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# Understanding the Relationship Between Students' Reading Achievement and Teachers' Self-Regulation Patterns in Grades K-3

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The University of Southern Mississippi

UNDERSTANDING THE RELATIONSHIP BETWEEN STUDENTS' READING  
ACHIEVEMENT AND TEACHERS' SELF-REGULATION  
PATTERNS IN GRADES K-3

by

Pamela Renee Allen

Abstract of a Dissertation  
Submitted to the Graduate School  
of The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

May 2011

## ABSTRACT

### UNDERSTANDING THE RELATIONSHIP BETWEEN STUDENTS' READING ACHIEVEMENT AND TEACHERS' SELF-REGULATION

#### PATTERNS IN GRADES K-3

by Pamela Renee Allen

May 2011

Previous findings on student self-regulation support the fact that students who are self-regulated achieve more in their academics, including students taught self-regulation interventions. However, there has been little research to establish how a teacher's self-regulation affects a student's academic success. Therefore, the purpose of this quantitative research study was to determine what specific teacher factors contribute to a teacher's self-regulation score and a student's reading achievement. The study consisted of 276 teachers in Grades K-3 in a large Alabama school district. Reading achievement test scores and the Self-Regulation Inventory (Casler, 2005a) were collected from respondents. A Pearson product-moment correlation established that there was no significant relationship between a teacher's self-regulation score and a student's reading achievement ( $r = -.061, p = .321$ ). Independent variable correlations were analyzed using a simultaneous multiple regression analysis. Independent variables were National Board certification, years of experience, highest degree earned, and current grade level. No significant correlations between the independent variables (specific teacher characteristics) and teacher's self-regulation patterns were established. According to this study, understanding the relationship between students' reading achievement and teachers' self-regulation scores in Grades K-3 are not correlated and

revealed no statistical significance. The findings suggest that K-3 teachers who self-report are more self-regulated in their instructional practices.

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A Dissertation  
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## CHAPTER I

### INTRODUCTION

This quantitative research study investigated teachers' self-regulation patterns in relation to their classroom reading achievement scores. Chapter I introduces the background of the study, theoretical framework, statement of the problem, research questions and hypotheses, definitions, limitations and delimitations, assumptions, and summary. The theoretical frameworks included Bandura's (1986) Social Cognitive Triadic Theory of Self-Regulation and Ruddell and Unrau's (2004) Interactive Reading Model. These theories have three distinct constructs and affect one another in the learning process. The purpose of the study was to determine if teachers' self-regulation patterns affect their students' reading achievement scores. In addition, this study established the effects of specific teacher characteristics on students' reading achievement. These characteristics included highest degree earned, National Board certification status, current grade level, and years of experience. These findings will help support the interaction among the teacher, the student, and the classroom context and determine if a teacher's self-regulation score is related to students' reading achievement scores. These findings will guide future research and verify the strength of the relationship between teachers' self-regulation patterns and their effect on students' reading achievement and the correlation of specific teacher characteristics.

#### Background

In this age of accountability, both school districts and their schools shoulder surmounting pressure to perform well on standardized assessments measuring student achievement (No Child Left Behind Act [NCLB], 2001). State and local government agencies have responded to mandates for accountability by creating specific protocols

for school districts that ensure the student assessments meet the rigor of standardized tests (Berliner & Biddle, 1995; Bracey, 1997; Tyack, 1974; Tyack & Tobin, 1994). If schools fail to meet their adequate yearly progress (AYP) status, they are placed on probation and assigned mentors and coaches to aid in making drastic improvements in student achievement. If the schools do not show an increase in achievement scores or make AYP after 4 years, the state takes over the schools and the teachers must either transfer or reapply for employment (Gill, Lockwood, Martorell, Setodji, & Booker, 2007). Placing such accountability on the teachers themselves in this restructuring process serves to underscore the critical role teachers play in student achievement (Good & Brophy, 1995; Marzano, 2003; Sanders & Horn, 1994). Numerous studies have explored the positive and negative impact that teachers can have on students' achievement.

However, the literature falls short of delineating which teacher characteristics create maximum gains in this area. While some studies have investigated the importance of teachers' beliefs and efficacy, most studies have yet to consider teachers' self-regulation patterns and abilities relating to student progress. The purpose of this study was to consider the effect of teacher self-regulation on student achievement in reading. Since student self-regulation studies report students who are self-regulated or who receive a self-regulation intervention are more successful in their academic achievement, perhaps, this same benefit may translate for teachers who self-regulate (Fuchs et al., 2003; Glaser & Brunstein, 2007; Perels, Dignath, & Schmitz, 2009; Pintrich & De Groot, 1990; Zimmerman & Schunk, 2001).

This quantitative research study identified the relationship between teachers' self-regulation practices and students' academic achievement in reading by examining

certain variables. Independent variables included specific grade level, National Board certification status, years of experience, and highest degree earned. In addition, this study measured dependent variables including a teacher self-regulation score (Casler, 2005a) as specified by Bandura (1986) and Zimmerman (2001b). There are three sub-constructs, self-awareness, self-evaluation, and self-monitoring, within the variable of teacher self-regulation scores which are the behaviors of self-regulation identified by Zimmerman (2001b). This study used prior research and went beyond to seek available commonalities that will assist in developing teacher education and professional development programs in instructional training.

Despite years of applying well-researched theories on how best to enhance student achievement, recent statistics affirm the need for further studies in the quest for determining which teacher characteristics can positively impact scores (NCLB, 2001; Individuals with Disabilities Education Improvement Act [IDEIA], 2004). For example, the National Association of Educational Progress (NAEP) (2009) reported that 34% of fourth-grade students nationally are scoring below basic proficiency. The National Center for Educational Statistics (NCES) (2010) found no increase in fourth-grade students' reading achievement on the NAEP assessment in all 50 states since 2007. These data also revealed that in most states scores decreased between 2% and 3%. Additionally, the 2008-2009 SAT scores revealed a 7% drop in critical reading achievement scores from 2004-2005. In other words, the numbers echo a resounding cry for change. This study built upon current research on teacher self-regulation and considered its potential to be a catalyst for improving student achievement scores while highlighting those teacher characteristics—knowledge, skills, beliefs, and attitudes—that form a strong basis for overall improvement in instruction (Ruddell & Unrau, 2004).

## Theoretical Framework

This study was guided by Bandura's (1986) Triadic Theory of Self-Regulation and Ruddell and Unrau's (2004) Interactive Reading Model. These theories explain the process individuals must go through when monitoring and evaluating their own behaviors and also the importance of relationships between teachers and students and the affective domain. These theories were used to diagnose various relationships between teachers' self-regulation skills and their students' reading achievement. The more positive behaviors teachers possess about learning, the more successful their students will be in their academic achievement because the teacher will model and facilitate learning based on the students' interests and needs. Therefore, the students may be more engaged and may develop positive attitudes toward learning (Ruddell & Unrau, 2004).

### *Self-Regulation Theory*

The triadic theory (Bandura, 1986; Zimmerman, 2000, 2001b) of self-regulation supported and guided this study on teachers' self-regulation. This particular theory comes from a social cognitive perspective and asserts that self-regulation may indeed be one of the most crucial elements of an individual, one that allows the individual to flourish while others seem to be diminishing (Zimmerman, 2000). Within this social cognitive perspective, self-regulation is a cyclical process that reoccurs time and time again. Self-regulation is supported by feedback, metacognition, self-efficacy, and reflective behaviors. The triadic theory includes personal, behavioral, and environmental factors that affect the self-regulation of individuals. These factors of the triadic theory guide an individual in the regulation of behaviors. Self-monitoring, self-evaluation, and self-awareness can increase an individual's ability to be reflective when

making important decisions or thinking critically about new or existing knowledge.

This process is known as the social cognitive theory of self-regulation and can increase students' academic achievement (Bandura, 1986; Zimmerman, 1989, 2000, 2001b).

*Social cognitive perspective.* Zimmerman (2000) described the social cognitive perspective of self-regulation, which claims an individual will be able to strive and thrive in a social context. Zimmerman's theory supports a triadic definition of self-regulation, which includes "personal, behavioral, and environmental triadic processes" (p. 13) as cited by Bandura (1986). Bandura (1986) asserts that teachers who are self-regulated generate thoughts, ideas, and actions when facing various situations; yet, Bandura recognizes that individuals may be self-regulated in certain contexts but not in others. In other words, this phenomenon of behavior presents itself as cyclical in nature. Furthermore, the process of self-regulation is nurtured by the individual and other prominent figures who offer feedback and support to an individual or student over a long period of time, not a skill a student or teacher begins to practice without feedback and support (Zimmerman, 2000, 2001b).

The cyclical pattern within self-regulation is supported by feedback from areas of prior performance and must include another individual providing feedback to an individual throughout the self-regulation process. Zimmerman (2000) supported this theory (see Appendix A) shaped as a triangle which shares three critical determinants when producing self-regulation skills: environment, person, and behavior. If the individual is in an environment, this individual has the ability to "create, alter, or destroy environments" (Bandura, 1986, p. 23) which determines future behaviors. The behavioral construct allows the individual to learn from past behaviors in order to correct or improve current practices, which results in awareness and reflection of

cognitive processes. In many cases, behavioral, personal, and environmental factors interact; however, one of these factors proves to be the strongest determinant in most situations concerning self-regulation. If an individual is engaged in all three critical constructs of Bandura's (1986) self-regulation triadic theory, the level of knowledge and performance is constantly increasing, making small adjustments along the path when reading, writing, or constructing new knowledge (Zimmerman, 2001b).

Determinants of the triadic theory include goal-setting, self-awareness, self-motivation, and self-evaluation (Bandura, 1986; Zimmerman, 2000, 2001b). These sub-constructs are affected in part by behavioral, environmental, and personal factors (Bandura, 1986; Zimmerman, 2000, 2001a). Goal setting represents individuals' ability to take chances to learn new information that will guide them in their practices. For instance, teachers who attend professional development sessions will gain knowledge and practices that perhaps may improve their instructions to students and result in increased learning and achievement scores. The personal and behavioral portion of the theory is measured by self-monitoring, self-awareness, and self-evaluation within the instrument. In any case, these three sub-areas overlap with the personal and behavioral section of Bandura's (1986) and Zimmerman's (1989) triadic theory of self-regulation. This process includes a teacher or individual who receives constructive feedback and improves in practice and cognitive thinking abilities (Baumeister & Vohs, 2004). For instance, teachers who monitor their thinking when reading new information are using their metacognitive skills. These metacognitive skills increase self-regulation behaviors and build reflective practices. Self-monitoring and self-evaluation are similar as they require one to be aware of personal thought processes before the person can evaluate thinking. This process requires teachers to monitor their behaviors and evaluate their



practices or learning. Once teachers have monitored and evaluated their learning, they can make decisions that include goal setting for the individual. Self-regulation is a cyclical process which reoccurs time and time again (Zimmerman, 2000, 2001b).

Finally, self-regulation is a recurring process in which learners can monitor and affect their learning outcomes and goals. This process requires learners to adjust and adapt their strategies and skills when having difficulty learning new information. The more observation or modeling of self-regulation a student observes at an earlier age, the more the student's reflective practices and critical thinking will be enhanced. The goal of self-regulation is to teach learners proactive skills so they can successfully accomplish feats on their own without the help of others. Success in their academics will lead more students to become self-confident individuals who feel they can achieve all tasks no matter the difficulty of the task, including the reading acquisition process.

### *Interactive Reading Theory*

A second theory related to self-regulation can be found in the Interactive Reading Model by Ruddell and Unrau (2004). This sociocognitive theory complements Bandura and Zimmerman's understanding of self-regulation within the social context of a reading classroom. Readers construct meaning through an interaction among three components: the reader, the text and classroom context, and the teacher. In this theory, the teacher plays a vital role in modeling the use of knowledge and control to "construct, monitor, and represent meaning" (Ruddell & Unrau, 2004, p. 1464). The Interactive Model supports the belief that the teacher is vital to student success as the teacher makes instructional decisions, understands the student's affective and cognitive conditions, and provides a supportive environment for meaning making using and modeling self-regulation.

The goal of Ruddell and Unrau's (2004) model is to explain the relationship between the reader, teacher, and classroom context. The *reader* is defined as the young child, adolescent, or even adult (learner) in this case who is involved in the process of reading. The teacher is a person who facilitates learning and instruction in the classroom setting. The classroom context includes the environment the teacher has created in which all three factors function. The goal of this interactive environment is to allow students to engage in meaningful learning. Similarly, an abundance of the research literature and education support this understanding (Elstad & Turmo, 2009; Good & Brophy, 1995; Marzano, 2003; Marzano, Pickering, & Pollock, 2001).

In addition to identifying each stakeholder in the reading process, Ruddell and Unrau (2004) also described the influence of motivation, cognitive ability, and affective domain. Therefore, researchers have realized that the reading acquisition process is more complex than it was considered to be earlier. Ruddell and Unrau allow one to see the difference in the teacher versus the student's role and how the interaction between these individuals plays out in the classroom. Without understanding the complexity of the reading process, a teacher is unable to teach students effectively. These affective and cognitive factors determine students' attitudes and abilities regarding reading. If teachers are aware of students' behaviors, attitudes, and cognitive competencies, they can plan skillfully (Ruddell & Unrau, 2004).

*The reader's role.* The reader's role in effective reading instruction requires one to (a) hold self-efficacy beliefs, (b) become self-regulated, and (c) be an active participant with the text and in the classroom context. Motivational factors which contribute to the reader's success are background knowledge, strategic abilities, and learning context features. These motivational factors are also described as an

individual's self-efficacy, which refers to the student's belief system and intrinsic motivation toward reading (Guthrie & Wigfield, 2000). These affective and cognitive conditions function simultaneously and together constitute the learner's belief system. The reader's attitudes, values, and beliefs help determine the reader's level of comfort and comprehension when reading (Ruddell & Unrau, 2004). Matthewson (as cited in Ruddell & Unrua, 2004) identified *attitude* as three concepts: "feelings about reading, action readiness towards reading, and evaluative beliefs about reading" (p. 1470). Therefore, the role of the reader is active with clear goals and requires controlling the reading acquisition process. Furthermore, the teacher must be the facilitator of this process and teach students in a collaborative manner that refines their personal skills and builds their schema (Ruddell & Unrau, 2004).

*The teacher's role.* This type of teacher builds a classroom environment based on inquiry and is reflective of classroom practices. Teachers who are influential in this process possess a number of characteristics and carry certain responsibilities. Effective reading instructors plan specific instructional strategies to enhance student achievement based on their previous experience and reflective nature. In addition, effective reading teachers are aware of the reading acquisition process and the effects the cognitive and affective domains have on learning to read. The teacher's job then becomes identifying the best practices to reach all levels of learners and gain achievement. In exchange, the student becomes an active reader who draws meaning from the text and is able to synthesize information to explain learning. The goal of this process is for students to become strategic readers and writers (Ruddell & Unrau, 2004).

*Text and classroom context.* The Ruddell and Unrau model (2004) involves more of a constructivist view which relies on the teacher to build an environment where

students are engaged and active in an authentic learning environment. This effective environment engages students while motivating them to learn (Guthrie & Wigfield, 2000). Tomlinson (2001) described the learning environment as a risk-taking environment where students work in flexible groups, monitor their own learning, and work at their own achievement level. This form of environment removes fear or insecurities and absolute right and wrong answers and challenges students to think creatively which facilitates in building their self-concept. Within this setting students become more self-regulated and interact with peers in socially acceptable manners. Teachers who build and monitor this type of environment give students the opportunity to express, communicate, and organize their own learning (Conley, 2008). Ruddell and Unrau (2004) cited Ames (1992), Covington (1992), Maehr (1984), and Pintrich and De Groot (1990), stating that students who become more motivated actively engage in constructing knowledge which enhances their learning.

Ruddell and Unrau (2004) identified the process of the text, reader, and classroom context as the meaning-negotiation process. This process invites the reader and teacher to participate in a particular setting and converse about the text. The reader enters the setting with a set of knowledge, values, skills, and beliefs; therefore, the interpretation and motivation to read the text are entirely different for all parties involved. Ruddell and Unrau (2004) determined the learner reads the text, authority, settings, classroom dynamics, and expectations. Ruddell and Unrau (2004) embrace the fact that it is the text and the integration of all concepts of the learners' meaning-making process.

