughout the eight weeks. I then proceeded to send a brief, initial email providing information regarding the study,
letter of invitation and consent form for participation in the study. The interviews took place directly after the 8 weeks of Reading Rocks!, which was ideal, as the parents’ experiences of the program were current and fresh in their minds, which generated accurate depictions of the program. I asked the parents to email me with further questions or to express their interest in participating. I also strongly emphasized to the parents that their participation was completely voluntary and would in no way affect their or their child’s future access to Reading Rocks! or with the Learning Disabilities Association of Niagara Region.

Once the participants for the interviews were secured, I initiated the process of arranging a date, time and meeting place for the interviews. I conducted the interviews in the home of the participants for their convenience, as this constructed a sense of ease and prevented potential transportation challenges that may have arisen had the interviews been conducted in an alternative, less accessible location. I contacted the parents again one or two days prior to the arranged interview day to remind them of the scheduled interview as well as to bring the completed consent forms to the interview.

Transcription and Analysis

I audio recorded each interview to facilitate collection of information, which was then transcribed verbatim and analyzed by content analysis. Each transcript was analyzed so as to determine how they support and confirm the prevalent themes and subthemes of the self-regulation model and as a result, the themes guided my explanation of the ways Reading Rocks! supports the self-regulation model. I then utilized Nvivo, a qualitative data analysis software, to list all significant points, cluster them into groups to form preliminary categories and utilize these categories to recode the transcripts. I listed all categories across all transcripts and grouped them into clusters based on resemblances and overlap. I continued this interactive process of
coding and analysis to organize the interviews and stories according to the appropriate SRL model themes (Lin & Tsai, 2011).

The following Chapter comprehensively examines the essential elements of reading and the importance of each element, followed by a thorough exploration of the Reading Rocks! program and the various, vital components that comprise the program.
CHAPTER 4: READING HIERARCHY AND READING ROCKS! PROGRAM REVIEW

The Building Blocks of Becoming an Efficient Reader

In today’s schools, a staggering number of children are faced with challenges when learning to read. Research has validated that failure to read results in grave, long-term consequences for children’s acquisition of self-confidence and motivation to learn as well as for their future academic performance (Armbruster, Lehr, & Osborn, 2000). As indicated by Figure 2, reading is a dynamic and complex process and is thought of as a hierarchy of skills, from processing of individual letters and their corresponding sounds to word recognition to text-processing capabilities. The ultimate goal of reading is the comprehension of written text, which is an advanced skill that relies on prerequisites. The National Reading Panel (2000) has asserted that children must acquire a set of essential literacy skills in order to prevent early reading failure and consequently become efficient readers. Research has demonstrated that skilled comprehension requires a fluid articulation of all of these essential skills, starting with the sounding out and recognition of individual words to the understanding of sentences in paragraphs as part of longer texts. The building of healthy reading skills may be thought of as a hierarchy, whereby higher-level literacy skills are built upon lower-level, more foundational skills. This notion is illustrated in Figure 2, which is depicted as an upside triangle that begins at the bottom with prerequisites that include letter name and sound recognition and moves upwards to having the ability to read words accurately and automatically, known as fluency, which enables one to consequently comprehend a text. Individuals must successfully grasp and master each early element in the hierarchy before moving onto the next in order to become successful readers and ultimately comprehend a text (NRP, 2000). In this section, I will provide an analysis and discussion in five key areas of reading instruction that are the building blocks of efficient
reading and comprise the reading hierarchy: letter recognition, phonics instruction, sight words and vocabulary instruction, fluency instruction and text comprehension instruction.
Figure 2. Hierarchy of reading skills
Letter Recognition

Phonemic Awareness

Phonemic awareness is the ability to hear, distinguish, think about and utilize individual sounds in spoken words. Children must be capable of understanding how the sounds in words work before learning to read print. As such, children must recognize that words are comprised of speech sounds, or phonemes. Phonemes are the basic and smallest units of sound in our spoken language. The English language consists of 41 phonemes and these phonemes blend to develop syllables and words. Teaching children the sounds in language (phonemes) dramatically increases their reading and spelling. Children can demonstrate their understanding of phonemic awareness in various ways, such as identifying which words in a set of words start with the identical sound (for instance, gift, girl and go all have /g/ at the beginning); isolating and stating the first or last sound in a word (for example, the beginning sound of cat is /k/ and the ending of dog is /g/); breaking or segmenting a word into its distinct sounds (for instance, us would have two sounds—/u/, /s/). Children that have mastered phonemic awareness skills are expected to read and spell easier than children who have not acquired these skills (Armbruster et al., 2000).

Phonics

Phonemic awareness and phonics are often used interchangeably; however, they are two distinct skills. While phonemic awareness is the recognition that the sounds of spoken language are utilized together to make words, phonics is the understanding that there is a predictable association between phonemes and graphemes, which are the letters that symbolize those sounds in written language. Children must have acquired phonemic awareness in order to gain from phonics instruction (Armbruster et al., 2000).
Phonological Awareness

Phonological awareness is a broader term under which phonemic awareness fits. Phonological awareness refers to identifying and manipulating larger aspects of spoken language, including words, syllables, rhymes, alliteration, intonation and other aspects of sound (Armbruster et al., 2000). Children demonstrate an understanding of phonological awareness by identifying and making oral rhymes (for example, “Pat the [cat].”); recognizing and working with syllables in spoken words (such as, “I can clap the parts in my name: Da-vid.”); distinguishing and working with individual phonemes in spoken words (such as, “The first sound in fun is /f/.”).

Blending & Segmentation

When phonemes are manipulated, individuals are working with phonemes in words. Blending phonemes to make words is a form of phoneme manipulation. When blending, children combine individual phonemes to form words and hence, blend the phonemes. Making syllables and combining syllables to make words is another blending technique. Segmentation refers to breaking words into individual, separate phonemes. Words that are broken down into syllables are also a form of segmentation (Armbruster et al., 2000).

Therefore, children that have a good grasp of the letters of the alphabet and their corresponding sounds have acquired phonemic awareness, which enhances children’s ability to read words as well as reading comprehension. Phonemic awareness instruction impacts reading comprehension predominantly through its influence on word reading. In order to understand what one reads, one must be able to read words quickly and accurately so as to focus on the attention on the meaning of what was read. Children’s spelling also improves with phonemic awareness instruction, particularly when children are taught to utilize letters as they manipulate
phonemes (Armbruster et al., 2000). In this way, children can see how phonemic awareness is associated with their reading and writing.

**Phonics Instruction**

Phonics instruction enables children to understand the relationship between the letters of written language (graphemes) and the individual sounds of spoken language (phonemes), which develops their ability to read and write words. These relationships can also be referred to as letter-sound associations, letter-sound correspondences, sound-spellings and sound-symbol correspondences. The objective of phonics instruction is to assist children to learn and utilize the alphabetic principle, which is recognizing that systematic and predictable relationships exist between written letters and spoken sounds. Therefore, in phonics instruction, children learn a system of letter-sound relationships to help them remember how to read words, even irregularly spelled words. A complete understanding of these relationships will enable individuals to identify familiar words precisely and automatically as well as “decode” unfamiliar words (Armbruster et al., 2000).

**Sight Words and Vocabulary Instruction**

Vocabulary refers to words that must be known in order to effectively communicate, which is distinguished as oral vocabulary or reading vocabulary. Oral vocabulary alludes to words that are utilized in speaking or recognized in listening, whereas reading vocabulary denotes words that are identified or utilized in print. Vocabulary significantly impacts the process of learning to read and comprehension as beginning readers utilize the words they have heard to understand the words they see in print. The Dolch Word List is a list of 220 frequently used English words, also referred to as sight words, that cannot be learned through the process of manipulating sounds; these words must be learned by sight and memory. The ability to read sight
words instantly and automatically is a vital skill as it ultimately helps children develop into efficient and smoother readers. Sight words can be taught directly and explicitly by providing students with specific word instruction as well as word-learning strategies (Armbruster et al., 2000).

**Fluency Instruction**

Fluency is the ability to read aloud with speed, accuracy, proper expression and with understanding. Fluent readers that read silently have the ability to identify words automatically. Fluent readers read aloud naturally and effortlessly, whereas readers who have yet to develop fluency read word by word, which results in choppy oral reading. The ability to read fluently is a vital skill because it bridges word recognition and comprehension. When words are read quickly and accurately, it allows for complete comprehension of the text as less effort and concentration is required for decoding the words (Armbruster et al., 2000). Fluent readers have the ability to identify words and comprehend simultaneously and can connect ideas in a text with their background knowledge. On the contrary, readers that are developing their fluency shift all of their attention on decoding individual words and hence, are unable to understand the text.

Fluency develops progressively over time and through extensive practice. Once readers have mastered the earlier elements of the reading hierarchy, such as understanding how to attach sounds to letters and to blend letter sounds into identifiable words, they can then begin to read with speed, accuracy and expression. Research has validated the repeated readings strategy to be an integral instructional approach contributing to enhanced word recognition, speed, accuracy and fluency. In this approach, students read passages aloud multiple times or until a specific level of fluency is achieved and are provided with guidance and feedback (Armbruster et al., 2000).
**Text Comprehension Instruction**

Comprehension, which is the understanding and interpretation of a text, is the ultimate goal of reading. Readers that have mastered each element of the reading hierarchy are actively engaged in the complicated reading process and hence, have the ability to draw conclusions about what they read. Based on their experiences and prior knowledge of the world, their understanding of vocabulary and language processes and reading strategies, effective readers have the capacity to understand, remember and communicate with others about what they read (Armbruster et al., 2000).