*Interaction between the reader, teacher, and classroom context.* In the previous sections each component was addressed individually, but it is crucial to understand the

relationship among all three areas of Ruddell and Unrau's (2004) model. Teachers who build a classroom environment with strong strategic teaching will inform students, allow them to participate in active group work, and converse with peers. Ruddell and Unrau (2004) stated teachers treat their students with respect, involve them in the learning process, and determine the instructional goals daily according to the students' needs and assessments. In other words, many factors contribute to teacher and student success.

Teachers need to be involved in planning meaningful lessons which will revitalize and strengthen student learning. The students must be actively engaged in the planning and process of reading. These practices allow the reader to learn the value of engaging in the text, making decisions, and thinking through the meaning-making process (Alexander & Fox, 2004).

Based on the previous theories and literature one can see the connectivity among the teacher, student, and classroom context, which leads individuals to believe teachers do have an impact on student achievement (Ruddell & Unrau, 2004). Therefore, this study investigated the degree of correlation between a teacher's self-regulation patterns and student reading achievement. The theoretical frameworks described very unique processes that require learners to be actively engaged in tasks. If learners are not involved proactively, cannot identify when there is a breakdown in meaning, regulate their behaviors to fix the interference, or change their behaviors to reach the desired outcome, they are without regulation behaviors. Self-regulation involves the interaction among the teacher, student, and classroom environment, as well as self-awareness, self-evaluation, and self-monitoring, which are critical in expanding the learner's level of knowledge (Bandura, 1986; Ruddell & Unrau, 2004). Without the practice of specific

self-regulating behaviors, one is unable to identify strategies to help repair misunderstandings or breakdowns in meaning (Snow, Burns, & Griffin, 1998). Therefore, educators need to practice these skills so students will learn from modeled behaviors (Bandura, 1986; Orange, 1999). If educators consistently repeat and model these behaviors in classrooms, then the students will practice these strategies individually and become more successful individuals socially and academically (Martinez-Pons, 1996; Wong, 2008).

#### Statement of the Problem

While extensive research on self-regulation has been conducted, minimal research addressed the impact of teacher self-regulation on student reading achievement. This quantitative research study sought to explore these factors and their impact on further research in the educational field. The growing consensus in these data states that teachers are ineffective and reported either a decrease or no increase in test scores. For instance, in 2008 the Condition of Education Report stated fourth-grade SAT critical reading scores dropped 8% since the 2004-2005 school year. In addition, the National Center of Educational Statistics (2010) reported that the National Assessment of Educational Progress scores reported only 1% difference in 12<sup>th</sup> grade reading scores from 1971 to 2008. During these years numerous education bills have passed Congress, and major reforms have been mandated by the federal government. Unfortunately, these regulations have not had a vast impact on student achievement. Therefore, educators need to ask themselves what factors are impacting academic achievement that are not being used to guide or support teacher instruction in the classroom.

Lizarraga, Ugarte, Iriate, and Basquedano (2003) argued that when teachers lack specific regulation and awareness skills, the students also are affected. These Italian-based researchers found students who were taught specific self-regulation skills increased their achievement scores and showed improvement even after a period of 2 years. Pintrich and De Groot (1990) found there is a strong correlation between self-efficacy, cognitive use, and self-regulation. Perels et al. (2009) reported that teachers who were taught how to teach self-regulation in their classrooms supported growth in their students' self-regulation scores. In addition, available research has proven that teachers play a critical role in student success (Good & Brophy, 1995). However, at this time there is only one research study measuring the benefits of teachers' self-regulation behaviors (Casler, 2005a). This gap in the literature supported the purpose of this study by further examining how to measure teacher self-regulation and what effects it can have on students' reading achievement when investigating teacher characteristics.

Student reading achievement is affected by students' self-regulation skills as well as affective and cognitive domains involved during the reading acquisition process. The level of critical thinking modeled during instruction affects students' understanding and feelings about reading (Ruddell & Unrau, 2004). The Interactive Reading Model by Ruddell and Unrau supports the findings that the affective domain is specifically affected by the classroom context and rapport between the student and teacher. The three critical constructs of the interactive model represent the cycle of learning in the classroom and reflect relationships involved in the learning process. Therefore, it is important to understand why and how students make progress and how teachers can model effective lessons that affect student achievement.

There is a desperate need for research that can have a lasting effect on student achievement. So far, research reports strategies and skills that have proven to support student achievement but does not show an increase in the rigorous state tests required by the federal government. Exploring teacher self-regulation patterns will help determine if self-regulation is the missing component in increasing student achievement. This research will continue to describe and emphasize the critical role the teacher plays on student academic success. Consequently, if a teacher is not self-regulated or interested in creating a classroom climate conducive to learning and communicate with students effectively, the students will not be successful (Burden & Byrd, 2010; Marzano, 2003; Marzano et al., 2001). Therefore, it is important to understand the difference in specific teacher characteristics that play a pivotal role in increasing student achievement.

### Research Questions and Hypotheses

In order to explore these issues, the following research questions and hypotheses guided this study:

#### *Research Questions*

1. Is there a relationship between students' reading achievement and teachers' self-regulation patterns in Grades K-3?
2. Are a teacher's self-awareness, self-monitoring, and self-evaluation related to a student's reading achievement?
3. Is there a relationship between specific teachers' characteristics and their self-regulation patterns?



### *Hypotheses*

- H<sub>1</sub> There is a significant relationship between teachers' self-regulated scores and students' reading achievement scores.
- H<sub>2</sub> There is a significant relationship between teachers' self-monitoring abilities and students' reading achievement scores.
- H<sub>3</sub> There is a significant relationship between teachers' self-evaluation and students' reading achievement scores.
- H<sub>4</sub> There is a significant relationship between teachers' self-awareness and students' reading achievement scores.
- H<sub>5</sub> There is a significant relationship between National Board certification and a teacher's self-regulation score.
- H<sub>6</sub> There is a significant relationship between the teacher's years of experience and self-regulation score.
- H<sub>7</sub> There is a significant relationship between specific grade levels and teachers' self-regulation score.
- H<sub>8</sub> There is a significant relationship between highest degree earned and teachers' self-regulation score.

### Definition of Terms

For the purpose of this research study, the following terms were defined:

*Achievement*: reaching a specific goal set by the student or another individual.

In this case, the higher the mean of each class, the higher students' achievement.

*Goal setting*: having the ability to challenge and commit oneself to a goal to increase knowledge or skill level (Casler, 2005a).

*Grade level:* the grade or age of students the current participant teaches at the time of the research study.

*Highest degree earned:* the most prestigious degree held by the participant at the time of the research study.

*Instructional practices:* strategies or methods used by teachers to enhance student achievement in the academic setting (Marzano, 2003).

*Learner-centered classrooms:* environments where students are in charge of their own learning and allowed to make decisions about what product they will create to show the achievement of their goal (Salinas & Garr, 2009).

*National Board certified:* a specialized certification a teacher earns by participating successfully in the National Board Professional Teaching Standards (NBPTS) assessment process.

*Self-regulation:* an individual's self-generated thoughts, feelings, and actions that are directed toward achievement of a specific goal (McCombs, 2001; Schunk, 2001; Zimmerman, 2001b).

*Self-monitoring:* the ability to observe behaviors of oneself in covert and overt operations to meet a challenge or reach a goal (Casler, 2005a; Zimmerman, 2000).

*Self-awareness:* similar to self-observation and self-reflection with an active process that takes place simultaneously. The teacher then takes action by changing behaviors depending on observation, feedback, and reflection (Bandura, 1986; Casler, 2005a).

*Self-evaluation:* the ability to judge oneself based on awareness and observations. These participants can make specific behavior changes according to their evaluation (Capa-Aydin, Sungur, & Uzuntiryaki, 2009).

### Limitations and Delimitations

The limitations identified for this study included the following:

1. Four reading achievement tests were given--one to each grade level.
2. This was the second year for the reading End of the Quarter (EQT) achievement tests.
3. Individual teachers may have varied directions even though they are given specific protocols.
4. Special education students may have received modifications or accommodations on the reading EQT achievement test.
5. Not all students' scores were included on the data collection sheet in the study.
6. Some participants may have chosen not to participate in the study.

The delimitations imposed by the researcher conducting the study were as follows:

1. Participants only included teachers in Grades K-3.
2. The research study took place in one school district.
3. The study was restricted to southeastern United States.
4. There was a time limit to complete the study and return the packets to the researcher.
5. Only self-contained classrooms were used.

### Assumptions

The researcher made the following assumptions:

1. The teacher participants volunteering to participate in the study completed the instrument honestly and reported the accurate reading achievement scores and did their best on the assessment.
2. The students taking the EQT reading achievement test did their best on the assessment.
3. The teachers participating in the research study only completed one survey and completed one EQT data collection sheet.

### Summary

Finally, it is obvious that self-regulation is a major part of a student's academic success (Fuchs et al., 2003; Martinez-Pons, 1996; Matuga, 2009; Ommundsen, Haugen, & Lund, 2005; Orange, 1999; Perels et al., 2009) as well as the role of each stakeholder and the classroom environment. Each of these factors plays a role in teaching and learning (Ruddell & Unrau, 2004). Therefore, it is critical for educators to be properly prepared to teach self-regulation skills through modeling and observation (Bassi, Stecca, Fave, & Caprara, 2006; Orange, 1999; Perels et al., 2009). Teachers need to be aware of their impact on student achievement when considering their own self-regulation practices and beliefs about reading. This chapter supported the fact that students are not equipped to guide themselves through the process of learning entirely; instead, they need a scaffold or guide to support their critical thinking skills and model the use of effective self-regulation strategies (Pearson & Gallagher, 1983; Routman, 2003).

Research has shown that the teacher can have a phenomenal impact on a student's achievement in the classroom (Brophy & Good, 1986; Sanders & Horn, 1994). Therefore, researchers need to understand the common denominators for student

achievement and determine if it is the teacher's behaviors, instruction, and/or direction in the classroom. The theoretical frameworks supported the process of self-regulation and positive rapport between the teacher and the student (Bandura, 1986; Ruddell & Unrau, 2004). Research has shown that specific school-level factors can increase student achievement (Marzano, 2003). These factors increase the chances of students being successful and confident in the classroom and affect their feelings about school and learning (Marzano, 2003). Ruddell and Unrau (2004) included this in their Interactive Reading Model. The emotions and feelings (affective domain) involved in the school context are highly correlated with students' self-worth and ability to self-regulate their own learning. This description requires one to understand that without a positive rapport between the teacher and the student, achievement can be compromised (Ruddell & Unrau, 2004).

The growing consensus of accountability in today's society places a massive amount of pressure on school districts to make achievement gains and adequate yearly progress. Data from the National Center of Educational Statistics (2010) and various achievement scores support the opinion that the instruction taking place in the classroom is not effective. Because of this resounding pressure from the federal government, educators and administrators are required to constantly look for answers and proactive solutions for educational issues to increase student achievement. Therefore, it is critical to investigate the different teacher factors that have a lasting effect on student achievement. Many studies, including Marzano (2003), explored teacher factors that affect student achievement. However, there is no research stating the ranking or importance of each of these factors on student achievement. Other gaps in the literature include the exploration of teacher self-regulation behaviors on students'

reading achievement. Extensive research has proven student self-regulation patterns in the academic realm will increase students' academic success and can be taught to students in the school setting. However, the research does not include teacher self-regulation. Therefore, if student self-regulation has shown to increase student achievement, how much more important is a teacher's self-regulation to student achievement?

Chapter II will include an extensive literature review of the variables studied in this quantitative research. The topics include an overview of self-regulation, self-monitoring, self-evaluation, and self-awareness as well as self-efficacy. Further research will discuss academic achievement strategies that support positive growth in academic learning. Other topics included in Chapter II are the independent variables, National Board certification status, years of experience, current grade level, and highest degree earned. The methodology is explained in Chapter III. Critical components of Chapter III include a description of the purpose, research design, participants, procedures, instrumentation, limitations, and data analysis. This information provides explicit details concerning each area of the research study. The research design includes collection of data utilizing a self-regulation instrument (Casler, 2005b) and a data collection sheet where teachers report their reading EQT achievement scores. Data collection determined if there is a relationship between teacher self-regulation and student achievement.

## CHAPTER II

### LITERATURE REVIEW

A broad summary of literature will be presented in this chapter concerning the relationship between teacher self-regulation and student achievement including the sub-components of self-regulation: self-monitoring, self-evaluation, and self-awareness. The chapter begins with an overview of self-regulation along with self-efficacy and then gives an in-depth description of self-regulation including definitions, theoretical stances, levels of self-regulation, factors affecting self-regulation, and specific studies on self-regulation. Research studies supporting and opposing various points of view along with practices that predict performance and teacher self-regulation will be included.

The introduction to self-regulation is followed by an examination of the sub-constructs of self-regulation: self-monitoring, self-evaluation, and self-awareness. The section includes definitions, examples, and studies measuring each of the constructs. The chapter continues with a summary of research on effective teachers and instructional practices related to improved academic success for students. The chapter then explores conditions affecting academic achievement at the school-level, teacher-level, and student-level, especially relating to reading achievement. The review covers factors related to academic achievement, such as reading interferences, motivation, subject-matter knowledge, and strategic capabilities.

The last section of the chapter provides an overview of the independent variables covering research findings on National Board certification, years of experience, current grade level, and highest degree earned. Each study investigated the variables mentioned above and their relationship to academic achievement. The

literature review establishes the importance of self-regulation in relation to academic success and highlights the importance of the teacher's contribution to academic success.

### Overview of Self-Regulation

The purpose of this literature review was to analyze the various components of self-regulation and its effects on student achievement when practiced by classroom teachers with specific characteristics. *Self-regulation* is defined as a self-directed process in which learners transform their behaviors to achieve a desired result, such as self-monitoring, self-evaluation, and self-awareness (Zimmerman, 2001b). Self-regulation is cyclical in nature (Bandura, 1986; Zimmerman, 2000) meaning it is a reoccurring process where teachers monitor, evaluate, and adjust their behaviors and their impact on student learning. These factors are related to self-efficacy in that self-regulated teachers believe their efforts can and do make a difference in student achievement when the teacher is reflective about personal practice. This process is related to self-efficacy. Zimmerman, Bonner, and Kovach (1996) published the first edition of *Developing Self-Regulated Learners: Beyond Achievement to Self-efficacy* in 1996 and published their latest edition in 2009. This fact substantiates the importance of creating self-regulated learners and effective teachers.

Self-regulation was defined by Zimmerman and Schunk (2008) as ways in which learners control their own thoughts, feelings, and Schunk's actions in order to achieve academic success. Merriam-Webster defines *self-regulation* as "control of oneself" ("Self-regulation," 2010, n.p.). Markus and Wurf (1987) concurred with this definition. This definition articulates the importance of engagement and motivation (Guthrie & Wigfield, 2000). Pressley (2007) explained this as an active process where students monitor their own learning and use strategies to clear up misunderstandings



(Pintrich, 1995). Social cognitive researchers are interested in investigating how learners adapt to their context and continuously increase their knowledge and skills (Zimmerman & Schunk, 2001).

The self-regulation process consists of goal setting, self-evaluation, self-monitoring, and self-awareness, which are also known as forethought, performance, and self-reflection (Bandura, 1986; Schunk, 1989; Zimmerman & Schunk, 2001).

Forethought includes goal setting and is defined as the capability to identify the task which must be completed and planned accordingly to meet the necessary timeline.

Performance is also known as one's self-awareness and is the cognitive skill an individual must practice to monitor and evaluate himself or herself as a learner. Self-evaluation is the ability to reflect and actively change the behavior when becoming aware of it, also known as self-reflection (Ormond, 2004). Therefore, if teachers are reflective in their practice, then they can manipulate strategies to best fit the needs of learners in the classroom. As a result of being self-regulated, the teacher begins to monitor the instruction given on a consistent basis and student learning and achievement increase (Zimmerman & Schunk, 2001).

Self-regulated students and teachers engaged in this process understand when a breakdown in meaning occurs and are able to recall strategies that will clear up any misconceptions. The process of self-regulation is not as simple as self-efficacy but is more complex. Self-regulation requires students to think metacognitively about their own learning, which allows the learner to give attention to the breakdown in meaning (Pintrich, 1995). Teachers can instruct students by teaching this process, but it only comes when teachers model specific self-regulation strategies, such as setting goals, monitoring instruction, and giving students time for practice (Ley & Young, 2001;

Pressley, 2007). Schunk (1987, 2001) discussed the importance of modeling and stated that models are inhabitants or groups whose behaviors serve as cues for later learning. Bandura (1986) claims modeling serves as “different functions: acquisition of new behaviors, strengthening behavioral inhibitions, and performance of previously learned behaviors due to prompting” (p. 129). Observational learning through modeling is known as having four distinct processes: attention, retention, production, and motivation (Bandura, 1986). Attention is necessary to learn in varied environments; retention includes coding the new information to help with transfer and memorization (Shepard, 1978). Production takes into account the translating of visual representations, and motivation refers to the willingness to imitate the modeled behaviors (Schunk, 2001). Without the practice of all four processes, students and teachers will not learn from the modeling.

The process of self-regulation is critical to academic success and requires that students actively engage in the learning process at all times (Guthrie & Wigfield, 2000). Monitoring and evaluation processes allow a learner to attend to meaning and understand when a breakdown in meaning occurs as the information or knowledge is learned. Other key components of self-regulation require learners to change their behavior based on the outcome they want to achieve. Shepard (1978) states attention is necessary for this to take place if one is able to transfer material and make connections in the process of learning. Therefore, the process of self-regulation allows individual behaviors to become more positive and improves learners’ cognition awareness.

Empirically-based research suggests there are multiple factors that affect student achievement, such as teachers, students, and instruction (Good & Brophy, 1995; Marzano, 2003; Marzano et al., 2001; Morrow, Gambrell, & Pressley, 2003). This

study attempted to discern if self-regulation or specific constructs of self-regulation when practiced by teachers can enhance their classroom students' achievement, specifically in the area of reading. Teacher scores from the Self-Regulation Inventory (Casler, 2005b) were evaluated to determine the impact of teacher self-regulation on reading achievement. Therefore, the literature review focused on the constructs of self-regulation, academic achievement, effective reading instruction, and teacher factors related to student academic success. Research on the importance of self-regulation in relation to academic achievement began in the late 1950s and 1960s at the same time as national education reform movements. Glasser (1969), Holt (1964), and Rogers (1969) proposed a variety of reforms to increase academic achievement and student self-regulation. Some of these reforms included making school relevant, a flexible curriculum, and less grading procedures. The objective of the reform movement was to decrease the achievement deficits. As the 1980s approached, Fiske (1976) and the Secretary of Education were evaluating the quality of education in the United States. These reforms have led to more strenuous curriculum requirements, congressional laws, and higher school standards, which help to enforce the importance of self-regulation for students and teachers. Self-regulation also was impacted in 1964 by Lyndon Johnson's *War on Poverty* (2010), the disparity between home and school, and the creation of the U.S. Department of Education (1973) and Head Start.

Self-regulation is a dynamic decision-making process that involves an awareness of behaviors and attitudes (Bandura, 1986; Zimmerman, 2000, 2001b). Those individuals who are aware of their behaviors have the ability to alter these behaviors based on the outcome they desire to achieve. Educators are also concerned about how learning and cognition are related to this process as well as the importance of

teachers' modeling behaviors. Research suggests there are seven distinct views of self-regulation along with critical features, such as personal initiative and perseverance. In addition to those mentioned, Ormond (1999) investigated factors that affect learning and concluded that self-regulation is a complicated process that requires reflection and action on the part of the individual.

Self-regulation is derived from the father of the social learning theory, Albert Bandura (1971, 1977, 1986). The social learning theory provides principles on how individuals learn and states learning occurs by observing and imitating behaviors to achieve the same outcome as others (Ormond, 1999). Often there is a behavioral change in an individual's conduct; however, many times there is no permanent sign. Ormond (1999) suggested cognition is critical when discussing human learning. The social learning theory builds a bridge between cognitive learning theories and behavioral learning theories. This approach is recognized when an individual models a behavior when trying to achieve the same outcome as a third party; however, Bandura (1986) makes a distinction between modeling and imitation. Bandura (1977) stated, "[m]odeling is an indispensable act of learning" (p. 12).

Self-regulation is recognized in seven distinct views. These views include operant, phenomenological, information processing, social cognitive, volitional, Vygotskian, and constructivist (Zimmerman & Schunk, 2001). The view represented in the current study is the social constructivist view which includes self-efficacy, outcomes, and an emphasis on goals, self-observation, self-judgment, and self-reactions (Bandura, 1986). However, Bandura's (1971) initial theory also emphasized motivation. Bandura's point was individuals are motivated by the consequences of behavior rather than the actual award. Critical features of a self-regulated learner are

personal initiative, perseverance, and adaptation skills to various situations and context (Zimmerman, 2001b).

Cognitive factors that affect the learning perspective are attention, expectations, reciprocal causation, and modeling (Ormond, 1999). Without appropriate cognitive behaviors, learning is not taking place. For example, if a teacher assigns homework but never takes it up most students ignore the assignment. Other conditions that affect learning are (a) paying attention, (b) remembering the behavior, (c) replication of the behavior, and (d) motivation to demonstrate the behavior. Those individuals recognizing the positive aspect of modeling behaviors will begin to replicate modeled behaviors more frequently and become encouraged when successful learning occurs (Ormond, 1999).

This process of self-regulation is of great value to individuals, especially concerning behaviors. The goal is that if individuals are aware of their behavior, they have the ability to change that behavior based on the desired outcome. The cognitions involved in this process are attention, expectations, reciprocal causation, and motivation along with attitudinal skills involving personal initiative, perseverance, and adaptation. The attitude and motivation toward learning will directly affect the self-regulation process.

Self-efficacy is related to self-regulation. Individuals' sources of self-efficacy are said to come from mastery experiences, social context, and emotional status. These individuals have specific qualities that are related to self-efficacy and individual worth. Self-efficacy is included throughout the entire self-regulation process which is also related to various theories, such as the attribution theory, expectancy-value theory, and

goal theory. Self-efficacy is a small, but critical, determinant of the self-regulation process.

Self-efficacy also is derived from the social learning theory. Self-efficacy is defined as the confidence one has to perform a certain task or job (Bandura, 1994). In most cases individuals choose jobs in which they know they will be successful (Ormond, 2004). Individuals who have self-efficacy exhibit effort and persistence, and they achieve at higher levels than those with low self-efficacy. Self-efficacy is related to self-worth but is more explicit about the task. Self-worth refers to one's overall confidence to perform any task or job. Therefore, an individual who has self-worth may be overall more confident than an individual who possesses self-efficacy.

Self-efficacy is present during all phases of self-regulation, which include forethought, performance, and self-reflection (Schunk & Ertmer, 2000). Self-efficacy consists of four major processes: cognitive, motivational, affective, and selection. These four processes are connected to various theories, such as the attribution theory, expectancy-value theory, and goal theory. Each of these theories helps support the belief that the individual's cognitive behaviors and actions are the driving force behind their success in life, which can be altered easily by the amount of stress one experiences in life (Schunk, 1987). Furthermore, Bandura (1994) suggested even though an individual may be successful or a straight "A" student does not necessarily mean they are confident in their practices. Oftentimes these students find ways to compensate for their lack of self-efficacy. There are two types of personalities, those who claim to be confident and unafraid of the tasks that lie ahead and those who are fearful of what the future holds. Research indicates an individual's sources of self-efficacy come from mastery experiences, vicarious experiences through models, social persuasion, and

emotional state (Schunk, 2001). These sources influence one's self-efficacy and determine how successful individuals will prove to be in their careers, marriages, and personal lives (Bandura, 1994).

*Self-regulation* is defined as a self-directed process in which learners transform their behaviors to achieve a desired result, which includes self-monitoring, self-evaluation, and self-awareness (Zimmerman, 2001b). Self-efficacy is the confidence one has to perform a specific task or job. This confidence is determined by the individual's choice, persistence, effort, and achievement (Schunk, 1996). Therefore, self-efficacy is the confidence an individual has about specific tasks or jobs. On the contrary, self-regulation refers to the learning process an individual goes through to regulate behaviors and achieve a desired outcome. Therefore, self-efficacy is the worth or confidence one has to attempt a job or task while a self-regulated person will try any task or job and determine what changes need to be made to reach the goal. Suffice it to say, self-regulation is the big block self-efficacy is built upon, but is the action that the individual must take to regulate learning (Markus & Wurf, 1987; Zimmerman, 2000).

### *Self-Regulation Studies*

Most studies reviewed in this literature review were guided by Bandura's Social Cognitive Triadic Theory of 1986 and Zimmerman's (1989) cyclical triadic perspective of self-regulation. The theoretical frameworks provide the basic understanding that self-regulation is a simultaneous cognitive process in which an individual can alter behaviors depending on the goal one is trying to achieve (Bandura, 1986; Ley & Young, 2001; Orange, 1999; Zimmerman, 1989). The self-regulation process has been explored in-depth by social constructivist researchers looking for specific strategies to incorporate in content domain instruction to raise achievement in mathematics, writing,

science, and English (Fuchs et al., 2003; Glaser & Brunstein, 2007; Perels et al., 2009; Pintrich & De Groot, 1990; Zimmerman & Schunk, 2001). Most of these researchers used the pre/post design to identify the difference in students who received a treatment and those who did not receive a treatment. Each study that analyzed the relationship between self-regulation and academic achievement showed significant gains when given the treatment or intervention (Fuchs et al., 2003; Glaser & Brunstein, 2007; Lizarraga et al., 2003; Orange, 1999; Perels et al., 2009). Therefore, research supports the fact that achievement increases when students practice self-regulation in their academic careers.

Studies included in the literature review ranged from various age groups to several specific types of academic achievement. The literature reinforced that teachers are crucial for student success (Good & Brophy, 1995). For example, Ley and Young (2001) summarized that self-regulation strategies are research-based and facilitate self-regulation practices in students and classrooms concerning various levels of students. The four principles Ley and Young (2001) share are as follows: (a) guiding learners to prepare and create effective learning atmospheres, (b) organizing instructional activities that facilitate the cognitive processes, (c) allowing students the opportunity to monitor their learning through goal-setting and feedback, and (d) constantly giving information on evaluation and opportunities to self-evaluate. Rosenthal and Jacobson (1968) found the expectation of the classroom teacher can have a positive impact on student achievement. Similarly, Martinez-Pons (1996) investigated the influence parents have on elementary students' academic self-regulation. Martinez-Pons found students whose parents supported and modeled the facilitation of self-regulation practices were more successful. Furthermore, Howse, Lange, Farran, and Boyles (2003) researched the role



of motivation concerning self-regulation task behaviors for students between the ages of 5 and 8 years with two groups of students: (a) those who are economically disadvantaged and (b) those who are not economically disadvantaged.

Howse et al. (2003) suggested that disadvantaged students were unable to regulate tasks, which predicted their achievement score. Bandura stated in his 1997 writings that self-efficacy can be domain specific which allows a student to practice mathematical efficacy, but not reading efficacy. Therefore, the self-regulation of students is affected based on their expert knowledge and interests. One group of well-known authors studied the effects of domain specific efficacy related to self-regulation concerning mathematical problem-solving and found there was a positive effect on performance when students practiced self-regulation strategies (Fuchs et al., 2003). Schunk (1986, 1996) and Zimmerman (1995) support the fact that self-regulation is correlated with intrinsic motivation and self-efficacy. Howse et al. (2003) found that most preschoolers enter school with a positive demeanor but lose intrinsic motivation without the ability to regulate their tasks or behaviors. Wong (2008) also stated that parental involvement and autonomy resulted in less classroom disruptions from students. Therefore, one must understand how critical it is to have a good model teacher in all classrooms.

Fuchs et al. (2003) and Perels et al. (2009) investigated the importance of teachers modeling while Martinez-Pons (1996) and Wong (2008) identified the importance of parental models of self-regulation behaviors. Each of the above studies showed favorable gains when teachers or adults modeled self-regulation behaviors or rewarded these behaviors before students. These research studies validate the practice of self-regulation behaviors as critical when instructing students in any content domain.

Orange (1999) studied the effects of peer modeling on self-regulation. Orange used a videotape of an Academics Anonymous meeting to model peer self-regulation strategies and then gave directions to the students. The peer modeling strategy was found to be effective when given the posttest following the practice of the self-regulation strategies (Orange, 1999). Other researchers, such as Matuga (2009), looked at the difference between high school students taking college preparation courses online to earn college credit during summer break and those high school students who did not take a college courses online. Matuga (2009) found that even though all the students were ranked in the top of their class only those students who were classified as low achievers demonstrated an increase in their self-regulation score on the Motivated Strategies for Learning Questionnaire (MSLQ) while the other students' scores declined on the self-regulation posttest. However, Matuga found that no one received an intervention or treatment; the students were either classified as self-regulated or not self-regulated.

Elias and MacDonald (2007) explored factors that predicted college performance: past performance, proxy efficacy, and academic self-efficacy. Elias and MacDonald found that self-efficacy beliefs have a predictive relationship with past performance as well as college performance. The proxy efficacy is confidence in a third party. Elias and MacDonald (2007) identified the third party as the college faculty, which interestingly is similar to the current study. This study investigated the relationship between a teacher's self-regulation and a student's reading achievement. The third party in the current study is the classroom teacher. Elias and MacDonald (2007) found a student's past performance was the biggest indicator of college academic success. In this research past performance was measured by the student's grade point average (GPA). Similarly, Baslanti and McCoach (2006) conducted a study

investigating factors that contribute to gifted underachievers in the college setting. The results indicated that 72.5% of the underachievers had low self-motivation or regulation. Other researchers, such as Ross, Salisbury-Glennon, Guarino, Reed, and Marshall (2003), investigated college-age self-regulation practices in a more authentic and valid college-level classroom by investigating contextual variables. These variables included teaching format, test item complexity, study strategy, and performance. The results of Baslanti and McCoach (2006) indicated that the effects of the study strategies on performance achieved a significant status as well as teaching format and test complexity on study strategies.

Minimal studies exist concerning teacher self-regulation. The only instruments found by the current researcher were the Self-Regulation Inventory by Casler (2005b) and the most recently published inventory, the Teacher Self-Regulation Scale (Capa-Aydin, Sungur, & Uzuntiryaki, 2009). Each of these instruments measures teachers' self-regulation skills in relation to the teaching environment concerning the instructional strategies and practices used consistently in the classroom. The self-regulation models by Bandura (1986) and Zimmerman (1989, 2000) were used to support the construction of the surveys.

### *Teacher Self-Regulation*

The research on teacher self-regulation identified teachers as learners rather than the teachers' self-regulation practices in their teaching environment. As a result, there is a gap in the literature. Capa-Aydin et al. (2009) suggested teachers' self-regulation practices in the teaching environment need to be explored to determine the implications teachers' self-regulation practices can have on student achievement. Hwang and Vrongistinos (2002) studied the relationship between student teachers' academic

achievement and self-regulated learning styles. The results indicated student teachers who had higher achievement practiced more self-regulation strategies including all levels and components of self-regulation. Tillema and Kremer-Hayon (2002) explored the strategies used by teachers to build self-regulated learners. Participants consisted of Dutch and Israeli educators, and both groups of participants yielded different results. The Dutch emphasized higher order thinking, the development of self, and independent research and study. The Israelis trained their students in goal setting and planning (considering time management) and other cognitive capacities such as metacognition. However, both groups considered reflective practices appropriate for their students and themselves as educators.

Other researchers who have investigated teacher self-regulation are Corno and Randi (1999) and Randi (2004). Randi (2004) suggested that the following specific learning environments promote self-regulated learning: (a) including teachers who design their own instruction; (b) providing teachers with autonomy about choices; (c) emphasizing the evaluation of instruction practices; (d) encouraging teachers to plan, implement, and evaluate their instruction; (e) providing opportunities for learning within the context of teaching; and (f) helping teachers communicate their knowledge clearly. This approach informs the public that teachers need to be in control of their instruction and given opportunities to learn themselves. If Randi's (2004) research supported these activities, it would seem logical that teachers' self-regulation practices would influence student achievement.

Dolezal, Welsh, Pressley, and Vincent's qualitative study investigated specific behaviors between effective and ineffective classroom teachers (as cited in Casler, 2005a). The results indicated classroom teachers who promoted collaboration and

cooperative learning were more effective in the classroom. Other research by Stronge (2002) revealed scaffolding as supported by Pearson and Gallagher (1983) is part of an effective teacher's repertoire. Other effective teacher practices confirmed by Bulgren, Schumaker, and Deshler (1994) are memory enhancers, problem-based learning, inquiry-based learning, graphic organizers, and simulations (Mastropieri & Scruggs, 1991; Wolfe, 2001). When memory enhancers or graphic organizers were used consistently, students' academic achievement increased (Bulgren et al., 1994).