It is evident that learning to read accurately and fluently entails a set of complex cognitive process that involves a hierarchy of skills that must be mastered. Each skill relies on the mastery of earlier prerequisites as indicated in the upside-down triangle. These skills range from basic skills such as letter-sound recognition to blending to identifying pre-fixes, to more advanced processes such as recognizing whole words instantaneously, determining the meanings of sentences and text to more advanced skills such as actively making sense of the information read and retaining it. This scientific evidence provided by the NRP (2000) has helped build a foundation for the Learning Disabilities Association of Niagara Region’s Reading Rocks! remedial literacy program, which is premised on the principle of the reading hierarchy that provides systematic and explicit instructional in the five foundational literacy skills outlined above.

**Reading Rocks!: Achieving Success**

The following section provides a comprehensive review of Reading Rocks! and highlights key components that make up the program. This discussion will also set the stage for
an examination of the themes of the model of self-regulated learning as established by Butler and Winne (1995) and Winne and Hadwin (1999).

Reading Rocks! is a one-to-one remedial literacy program offered by the Learning Disabilities Association of Niagara Region designed to support children and youth aged 5 to 16 impacted by learning disabilities and encountering reading difficulties. While an official diagnosis is not required, in order to be eligible for the program, children and youth must demonstrate evidence of reading and writing significantly below grade level not contributed by other exceptionalities, such as autism, intellectual delays and so forth. Reading Rocks! is offered twice a week for an hour each session and runs for a total of 8 weeks (16 sessions) every Fall, Winter and Spring. There are multiple satellite locations across the Niagara Region, including St. Catharines, Welland and Beamsville. Eligible children and youth that are accepted into the program are paired up with a fully trained and qualified tutor who develops and implements a custom, individualized reading support program intended to meet the child’s specific reading needs by strengthening children’s existing skills as well as build new skills. The program is based on the hierarchy of reading skills and follows a very structured, predetermined sequence through the implementation of stimulating and hands-on literacy activities and games.

During the first two sessions of the program, the tutor administers a set of informal needs-based reading assessments in order to determine the child’s reading strengths and areas of need so as to discern where to begin the tutoring. These assessments test children’s reading abilities in the areas of phonemic awareness, phonics, sight words, vocabulary, reading fluency and reading comprehension. For the full 8 weeks, children receive systematically and explicitly intensive one-to-one instruction in 4 core reading-based skills as asserted by the National Reading Panel (2000), including phonics, sight words, fluency and comprehension. Additionally,
the instruction is sequenced according to the hierarchical view of reading with each element regarded as a series of prerequisites. As a result, tutors are trained to refer to the reading hierarchy to determine the elements that the child has mastered and yet to attain within the upside-down triangle. Once the areas of need have been established, the tutors design an individualized program for the child by providing systematic and explicit instruction in the 4 core reading-based skills.

Research has demonstrated that systematic and explicit instruction in remedial literacy programs makes a more significant contribution to children’s literacy acquisition than non-systematic instruction. Systematic and explicit instruction refers to the direct teaching of literacy principles in a clearly identified sequence. This instruction provides children with ample resources, such as various books and opportunities to practice applying the knowledge they have been gaining in reading and writing (NRP, 2000). Furthermore, the one-to-one instruction is regarded as the supreme method of instruction for students experiencing reading difficulties as it allows the educator, who would be the tutors in this program, to customize the program to best address individual children’s various needs (NRP, 2000).

Program Breakdown: 12-Minute Instructional Blocks

Reading Rocks! is structured in such a way that the hour is divided up into these 4 areas of focus that each last for approximately 12 minutes. This 12-minute principle highly motivates children by focusing them on achieving their specific goal in a short period of time. Therefore, these 12-minute instructional blocks are designed to minimize distractions, which in turn, keep children engaged on the task at hand, which is a motivational factor in itself. In the first 12-minute instructional block, the tutor works on the child’s phonics and phonic awareness; in the second 12 minutes the emphasis is on sight words and vocabulary; the third 12 minutes is
focused on developing fluency through repeated readings; and in the last 12 minutes, the emphasis lies on another literacy skill that the child would benefit from, such as spelling, grammar, sentence structure and so forth. This last instructional block is also dedicated to having the tutor read to the child a book or passage that is at a more advanced level than the child’s current abilities to model proficient reading. In each of these instructional blocks, a variety of teaching methods are implemented that play a role in children successfully learning to read. As every child enrolled in the program will differ in reading and writing abilities with distinct literacy needs, the explicit instruction that is provided must be appropriate for each individual child’s level of literacy development.

*The Power of Students Graphing Their Success*

As a form of motivation and to aid children to become self-regulated learners, an essential aspect of Reading Rocks! is the opportunity for children to track their own progress by graphing their achievements after each instructional block. The tutors are all required to develop graphs for phonics instruction, sight words instruction, fluency and comprehension instruction and writing, sentence structure or other literacy instruction, which are posted on the motivational workstation boards. At the end of each instructional block, the tutor and child determine what was mastered during those 12 minutes, which the child manually charts through line graphs or bar graphs using a variety of preferred methods, such as markers, stickers and so forth. For instance, children graph the total number of sight words they mastered each session, the total number of phonics principals learned and so forth, calling attention to the skills the child developed. Following the graphing, the tutor and child collectively set future attainable goals to accomplish in the next session, which are also distinctly graphed.
decoding strategies that entail sounding out and blending individual letters and digraphs, or pronouncing and blending larger subunits and so forth.

Regardless of the specific area of focus, the tutors introduce a maximum of five areas of focus through motivational and hands-on learning activities and games, whereby the children would be required to sound out or write the particular phoneme and apply it by thinking of a word or sentence that involves that particular phoneme. Children are taught how to decode unfamiliar words by sounding out the letters and blending them together to pronounce the word. The tutors partake in the games and activities with the children to help students review and rehearse the particular phonemes and provide guidance when necessary. Children demonstrate mastery of that particular skill when they are able to correctly identify the specific phoneme 5 times consecutively. Following this, with the assistance of the tutors, children then chart the number of phoneme concepts they mastered on the corresponding graph.

*Second 12-Minutes: Sight Words Instruction*

During the second 12-minute instructional block, the Dolch Word List is utilized, whereby 220 high-frequency, irregularly spelled words are organized by grade level, ranging from pre-primer words through Grade 4 as well as the Fry List, which are a more advanced set of high-frequency words. Once tutors determine the sight words that have yet to be developed, the tutors introduce a set of five sight words (maximum) at a time and children are taught to read them as unanalyzed wholes in order to enable them to read those words immediately without hesitation upon seeing them. Sight words are acquired through sight and memory through the use of hands-on activities, such as flash card games, concentration, memory and so forth. Children demonstrate mastery of the words if they have the ability to correctly identify the words instantaneously without hesitancy five times in a row, which children then chart on the
appropriate graph. The sight words are also posted on the motivational workstation boards or on objects that interest the children, such as on soccer balls, hockey sticks and so forth.

*Third 12-Minutes: Fluency & Comprehension Instruction*

The third 12-minute instructional block is dedicated to fluency development, which is an essential component of skilled reading. Fluency is conditioned upon well-developed word recognition abilities. Reading fluency development is greatest when students are working directly with an instructor (NRP, 2000); therefore, an entire instructional block has been allocated for direct teaching of reading skills and strategies. In order to help children read words accurately, rapidly, efficiently and with proper expression, which is known as automaticity, the tutors select a reading passage geared towards the children’s independent reading level that also pertains to the child’s various interests and implement the repeated reading technique, which has been empirically validated as an effective method of developing fluency (NRP, 2000). Children learn to acquire fluent reading habits that will enable them to read text with speed, accuracy and appropriate expression. As such, the tutors may select the entire passage, a sentence or paragraph of the passage, dependent upon the child’s abilities. The child would be required to read the text orally while the tutor times the number of seconds it takes for the child to read the passage while making notes of the words the child was challenged by. Once the child finishes reading the passage, the tutor totals the number of words in the passage and the number of errors made. In order to calculate the child’s fluency, or words correct per minute (WCPM), the tutor subtracts the number of errors from the total number of words, divide this number by the number of seconds it takes the child to read the passage and multiplies this number by 60 seconds. Each session, the child rereads this text and the tutor calculates the child’s words correct per minute. This repeated reading is typically done a number of times until a pre-specified level of
proficiency has been attained or if the child’s words correct per minute is near grade level. The tutors also provide children with models of fluent reading as well as offer guidance as the children read through the passages. At the end of this instructional block, the child also charts the number of words read correctly on the fluency graph.