Owen and Fuchs (2002) also conducted a study on self-regulation of students and found academic achievement scores increased when teachers taught self-regulation practices. Therefore, if teachers are able to teach self-regulation practices, one would expect that teachers would be self-regulated in their own learning and practices. The current study attempted to determine if teachers' self-regulation skills impact student learning and achievement.

The studies mentioned in this section allow the reader to understand there is great value in the process of teaching or practicing self-regulation strategies. Several studies found models are a critical part of this process, especially when modeled by parents and teachers. Additionally, Hwang and Vrongistinos (2002) studied the relationship between student teachers' academic achievement and self-regulated learning styles. The results indicated that student teachers who had higher achievement practiced more self-regulation strategies and all levels and components of self-regulation. However, it is also important to note specific learning environments (e.g., cooperative grouping) support self-regulation practices (Randi, 2004). Furthermore, this empirical research is critical in helping teachers and administrators make decisions about instructional practices.

*Self-monitoring.* Self-monitoring has been intensely studied by Bonner and Kovach (as cited in Zimmerman et al., 1996) and Zimmerman (2000, 2001b). These researchers have identified self-monitoring as a sub-component of self-regulation and defined self-monitoring as the ability to observe and record one's behavior with the purpose to assist in personal improvement and change in behavior (Mace, Belfiore, & Hutchinson, 2001). Zimmerman and Paulsen (1995) emphasized self-monitoring as a critical component of self-regulation. Forms of self-monitoring included the use of frequency, narrations, duration measures, time-sampling procedures, behavior ratings, and direct assessments. Many teachers in the field use these forms of assessment to monitor student behaviors. The practices involved in self-monitoring make individuals more aware of their behaviors, which can lead to a change in undesired behaviors (Mace et al., 2001). This process is known as the reactivity to self-monitoring and is explored in studies by Hallahan, Lloyd, Kneedler, and Marshall (as cited in Mace et al., 2001).

Reactivity to self-monitoring has been studied by numerous researchers and has been generalized across various populations of students including special needs to adults (Mace et al., 2001; Shapiro, 1984). The findings suggested an increase in awareness of behaviors can support academic behaviors and increase more on task performances with a quicker rate of completion, math performance, and more accuracy in writing (DiGagni, Maag, & Rutherford, 1991; Jones, Trapp, & Cooper, 1977; Morrow, Burke, & Buel, 1985). In fact, Fowler (1986) announced that peer self-monitoring also reduced disruptions in classroom behaviors. Once the behaviors were corrected, their peers noted positive behaviors the students were modeling (e.g., fewer times students got out of their seat). Self-recording is part of self-monitoring and can

produce a change in behavior. There also are factors that have been shown to affect reactivity of self-monitoring, such as instructions, surveillance, motivation, valence, recording device, feedback, and reinforcement. Frederickson, Epstein, and Kosevsky (1975) concluded that self-monitoring produced a greater change than self-recording. Harris (1986) found that monitoring academic productivity produced more improved changes in behaviors than self-recording.

Kazdin (1974) provided data to confirm that when subjects received feedback and started with performance standards there was a greater increase in positive behavior and academic achievement. Behavior change is the action that takes place during the self-evaluation stage of self-regulation. Self-monitoring is just one component of self-regulation, but without the other determinants self-regulation would be incomplete as noted by Bandura (1986).

Sagotsky, Patterson, and Lepper (1978) investigated monitoring and student math performance. The fifth- and sixth-grade students who participated in self-monitoring and setting daily performance goals increased their time on tasks and math achievement. Schunk's (1983) study consisted of three groups: (a) teachers who self-monitored, (b) teacher monitors, and (c) teachers who did no monitoring. Those groups who monitored showed an increase in math performance, while the group with no monitoring exhibited no change in achievement. Goal-setting proved to be insignificant, but Sagotsky et al. (1978) stated goals must be "challenging but attainable" (p. 140).

Other reasons self-monitoring is considered important is how it encourages one to focus on the activity at hand and allows one to discriminate "between effective and ineffective performances" (Thoresen & Mahoney, 1974, p. 15). Pressley and Ghatala

(1990) suggested self-monitoring allows the learner to identify strategies that are more appropriate for specific activities; while other researchers, such as Zimmerman, Greenberg, and Weinstein (1994), claimed it boosted management and the time allotted for study periods. For example, if a student recorded a study time of 3 hours in English coursework but made a C on the test, then the next week more time should be spent on homework. Most importantly, self-monitoring leads to self-reflection in personal practice (Bandura, 1986). As students become more organized, they are more effective when planning and setting goals and make more accurate judgments (Lan, 1994; Zimmerman & Bandura, 1994). Similarly, self-monitoring has been found to increase one's self-efficacy, goals, expectations, and overt motivation (Bandura, 1986; Zimmerman, 1989). Schunk (1983) agreed with Bandura (1986) and Zimmerman (1989) that learners who practiced self-monitoring improved their achievement.

Two components of self-monitoring considered important are feedback and goal setting (Butler & Winne, 1995). Feedback is the explicit instruction or comments given to an individual when performing a certain task. Feedback offers a form of evaluation from a third-party. This feedback allows the individual to adjust or change goals based on the information presented. Weinstein (1994) explained learners must understand tasks and outcomes to monitor their learning.

The importance of self-monitoring is the focus on the individual (Shapiro, 1984), the analysis it initiates (Bandura, 1986), the discrimination between effective practices it encourages (Thoresen & Mahoney, 1974), the revealing of inadequate learning strategies (Pressley & Ghatala, 1990), and the enhancement of organization and study time including reflective practices (Bandura, 1986; Zimmerman et al., 1994). The focus and reflective practices allow students to monitor their learning and alter



behaviors which cause confusion or disharmony. These self-monitoring procedures can have a lasting effect on an individual's learning career (Lan, 1994; Zimmerman & Bandura, 1994). Schunk (1983) commented that those students who practiced self-monitoring demonstrated greater self-efficacy with more motivation to achieve academic success.

However, sometimes self-monitoring has an adverse effect on self-regulation when it is counterproductive (Zimmerman, 1994). Self-monitoring is especially helpful when comprehending a new text on an unfamiliar topic (e.g., car engines). Other social constructivists, such as Pressley and Ghatala (1990), recognized that self-monitoring wages on one's motivation, while Ellis (1994) acknowledged that individuals must be able to discern between behavioral shifts in their behavior to monitor and evaluate within the self-regulation process. Self-monitoring is the first step of many individuals to self-regulation.

Metacognition strategies also influence an individual's performance when actively self-monitoring and evaluating behaviors. Metacognitive strategies are defined as "the ability to think about one's own thinking and to actively select appropriate strategies for various learning situations" (Zimmerman & Risenberg, 1997, p. 243). Flavell (1979) supported metacognitive thinking and monitoring one's behaviors when comprehending text. Comprehension construction can only take place when students are actively building upon a set of knowledge, values, and skills they already possess. In Ruddell and Unrau's (2004) Interactive Reading Model, the metacognitive strategies supported monitoring and evaluation (Hacker, 2004). Researchers identified that higher achievers used the same strategies as low achievers but were more victorious with

monitoring based on their successful execution of practices (Goetz, Palmer, & Haensly, 1983).

Successful goal orientation is seen through the execution or perfection of modeling practices and skills. Goal orientation is believed to enhance self-regulation and monitoring in conjunction with feedback as part of the forethought phase (Bandura, 1986). Within self-regulation there are varied types of goals: process, general, and performance standards. Process goals consist of large tasks broken down into smaller steps (e.g., long division). General goals are not specific (e.g., become a better writer), and performance standards are goals one should be able to accomplish at the end of a semester. Goal properties consist of “specificity, proximity, and difficulty level” (Schunk, 2001, p. 132). Performance standards are said to raise self-efficacy, while process goals result in an increase in motivation; however, general goals do not increase anything. Bandura (1997) says individuals who care about their performance monitor their learning. Furthermore, it is important to recognize goals can increase in value when individuals are given feedback and increase their knowledge or skill level.

Self-monitoring is identified as a sub-component of self-regulation. This sub-component was investigated by Butler and Winne (1995) who stated two components of self-monitoring are feedback and goal setting. The feedback refers to an individual guiding or facilitating the learning. Goal-setting is important because it leads to the next step in the process; therefore, the student never stops learning and is consistently growing as a learner. Interestingly, self-monitoring has had an adverse effect on self-regulation when it is counterproductive (Zimmerman, 1994). However, self-monitoring is especially helpful when comprehending new information. This process allows a

learner to change behaviors that are not allowing achievement of the desired outcomes. Therefore, without explicit feedback the learner will not have an opportunity to grow.

*Self-evaluation.* Another factor which is influenced by self-monitoring is self-evaluation. Self-evaluation is having the ability to reflect on one's awareness and practices and make the necessary changes to increase or diminish a behavior being compared to a specific set of criteria (Belfiore & Hornyak, 1998). The criteria may be defined as a set of performance goals. Ertmer and Newby (1996) described setting goals and evaluating progress as a trait of self-regulated learners. These traits include self-monitoring, performance awareness, and evaluation judgments over time (Zimmerman & Kitsantas, 1997). Behavior evaluations should constantly change due to the alteration in one's knowledge and skills. Therefore, if one has learned how to prepare a recipe they may not have to look at the recipe to determine what ingredients they need to purchase at the store or to execute the steps of the recipe. The evaluation process also can include self-correction, which requires one to alter a response based on feedback or an evaluation (McGuffin, Martz, & Heron, 1997).

The self-regulation loop consists of monitoring goals and effectiveness of strategies in use while changing specific behaviors due to feedback (Zimmerman & Kitsantas, 1997). This loop entails the entire cyclical self-regulation process. Garner (1990) warned that those students unable to correctly monitor and spot failure will be incapable of evaluating their own learning. Often this is where an individual's skills in self-regulation break down (McCombs as cited in McCombs, 2001). Zimmerman and Martinez-Pons (1986) discovered self-evaluation processes differ tremendously for high- and low-achieving college and high school students (Lan, 1994; Ley & Young;

2001). However, Ley and Young (2001) suggested that higher-achieving students used past performance to evaluate themselves.

Many authors, such as Pintrich (1995), suggest that guiding students through tasks and giving explicit feedback can be beneficial to self-evaluation. Explicit feedback may contain observations about one's effort, time management skills, and involvement in evaluation while also encouraging continuous goal setting throughout the process or to reach a specific performance goal. Guiding students is another term for modeling behaviors for a third party; this could be in any domain such as math, reading, science, and others. The importance of a model can be seen in many of the studies shared within this literature review.

McGuffin et al. (1997) had their students evaluate spelling words from a tape recording, and Grskovic and Belfiore (1996) had students assess their spelling words from a teacher's written model. Both studies found students increased their spelling scores after self-correcting from the pre-written model or recording compared to those who had no self-correction practice. DiGagni et al. (1991) had students use frequency tallies and then assigned themselves an evaluation based on their reported behaviors. This approach allowed the participants to increase the behaviors to a more favorable response if motivated to do so. Schunk and Swartz (1993) investigated how goals and self-evaluation affect academic achievement and self-regulation. Schunk and Swartz's studies were based on writing achievement and proved feedback with process goals were more effective than general goals; 6 weeks later the students maintained their gains without any instruction on other types of writing. In 1996, Schunk conducted two studies: one to measure the relationship among goal setting, self-evaluation, self-regulation, and academic achievement. All participants involved in the study saw an

increase in self-efficacy, skill, and motivation. In the second study, all learning goal participants had an increase in motivation and achievement rather than those who worked with performance goals.

Overall, Schunk (1983) learned self-evaluation promotes self-regulation and self-efficacy among students who converse with teachers about learning goals. Schunk and Ertmer (2000) repeated the study with college-age students and found that with self-evaluation there were minimal results, but process goals led to more self-regulation and self-evaluation supported self-efficacy.

*Self-awareness.* *Self-awareness* is defined as an individual's ability to examine one's own practices (Casler, 2005a). The motivation to self-regulate comes from covert psychological actions that are controlled by an individual's will or desires (Kuhl, 1984). Motivation is driven by an individual's awareness of volition strategies. These strategies allow one to stay focused because of will and awareness. One of the six volitional control strategies is attention control, which is an inhabitant of one strategy titled control of cognition. Attention control allows an individual to determine where focus may be at one time and continue to stay focused (e.g., tuning out noise around you to finish a task).

Vygotsky (1986) recognized self-awareness as a sub-construct of consciousness. Gallimore and Thorpe (as cited in Zimmerman, 2001b) believed words brought forth a consciousness; as the words were practiced, they became automatic and were internalized. This internalization led to no longer needing self-awareness in that area but in new areas of knowledge. Piaget (as cited in Zimmerman, 2001b) believed children's thinking is not operational until they become aware of their world and those around them. Once they can communicate these ideas and become fully operational as

defined by Piaget, they are not aware of their own thoughts and behaviors. Others, such as Flavell (1979), used the *meta* term to identify self-awareness and monitoring. More explicitly, Paris, Byrnes, and Paris (2001) described the process children go through in their development of awareness.

Researchers have found many children enter school with a high level of efficacy, only to find their confidence drops or becomes domain specific over their academic career (Beneson & Dweck, 1986; Simmons, Blyth, Van Cleave, & Bush, 1979; Stipek as cited in Zimmerman, 2001b). Self-efficacy is often affected by identity created in the social and school context and the self-regulation practices learned by this stage. The schema (i.e., past experiences) children have developed in years of schooling affects the identity of the child and the motivation or volition currently possessed. This motivation is critical for students to feel successful in the school setting which is impacted by the educators. These educators are privy to various social situations that can affect learning in the classroom.

Self-regulation, then, is the way in which a learner controls individual thoughts, feelings, and actions in order to achieve academic success (Zimmerman & Schunk, 2001). Studies have shown that self-regulation from a teacher's or student's perspective has positive effects on student achievement (Fuchs et al., 2003; Glaser & Brunstein, 2007; Lizarraga et al., 2003; Perels et al., 2009; Pintrich & De Groot, 1990; Zimmerman & Schunk, 2001). Specifically, the sub-construct of self-monitoring contributes to academic productivity (Harris, 1986) and focus (Shapiro, 1984). Self-evaluation allows students and teachers to evaluate their work and create a strategic plan to find academic or instructional success. Finally, self-awareness allows individuals to attend to their behaviors and make the necessary changes when specific

outcomes are not being obtained. Taken together, self-regulation impacts student academic achievement and, coupled with effective instructional practices, produces positive results for students.

### Overview of Effective Teachers and Practices

A self-regulated teacher is an effective practitioner who uses research-based practices to ensure student academic success. This teacher has a personal belief system in creating an environment that engenders positive behaviors in students. In addition, the teachers use self-monitoring, self-evaluation, and self-awareness (Bandura, 1986) to guide instruction in the classroom. Effective reading practitioners apply appropriate strategies based on a personal belief system that fosters self-regulation in interplay among the teacher, the environment, and the student. To understand this approach, researchers study the constructs of teacher factors and instructional strategies.

#### *Teacher Factors*

During the 20<sup>th</sup> century many researchers and policymakers began scrutinizing the teaching population to determine what characteristics support student achievement (Wayne & Young, 2003). Some of the reports include the following: (a) the National Research Council Panel (Mitchell, Robinson, Plake, & Knowles, 2001), which investigated teacher quality and assessment; and (b) the report issued by U.S. Secretary of Education Rod Paige on teacher quality in 2002. These researchers were seeking results to help improve policy and federal and state practices. Some of the studies included focus on teacher turnover, effective teachers, and teacher quality. Ingersoll (2001) and Wayne (2002) investigated the relationship between low-income students and teacher qualities. Throughout the last decade many states have adopted standards

(e.g., Interstate New Teacher Assessment and Support Consortium) hoping to improve academic achievement and teacher preparation programs (NCLB, 2002).

Interestingly, Achienstein, Ogawa, and Speigleman (2004) investigated a teacher tracking system and discovered two very diverse types of teachers: (a) teachers who are given autonomy when making decisions about instruction and (b) those who are given no choice when teaching their content areas, especially in the field of literacy. Lacey (1977), Lawson (1992), and Zeichner and Gore (1990) identified three components that shape new teachers: (a) background, (b) local context, and (c) state policy environments. Coburn (2001) researched how state policy affects teachers' beliefs and practices. This finding was evident when the NCLB Act (2001) passed and Reading First made its way into the state and local governments. Many schools began revamping their literacy programs to fit the three-tier process and make the necessary adjustments in their daily schedule to meet federal and state mandates. These processes influenced some teachers, which led to a shift in their philosophy of education and had an effect on the way they ran their respective classrooms. The results proved teachers who were given more autonomy and choice had a higher total mean in classroom discourse than those who were told to use a literacy curriculum and were given no choice.

This information is valuable to researchers because it helps authenticate the purpose behind giving teachers more skills and choice when teaching. The more knowledgeable teachers are, the more positive impact they can have on student achievement (Achienstein et al., 2004). Eighty percent of the schools given a choice were ranked between 6 and 10 (with 10 being the highest) while only 8% of the schools using a direct instruction literacy program were rated between 6 and 10.



A very recent study on academic achievement by Viadero (2010) investigated the relationship between academic achievement gains when teachers were coached by literacy specialists. Over a 3-year period, Viadero found that all students (> 8,000) within the study from diverse backgrounds increased their reading achievement by 16% beyond the predicted score: 28% in the second year and 32% in the third year. However, the results varied from school to school and teacher to teacher. Viadero (2010) is one of very few studies to date that measured the effect coaching teachers can have on student achievement.

Similarly, there are studies on teachers' epistemic cognition, beliefs, and calibration. Zimmerman investigated "how students (teachers) become masters of their own learning" (p. 167, as cited in Maggioni & Parkinson, 2008). Maggioni and Parkinson (2008) believed that learners have to be actively involved in the process to make meaning and practice critical thinking skills (e.g., self-regulation). The purpose of Maggioni and Parkinson's (2008) study was to determine the role a teacher's cognition and beliefs play on instruction in the classroom setting. The results indicated teachers who are in control of their cognitive abilities and are reflective in nature prove to have a positive effect on students becoming masters of their learning. This theory supports the current study that there is a variance in students' achievement scores when teachers are and are not self-regulated. Evidence suggests that when teachers are reflective in nature and drive instruction, based on the evaluation of students' achievement, scores will increase.

Darling-Hammond (2006) reported that student achievement scores are more influenced by the teacher in the classroom than the size or make-up of the classroom (Sanders & Horn, 1994; Sanders & Rivers, 1996; Wright, Horn, & Sanders, 1997).

Rivkin, Hanushek, and Kain (2005) pointed out that 7% of their total variance was based on the teacher being in control of the classroom. Sanders and Rivers (1996) state when students are assigned to highly effective teachers they have significant gains. Furthermore, when students are exposed to ineffective teachers their achievement is also influenced even years later. The U.S. Department of Education (as cited in Darling-Hammond & Youngs, 2002) referred to 57 studies that examined the relationship between pre-service preparation programs and effective teaching. The USDE found that most teachers involved in formal training were more effective than other teachers with no formal training.

Darling-Hammond (2006) identified many of the teacher qualities related to student achievement. These teacher qualities included (a) academic and communication skills, (b) knowledge of specific subject matter, (c) internship experiences along with courses exemplifying teaching practices, (d) minimum grade point averages, and (e) the passing of pedagogy or subject-matter tests. Ferguson's (1991) analysis of Texas schools concluded that after controlling for socioeconomic status and race almost the entire variance in student achievement could be related to the difference in characteristics of teachers. Similarly, Strauss and Sawyer (1986) supported these findings by stating the more improvements made to teacher education programs, the more success will be seen from at-risk students in the classroom.

This research is also supported by Darling-Hammond, Holtzman, Gatlin, and Heilig (2005), Goldhaber and Brewer (2000), and Hawk, Coble, and Swanson (1985). The results of these studies stated teachers who were teaching subjects in which they were certified outperformed students whose teachers' were not certified or were without any formal training, especially in math classes of algebra and above. Alexander and

Fuller (2004) and Fuller (1998) recently completed studies in Texas investigating the same type of relationships with academic achievement. The results indicated students who had licensed teachers were much more likely to pass the state test, even after controlling for other variables such as socioeconomic status (SES), school wealth, and teachers' experience. Specifically, high SES schools were more likely to have more non-experienced teachers with emergency certifications than low SES schools (Darling-Hammond, 2003, 2004).

Wayne and Young (2003) examined a large number of studies evaluating teacher characteristics and achievement gains. "Teacher characteristics are classified into four categories: college ratings, test scores, degrees and coursework, and certification status" (p. 89). Only three past studies investigated the relationship between teachers who graduated from top-rank universities and student achievement (Summers & Wolfe, 1975, 1977). The gains within the study over the 3-year period of time were in Grades 3-6, 6-8, and 9-12. Variables examined in the study were teachers' examination score, years of experience, and undergraduate institution ranking. The researchers found the ranking of institutions resulted in a significant relationship with Grade 6 students unlike Grades 8-12 students. In a similar study on low-income African Americans, Murnane and Phillips (1981) found no significant relationship between college rankings and student achievement when controlling for all other variables. However, Ehrenberg and Brewer (1995) and Summers and Wolfe (1975, 1977) found Caucasian and African American students were more affected by university rankings.

Other studies investigating the relationship between teacher factors and academic achievement were those investigating teacher licensure examinations,

teachers' verbal skills, and other test measures. Two studies on the quality of teacher licensure revealed opposing views. Summers and Wolfe (1975, 1977) revealed students scored lower when teachers scored higher on the teachers' licensure examination; however, Ferguson (1991, 1998) stated teachers in Texas who scored higher on the Texas Examination of Current Administrators and Teachers (TECAT) disclosed higher achievement gains in reading, especially in Grades 3 and 7. Ehrenberg and Brewer (1995), Ferguson and Ladd (1996), Hanushek (1992), Murnane and Phillips (1981), and Rowan, Chiang, and Miller (1997) compared teachers' verbal skills to students' academic achievement. The results indicated a teacher's verbal ability was sometimes related to a student's academic achievement gains, especially in the study by Ferguson and Ladd in 1996 using the state of Alabama data when compared to ACT college entrance exam. These results help validate the importance of an effective teacher.

Studies which investigated the relationship between teachers and student achievement include those exploring the variables of teacher coursework and degree. Studies in most of these cases carried mixed results, some even inconclusive results (Hanushek, 1992; Harnisch, 1987; Link & Ratledge, 1979; Murnane, 1975; Murnane & Phillips, 1981; Rivkin et al., 2005; Summers & Wolfe, 1975, 1977), although Ferguson and Ladd (1996) reported positive results. Goldhaber and Brewer (1997) stated even more explicitly that teachers who held master's degrees in their subject taught showed much higher student achievement than teachers who held master's degrees in other content areas. In addition to the master's degrees, those teachers who held bachelor's degrees in mathematics and taught mathematics also showed higher achievement scores than those not certified in the content they taught. Goldhaber and Brewer (1997) also investigated the certification of teachers which produced similar results. Goldhaber and

Brewer found those who were certified (i.e., standard certification) in their content area and taught that specific subject showed greater gains in academic achievement.

As a result, teacher factors affect academic achievement and studies confirm teachers with specific certifications in specialized content areas appear to have a positive effect on academic achievement and in some cases college ratings; teachers' verbal ability and tested knowledge and skills can affect students' academic achievement. These findings helped validate the importance of the current study when investigating the relationship between teachers' self-regulation skills and academic achievement.

Casler (2005a) was the only study found that measured teachers' self-regulation compared to their instructional practices. Casler created and piloted an instrument measuring teacher self-regulation and compared the score to observations of instructional strategies. This Self-Regulation Inventory was used in the current study. Casler predicted a significant relationship; however, the correlation between the self-regulation study and the instructional practices correlation was significant but very weak.

Overall, the relationship between teacher factors, student behaviors, school climate, and curriculum models has proven to play a significant role in student achievement (Marzano, 2003; Marzano et al., 2001; Silver, Strong, & Perini, 2007; Wayne & Young, 2003). Research supports that student achievement can be increased when teachers have a more extensive vocabulary and specific certification or create a specific type of learning climate. These findings are critical in proving that teachers' behaviors practiced in the classroom can have a positive effect on students' achievement in any content area or field in any grade or age student. The studies

discussing teacher relationships in comparison with students' academic achievement are critical in determining the factors which can be enhanced to improve students' academic achievement, which is the ultimate goal of education.

### *Reading Teacher Factors*

Self-regulated teachers are driven to improve student achievement and reflect on their instructional methods to increase test scores. Teachers who practice self-monitoring, self-evaluation, and self-awareness evaluate their methods of teaching to produce greater academic success. However, in many cases literacy is the underlying reason for low test scores on formalized assessments (Conley, 2008). Therefore, it is important to understand the methods of effective reading teachers. Reading teachers are equipped with many characteristics that differentiate themselves from regular content area teachers. Reading teachers possess in-depth knowledge of the reading process, an understanding of reading models, reading theories, reading strategies, the components of reading, and the importance of assessment driving instruction. This information is critical to an effective reading teacher (Routman, 2003).

Seven characteristics of highly successful reading teachers are as follows: (a) understand the role of language as a critical component of the reading process; (b) assess the learner's needs to plan appropriate instruction; (c) construct organized and print rich learning environments; (d) use research-based instruction; (e) use direct instruction to model literacy strategies; (f) differentiate instruction according to students' needs; and (g) involve the family, community, and school (Reutzel & Cooter, 2004). Teachers who are aware of these strategies and implement them on a daily basis provide their students with a chance to succeed. These factors are critical to significant growth in school improvement and academic achievement.

Gambrell, Morrow, and Pressley (2003) described best practices in reading instruction. Gambrell et al. identified each area of reading and determined the strategies that work best for the different components of reading (i.e., phonics, phonemic awareness, vocabulary, fluency, and comprehension) (National Reading Panel Report [NRPR], 2000). However, in the beginning, Gambrell et al. (2003) shared eight principles of best practice. These principles, said to be the “common ground” of best practices, are as follows:

1. Learning is meaning making.
2. Prior knowledge guides learning.
3. The Gradual Release of Responsibility Model and scaffolding instruction facilitate learning.
4. Social collaboration enhances learning.
5. Learners learn best when they are interested and involved.
6. The goal of best practice is to develop high-level, strategic readers and writers.
7. Best practices are grounded in the principle of balanced instruction.
8. Best practices are a result of informed decision making.

Schunk (1987, 2001) stated modeling is one of the most critical constructs of reading instruction. Modeling is practiced in Pearson and Gallagher’s (1983) and Routman’s (2003) gradual release models.

It is critical for reading teachers to be equipped with strategies that will allow students to become literate learners. Reading skills are only developed by those educators who are able to identify and teach the strengths and weaknesses of each student. The self-regulation process requires the teacher to actively pursue new

strategies and goals with the students. When students are involved in this process, they are actively engaged in learning and develop a positive rapport with the teacher. This relationship is the driving force behind teacher and student success in the classroom (Ruddell & Unrau, 2004), especially when the teacher uses the most effective strategies for the varied learners in that environment (Gardner, 1999; Tomlinson, 2001).

### Effective Instructional Strategies

Effective instructional strategies are critical in classroom instruction to enable students to make meaning and transfer and apply knowledge learned. Teachers' strategies in classroom instruction have an effect on a student's level of knowledge and ability to make connections when new knowledge is introduced (Miller, 2002). In addition, self-regulated teachers utilize research-based strategies in their planning and execution of classroom lessons. These strategies include setting objectives, providing feedback, reinforcing effort, providing recognition, homework and practice, nonlinguistic representations, and cooperative learning. Furthermore, teaching students to use strategies in all content domains, such as identifying similarities and differences, summarizing, note-taking, questions, cues, advanced organizers, and generating and testing hypothesis. With these strategies in place, students can learn to evaluate and analyze information and make connections to previous knowledge. This process requires students to be actively engaged and become aware of their own learning.

Effective teachers use these strategies when planning and executing lessons in any content domain. They use their observation skills and assessment data to determine the basic needs of students and implement the necessary instruction to show growth in student achievement. This practice requires teachers to be aware of, monitor, and evaluate their personal, behavioral, and environmental perspectives (Bandura, 1986).



Teachers who practice these behaviors and allow these data to drive their instructional decision-making teach specific strategies depending on students' learning styles, interests, and developmental levels (Tomlinson, 1999).

### *General Instructional Strategies*

Gambrell et al. (2003), Marzano (2003), and Marzano et al. (2001) discussed many strategies in their research on effective instructional strategies. Direct instruction is identified as being a powerful tool when helping students who are at high risk of failure (Marzano, 2003). "More effective teachers use more effective instructional strategies" (Marzano, 2003, p. 78). Expert teachers have a way of knowing which instructional strategies are more favorable in different domains or various types of learning context.

Therefore, if an effective teacher is able to identify specific strategies for certain learning situations, this teacher may be considered self-regulated (Bandura, 1986; Zimmerman, 2000, 2001b). Bennett (1986), Creemers (1994), and Hattie (1992) reported effective instructional strategies in their literature as Silver et al. (2007). Many of these strategies were similar in all cases including those studied by Marzano et al. (2001). Marzano et al. (2001) found teachers who modeled best practices with their students gained anywhere from 22% to 45% on standardized assessments. Therefore, a teacher who uses these strategies where they best fit within the curriculum should show gains as well. Silver et al. (2007) grouped effective strategies into four distinct styles of instruction: mastery, understanding, self-expressive, and interpersonal.

The goal of the self-regulated teacher is to develop self-regulated learners who can choose effective strategies. Teachers must introduce strategies that can be applied across all content areas but allow students to determine what strategies work best for

their learning style or assignment (Conley, 2008; Marzano, 2003; Marzano et al., 2001; Silver et al., 2007). Teachers who follow the recommendations given by Marzano (2003) and Silver et al. (2007) will see an increase in students' academic achievement. The mantra stated in Marzano's (2003) literature is "to provide teachers with an instructional framework for units that employ research-based strategies" (p. 85). However, it is important to consider that each of these models may appear differently for each school. The critical element is that the teacher is in charge of the learning and has a plan with multiple research-based strategies that will prove to be helpful for all students involved. Tomlinson (2001) reported all students should be actively engaged and challenged at the appropriate developmental level and support varied activities according to students' learning styles and interest. This technique is similar to Silver et al.'s (2007) suggestion that teaching students specific strategies will support their academic achievement and growth. However, it is important to remember that teachers should be facilitating the conversation and explicitly model strategies so students can become well acquainted with the instructional strategies needed to improve academic achievement.

Overall, one can see that there are many effective instructional strategies used by educators. However, without the proper education and training, teachers will be less likely to support academic achievement. Darling-Hammond (2006) stated effective teacher training is necessary if an increase in student achievement is expected nationally. Furthermore, this supports the need for teachers to be explicitly taught the process of reading, the approaches, and the proper pedagogy to model when using assessments to drive instruction. Lacking this knowledge can damage a student's chance for academic success.

Teacher factors have proven to have a significant effect on instructional strategies modeled in the classroom. The more effective a teacher proves to be, the more motivated the teacher is to design the curriculum around students' needs. Effective teacher factors translate into effective instructional strategies and successful academic achievement. Similarly, effective reading strategies practiced by effective reading teachers produce more academically successful students who gain an understanding to comprehend and analyze text.

### *Effective Reading Strategies*

Effective reading strategies are supported by empirical data to support an increase in student academic achievement (International Reading Association, 2002). These research-based strategies include the following: (a) building a positive literacy environment, (b) teaching reading using authentic purposes, (c) providing a model for students when teaching the components of reading, (d) giving students ample time to practice reading a variety of genres and use high-quality literature in the classroom, (e) using a variety of text to extend comprehension and vocabulary, (f) building a classroom community upon critical concepts and background knowledge, (g) balancing classroom discussion between teachers and students, (h) using technology to expand learning concepts, and (i) using a variety of assessments to inform classroom instruction (Gambrell, Malloy, & Mazzoni, 2007). These strategies have proven to increase academic achievement scores.

A positive classroom climate is crucial to student success in literacy. Gambrell and Morrow (1996) stated learning is a deep cognitive process that requires motivation on the individual's part. Without this motivation students are less likely to achieve academic success and lose focus on education. This environment is implemented by

providing a print rich environment, offering high-quality literature, and supporting students' choice to read. These factors motivate students and offer more authentic learning experiences. Authentic learning experiences include allowing students to participate in activities that are occurring in the real world such as creating flyers, brochures, grocery lists, recipes, stories, or letters to pen pals. These authentic opportunities given to students allow them to recognize the meaningful connection between life and learning (Gambrell et al., 2007).