*Fourth 12-Minutes: Writing, Spelling, and Sentence Structure Instruction*

The final 12-minute instructional block is dedicated towards another literacy skill that the tutor feels the child would benefit from, based on the results of the informal assessment. Such skills may include writing skills, enhancing sentence structures, focusing on grammar, punctuation and so forth. This instructional block can also be a time for the tutor to model proficient reading while the child sits back and relaxes for their hard work throughout the session. Similar to the previous instructional blocks, the literacy skills that are emphasized are taught systematically and explicitly through the use of hands-on, engaging activities such as card games, board games and so forth, which are then charted on the appropriate graph.
CHAPTER 5: DISCUSSION

As highlighted in Chapters Two and Three, there are five major themes of the self-regulated learning model as outlined by Butler and Winne (1995) and Winne and Hadwin (1999), and these were prevalent in the parent interview transcripts that I analyzed. In the following pages, I will compliment the comprehensive program review of Reading Rocks! outlined in Chapter Four by bridging this SRL model with Reading Rocks! and thoroughly explore how this remedial literacy program enables children and youth to become self-regulated learners. I will also examine if these vulnerable readers experience changes in their self-confidence and engagement in literacy as a result of participating in the Reading Rocks! program. First, I will discuss children’s prior knowledge and beliefs regarding their engagement with literacy prior to participating in Reading Rocks!. Second, I will explore whether Reading Rocks! provides opportunities for children to select goals within their instructional blocks. Third, I will examine whether children are able to select and generate certain tactics and strategies to accomplish certain literacy tasks. Fourth, I will investigate the outcomes of the Reading Rocks! program. Finally, I will discuss whether children actively partake in their learning and hence, monitor their performance and whether the program reinforces children’s self-regulated learning through a cyclic, feedback loop. All of these themes comprise the SRL model and components of Reading Rocks! will be incorporated and thoroughly analyzed and further verified by the parent interviews and photographic evidence of the motivational workstation boards. It is important to bear in mind that, while these in-depth interviews provide valuable insight into the Reading Rocks! program, and numerous other families may relate to these unique experiences, they are not representative of all of the families and children that have been enrolled in the program and thus their stories cannot be generalized to the larger population.
Functions of Knowledge and Beliefs in Cognitive Engagement

As discussed by Winne (2010), when students are exposed to certain academic activities, they have the ability to gain more knowledge about the tasks, which fosters self-regulation. Prior to participating in Reading Rocks!, children and youth are often cognitively disengaged and hence, unmotivated from literacy-based tasks. Despite these children’s low academic achievement, research has verified that individuals that are at-risk for learning disabilities are in fact characterized by average to above average intelligence (Trunmer & Greaney, 2010). Nonetheless, these children typically may not recognize their intellectual potential due to the negative academic experiences they have encountered and internalized prior to entering Reading Rocks!. For instance, one parent, Stephanie, stated that she knows her son, David is “a bright child but he’s missed something. He probably doesn’t have the phonics. They don’t teach phonics anymore and they need to go back to that.” She further explained that during a typical school day, David, “struggles with all subjects and of all the children in the classroom, she [the teacher] spends the most time with him.” Furthermore, in regards to her son’s literacy, she said, “he would rush through his work and copy off the person next to him even though it might be wrong...so yeah, he wasn’t interested at all in the reading. It was a struggle....”. Similarly, another parent, Lisa said that her son, Peter, who was reading four years behind grade level before starting the program had been working “hard but doesn’t see the results”. She said that Peter “never liked it. We would sit and read a book—he would read a page, and I would read a page and he says ‘OK mom, I’m done.’ Just not interested.”

1 All names used in this thesis are pseudonyms.
She further explained the frustration that both Peter and herself experienced:

And the teacher would say, 'oh, he's OK, he's gonna do fine.' And it's me going...no, there's something going on and I wish we had done it years ago because now, in that map, that hierarchy, where there's such a huge difference and that is discouraging that way...because for every year they're behind, they have three years to catch up—that's the average.

Jessica, another parent, noted that her son, Alan, was also quite disengaged from literacy-based activities prior to participating in Reading Rocks!;

He didn't really have a good view on literacy...he is very auditory so if you would sit and tell him, he would remember but if you had to give him a paper to read, it's a different story. So he wasn't necessarily always interested in reading...the feedback from his teachers is that he would rather not use his class time and bring his homework home, um, just to make it a little easier to get that support at home...I find that he would opt to be sick that day...or if he feels that there's a certain assignment that he knows he hasn't completed, um, he won't tell me all the time.

Moreover, prior to entering Reading Rocks!, these children read and write below their current grade level because they required, but did not receive, further support in some aspect of the reading hierarchy and without that knowledge, were unable to gain advanced literacy skills. Stephanie mentioned that David was “not understanding the verbal directions...he doesn’t know what he’s expected to do.” David also revealed his confusion with the task at hand as he would say “mom, I don’t know what to write.” Stephanie further expressed the frustration that he experienced by realizing that he was “not learning properly...because he doesn’t even know where to start!... They’re just expecting them to know this...He’s sitting there and he doesn’t know.” Jessica also revealed the frustration that she and Alan experienced as a result of not being able to meet grade level expectations due to the challenges that Alan faced:

We actually took a learning program at the Canadian Learning Centre, and when they did the assessment on him, he was in Grade 6? And they evaluated him at a Grade 2 level. So it’s discouraging...and like you said, it’s hard because you’re expected to do this work at this level yet you’re only at this level. So without the levels in between being completed or up to par, for him it was very frustrating.
It is evident that while the severity of each child’s literacy-related challenges varies, the children entered Reading Rocks! reading and writing considerably “below” their peers. As Butler and Winne (1995) have verified, students’ understandings of tasks have an impact on the goals they establish and their engagement with those tasks. As such, many times, children are fully aware and can sense they are undergoing literacy challenges as indicated by their feelings of incompetency in relation to their peers. Children’s awareness of their performance abilities is part of the process of evaluating their learning and is thus beginning to play a role in the self-regulation process (Butler & Winne, 1995). These feelings of inadequacy consequently have a significant impact on their self-confidence, as usually these children lack the motivation to engage in any academic activities and are reluctant to read. Stephanie spoke of the lack of motivation her son experienced as a result of feeling academically inept:

The beginning of the school year was very...not motivating for him. We always had to encourage him to wanna go to school. He did not wanna go or he’d come home and he’d be crying. Because his friends could do stuff and he couldn’t and I would say ‘honey, you can do it’...he tells me they’re able to do it all and he can’t understand why he can’t do it.

Lisa’s son Peter experienced similar challenges being motivated to engage in literacy-based tasks, as she explained that “we always got him to try, but he would never”. As a result, children often enter Reading Rocks! with feelings of inadequacy and negative perceptions and experiences with literacy. Stephanie further stated that “it was a very negative experience” and David was “…not interested in it before and found it really stressful. And I felt bad sending him to school! But what am I gonna do? Keep him home?” It is apparent that prior to participating in Reading Rocks!, children’s full awareness of not performing at the expected grade level presents internal challenges and feelings of incompetency, which in turn disengages children from literacy-based activities. Similarly, Alan had also encountered negative experiences towards
literacy-based activities, as Jessica explained that Alan did “not like to read a lot. He only reads if he’s coaxed, so to speak...because of the whole processing and if he does read, he reads very slowly...he’ll read a whole page and not really know what he just read so he’ll feel like ‘what’s the point of reading?’ because he didn’t comprehend.”

Selecting Goals

The second stage of the self-regulation model comprises students establishing goals for the task at hand and generating plans to attain them. One of the most vital requirements of Reading Rocks! is having the tutor and child consciously and deliberately set goals for their learning, which are guiding principles to direct children’s behaviour and performance (Boekaerts & Niemivirta, 2000). Reading Rocks! is structured in such a way that provides opportunities for participating children to develop their engagement towards literacy-based activities due to the various motivational components of the program. First, this specific program includes focusing on four reading-based skills, where the children spend no longer than 12 minutes on various literacy components to address all of their needs within the hour. These small time periods keep the children engaged and motivated because the activities and tasks change at a fast pace, which minimizes distractions and disengagement. With the reduction of distractions and short, stimulating instructional blocks, the children remain engaged and motivated, which are important factors for success and contribute to the development of children’s self-efficacy. Therefore, the children are able to predict and expect the next instructional block they will be working on and the measurable success they intend to attain during these blocks. Lisa saw the value of the short instructional blocks, as she appreciated the opportunity for children to make diverse literacy gains in small increments, which she realized were prerequisites for one another:

I think the testing, how it broke out into 15 minute sessions...it helped him in all the different areas instead of just one. Sometimes I think maybe he needs more in one than
the other, but like I say, it comes in a package and you have to do, like the hierarchy of getting it—mastering the levels before moving up so I understand that. That was something that worked well for him, he loved it. He loved the little tests at the end.

These examples verified that, just as Butler and Winne (1995) have suggested, in Reading Rocks!, the goals that the children establish are hierarchically nested so that the attainment of a goal at one level, such as one instructional block allows the goal for the next block to be met. The phonics that children master pave the way for the attainment of certain sight words, which then allows a certain rate of fluency due to the child’s ability to read the words, which ultimately contributes to the child’s comprehension of the text.