Other best practices in reading include explicitly modeling for students and giving them an opportunity to demonstrate effective reading behaviors. These components of reading are phonics, phonemic awareness, fluency, comprehension, and vocabulary (NRP, 2000). These opportunities allow students to demonstrate their learned behaviors while teachers monitor their behavior and alter instruction based on their observations. This process is known as self-regulation. However, it is also necessary that the student's learning be scaffolded using the gradual release model (Pearson & Gallagher, 1983). This model allows the teacher to model in the beginning and then relinquishes control over to the student when the teacher feels that the student is ready and can do so with minimal frustration. In this role the teacher is evaluating the student's progress and determines the most appropriate instruction needed. Additionally, students need to practice reading a variety of genres and high-quality literature. High-quality literature allows students to experience various text structures and develop a love of literature. Allington (1983) stated that type of reading development increases students' comprehension and vocabulary development. Anderson, Wilson, and Fielding (1988) found a significant relationship with the amount of time a child reads and reading achievement.

Other critical components include teaching new material based on students' prior knowledge and experiences (Gambrell et al., 2007) which allows learners to make connections and expand their level of knowledge (Marzano, 2004). Teachers who evaluate students' backgrounds and develop a positive rapport will show greater gains in academic achievement (Ruddell & Unrau, 2004). Studies also support teachers who build this type of positive literacy environment to promote a love of literacy. The teachers in this environment act as the facilitator (Heacox, 2002; Tomlinson, 2001) by allowing students to share their connections and asking higher order thinking questions (Gardner, 1983) and making connections with other text. Several studies have proven this type of student and teacher collaboration promotes reading comprehension and reading motivation (Almasi, McKeown, & Beck, 1996). Gambrell et al. (2007) used technology to expand understanding, comprehension, and vocabulary development. However, Coiro (2003) suggested there is a different set of skills required to read off the hypermedia text online. Therefore, teachers must be equipped with this knowledge to impact student achievement. In conclusion, the last best practice included using assessments to guide future instruction. This best practice requires teachers to monitor, evaluate, and make decisions regarding the curriculum in the classroom. These decisions should ultimately be decided based on students' needs and past assessments. However, all too often teachers choose to disregard attention to past assessments and use a textbook to guide their classroom instruction.

Overall, one can see the many benefits of using best practices when teaching reading. However, if one is without the expertise needed to teach reading, then those students will not benefit from the teacher's knowledge. It is critical that the students be motivated and required to participate in authentic learning experiences. These

experiences will increase student motivation if the teacher builds a positive learning environment where students are surrounded by high-quality literature and given ample time to practice. Furthermore, the teacher must take time to develop a personal relationship with the students so they become more motivated and achieve greater academic success (Gambrell et al., 2007).

### Academic Achievement

Self-regulated teachers engage in effective practices that translate into academic achievement for students. Academic achievement is measured by criterion referenced tests and formal standardized assessments such as the National Assessment of Educational Progress (2009). The results are influenced by factors, such as school level, teacher level, and student level (Marzano, 2003). Factors specifically related to reading are interferences, motivation, subject matter knowledge, and strategic capabilities (Alexander & Fox, 2004). These factors support or hinder the instruction taking place in the classroom and affect students' academic achievement.

A large body of literature on academic achievement suggests there are specific factors that predict student success rather than grades as cited by Salinas and Garr (2009). School level factors included guaranteed and viable curriculum, challenging goals and effective feedback, parent and community involvement, a safe and orderly environment, and collegiality and professionalism (Marzano, 2003). Schools with viable curricula have a balance between the objectives which need to be taught and the proper amount of time to teach the curricula; however, this is one of the biggest challenges schools face. Other factors included in Marzano's (2003) findings included challenging students with goals and high expectations but also give specific feedback to students while working to attain their goals. The more parental and community

involvement one can gain, the more successful the school will become. Parent and community support are critical for successful academic achievement. The school environment builds a positive attitude about learning and reinforces skills that will be needed in the workplace, such as collaboration, socialization, communication, and setting goals. These skills support Salinas and Garr's (2009) prediction that students in a learner-centered classroom score higher than students in a traditional classroom, specifically minority students. The authors discovered students who were involved in learner-centered classrooms achieved greater success than students in traditional classrooms. This study resulted in the identification of specific factors that contribute to self-regulated students' academic success. These factors include self-efficacy, motivation, creativity, collaboration, innovation, motivation, learning strategies, and goal setting (Salinas & Garr, 2009; Zimmerman et al., 1996).

Professionalism is defined as adherence to job roles and responsibilities with the utmost integrity and honesty ("Professionalism", 2010). An attribute of a professional is treating students and colleagues with respect. Turner and Husman (2008) found students who felt shame were often thought to be less self-regulated, lacked specific coping skills, and were unsuccessful when dealing with academic failure. The conclusions were similar to Salinas and Garr (2009), stating that students could recover from shame if they were equipped with coping skills, such as planning, creating goals, practicing study strategies, positive self-talk, and becoming more engaged in classroom activities. Self-regulated students who practiced these coping skills were much more successful in their academic accomplishments (Turner & Husman, 2008). Bassi et al. (2006) also confirmed academic achievement is promoted through students' self-regulation patterns. As a result of this study, students' self-regulation skills and

academic achievement remained significant even after a period of 2 years. Other researchers, such as De Charms (1976), stated that those students involved in learning-centered classrooms found themselves involved in the process of learning and were much more likely to enjoy school than those individuals who were under the constraints of a teacher-controlled classroom (i.e., direct instruction, seat work, and no active talk).

Marzano (2003) discussed the dynamics involved in a classroom and the connection between student achievement and teachers. Teacher-level factors include instructional strategies, classroom management, and classroom curriculum design. Each of these components is identified by researchers as critical components of students' achieving success. In most cases, the more effective teacher will utilize a wider variety of strategies than one who is least effective. Research supports Brophy (1996), Creemers (1994), and Marzano (2003) that specific strategies used by effective teachers are graphic organizers, meaningful homework, assessments, teacher expectations and reinforcement, direct instruction with corrective feedback, and ability grouping. These strategies have been recognized as increasing student achievement. Hattie (1992) also concurred with these researchers that homework, individualization, games, tutoring, and mastery learning increase student achievement (Wang, Haertel, & Walberg, 1993). Marzano (2003) stated that classroom management is a significant factor affecting student achievement and supported his findings by declaring an unorganized classroom will have no positive effect on student learning. The last teacher factor is classroom curriculum design, which is also known as the approach or pedagogical practices a teacher uses to inform and communicate knowledge to the students. In many cases teachers are unable to select and pace their curriculum; they are given a systematic pacing guide that includes the curriculum. They are responsible for



teaching (Farr, Tulley, & Rayford, 1984). However, it is more common that teachers determine how to present and sequence the content. Findings from the Third International Mathematics and Science Study (TIMSS) found the nation puts too much emphasis on textbooks to determine the content and pacing (Stevenson & Stigler as cited in Marzano, 2003). In fact, the instruction and content in the classroom should be informed and driven by the students' needs and assessments (Gambrell et al., 2007). In addition, remember teaching is a "holistic process" (Marzano, 2003, p. 77), which requires one to be tuned into learning and evaluation at all times.

Bloom (as cited in Marzano et al., 2003) identified student-level factors as cognitive and affective characteristics while Walberg (as cited in Marzano et al., 2003) identified these factors as prior achievement, age, and motivation to learn. However, these researchers did not mention the home environment as a variable. Marzano (2003) identified three categories: home environment, learned intelligence and background knowledge, and motivation. Each of these categories is critical to the student and determines the success or achievement level. Home environment either encourages or discourages lifelong learning and achievement. Home factors that affect this are the socioeconomic status of the family, the education achieved in the home, the occupation, and the atmosphere of the home. Payne (2005) stated that families who have lower income levels and live below the poverty level are much more likely to support their children going to work rather than furthering their education, while families who support education are those who have earned degrees themselves and encourage their students to continue in school. However, the most significant factor that contributed to student success was the atmosphere of the home. This includes the communication and attitude about school, supervision, and parental expectations and style of parenting

(Boersma & Chapman, 1982). Intelligence is often defined as the ability level that is a fixed characteristic (Heurnstein & Murray, 1994; Jensen, 1980), and background knowledge is known as the previous knowledge gained from various experiences and situations. Oftentimes background knowledge becomes more valuable when students begin making connections to new concepts and knowledge (Marzano, 2003). In the meta-analysis conducted by Dochy, Segers, and Buehl (1999), 91.5% of the background knowledge studies had a positive effect on academic achievement. In addition, motivation research states that if students are motivated to learn content they will in most cases be successful and increase their academic achievement. Therefore, it would seem obvious that student motivation increases achievement. Self-regulation would be more evident in students and teachers who are motivated to learn.

In conclusion, it is important for administrators, teachers, and researchers to understand that student success is affected by a wide range of influential factors. Many of the factors discussed can be controlled by administration and teachers. However, the student factors are less likely to be controlled unless there is communication taking place between the school and home. Furthermore, the bridge of communication can be a positive aspect to learning parents' expectation and discovering the attitudes and feelings about education in general. This type of communication is a key factor if educators want students to become successful and value education.

Research on academic achievement in relation to self-regulation proved students with more self-efficacy were more confident in learning and improving their academic achievement (Bandura, 1986; Zimmerman & Schunk, 2001). However, Zimmerman (2001a) emphasized the amount of stress many adolescents face in current times and the effect it can have on their independent self-regulation strategies. Other researchers call

considerable attention to the process of self-regulation and how it has the capability to enable student success and social competence (Graham & Harris, 2005; Schmitz & Wiese, 2006). Cleary, Platten, and Nelson (2008) describe the sophistication of self-regulated learners and the varied constructs needed to set specific goals and facilitate adjustments when needed while affecting one's academic achievement.

The majority of studies identifying the relationship between self-regulation and academic achievement found students who practiced self-regulation or the constructs were found to be successful in their academic career (Pintrich & De Groot, 1990). However, many other scholars looked at various factors, such as socioeconomic status, type of instruction, absenteeism, and hours on a job while earning a college degree. These factors help institutions and teachers identify ways to be more effective in classroom practices. These studies uncovered the meaning behind many behaviors observed in today's schools.

#### *Factors Affecting Academic Achievement in Reading*

While understanding the value of academic achievement to a child's future success, it is critical that children need to achieve success in all content areas, specifically reading. Reading research states that reading is a meaning-making process which allows the reader to learn new concepts and become actively engaged in the text (National Reading Panel, 2000). Many factors that impede this process are interferences, motivation, subject matter knowledge, and strategic capabilities (Alexander & Fox, 2004). These factors work against the institution, the individual, and the educator. Historically, education has made strides to correct some of these issues, but unfortunately has fallen short in many areas due to unknown circumstances.

Students can have various interferences when reading. These interferences are identified as motivation, attention, and disposition (Shanker & Cockrum, 2009). Other factors which contribute to a student's difficulty in reading are known as background knowledge and experiences, processing issues, and disabilities. These interferences serve as distracters in student learning and can prohibit comprehension and engagement of students. Therefore, teachers must be aware of how to motivate and plan effective instruction. Efficient teachers take time to learn each student and promote engagement (Tomlinson, 2001). Ruddell and Unrau's (2004) Interactive Model exemplifies this process. For example, within the model Ruddell and Unrau integrate the classroom context where the learner and teacher come together to function in the learning process. The teacher determines the classroom climate and builds relationships with the students. These relationships can exemplify either anxious behaviors or levels of comfort where students are willing to take risks. The latter should be the teacher's goal for the classroom.

Within the interferences there are varying levels and theories which support these models. The two domains that interfere with the process of reading are the affective and cognitive domains. The affective domain is influenced by the reader's level of knowledge, experiences, attitudes, beliefs, and dispositions. The cognitive domain is affected by procedural, declarative, and conditional knowledge, as well as word analysis, text processing strategies, and metacognitive strategies. Readers with interferences in these areas have a breakdown in the meaning-making process and are unable to monitor their own comprehension, especially when they lack the necessary knowledge to understand and comprehend the text (Reutzel & Cooter, 2004).

However, it is important to understand there are varied views for teaching the process of reading. It is critical to remember that students learn in dissimilar ways (Gardner, 1999), and there are numerous models and components involved in this process. As a result, teachers must be aware and equipped with the pedagogical knowledge and understanding that students' needs should drive classroom instruction and teachers should constantly be reflecting and evaluating their work. This evaluation process (self-regulation) allows teachers to increase their rapport and continue learning as adults.

The challenge of effective reading instruction, which produces successful reading achievement, emerges from the complex understanding of the reading acquisition process. The processing and strategic capabilities needed to comprehend text effectively interact simultaneously (Farstrup & Samuels, 2002). This reaction requires the reader to use existing knowledge, read and interpret new knowledge, and make meaning concurrently. This meaning-making process requires the reader to be skillful and thoughtful (Ruddell & Unrau, 2004). As a result, the teacher must be able to prepare the student for this process and scaffold learning so students can become self-regulated. Therefore, if a teacher is not well-versed in reading, it will be difficult to plan with skill and judgment.

Subject matter knowledge needed is how to teach the components of reading. The National Reading Panel (2000) recognized the five components of reading. The components identified were phonemic awareness, phonics, vocabulary, fluency, and comprehension. Phonemic awareness is the ability to hear, manipulate, isolate, and blend sounds to form words. Phonics instruction consists of teaching the letter sound relationships identified as the alphabetic principle. Phonemic awareness can be accomplished without the use of writing. Vocabulary instruction is the practice of

teaching specific terms to enhance students' understanding of text. Vocabulary knowledge is an indicator of verbal ability (Sternberg & Terman as cited by the National Reading Panel, 2000) and can increase a student's comprehension (Beck et al. as cited by the National Reading Panel, 2000). "Fluency is characterized by the ability to read orally with speed, accuracy, and proper expression" (National Reading Panel, 2000, p. 167). Fluent readers become engaged in the text and gain a deeper understanding, interpreting, and analyzing information. This depth of comprehension allows readers to understand various text and genres.

Phonemic awareness is the ability to hear, identify, and manipulate individual phonemes. This ability is a sub-skill of phonological awareness, practiced through oral language and one of the best predictors of reading success (Cunningham, 2003). Students must understand that letters represent sounds, sounds create words, words create sentences, and sentences create cohesive thoughts. The concepts of print are critical in the reading process. Oral language is necessary for students to understand the reading process and initiate learning. Phonological awareness is the umbrella under which phonemic awareness falls. Phonics is the understanding of the alphabetic principle. Students become aware of the relationship between the graphemes and phonemes, learn to decode these sounds, and pronounce new words. The more automaticity a student develops, the more fluent they become (Reutzel & Cooter, 2004). Fluency allows the reader to understand and interpret the text without interferences (Razinsky, 2003).

Reading comprehension is the interwoven understanding of the text, vocabulary, and genre. Without automaticity and accuracy, the more difficult comprehension becomes. Readers must understand various genres and be able to interpret, analyze, and

synthesize information. When a reader can participate in these functions simultaneously, they have mastered the comprehension process. Yet, there are different types of genres and various levels that prove to be more difficult. It is imperative that teachers understand the reading process when instructing students. This process is intense and requires the reader to be an active participant (Harvey & Goudvis, 2000). These five components allow one to realize effective reading instruction is an art and science that combines experience, skill, judgment, and intuition of a teacher who reflects and emphasizes the importance of solid research evidence (Farstrup & Samuels, 2002). Art is defined as skillful workmanship. The science of teaching is identified as the branches of knowledge needed to be an effective teacher. Therefore, an effective teacher must be knowledgeable but also skillful. These factors that attribute to effective reading instruction also guide in judgment, skill, and intuition as a teacher and are defined as self-regulated. Consequently, an understanding of effective reading instruction has become more complex and recognizes there are many factors which contribute to student success (Farstrup & Samuels, 2002). Some of the strategies included in the definition from Murawski and Hughes (2009) are excellent classroom management, balanced teaching of skills, scaffolding, differentiated instruction, content area connections, and the promotion of self-regulation, while others include research-based lessons, use of graphic organizers, and authentic learning experiences.

Each of these strategies has been empirically proven to show gains in student achievement (Murawski & Hughes, 2009). When reading teachers specifically manage their classroom and use a balance approach to teach reading, their success will be encouraging if students are motivated. Consequently, without motivation there will be less improvement and interest on the student's part. Student motivation encourages

teachers to use differentiated instruction to increase motivation and reach varied levels of learners (Heacox, 2002; Tomlinson, 2001). On the contrary, without the proper management techniques and modeling, teachers will be unsuccessful and students will not become self-regulated learners. Although the practice of these effective reading strategies are supported by researchers in the field, without the proper usage of these strategies at the exact time academic success will be an unfortunate loss.

Researchers stated that student success will not be positive without an effective reading teacher with the direct knowledge of the reading process and approaches of teaching reading. The factors affecting reading achievement, such as reading interferences, subject matter knowledge, and strategic capabilities, directly affect academic achievement. These reading factors are critical to overall student success and determine the effectiveness of the teacher.

In conclusion, it is important to note that academic achievement is the overall result of teachers' instructional practices in action. It is assumed the more self-regulated teachers have proven to be, the more successful their students will become in their academic career. Factors relating to student success are school-level factors, teacher-level factors, and student-level factors. These factors include the culture and climate of the school, the behaviors of teachers, and background of students (Marzano, 2003). These levelized factors play a significant role in student achievement as noted by Salinas and Garr (2009). Factors found to have a positive effect on student achievement are self-efficacy, motivation, creativity, collaboration, innovation, motivation, learning strategies, and goal setting (Salinas & Garr, 2009; Zimmerman et al., 1996) along with coping skills (Turner & Husman, 2008). These researchers found that learners who practice self-regulation and coping skills are more successful in their



academic careers. These specific factors affect the standardized assessment scores that are used to measure a teacher's effectiveness.

Therefore, it is assumed teachers with strong self-regulation skills (i.e., self-monitoring, self-evaluation, and self-awareness) and a strong knowledge of effective teaching practices in general and in reading will prove to show greater gains during classroom instruction and students will achieve greater academic success. Academic success will be determined by students' motivation, the classroom environment, the beliefs and attitudes of the teacher, and the classroom instruction (i.e., school, teacher, and student level factors). These factors will determine the success of the individual student. The more positive factors in a student's environment, the greater chance the student has for successful academic achievement.

In addition to these factors mentioned above, it is also important to control for other variables that may contribute to a teacher's characteristics. Therefore, this study included a review of literature on teacher characteristics that may contribute to students' academic success. These characteristics are as follows: National Board certification, years of experience, current grade level, and highest degree earned. These characteristics were used to measure the relationship between a teacher's self-regulation score and students' academic achievement. The correlation coefficient determined if the teacher characteristics influenced a teacher's self-regulation score.

#### Overview of Independent Variables

Many studies in the field of education have focused on teachers' characteristics that support effective instruction and student achievement (Ferguson & Ladd, 1996; Hanushek, 1992; Harnisch, 1987; Link & Ratledge, 1979; Marzano, 2003; Marzano et al., 2001, Murnane, 1975; Murnane & Phillips, 1981; Rivkin et al., 2001; Rowan et al.,

1997; Summers & Wolfe, 1975, 1977). One specific study focused on teachers' efficacy beliefs in comparison to RTI implementation (Nunn & Jantz, 2009). Nunn and Jantz found teachers with higher efficacy were also associated with higher levels of RTI implementation. Bandura (1986) supported this finding along with Tschannen-Moran, Woolfolk-Hoy, and Hoy (1998), stating that teacher efficacy is a big predictor of teacher effectiveness and commitment. Therefore, the current study investigated four independent variables to determine if there is a correlation between a teacher who is nationally board certified, years of experience, grade currently teaching, and highest degree earned. The goal was to determine if there is a positive correlation between teachers' qualities and student achievement.

Teacher quality presented itself as different within schools more than between schools, and good teachers seemed to be more effective for all student achievement scores (Hanushek, Kain, O'Brien, & Rivkin, 2005). In one instance, a district selected four teachers in different schools. The goal was to determine if a reform in chemistry education could close the gap in student achievement. Both teachers were given the same resources and support. Roehrig and Garrow (2007) reported there was a positive correlation with student achievement. Furthermore, Roehrig and Garrow showed a significant relationship between teachers' beliefs and students' scores that demonstrated more teaching strategies in line with the Science Reform Act, rather than traditional methods. The methods used were inquiry, cooperative learning, and hands-on activities along with reasoning skills and drawing conclusions (Roehrig & Garrow, 2007).

#### *National Board Certification*

Commitment is a large part of the National Board Certification (NBC) process, and standards required for one to gain the credentials to become an NBC teacher. NBC

is a certificate teachers can acquire when they have at least 3 years of teaching experience that allows them to be certified in any state. National Board certified teachers receive an increase in yearly salary and retirement. However, the requirements include submitting a portfolio with video-taped lessons, responding to essay questions, and taking an assessment on teaching pedagogical knowledge. Two thirds of the teachers who apply for this NBC eventually meet the requirements; however, this process can take anywhere from 3 months to several years. The National Research Council (2009) reported that almost 100,000 applicants have applied for NBC; however, approximately 64,000 met the requirements and gained the credential.

Recent studies have been conducted to evaluate the effect NBC teachers have had on student achievement. In June of 2009, the U.S. Department of Education (as cited in Harris & Sass, 2009) reported that teachers who applied for NBC and failed tended to have lower student achievement scores than those who passed NBC. However, the difference between student achievement scores of NBC teachers proved to support the fact that students' scores increased anywhere from 5% to 7% in math and language arts (Cantrell, Fullerton, Kane, & Staiger, 2008). Rivkin et al. (2005) and Rockoff (2004) supported the fact that teacher qualities have an effect on student achievement.

Clotfelter, Ladd, and Vigdor (2008) and Goldhaber and Anthony (2007) stated that teachers with NBC are more effective than the average teacher without an NBC, which indicates that the more effective teacher is more likely to hold an NBC. Specifically, teachers who gain their NBC are more effective in their beginning years of teaching than their peers. Other important points in the study by Clotfelter et al. (2008) are high school teacher applicants for NBC actually show an increase in achievement

the first year of application and more than double during the second year. However, the study by Goldhaber and Anthony (2007) found no significant difference between NBC teachers of math as opposed to Clotfelter et al. (2008). This difference could be due to the small number of teachers ( $N = 75$ ) who participated in Goldhaber and Anthony's (2007) study.

In addition to the studies discussed above, other studies analyzed the effects of an NBC in the states of Arizona (Vandevoort, Amrein-Beardsley, & Berliner, 2004), South Carolina (Stephens, 2003), and Tennessee (Stone, 2002). However, these studies used very small samples and employed less complicated analytical techniques; therefore, the reliability of their results was limited. At any rate, it is recognized by the National Research Council (2009) that teachers who hold an NBC are more effective and stimulate student achievement with varied results from state to state. For instance, Clotfelter et al. (2008) found that teachers in high poverty schools held fewer characteristics, especially an NBC.

### *Years of Experience*

Years of experiences is an independent variable examined by many in the field of academic achievement. Multiple studies have discovered that a teacher's years of experience has a positive effect on student achievement rather than class size (Darling-Hammond, 2000; Ferguson & Ladd, 1996). Furthermore, Ferguson's (1991) study of 900 Texas school districts found that more variation in the achievement scores was attributed to teachers' expertise, scores on examinations, degrees held, and experience rather than students' socioeconomic status and race in Grades 1-11 in reading. The largest difference was in the state examination, followed by degree held and years of experience.

Harris and Sass's (2009) study illustrated a positive relationship with student achievement and years of experience. Multiple studies found students' academic achievement was increased in a positive manner when a teacher had more years of experience than a specific certification (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2005; Gordon, Kane, & Staiger, 2006; Kane, Rockoff, & Staiger, 2006; Rivkin et al., 2005; Rockoff, 2004; Sanders & Horn, 1994; Sanders & Rivers, 1996). Kikas, Peets, Palu, and Afanasjev (2009) found that teachers' experience was correlated with students' math performance. Furthermore, Clotfelter, Ladd, and Vigdor (2007) found novice teachers are less effective than teachers with several years of experience; however, teachers with a small amount of experience were just as ineffective as novice teachers. Conversely, it is understood that teachers who stay in the field of education gain more experience and become more effective. Experience is the biggest negative effect on student achievement (i.e., teachers' experience). Hanushek et al. (2005) noted that experience mattered, but only in the first year of a teacher's practice. On the contrary, many researchers cited teachers' experience is demonstrated in student achievement the first 3 to 5 years of their teaching career and after the fifth year no additional gains were reported in achievement data (Boyd et al., 2005; Gordon et al., 2006; Kane, Rockoff, & Staiger, 2006; Rivkin et al., 2005; Rockoff, 2004; Sanders & Horn, 1994; Sanders & Rivers, 1996).

### *Current Grade Level*

Another independent variable investigated in the study was current grade level. The present research attempted to determine if specific grade levels of teachers are more self-regulated than others. However, there was no research in this field to support or deny this relationship. Therefore, this study will be one of the first to identify the

relationship between specific grade levels (i.e., teachers' self-regulation scores) and student achievement levels.

### *Highest Degree Earned*

Harris and Sass (2009) found that teachers who were nationally board certified and had earned a master's degree were more effective in the classroom and proved to have a more positive relationship on student achievement. Similarly, Clotfelter et al. (2008) found convincing evidence to support teachers' credentials demonstrated sufficient variance to consider in student achievement in elementary and high schools when writing new policies and educational bills. For instance, teachers who hold a master's degree showed a positive effect, but those teachers with a PhD had a reverse effect on academic achievement. Consequently, the sample of teachers with PhDs was very small; therefore, this study may just speak about these particular teachers.

Interestingly, teachers who held higher credentials (i.e., NBC, graduate degrees, years of experience, and teachers' examination scores) were much more effective than those teachers whose credentials were not as strong. However, policymakers need to be aware that all teachers are not seen as effective who hold these credentials; teacher observations need to be used to further this investigation (Clotfelter et al., 2008). Clotfelter, Ladd, Vigdor, and Wheeler (2007) also discovered in a similar research study that high poverty schools have higher proportions of less experienced teachers; as a result, the students' achievement scores are much lower. Hanushek et al. (2005) reported that teacher quality is unrelated to the advanced degree one holds or the certification; however, this is rebutted by many researchers in the field, especially those holding a master's degree or math certification (Clotfelter et al., 2008).

Many in the field of education have studied the characteristics of effective teachers. The characteristics which have a historical stance are teachers' years of experience, teachers' efficacy beliefs, classroom climate, teacher certification, and degrees held. Furthermore, National Board certification can increase students' scores as much as 5% to 7% in mathematics and language arts (Cantrell et al., 2008). These characteristics can also be detrimental to students who have teachers who are not certified or a novice in the field of education. Therefore, it is critical that professors of education make a concerted effort to establish pre-service teachers and programs that hold the knowledge of effective instructional strategies and are self-regulated learners themselves. Self-regulated teachers give students the opportunity to achieve greater success in their academics and future employment.

#### Conclusion

Overall, the literature review examined teacher factors and instructional practices that affect the complex process of student reading achievement. Topics included in the literature review were self-regulation, self-efficacy, self-monitoring, self-evaluation, and self-awareness. An overview of teacher factors and effective instructional strategies were found to create high student achievement when practiced by classroom teachers, including specific reading teacher factors and reading instruction. Other topics included academic achievement and the independent variables of teacher characteristics. These topics enlightened the researcher's understanding of the variables in the current study.

After a thorough review of the literature, several conclusions evolved. According to Bandura (1986) and Zimmerman (2001b), self-regulation is a cyclical process that improves an overall teacher's instructional practices and increases student

achievement. Student achievement is affected by specific factors including school, teacher, and student-level factors (Marzano, 2003; Marzano et al., 2001) along with a student's coping skills and self-regulation practices (Ley & Young, 2001; Turner & Husman, 2008). Learners who have a strong sense of self-efficacy and are taught self-regulation interventions increase their academic achievement over a long period of time (Fuchs et al., 2003; Glaser & Brunstein, 2007; Lizarraga et al., 2003; Orange, 1999; Perels et al., 2009; Schunk & Ertmer, 2000). In addition, the literature also securely stated learners can be regulated in some but not all content areas (Zimmerman & Schunk, 2001), and students learn in a variety of ways (Gardner, 1999; Silver et al., 2007).

Other key points highlighted in the literature review included the type of feedback and goal setting a teacher does with students is critical in developing self-regulation skills (Ley & Young, 2001), and students with certified teachers make a certain score on a licensure exam or use a balanced approach to teaching and scaffold instruction are most likely to see improvements in their academic achievement scores (Darling-Hammond et al., 2005; Goldhaber & Brewer, 2000; Hawk, Coble, & Swanson, 1985). These findings suggest students with self-regulated teachers are much more likely to increase their academic achievement scores and motivation (Guthrie & Wigfield, 2000).

The goal of this study was to determine the significance between teacher self-regulation and student achievement. Only one study (Casler, 2005a) investigated teacher self-regulation, which emphasized the need for research on teacher self-regulation and the positive impact it can have on student achievement. If student self-regulation is shown to have such a positive impact on academic achievement, how



much more do teachers' self-regulation patterns reflect their individual students' achievement? Therefore, the current study investigated the relationship between a teacher's self-regulation score and students' academic achievement. The goal was to determine what specific teacher characteristics (i.e., National Board certification, years of experience, grade level, and highest degree earned) affect a teacher's self-regulation skills and classroom instructional practices to improve students' academic achievement. In return, this study will narrow the focus on specific teacher characteristics that teacher interns need to acquire during their pre-service teacher education programs in colleges and universities and guide professors in developing courses and experiences offered for future educators.

### CHAPTER III

#### METHODOLOGY

This chapter will provide a description of the correlation procedures utilized in this study to determine the relationship between teachers' self-regulation skills and students' reading achievement, including examining relationships between various dependent and independent variables. The purpose of this study was to determine which specific teacher characteristics have a positive impact on student reading achievement. Research states that student self-regulation has a positive impact on student academic success (Bassi et al., 2006). However, there is a lack of research on the impact of teacher self-regulation patterns in correlation to student achievement. The purpose of this research study was to determine if teachers' self-regulation behaviors can have a positive influence on student reading achievement.

#### Problem and Purposes Overview

The problem began in the early 1960s when other countries began superseding the U.S. in various industries. The national government became concerned with student achievement in the U.S. and began making increasing demands on teachers and students in the public education system. This increasing amount of pressure placed on teachers for students to achieve has affected classroom teachers' attitudes toward learning. The autonomy of the teacher has been reduced, and the federal government has placed mandates upon school systems. These changes have had a negative impact on student achievement and require teachers to follow textbook programs. Therefore, the current study investigated the impact teachers' behaviors can have on students' achievement.

The research questions and hypotheses presented originally in Chapter I are also in the following sections of this chapter, which were examined quantitatively using the

Self-Regulation Inventory (Casler, 2005b), which generates a score quantifying the teachers' level of self-regulation and the End of the Quarter Test (EQT) to measure students' reading achievement. This chapter includes a presentation of the research questions and hypotheses, limitations and delimitations, participants, instrumentation, procedures, and data analysis.

### Research Questions

The research questions listed below allowed the researcher to explore various avenues related to teacher's self-regulation behaviors and student reading achievement and identify specific populations of teachers who are more self-regulated and if they hold a higher degree. Research states teachers who practice specific research-based strategies during classroom instruction will improve student learning as measured by their achievement scores at varied degrees (Marzano, 1999). Teachers who are self-motivated identify strategies that work for students and improve personal teaching techniques and practices. The more self-motivation a teacher possesses, the more effective the classroom instruction will become. Student learning and achievement scores will increase (Fuchs et al., 2003; Glaser & Brunstein, 2007; Orange, 1999; Perels et al., 2009). This investigation sought to determine which factors studied may offer confirmation concerning teachers' self-regulation in relation to student reading achievement.

The following research questions were explored in this quantitative study:

1. Is there a relationship between students' reading achievement and teachers' self-regulation patterns in Grades K-3?
2. Are a teacher's self-awareness, self-monitoring, and self-evaluation related to a student's reading achievement?