Second, the individualized motivational workstation that each tutor is required to design for the child exemplifies the value Reading Rocks! places on goal-setting. The workstation is created by the tutor and child utilizing a tri-fold board for the purpose of exhibiting the child’s learning in a measurable way by charting their success for each instructional literacy block. Upon their initial meeting, the tutor gathers information about the child in regards to the child’s interests, favourite hobbies and so forth to design the board according to the child’s various interests. Stephanie verified the significance of incorporating the child’s interests when designing the board and selecting goals, as “that’s the motivation. She used something he liked; she picked a very good theme for him and it was very motivating.” A graph is also a requirement for each instructional literacy block for every session; therefore, a graph is created for phonics, sight words, fluency and comprehension. As soon as the child masters a particular literacy skill, the child physically graphs his or her own success by colouring in the bar graph, placing stickers and so forth to see the tangible success. Throughout the 8 weeks of Reading Rocks! the tutor and child are actively engaged in the development of the motivational workstation. The child contributes to the design of the board by suggesting ideas and seeking ways to enhance the
board; hence, taking ownership of their learning. Furthermore, at the end of each instructional literacy block, the children are encouraged to set a realistic goal to achieve the next session, which is clearly indicated on the chart as a visual reminder. For instance, a child may strive to master five new letter names and sounds by the following session or work towards increasing their fluency rate. Lisa recalled that her son Peter’s board was football-themed as it “had a ball sort of going through here and it even had success and it has the board charts on the sides” with both of their names on the board. Jessica saw the value in designing the workstation boards to meet the child’s interests, as she believed that contributed to Alan’s increase in motivation:

He wasn’t overly motivated until she [the tutor] started trying different strategies and different techniques. And talking more about stuff that Alan was actually interested in, like weather or nature...so it kinda caught his attention and it really helped his focus more on what she was trying to teach him.

Children that are actively involved and contribute towards the progression of their board and chart their own learning are able to observe evidence of their success and the results of their perseverance, for which they are rewarded. For example, Stephanie indicated that in regards to the literacy skills David was mastering, he was “charting it and she’s [the tutor] showing him, ‘oh, you’ve gone up this level and now you know this’ and then she gives him little prizes and he looks forward to it.” Children then recognize and internalize their capabilities and potential, which motivates them and provides autonomy to continue setting goals for the following session, resulting to their determination to accomplish these goals (Winne, 2010). Stephanie asserted that this motivational component of Reading Rocks! is the impetus for children’s success and active engagement in the program:

She [the tutor] had little prizes for him, even if they were insignificant, like little erasers, he wanted to work towards, whatever it was...and she said it was bizarre because where she worked with him...it was noisy, but David did not have a problem concentrating. She goes ‘he was able to read all of it...’
Lisa related to this positive experience and was able to attest to the success of Reading Rocks! due to the motivational goal-setting opportunities because Lisa quoted that her son could “see it right in front of him...something to strive for.” Peter was actively engaged in his learning during the program and looked forward to the motivational workstations: “Every week, or every Monday and Wednesday, he went for that chart...”.

Third, it is apparent that these self-regulating children evaluate their performance relative to the goals they strive to achieve, which creates internal feedback regarding their rate of improvement that propels children’s willingness and need to modify the goals accordingly (Butler & Winne, 1995). Stephanie’s son, David, evidently took an active role in his learning, as “he was always wanting to go see her [David’s tutor], constantly. He’s like ‘mom, I’m gonna get this tonight and I learned 10 more words tonight’.” Comparably, Lisa’s son, Peter, began to actively regulate his own learning by striving to “get to a 1000 sight words but he said he knew he wasn’t gonna get there”; however, the thought process of having a goal in mind and the desire to reach success is a transformative experience for the child as part of the self-regulatory process. Figures 3 through 7 illustrate the ways Reading Rocks! provides opportunities for children to set goals in their learning.
Figure 3. In Reading Rocks! tutors are required to develop motivational workstations, such as the one in this picture, which display the graphs for each instructional block as well as the sight words mastered each session. These workstations are designed around the children's various interests, such as Spongebob, to further motivate them.
Figure 4. This picture is another example of a motivational workstation created by a Reading Rocks! tutor. This workstation is centred on a Spiderman theme, which was the child's interest in order to keep the child motivated and engaged. At the end of each instructional block, children graph the concepts they have mastered on the charts for each literacy concept and set goals for the next session.
Figure 5. This picture clearly illustrates the graphs that each tutor is required to develop in Reading Rocks! A graph is made for each instructional block, for each session. Children track their success at the end of each session, which is followed by goal setting for future sessions.
Figures 6. This is another example of a graph that was made by a Reading Rocks! tutor. The graphs themselves may be designed around the child’s interests, to further engage the child. This particular tutor-child pair utilized Pokémon-themed stickers to track the child’s success. Incorporating the child’s interests in the graphs enables children to take ownership of their learning. Therefore, the literacy activities become more valuable for the children.
Figure 7. In this picture, the child is in the process of graphing the number of sight words he mastered at the end of that instructional block. Once children set goals, they are able to directly know how well they accomplished that goal when they chart it on the graphs. This enables children to recognize their capabilities by seeing their visible progress throughout the weeks.
Selecting, Adapting and Generating Tactics and Strategies

Once the children and tutors have mutually established goals, these self-regulating children observe their progress with the tasks and implement strategies to meet particular learning objectives. For familiar tasks, learners may apply strategies automatically; however, for novel or challenging tasks, children modify or develop new strategies (Winne, 2010). The tactics and strategies that are generated and implemented in Reading Rocks! reflect the varying abilities and interests of the children in the program. Regardless of the specific activity, tutors are trained to develop and introduce hands-on, tangible and stimulating literacy activities in order for the children to actively partake in their learning. Examples of activities include various phonics or sight words flash card games, tracking the new sight words mastered by recording them on an object of the child’s interest, such as a football, basketball, hockey stick and so forth that the tutor and child can play games with. For instance, Peter’s tutor, Gary (a pseudonym), utilized “a ball, like basketball-sized and Gary had written probably a couple hundred words on it. It was amazing and that’s what they played with.” In this case, the strategy was recording the mastered sight words on a basketball and practicing these words by playing games with the words on the ball. Peter was evidently striving to meet this particular literacy skill through the use of the basketball and games as he would “just sit there and read all the words he put on the ball...there were tons!” In David’s case, he was motivated by small rewards, as Stephanie explained:

Even if it’s little silly stuff wrapped up, she [the tutor] just wraps stuff up that she has and he gets so excited. He has to read the note first, before opening it. Yeah, it’s the motivation...they just need it.

In Alan’s case, who was in the older age range in comparison to the other program participants, his tutor ensured to develop strategies and activities that were age-appropriate yet suitable for his performance level. Jessica mentioned that Alan’s tutor implemented excellent reading strategies,
which Jessica found to be very beneficial that allowed Alan to better understand the skills he was learning. Jessica explained that the strategies were one of the major factors contributing to Alan’s success: “If there’s a question at the end of the story, to find what the main idea is. She used a lot of her strategies to help him identify, or to you know, block certain things. So read one paragraph and then figure out questions about what you just read. And then he’ll be able to remember it and stuff like that—reading in chunks so he’s not too overwhelmed.” Figures 8 through 10 illustrate the various resources and tools that are utilized at Reading Rocks! for children to achieve their literacy goals.
Figure 8. Tutors develop and implement hands-on, tangible and stimulating literacy activities in order for the children to actively partake in their learning. As an alternative to the traditional paper and pencil technique, in this photo, a tutor had the child formulating letters and words utilizing sand, paint and “wikki stix” (non-toxic wax formula that are pushed into a strand of yarn).
Figure 9. The use of magnetic letters has been proven to be very effective, hands-on resources to incorporate in Reading Rocks!. Magnetic letters are often used to develop phonics and sight word vocabulary. Children enjoy manipulating and working with these magnetic letters and often express their interest in utilizing this resource as often as possible.
Figure 10. Children at Reading Rocks! enjoy playing various active literacy games, which are very hands-on and motivating. For instance, in this picture, the child is playing a game of sight words hopscotch. Similar to traditional hopscotch, the child throws a beanbag on a square. The child must then identify the word the beanbag landed on and if they are capable, use the word in a sentence. The child then hops through the squares and skips the one with the beanbag. In this way, the child develops their sight word vocabulary while having fun and consequently, reading becomes more enjoyable.
Products

Once children consciously and deliberately establish the literacy skill they intend to achieve and implement strategies to succeed in their endeavours, they are able to produce the results, which are the learning outcomes. The results of the children’s perseverance and determination towards the attainment of these goals are tangible, which are then graphed and posted on the motivational workstation boards. Every phonics concept, number of sight words, fluency rate and comprehension questions answered correctly are charted and tracked on the motivational boards. In this way, children are able to see evidence of their progress and capabilities. Every child in the program progress at various rates and the emphasis lies on the actual progress made as opposed to the amount of progress as this indicates that children are receiving the support required and on the right path towards success and an increase in self-confidence and motivation. Stephanie mentioned that David had “jumped from, I can’t remember what level but I think from 9 to 15 for reading and it was huge! His Grade 1 teacher was like, ‘honestly, I haven’t seen a child jump this far...he’s doing really well’...it just clicked for him. And it’s hard for them in the beginning of reading, to get to that certain level.” Children also demonstrate evidence of their learning particularly when they are able to apply the skills and knowledge gained from Reading Rocks! to other aspects of their lives. For example, in David’s case, “sometimes the words of the week would come home and he’s like ‘I already learned that with my tutor’...and with the blending, like the blending sounds, he’s like ‘mom, I got this’ and I would say, ‘what’s this word? Remember what your tutor showed you!’ so yeah, it’s just the motivation...and his attitude, he was just so much more...overall, positive. He has shown a lot of progress lately...and the fact that he came home and he already knew some of the material, and that he could do it, he was definitely more positive towards school.” Alan also had the ability to
apply the knowledge he learned from the program to other components of life his as Jessica stated, that “honestly, I think he benefitted a lot from going. And not just from going but he was actually retaining it, you know, the stuff that they were talking about and what he was learning. And he was applying it.” Moreover, Peter evidently demonstrated significant progress as a result of his efforts to set goals and utilize the strategies as Lisa stated, “he was at 900 words that he had learned...he went from knowing 70 to 954!...and his fluency went up, but not as high as the sight words but it was still up there. So it worked—I see it!” Reading Rocks! is structured around the notion that when children physically observe their results, they are partaking in the regulation of their learning as they realize which goals were attainable and the strategies that were effective in contributing to their success. This steers the way towards children’s ability to monitor their progress and evaluate the external feedback, which play a factor in their overall self-esteem and motivation towards literacy. Lisa was able to attest to this as she explained, “he [Peter] would say, ‘mom, mom, come here and look!’ ‘cause we would be sitting there, waiting in the room and he would say, ‘mom, come and see my results! Look, look!’ and we would just be ecstatic, you know, that he doubled it and I’m like ‘you know that many words?!’ Jessica was quite pleased with the motivational workstation board that Alan and his tutor had been working on because Alan was able to see evidence of his accomplishments and positive outcomes of his hard work. Jessica referred to it as a “really good board. And she [the tutor] had all his words here too, stuff like his sight words that he was working on. And he knows these are something he can glance back and say ‘I do know’ not ‘I don’t know’.” Figures 11 and 12 demonstrate participants’ learning outcomes at Reading Rocks! and the various ways these literacy achievements are displayed on the motivational workstations.
Figure 11. In this picture, this child is pointing to his achievement in relation to the goal he set with his tutor. This photo is an illustration of how goals were used in Reading Rocks. Additionally, the child can directly see all of the literacy skills he has attained throughout the program, which are the results of his hard work and ability to set goals.
Figure 12. Every phonics principle, sight word, fluency and any other literacy concept that children master are visibly displayed on the motivational workstations as illustrated in this picture. When children visibly see their success, which would be considered the tangible products, they are able to internalize this, which increases their intrinsic motivation.
Monitoring (Paths of Internal Feedback)

In this crucial component of the SRL model, self-regulating children evaluate their rate of progress relative to goals, which creates internal feedback that directs future action. The instruction provided in Reading Rocks! offers ample opportunities for children to practice what they are learning and make considerable progress. Children become fully aware that they have mastered certain literacy skills once they actively graph it on their charts. As soon as a child charts his or her success, this demonstrates his or her ability to utilize the knowledge and tasks he or she has been learning, make constant and efficient modifications and attain skills that were once challenging. Hence, these children are successfully able to self-regulate and calibrate tasks and believe that they are now capable and competent academically. Lisa spoke to the significance of the program enabling children to monitor their success through the graphing process, as she believed that “charts are very good and they support and push the kids to strive to do better, and if they see the accomplishments right in front of them everyday...that would be huge.” This internal feedback reinforces achievement calibration, which is the link between students’ beliefs regarding their performances and their actual accomplishment, which plays a significant role in self-regulation (Lodewyk et al., 2009). Jessica described the workstation board to play a significant role in Alan’s awareness of his own abilities as she believed that “the board definitely helped Alan because he could see ‘this is where I was’ and ‘this is where I am now’ at the end of the program. He actually saw results versus trying to remember exactly what it was...” Stephanie also explained that it was evident David was making significant literacy gains as a result of the one-to-one instructional support and having the opportunity to monitor his own success by graphing the skills he mastered: “…definitely the one-on-one and the motivation. They show him his growth. He can see his success. And he was able to pick up and he started
moving levels." Further, while she and her husband worked strenuously at home to provide as much support and strategies to enhance David's literacy, attending Reading Rocks! contributed significantly to his progress:

Stephanie: Yeah, so we did a little bit here but once we got him into the reading program, he wanted to do more.

Sarah: On his own?

Stephanie: On his own. And I said, 'OK, let's do half a page, let's read half of this' or 'let's read two sentences'. So he wanted to because he felt like he could actually do something. He was motivated.

For Alan, "something just clicked" as he began to make great strides in his reading abilities and was actively partaking in the self-regulation process by monitoring his performance and wanting to learn. Jessica mentioned that "the fact that he would actually ask me, like if we had to do some work at home or whatever, he would say to me, 'what's that word?' or he would actually be sounding things out or asking me the correct spelling versus just doing it and not caring...he wasn't always sick, um you know, that in itself are big changes. He was more positive...he actually...liked to go, he was participating and he was getting attention..." Similarly, Lisa described Peter's awareness of his progress every session through the graphs: "...every session we looked at the graphs and saw the increase...there were 4, his sight words were up and over the top. It [his charting] went over the graph, across the top...and his sight words and fluency had gone up as well." As a result of Peter's ability to chart his progress and internalize how far he had come throughout the program, Peter began to recognize his own potential and confidence towards literacy, which was a transformative experience:

It's definitely more positive because he's willing to try to do things he was never willing to do before...I think he's more comfortable trying and sitting there sounding out the word than before...halfway through [the program] he would just pick up something and was trying to read it or reading signs on the street. He would never...he would say,
'mom, I want this book from Scholastic book orders.' He would look at the pictures and put it back on the bookshelf. I'm like, 'aren't you gonna *read* that book?' and he goes 'oh yeah, maybe later' but now, he's like 'mom, I got this book' and I asked him if it was a library book and he says, 'no, mom, this is the Silver Birch logo, this is one of my Silver Birch books. That's why I have like a month to read.' And I'm like, 'ohh OK and he says, 'I read the back and it looks pretty easy, the words. But I think I can do it.'

Jessica also saw a significant difference in Alan's engagement towards literacy-based tasks as a result of having the opportunity to see evidence of his progress and knowing that he is capable of continuing to make progress as he "actually *wants* to learn...and he's asking more questions like 'how do you spell this?', "what's this word?'...you know, so that's a big improvement because before he wouldn't, didn't know and didn't care."

In addition to the charting process, externally provided feedback, which is the most common form of information that the students acquire after their engagement in academic tasks (Butler & Winne, 1995) is supplied through the one-to-one instructional support and encouragement provided by the tutors. This outcome feedback, which provides direction regarding students' academic achievement and assists them to monitor their engagement in the tasks (Butler & Winne, 1995), is another essential feature of Reading Rocks! that enables children to self-regulate and increase their motivation towards literacy. This supplementary knowledge and feedback is emphasized in Reading Rocks! and considered to be a vital component of the program as it confirms and adds to the learner's knowledge and understanding of the tasks and this external feedback enables children to be active learners capable of developing their own meaning of their learning (Pintrich, 2000). The Reading Rocks! tutors play a vital role in motivating the children and increasing their self-confidence. While the tutors provide opportunities for children to practice the literacy skills and assist them when charting success, their constant positive reinforcement, praise and encouragement contributes enormously to children's self-confidence and perceptions of literacy-based activities. Jessica was really able
to speak to the impact that Alan’s tutor made, which significantly contributed to Alan’s experiences in Reading Rocks! and his consequent motivation towards literacy:

At first, he wasn’t too sure about the program and he initially had a younger tutor and that didn’t work out. So then when Sandra took over, at first it was “ugh, I have to do the assessment” and that kinda put him off a little. He never said to me though that he didn’t want to go...I think working with Sandra though, her maturity, made the difference. Because she worked with him and she understood what he needed and what worked best. And she used the different strategies and we talked about them after the sessions were over and she would give me copies of some things she was trying so he can use it and apply it at school or at home.

When children are provided with external feedback regarding their potential and they observe that others believe in their capabilities, this positive energy becomes infectious as children begin to internalize this. Tutors make every effort to acknowledge and celebrate every success that children make regardless of how big or small the success is, through words of encouragement, positive reinforcement and patience. Jessica referred to the positive impact that Alan’s tutor had made in his self-confidence and reading abilities primarily from her encouragement: “I think it helped with his self-esteem for sure. Just the fact that he was going and Sandra honestly, she was very good...just the bonding...the fact that she got to know him and you know, kind of appreciate the stuff that he still likes to do...and she didn’t judge him or anything like that.”

Furthermore, Stephanie also emphasized the valuable role that the tutors play in children’s ability to monitor their progress in Reading Rocks!:

Yeah, she [David’s tutor] is wonderful...he would go and he would spend time with his tutor and she would be motivating him and it was a very positive experience. And he wanted to do it—he was excited and he wanted to go...she really had him motivated. He was so anxious, he showed me the bulletin board with all of the words that he knows. So she was very encouraging, very encouraging...he showed the charts or whatever they’ve done and he would be so excited to show me the numbers, what words he knows and he knew all of those...she would bring little prizes for him if he knew the words and we do that at home.
In the statement above, Stephanie also alludes to the positive external feedback contributing to children's recognition of their capabilities and potential as children begin to believe that they are in fact intellectual, competent and capable of learning. She further explained that "at the end of the session, he would show me how the numbers went up...he was so proud of himself. He said, 'look mom!'...it has to be the encouragement...he's so willing to learn, the teacher says she has no issues with him. He wants to learn, he's just gotta figure out the way. I said he needs encouragement, he needs positive." Lisa comparably believed the one-to-one support significantly impacted Peter's ability to self-regulate and succeed academically in the program: "Gary [the tutor] had a lot to do with it because Peter looks up to people to mentor him and to give him that extra positive encouragement, which he needs."

As part of the monitoring process, children begin to internalize their advancement through the opportunities to graph their success as well as the one-to-one support provided by the tutors, which enable children to recognize their potential and capabilities. These self-regulating children believe they can achieve their goals by implementing various strategies that work best for them. In turn, their self-confidence and motivation increase drastically and they become much more willing to partake in literacy-based activities. Lisa expressed Peter's confidence in his reading abilities and his eagerness and desire to engage in literacy-based activities as a result of Reading Rocks!:

He's happier. He's happier and he's willing to try things that he never did before. So that is huge...because things he would never do is pick up a book and go 'hey, I'm gonna read this. I'm gonna read five books in the next four months, mom.' I said, 'maybe you should stay home tonight and read' and he says, 'mom, I have four months to read these books, I'm gonna do one a month!'

Stephanie mentioned that David also began to recognize his capabilities and was more motivated to engage in learning-based tasks because "he would have those two days a week where he
would know he would get some sort of positive feedback about his academics...they need to see ‘oh, I’m doing better’ so they’re more motivated and once they’re motivated, they can work on their own and I think that’s so positive.” The positive reinforcement that children at Reading Rocks! internalize enables them to realize that they are indeed capable of acquiring essential literacy skills and succeeding academically by learning in unique, stimulating ways, which they no longer perceive as a negative characteristic of themselves. For example, this was relevant to David’s experiences as Stephanie happily mentioned, “he tells me that now. He says, ‘mom, I learn differently’ and I said, ‘yes, and there’s absolutely nothing wrong with that’ and I was like, in tears!” Lisa further verified the transformative experiences these children undergo in Reading Rocks! that enable them to self-regulate their learning, as she stated, “for them to all of a sudden switch the light is amazing and he [Peter] does enjoy it now. He just has to give it a whirl.” Stephanie also referred to David’s willingness to participate in literacy-based activities while enjoying the experience:

We’ve been lucky to participate ever since. And honestly, oh my goodness, leaps and bounds for him. Like, huge difference. Even with just...wanting to do it, he’s wanting to read now. When I say, ‘take the books out’, he goes, ‘OK Mom, I can read it’ or when we’re out and about, driving or whatever, he’ll see something and he’ll tell and he’s so proud of himself because now he can do it.

Jessica was also able to relate to the positive experiences that Alan was undergoing as a result of participating in Reading Rocks! as he began to recognize his capabilities and potential for success after having implemented the strategies to meet his goals and thus internalizing this progress. Jessica explained that “he doesn’t have as many negative thoughts...before it was like ‘oh, I don’t have any friends’, or you now, ‘I feel like I’m stupid’...like, he hasn’t been as vocal about stuff like that. I’m sure he still thinks in his mind but I see a difference anyways. He’s more...positive.” Figures 13 through 15 further illustrate the paths of internal feedback.
Figure 13. Children are able to internalize their success through external feedback provided by their tutors, parents and teachers as well as the motivational workstations, which enable the children to track their achievements and set future goals. In this picture, this child is graphing his accomplishments with the assistance and encouragement of his tutor. When children actively graph the concepts they have mastered, they internalize this success and also internalize the external positive feedback, which in turn increases their self-confidence and motivation towards reading.
Figure 14. The encouragement, support and guidance that children receive from their tutors at Reading Rocks! twice a week contributes significantly to children's self-efficacy and confidence in their abilities. The positive rapport they build with the tutors, who are a constant source of encouragement, is essential as the tutors help children recognize their own potential. Children, therefore, internalize this external support and feel more competent in their literacy abilities.
Figure 15. As a result of children's abilities to set goals, establish strategies to meet these goals and the positive feedback they receive from those around them, they are able to internalize their success and feel more confident in their abilities. The tutor-child pair in this picture is demonstrating the child’s success over the course of the program, which was a collaborative effort.
Self-Oriented Feedback Loop

It is evident that Reading Rocks! provides opportunities for participants to play a conscious and active role in their own learning by enabling them to actively engage in the tasks at hand by utilizing a set of powerful tools, such as goal-setting, developing strategies to achieve these goals and monitoring their performance (Greene & Azevedo, 2009). The positive reinforcement that the children receive on a one-to-one basis and tracking of progress through the graphs at Reading Rocks! play a fundamental role in children’s monitoring and regulation of their learning. By being able to partake in the self-regulation process during Reading Rocks!, children consequently experience a dramatic increase in motivation and engagement towards these literacy-based tasks. For example, for David, Stephanie saw an enormously positive transformation in David’s life:

*Huge difference.* Leaps and bounds...we were really worried about him, especially with the reading... he’s more motivated and engaged in the literacy activities. I said that he’s been involved with this program...and his Grade 1 teacher was astounded. She said, ‘I don’t know what you’re doing but keep doing it!’ Now he *wants* to do the work—he goes to see this tutor and he’s so motivated! She said she’s never seen a child jump that many levels.

Peter has similarly gained self-confidence in his abilities and has been making more of an effort to participate in literacy-based activities, such as signing up for the Silver Birch Reading Club at school, which had not been the norm prior to attending Reading Rocks!. Lisa further explained this by stating:

He reads and he’ll sit there and read a book when he never did before. I’ll sit there and read the newspaper and he might look and go, he’ll try and read where he would *never.* He would say, “mom, read it to me” and I’m like “no, you try it” and he is trying more.

Not only is this transformation a sense of relief and accomplishment for the children, the parents expressed how shocked and impressed they were with their children’s progress as a result of their self-regulation abilities while participating in Reading Rocks!. Lisa described her
frustration trying to support Peter the best way she could and provide him with resources and strategies, which he had not been as receptive to:

If you look back, like, 2 years ago, in the last 2 years, I have spent $5,000 on tutors. His reading level was not really...not grade level but his reading level was maybe 4 and that was over a 1-year process...to see the difference, you know...like I said, hopefully the school board sees it. But I’ve spent thousands and I didn’t see the enthusiasm in the whole year working with the other lady, than I saw in this program.

Moreover, since participating in Reading Rocks!, Alan demonstrated a willingness to learn and actively engage in literacy-based tasks because he had been undergoing the self-regulatory process. Jessica pointed out his genuine concern for his work and his results:

He is actually caring about what he’s handing in. He actually cares about what mark he’s gonna get...so he asks me too, ‘do you think this is OK?’ whereas before it was just like whatever, I’ll just do it this way and be done with it and he never really cared. Now he doesn’t look at a book and go, ‘oh I can’t read that.’ Now he’s considering it even if it takes him a little longer, that’s fine.

Self-regulated learning is a vital aspect of learning and achievement in academic settings. Individuals, particularly those at-risk for learning disabilities, that have the ability to successfully self-regulate through various opportunities and contexts that foster self-regulated learning, are much more likely to succeed academically and develop a more positive and confident sense of self.
CHAPTER 6: CONCLUSION

Implications

My current study holds a number of implications for research, practice and policy, which will be addressed in the following section in this chapter.

Future Research

There are numerous areas that future research examining self-regulatory processes and motivation in remedial literacy programs for children at-risk for learning disabilities would benefit from exploring. Taking into consideration the complexity of self-regulated learning, the development of self-regulation towards academic tasks emerges as children develop and mature. One avenue of research worth exploring is conducting a longitudinal study over a period of a few years to examine whether the children that previously participated in Reading Rocks! continue to develop some of the essential self-regulation strategies they acquired in Reading Rocks!, as adolescents. It would be interesting to explore whether self-regulatory processes in academic contexts progress given overall cognitive developmental transformations as well as changes in the classroom context as children mature. In addition to this, another prominent area worth exploring in the future is whether individuals, such as children that participated in Reading Rocks!, that already possess self-regulatory abilities as a result of the opportunities provided in the program, are able to maintain their self-regulatory capabilities intact in diverse contexts. It would, therefore, be interesting to examine if these individuals can independently utilize self-regulation strategies in various academic contexts and at which point individuals can independently motivate themselves to self-regulate.

Lastly, as I have mentioned previously throughout my thesis, a variety of self-regulation models exist that are all equally valid and eminent. It would be interesting and pivotal for future
researchers to examine in great depth the other SRL models by comparing and contrasting the various features of the models and bridging these other models with other existing remedial literacy programs.

Practice and Policy

The findings of my research hold various practical and policy implications that are worth recognizing. Vulnerable readers that are at-risk for learning disabilities are often unmotivated to engage in literacy-based tasks due to their perceived failure and negative experiences at school, resulting in a poor academic self-concept (Grolnick & Ryan, 1990). Therefore, researchers and practicing educators have identified one of their challenges as developing, implementing and distributing effective strategies for teaching literacy to vulnerable readers (Torgesen et al., 2001). Current research has validated that remedial literacy programs that provide explicit, systematic instruction and opportunities for students to practice self-efficacy foster the acquisition of literacy (Cowden, 2010). As demonstrated by the comprehensive program review of Reading Rocks! and the findings from the interviews with parents, remedial literacy programs that encourage students to self-regulate their own learning by utilizing a set of powerful tools, such as setting goals for specific tasks, selecting appropriate strategies to achieve their goals, monitoring their performance and internalizing the feedback, increases their self-confidence in their learning and hence results to academic success (Butler & Winne, 1995). It is fundamental that the fostering of self-regulated learning becomes a primary goal for all educational systems. Therefore, various professionals, including school boards, educational researchers, Speech Language Pathologists, Literacy Specialists and primary and secondary school educators must collaborate to provide a maximum number of opportunities for vulnerable readers to self-regulate their own learning. More specifically, future remedial literacy programs designed to support
vulnerable learners should be designed on the premise of a self-regulation model and provide opportunities for students to actively engage in various literacy tasks, including setting their own attainable goals, utilizing effective tools and strategies, and monitoring their own progress to actively take ownership of their own learning in order to enhance students' self-efficacy and academic success. Once the appropriate steps are taken to meet specific goals and the tasks develop, students can begin to concretely see the impact of their engagement with the tasks, which they internalize. Hence, students are eventually able to recognize their own potential and academic capabilities, which increases their self-confidence and motivation towards engaging in literacy-based tasks.

An essential practical implication of my research is the significant contribution it has made to the Learning Disabilities Association of Niagara Region, as it is evident that Reading Rocks! remains one of the agency's successful remedial programs. The findings of my study have further verified that motivation and children's ability to self-regulate in Reading Rocks!, are critical foundations to literacy development. My study points to the importance of on-going and continuing programs such as Reading Rocks!, at the Learning Disabilities Association of Niagara Region, to be designed on the premise of a self-regulation model.

Research has also elucidated the integral role that motivation has on students' use of self-regulated learning strategies and academic success (Wigfield, 1994). Research has alluded that children experiencing difficulties with reading as a result of phonological processing deficits associate academics with failure and therefore are more likely to withdraw from literacy-based activities. Motivation, therefore, is conditioned upon the individual's environment; these vulnerable readers must be intrinsically and extrinsically motivated to find the literacy-based activities valuable (Margolis & McCabe, 2004). My study further verified the significance of
placing an emphasis on motivation in remedial literacy programs extrinsically to improve children’s engagement towards literacy and self-efficacy. Reading Rocks! is designed in such a way that develops a positive, supportive environment that fosters students’ intrinsic motivation through the graphing of children’s progress; hands-on, stimulating literacy activities; short, 12-minute, engaging instructional literacy blocks; and positive reinforcement and encouragement from the tutors. Reading Rocks! also takes into consideration students’ choices, goals they wish to attain and students’ interests, which enhanced children’s motivation and engagement towards literacy. These findings delineate the need for various professionals to work together and place special emphasis on ensuring the development and provision of services and activities that are highly engaging and motivating for vulnerable readers. Furthermore, future literacy programs should be designed to increase children’s intrinsic motivation towards the task at hand, which in turn will enhance children’s self-confidence in their abilities.

Limitations

As a research project progresses, the researcher will certainly discern things that she hopes to have done differently that may have strengthened and enhanced the outcome of the study. I certainly encountered this while completing my study; while my data provided valuable knowledge and implications for practice, policy and research, as I culminate my study, there are a few limitations to be addressed. First, my study had a small sample size of three parents of children that participated in Reading Rocks!. I fully recognize that my sample is not representative of the population and hence, with a small sample size, generalizations about children’s experiences of Reading Rocks! cannot be made to the larger population. While the three in-depth interviews provided valuable, detailed accounts of individual experiences, interviewing a few more parents of diverse backgrounds may have provided an opportunity to
gain richer data on the subject. The parents interviewed had little diversity amongst one another; they were all mothers, white, appeared to be middle class, resided within the same geographical location and all shared their experiences on their sons. Nonetheless, my sample was comprised of the few parents that had responded to my request to participate in this research. While the parents interviewed discussed the ways their sons benefited from Reading Rocks!, I am fully aware that among all of the families that participated in Reading Rocks!, experiences would have varied greatly, with some children reaping the full benefits of the program while others not having undergone these positive experiences to the same extent. Despite the fairly small sample size, I feel as though I gained very valuable, comprehensive insights from the parents I interviewed regarding the ways Reading Rocks! promotes self-regulatory processes and the significance of providing opportunities for children to self-regulate their learning to increase their overall self-efficacy and academic success.

Second, as I discussed in the methodology section, I chose to specifically interview parents of children at-risk for learning disabilities who participated in Reading Rocks!. This was a personal preference, as research has validated the powerful impact that families can have on children’s literacy achievement. The inclusion of caregivers in literacy programs has been found to contribute to children’s literacy acquisition in a significant way (Senechal & Young, 2008; Timmons, 2008). Therefore, I felt it was important to incorporate and involve caregivers in this research study, to provide them with a voice and obtain their perceptions of their children’s experiences of Reading Rocks! so that they are better equipped to support their children’s reading acquisition and promote self-regulatory skills. I do fully recognize that as gatekeepers, these parents were speaking on behalf of their children; therefore, the parents’ interpretations of their children’s experiences are only their perceptions and will not fully epitomize children’s
authentic thoughts and feelings. Due to time restraints and other limitations, it was not feasible to interview the children as well, however, in the future, it would be worth conducting in-depth interviews with the children themselves along with the parents that participated in Reading Rocks! regarding their own experiences and attitudes towards their capabilities and literacy before, during and after having participated in the program and to gain their interpretation of engaging in self-regulatory processes.

Third, I began to realize that the inclusion of a combination of group interviews and individual interviews with parents rather than solely conducting individual interviews may have been an effective methodology. Group interviews would have enabled parents to share their experiences with one another, discovering similarities and differences among one another's stories, resulting to a rich discussion of whether Reading Rocks! promotes self-regulatory processes. Following this, it would have been beneficial to then interview parents individually to draw out feelings and thoughts that were not addressed in the group interviews due to the need for privacy or power imbalances within the group, which would have further supplemented the group discussion.

Fourth, as discussed in the Literature Review, there are numerous models of self-regulated learning. While these various models are premised on the same principle of learners taking an active role in their learning by setting goals, developing strategies and monitoring their progress, I chose specifically to examine in great detail Winne and Hadwin's model of SRL. Due to time constraints, I felt it was necessary to focus on one particular model and delve into the various components and examine whether Reading Rocks! promotes these self-regulatory processes purported by Winne and Hadwin. Future studies should strive to explore other SRL models and bridge it over with another remedial literacy program or develop programs based on
the various SRL models. For instance, as a follow-up to this research study, it would be valuable to further explore a specific SRL model proposed by Winne and Hadwin called the COPES-model (Greene & Azevedo, 2007). Utilizing the acronym COPES, Winne and Hadwin explain the four phases of the model in regards to the interaction between an individual’s conditions, operations, products, evaluations and standards. All of these phases, except operations, are types of information an individual utilizes or creates during learning. In this model, self-regulated learning takes place in four sequenced stages, including (1) task definition, (2) goal-setting and planning, (3) enactment and (4) adaptation (Greene & Azevedo, 2007).

Lastly, another potential drawback of my study may lie within the coding process of the interviews. The aim of the interviews was to examine whether the discussions and insights from the parents supported the various components of Winne and Hadwin’s SRL model, which were my predetermined themes. This may potentially be regarded as a limitation in that the themes of my interviews were selected in advance, prior to the conduction of the interviews, as opposed to discovering common themes among the findings afterwards. Nonetheless, I also perceive this unconventional method of analyzing my data to be a strength and unique feature of my research. For the purpose of bridging Winne and Hadwin’s SRL model with Reading Rocks! and to determine whether this remedial literacy program supports the various self-regulatory processes outlined by Winne and Hadwin, this was the most suitable approach to undertake and was an enormous asset to my study, which resulted in very rich, valuable findings.

Final Thoughts

Through the in-depth interviews and photographic evidence of the motivational workstation boards, it is palpable that Reading Rocks! successfully supports and promotes self-regulatory processes purported to be essential by Winne and Hadwin (1998). There are a variety
of factors that can influence the development of self-regulation with motivation playing a prominent role. Students in Reading Rocks! that were initially discouraged to engage in any literacy-based tasks and were reluctant readers were not only provided with explicit instruction in literacy skills but also opportunities to set and meet goals for their learning, monitor their rate of progress and internalize surrounding feedback. Consequently, these students’ interests in the academic tasks increased, as did their engagement with the activities because they began to witness and internalize the value in the tasks. These children began to find the tasks worthwhile, which aided in their abilities to self-regulate their learning, which eventually enabled them to feel self-efficacious and confident in their academic abilities and overall sense of self. It is because Reading Rocks! provided students with opportunities to take ownership of their own learning and to carry out tasks that are in their range of competence, on their own, that they began to self-regulate their learning. Moreover, participants in Reading Rocks! were provided with guided practice and support from knowledgeable others, including tutors and parents. Students that were successful in utilizing self-regulatory strategies were rewarded through encouragement and praise as well as through tangible rewards such as dramatic improvements in their learning outcomes.

The stories that were told by Stephanie, Lisa and Jessica may or may not be similar to the stories shared by other parents of children at Reading Rocks!. However, what can be suggested from their stories and experiences is that it is essential for remedial literacy programs, such as Reading Rocks! to provide maximum opportunities for children to set goals for their learning, select tools and strategies to attain those goals, monitor their progress and receive external feedback so that they can internalize their successes and recognize their capabilities and potential.
The relevance of my thesis is two-fold. Firstly, my thesis contributes greatly to the literature on learning disabilities by shifting the way learning disabilities are researched and perceived. There has been indefinite research on the etiology and characteristics of learning disabilities, however, restricted information on ways to develop and implement effective remedial programs to best support children’s literacy needs and to assist them in reaching their full potential. Therefore, my research has paved the way for an evolution in this topic, by now shifting the focus on the features of learning disabilities, to placing an emphasis on examining in great depth the role and significance of motivation and self-regulation in supporting individuals with learning disabilities.

Secondly, as research on the role of motivation in self-regulated learning among children with learning disabilities is limited and thus necessitated, my research significantly adds a new body of knowledge to the field of self-regulation among children with learning disabilities and how best to support their self-efficacy. By examining the specific ways that Reading Rocks! supports and promotes essential self-regulatory processes as outlined by Winne and Hadwin (1998), numerous professionals and practitioners can begin to emphasize the significance of including these components in future literacy programs.
Appendix A – Parent Interview Questions

Introductory Ice-Breaker Questions:

1. Can you describe a typical day in your child’s school life?
2. Does your child enjoy school? What does he/she like best? If not, what is it he/she doesn’t like about school? What are his/her general attitudes toward reading and literacy?
3. How did you find out about LDANR's Reading Rocks program and what made you sign your child up?
4. Has your child been formally diagnosed with a learning disability? If so, when was this diagnosis made and how did the child feel about it?

Before Participation in Reading Rocks:

1. Before participating in Reading Rocks, what was your child’s engagement with school like?
   a. What were their attitudes and views towards reading?
   b. What were his/her experiences and views towards literacy and reading?
2. Did your child’s experiences and views towards literacy affect your family dynamics? How did your child deal with these feelings and experiences?
3. How did you, as a parent, deal with your child’s experiences and what were some coping strategies?

During Participation in Reading Rocks:

1. While participating in Reading Rocks, do you feel that your child’s participation in the program changed their motivation levels and engagement in reading? Please explain.
2. How did your child perceive the Reading Rocks program? Can you explain a typical day where Reading Rocks took place?
3. Did the Reading Rocks program benefit your child? If so, in what ways?
   a. What were key elements of the program (specific examples) that contributed to your child’s success? How successful did your child become?
4. Throughout the 8 weeks of the program, did your child’s experiences and engagement at school change at all? How did your child deal with these experiences? Please explain.
5. What was your family dynamics like during your child’s participation in Reading Rocks?

After Participation in Reading Rocks:

1. Have you noticed any changes in your child’s motivation and engagement towards reading after having participated in Reading Rocks? In what ways?
2. After the 8 weeks of Reading Rocks, were there changes in your child’s academic life? Your child’s social life? Please explain.
3. Did the changes from Reading Rocks affect your family dynamics? Please explain.
4. Has this whole Reading Rocks journey been a struggle for you? If so, can you please tell me a little about the struggle?
5. Has there been a sense of relief? If so, what has this emotional shift been like for your child? For your family?
6. What would you say are key elements that attribute to Reading Rocks’ success? Would you recommend this program to other families?
Appendix B – Participant Information Materials

Participant Letter of Invitation

Date: December 20, 2011

Title of Study: Uncovering the Motivation Behind “Reading Rocks!”

Principal Student Investigator: Sarah Farrell, Master of Arts Thesis Student, Department of Child and Youth Studies, Brock University

Faculty Supervisor: Dr. John McNamara, Professor, Department of Child and Youth Studies, Brock University

Dear Parent/Guardian,

I, Sarah Farrell, am a Master of Arts Student, in the Department of Child and Youth Studies at Brock University working under the supervision of Dr. John McNamara and would like to invite you to participate in a research study entitled, Uncovering the Motivation Behind “Reading Rocks!” Research is a way to understand ideas and learn new things. In my research, I plan to examine the effectiveness of the Learning Disabilities Association of Niagara Region’s one-on-one literacy program “Reading Rocks!” More specifically, I plan to examine the changes in children’s motivation, self-esteem and engagement in literacy before participating in LDANR’s Reading Rocks program, during the program and after having participated in the program to examine the impact of the program.

If you choose to participate in the research, there will be an interview, taking place to further discuss you and your child’s experiences of the Reading Rocks program. The expected duration of the interview is approximately 45 minutes to 1 hour in length. If you wish, you may decline to answer any questions or participate in any component of the study. You may decide to withdraw from this study at any time, which will not affect you and your child’s future access to programs at the LDANR.

This research should benefit you, as a participant, as it will help you better understand the experiences you have encountered with your child as a result of participating in Reading Rocks and your child’s journey now that their literacy needs have been supported and addressed. This research will also make a significant contribution to the LDANR by improving LDANR’s programs and emphasize motivation as critical foundations to literacy development. This study will also point to the importance of continual or on-going programming for vulnerable children, particularly those with learning disabilities.

If you have any pertinent questions about your rights as a research participant, please contact the Brock University Research Ethics Officer (905 -688-5550 ext 3035, reb@brocku.ca).
If you have any questions, please feel free to contact me. Thank you for reading this letter and contributing to the improvement of LDANR’s effective programs.

Thank you,

Sarah Farrell
Master of Arts Student
Department of Child and Youth Studies
sf05wp@brocku.ca
Office: 905-641-1021

Dr. John McNamara
Professor
Department of Child and Youth Studies
jmcnamara@brocku.ca
905-688-5550, ext., 3835

This study has been reviewed and received ethics clearance through Brock University’s Research Ethics Board (file # 11-078)
Participant Consent Form

Dear Parent/Guardian,

I am a Master’s student in the Department of Child and Youth Studies at Brock University working under the supervision of Dr. John McNamara. You are invited to participate in a study that involves research, entitled, “Uncovering the Motivation Behind “Reading Rocks!” The purpose of this study is to examine the effectiveness of the Learning Disabilities Association of Niagara Region’s one-on-one literacy program “Reading Rocks!” More specifically, I plan to examine the changes in children’s motivation, self-esteem and engagement in literacy before participating in LDANR’s Reading Rocks program, during the program and after having participated in the program to examine the impact of the program. In this way, I aim to capture the effectiveness of the Reading Rocks program, particularly regarding how it impacts children’s motivation and engagement in literacy.

WHAT’S INVOLVED
As a participant, you will be asked to participate in a 45 minute to an hour interview that will take place in a mutually agreed upon location. You will be asked a series of questions by the investigator regarding your child’s experiences with Reading Rocks, particularly regarding their levels of motivation and engagement in literacy as well as their self-esteem before, during and after having participated in the program. With your permission, the interview will be audio recorded to facilitate collection of information, and later transcribed for analysis.

POTENTIAL BENEFITS AND RISKS
Possible benefits of participation include you gaining personal benefits by having the opportunity to reflect on the experiences you have encountered with your child as a result of participating in Reading Rocks and better understand your child’s journey now that their literacy needs have been supported and addressed. Additionally, findings of this study will make a significant contribution to the LDANR as this research will contribute to the improvement of LDANR’s programs and emphasize motivation as critical foundations to literacy development as well as the progression of a positive self-concept. This study will also point to the importance of continual or on-going programming for vulnerable children, particularly those with learning disabilities. Although very minimal risk, there is a possibility that this research may incite emotional discomfort as the interview questions regarding you and your child’s experiences of learning disabilities may be a sensitive issue. Should this research provoke discomfort or emotional distress, I have attached a list of appropriate resources at the end of this form.

CONFIDENTIALITY
All information you provide is considered completely confidential grouped with responses from other participants. Any information collected using audio-taping, video recording or interview cannot be considered anonymous because I will be able to link the data to specific participants. Please note that this refers to the anonymity of the data itself and not the reporting of results. In other words, your name or any other personal identifiers will not appear in any thesis or report resulting from this study, however, with your permission anonymous quotations may be used. The interview will be tape recorded for future transcription and data collected during this study will be securely stored. Data will be kept until the conclusion of the study after which time the
information will be destroyed. Access to this data and the Master’s Thesis Project will be restricted only to researchers associated with this project as well as the LDANR.

**VOLUNTARY PARTICIPATION**

Participation in this study is entirely voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. Further, you may decide to withdraw from this study at any time and may do so without any penalty or loss of benefits to which you are entitled. Whether you participate or not will in no way affect my standing in Child and Youth Studies at Brock University and will in no way affect you and your child’s future access to Reading Rocks! or with the Learning Disabilities Association of Niagara Region.

**PUBLICATION OF RESULTS**

It is my intention to publish the data in the form of a written thesis. Further, it is likely that the data will be disseminated orally at academic conferences. Feedback about this study will be available a few days after the conduction of the interviews. If you are interested in receiving more information regarding the results of this study, or if you have any questions or concerns, please contact me at the contact information provided above. Also, if you would like a summary of the results I will send it to you by email.

**CONTACT INFORMATION AND ETHICS CLEARANCE**

If you have any questions about this study or require further information, please feel free to contact either the primary researcher or the faculty supervisor using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University (file # 11-078). If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, reb@brocku.ca.

Thank you for your assistance with this project. Please sign the attached consent form and keep a copy of this form for your records.

Yours sincerely,

Sarah Farrell, Master of Arts Student  
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Brock University  
sf05wp@brocku.ca  
Office: 905-641-1021

John McNamara, Professor  
Department of Child and Youth Studies  
Brock University  
jmcnamara@brocku.ca  
905-688-5550, ext. 3835
CONSENT FORM
I agree to participate in this study described above. I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I know that my comments will be tape-recorded for future use in the study. I understand that I may withdraw this consent at any time.

This project has been reviewed by, and received ethics clearance through, the Research Ethics Office at Brock University (REB File #11-078). I know that if I have any comments or concerns about the study, I may contact the Research Ethics Office at reb@brocku.ca or 905-688-5550 ext. 3035.

______________________
Print Name

______________________
Signature of Participant

______________________
Date
References