3. Is there a relationship between specific teachers' characteristics and their self-regulation patterns?

### Hypotheses

The following hypotheses guided this study:

- H<sub>1</sub> There is a significant relationship between teachers' self-regulated scores and students' reading achievement scores.
- H<sub>2</sub> There is a significant relationship between teachers' self-monitoring abilities and students' reading achievement scores.
- H<sub>3</sub> There is a significant relationship between teachers' self-evaluation and students' reading achievement scores.
- H<sub>4</sub> There is a significant relationship between teachers' self-awareness and students' reading achievement scores.
- H<sub>5</sub> There is a significant relationship between National Board certification and a teacher's self-regulation score.
- H<sub>6</sub> There is a significant relationship between a teacher's years of experience and self-regulation score.
- H<sub>7</sub> There is a significant relationship between specific grade levels and teachers' self-regulation score.
- H<sub>8</sub> There is a significant relationship between highest degree earned and teachers' self-regulation score.

### Limitations and Delimitations

The current study had several limitations and delimitations. The limitations of this study were comprised of various threats to internal validity including gathering data from only one district in the coastal area. With this limited population the researcher

was careful when generalizing the findings of the study. Data collection consisted of the classroom make-up, the number of males and females, the various types of student classifications, including the number of gifted, general, and special education students. The results affected the decision making and generalizations made in Chapter V.

Equally important is the number of participants included in the study. To increase participation in the study, the researcher offered \$200 gift certificates to schools that had 100% participation. However, this gesture could possibly have skewed data and contaminated the findings within the study. Another concern was that the Self-Regulation Inventory and the data collection sheet were self-reported. Therefore, participants may have falsified data when reporting their scores or situated their scores on the Self-Regulation Inventory after determining what the researcher was looking for within the study. This limitation required the researcher to be cautious when discussing the study with participants if and when they asked questions. Furthermore, when collecting data, protocol was developed and followed.

The last limitation was that the sample consisted of a minimum number of grade levels. This study was limited to K-3 grade levels because these classrooms are self-contained and not departmentalized. If teachers were not with the students on a daily basis for the entire 8-hour school day, it would have been difficult to determine which departmental teacher had an effect on students' reading achievement score. Therefore, the only classrooms asked to participate in the study were those in the K-3 setting. These limitations were concerns; however, the researcher believed it was worth the risk to implement this study for the possibility of contributing new knowledge to the research world.

## Sample

The participants in the research study included K-3 teachers in a southeastern state. This large school district employs more than 9,000 employees and has more than 63,000 students in Grades K-12. Over 65% of the students in the district receive free and reduced lunch. The diversity in the district is represented by 50% African American, 2% Asian, 45% Caucasian, 2% Hispanic, and 1% Native American with 96 schools being represented. There were 55 elementary schools included in this research study. The participants volunteered for the study on an individual basis and were assured of complete anonymity.

This sample (N = 276) consisted of a larger number of participants in order to increase the reliability and validity of the data and results of the study. For this reason, the researcher selected a large racially and ethnically diverse district with 55 elementary schools from which to collect data. The population included approximately 400,000 residents comprised of 62% Caucasian, 35% African American, and 3% other ethnicities. The average household income was \$41,000 in 2009 as reported in the U.S. Census Bureau (2010). Teachers participating in this study were asked to provide an assortment of demographic data to assist the researcher in verifying the diversity of the participants. In addition, other information collected included the teacher's years of experience, current grade-level taught, highest degree earned, and National Board certification status.

## Data Collection and Instrumentation

This study was designed to measure a teacher's self-regulation behaviors in relation to students' reading achievement. The design of the study included a survey and the collection of the first quarter reading EQT achievement score. These data were used

to run statistical analyses measuring the correlation between the teacher's self-regulation behaviors and students' reading achievement. A Pearson product-moment correlation measured the relationship between the two dependent variables, teacher's self-regulation and student reading achievement. A multiple regression measured the relationship between a teacher's self-regulation behaviors and individual characteristics. This protocol helped determine if a teacher's self-regulation patterns were related to the classroom reading achievement.

This quantitative study investigated teachers' self-regulation in relation to student achievement using the Self-Regulation Inventory created by Erin Casler at the University of Kansas in 2005. To gain permission for use of the Self-Regulation Inventory, the researcher contacted Casler via email. The researcher received permission via web or paper format to modify and use the instrument (see Appendix B). The reading achievement score used in this study was created by K-5 teachers along with the curriculum director in a large school district in the southeastern United States. The EQT assessment tool was used to measure students' progress in reading over the course of an entire school year. The EQT is a district mandated test administered to students in Grades K-5 each year at the end of each quarter. Each of these instruments has criterion validity with test-retest reliability.

Criterion validity was documented by the district, which reported the objective being tested, the standard being aligned with the Alabama Course of Study (2008), the number of questions asked from each testing area, and the percentage each reading achievement area represented on the assessment. The test-retest reliability has been proven over the course of the last 2 years. The EQT assessment was administered the

previous year and is currently being given in K-5, which helped support the reliability of the Reading EQT.

This quantitative research study employed a survey instrument and an EQT reading achievement score to measure the correlation between teachers' self-regulation and students' achievement scores. The Self-Regulation Inventory contains four subtest areas: goal-setting, self-monitoring, self-awareness, and self-evaluation. This inventory was used to assess teachers' behaviors and abilities when planning and monitoring classroom instruction in the classroom learning environment (Casler, 2005b). The statements on the instrument reflected each of the four subtest areas of the self-regulation cycle: goal-setting, self-awareness, self-monitoring, and self-evaluation (Bandura, 1986; McCombs, 2001, 2002; Schunk, 1986; Zimmerman, 2001b). The 16 questions on the Self-Regulation Inventory statements were adapted using a 5-point Likert scale that ranged from 1 (*Strongly disagree*) to 5 (*Strongly agree*). These statements measure a teacher's willingness to learn new strategies and link awareness to instructional practices, which can affect student learning and reading achievement scores. Specific examples are as follows:

I seek out professional opportunities that will influence my instructional practices as a way to reach my goal of continuously improving my practices; I monitor how students react to new approaches and strategies I try out in the classroom; and when I am having difficulty reaching some students, I examine how my own beliefs and attitudes may be getting in the way. (Casler, 2005b, p. 1)

Casler (2005a) determined validity of the Self-Regulation Inventory by using a panel of experts to determine face, construct, and criterion validity. The panel of



experts included five university professors and three graduate students in the Department of Education and Psychology. Reliability was established via Cronbach's alpha on data from a pilot study of the instrument. The pilot study consisted of 17 elementary classroom teachers in various school districts. The Cronbach alpha scores were reported for each of the subtest areas in Casler's (2005a) dissertation study concerning the Self-Regulation Inventory. The Cronbach alpha results are as follows: goal setting (questions 1, 2, and 4),  $\alpha = .60$  (which will not be used in this study); self-monitoring (questions 5, 6, 8, and 16),  $\alpha = .75$ ; self-awareness (questions 3, 9, 10, and 11),  $\alpha = .74$ ; self-evaluation (questions 7, 12, 13, and 14),  $\alpha = .79$ ; and a total instrument Cronbach's alpha score of  $\alpha = .83$ . This researcher used the entire instrument to identify which of the self-regulation constructs were more prominent in self-regulated teachers. The Self-Regulation Inventory (Casler, 2005b) allowed the researcher to determine if a specific population, grade level, classification, or teacher's highest degree earned can influence students' reading achievement in the classroom.

The EQT assessment tools created by K-5 elementary teachers in a southeastern state were used to measure students' reading achievement scores at the end of each quarter so a student's marked improvement can be recognized over the entire school year. This assessment was created by using the Alabama Course of Study (ALCOS) (2010) and the school district pacing guide.

The kindergarten assessment measured phonemic awareness, phonics, vocabulary, and listening comprehension and has a total of 69 questions. Phonemic awareness was measured asking four questions which represented 6% of the test and was aligned to the first objective in the ALCOS (2010). Phonics represented 78% of the test items and was aligned to the second objective in the ALCOS, while listening

comprehension was measured by five test items, aligned to the fifth objective in the ALCOS and represented 7% of the test items. Another area included in the kindergarten EQT was vocabulary which was tested on six questions and represented 9% of the test questions (ACOS, 2010).

The first grade EQT measured phonics, comprehension, and vocabulary instruction with a total of 34 questions. Phonics represented 38% of the assessment tool aligned to the second objective in the ALCOS (2010) and corresponded with 13 questions. Vocabulary was assessed by six questions and represented approximately 17% of the students' reading achievement scores and aligned to the second and fifth objectives in the ALCOS. Listening and reading comprehension were tested using 14 questions and represented 41% of the students' achievement score and aligned with objective 4 of the ALCOS. The total number of questions on the instrument was 34.

The second grade EQT was designed to assess phonics, vocabulary, and comprehension. Comprehension represented 47% of the EQT, corresponded with 16 questions, and aligned with objective 4 of the ALCOS (2010). The comprehension portion required students to infer, identify various story elements which are plot, setting, main idea, and utilize reference materials such as dictionaries. The phonics portion was equated to 32%, which measures a student's abilities to decode long vowel and multisyllabic words and aligned to objectives 1, 2, and 3 of the ALCOS. Vocabulary was assessed by seven questions and represented 28% and aligned to objective numbers 3 and 5 of the ALCOS (2010).

As a result of the sequential progress in the developmental process of reading (Anderson, Hiebert, Scott, & Wilkinson, 1985), third-grade assessments required students to practice more advanced skills when dissecting and reading through

multisyllabic words, identifying main ideas, using context clues, and drawing conclusions. Therefore, the third-grade EQT measured comprehension, vocabulary, and phonics. The comprehension portion represented 53% of the test questions, aligned to objectives 3 and 4 in the ALCOS, and corresponded with 18 questions. Vocabulary represented 17% of the test questions, aligned to objectives 2 and 3 in the ALCOS, and corresponded with six questions on the assessment. Phonics represented 30% of the assessment, aligned to objective 1 on the ALCOS, and corresponded with six questions. Each of the reading achievement tests (EQT) used in this research study has criterion validity and is supported by the alignment of the curriculum within the school pacing guides and the ALCOS.

### Procedures

The procedures and protocol in this research study were designed to protect the participants and ensure confidential data collection. The researcher contacted the superintendent of the district to gain permission to collect data and forwarded a letter explaining how data would be collected in the 55 elementary schools. The superintendent returned the consent letter to the researcher granting permission to conduct the study during the 2010-2011 school year, with the appropriate signatures (see Appendix C). Once the school district approved the study, the Institutional Review Board granted the researcher permission to conduct the study (see Appendix D). After receiving permission from all necessary parties, the researcher put the school packets together and dropped them off at a local school and sent them to each of the 55 elementary schools in the campus mail system.

Each school received an envelope with the exact number of data packets needed for each K-3 teacher to complete. The packets were addressed to the principal of each

school with a letter explaining the protocol for completing the data packets. Each teacher's data packet consisted of a demographic sheet, the Self-Regulation Inventory (Casler, 2005b), and the data collection sheet (where teachers recorded their first quarter reading EQT scores, along with an envelope to seal this information (see Appendixes E and F, respectively). To ensure confidentiality of the teacher and student information, no signatures were obtained; each participant was known as a number. Student permission was not needed because students were not identified by name and were not participating in the study in any way except for the teacher's report of their scores. The completion of the survey and data collection sheet took approximately 15-20 minutes. Specifically, each school was given a certain set of numbers, then the researcher determined which schools had 100% participation. Schools with 100% participation in Grades K-3 were given the opportunity to receive a \$200 gift certificate to the location of their choice. More than four schools had 100%; therefore, four names were randomly drawn.

The Self-Regulation Inventory required teachers to answer each of the 16 questions honestly. The questions identified the teacher's self-regulation patterns using a Likert scale. The teachers selected a number 1 to 5, with 1 being *Strongly disagree* and 5 being *Strongly agree*. This information revealed the teacher's self-regulation patterns used during instructional practice. After answering each question, the participant continued by completing the data collection sheet where the teachers recorded their first quarter reading EQT scores.

The reading EQT was administered on a testing schedule in each of the 55 elementary schools. The district takes all steps necessary to ensure there are no internal threats of validity from testing. The EQT is a formal test, with written teacher

directions similar to the Stanford Achievement Test (SAT, 2010). The teachers were required to follow the written protocol and testing guidelines. The schools were closed to visitors and required no movement in the hallways during the testing period. All students took the reading achievement test at the same date and time. If there were any complications, students were removed from the classroom and given a make-up test at a later date. Students who missed the reading EQT were given the test on a make-up day along with other peers who missed the assessment. The make-up day is included in the testing schedule.

Once the teachers completed their data, the packets were returned to the principal, and the principal forwarded them to the designated school where the researcher collected data. The data were kept in a secure location until the research study was completed in its entirety, at which time the data were destroyed.

#### Data Analysis

This quantitative research study investigated the relationship between variables related to a teacher's self-regulation score on the Self-Regulation Inventory (Casler, 2005b) and students' reading achievement scores in the classroom on the first quarter reading EQT score. The two statistical analyses used in the research were the Pearson product-moment correlation and a simultaneous multiple regression. Each statistical analysis was generated and analyzed in an attempt to identify any statistically significant relationships between the two dependent variables (teacher's self-regulation patterns and the mean of students' reading achievement in the teacher's classroom).

The Pearson product-moment correlation statistical analysis was run to determine if there was a relationship between a teacher's self-regulation patterns and the classroom mean on the EQT reading achievement test. The Pearson product-moment

correlation coefficient strength is strong when it is close to 1.00 but loses power the closer to zero it becomes. For example, if  $r = .89$ , there is a strong relationship between the two variables.

The simultaneous multiple regression analysis was conducted to identify correlations between the following independent variables: years of experience, current grade level taught, highest degree earned, and National Board certification. The simultaneous multiple regression was measured using Cohen's (1992) interval ratings. These ratings are defined as  $\geq .20$  = small effect size,  $\geq .50$  = medium effect size,  $\geq .80$  = large effect size,  $\geq 1.10$  = very large effect size, and  $\geq 1.40$  = extremely large.

Eight hypotheses were tested using the procedures described above in order to determine if there was any relationship between the two dependent variables and four independent variables. The first hypothesis, which focused on the relationship between teacher self-regulation and student reading achievement, was measured by running a Pearson  $r$  correlation utilizing SPSS to measure the relationship between a teacher's self-regulation score and the mean of students' reading achievement scores to determine if there was statistical significance between the two variables.  $H_1$  through  $H_4$ , which focused on the sub-constructs of self-regulation in relation to student reading achievement, were measured using the Pearson product-moment correlation, examining each subtest area of the Self-Regulation Inventory including self-awareness, self-motivation, and self-evaluation.  $H_5$  through  $H_8$  focused on teachers' characteristics that influence teachers' self-regulation behaviors.

These statistical analyses allowed the researcher to accept or reject each of the eight hypotheses along with the probability of making a Type I or Type II error. A Type I error would include accepting the null hypothesis stating there is a relationship

between students' reading achievement and a teacher's self-regulation patterns. However, if the null hypothesis was rejected stating there is no relationship and there is in fact a relationship, this would be a Type II error. These errors cause researchers to make false accusations and report untrue findings. Therefore, it is critical to employ the correct statistical analyses to minimize errors.

### Summary

This chapter presented the procedures and protocol for the study. This correlation study was designed to examine relationships between teachers' self-regulation and students' academic achievement, as specified by the research questions and hypotheses. Additionally, teacher characteristics were explored to determine if any correlations existed between teachers' self-regulation and students' academic achievement. The participants in the study were teachers in K-3 in a large school district. The instrumentation section established the types of procedures used to collect data and the manner in which data were collected. This chapter also described data analysis methods which were used to test the statistical significance, correlations, and relationships. These included Pearson product-moment correlation for  $H_1$  through  $H_4$  and a simultaneous multiple regression for correlation coefficients of the independent variables mentioned in  $H_5$  through  $H_8$ .

## CHAPTER IV

### RESULTS

The goal of this quantitative research study was to determine the effects of teacher self-regulation patterns on students' reading achievement, including the investigation of specific teacher characteristics. The foremost research question posed was as follows: Is there a relationship between students' reading achievement and teachers' self-regulation patterns in Grades K-3? To accomplish this goal, the researcher used Pearson product-moment correlation bivariate analysis along with a simultaneous multiple regression analysis to measure correlation coefficients between specific teacher factors. Purposely, the goal was to be proactive and determine how teachers' self-regulation patterns affect their instructional practices and students' reading achievement. This chapter includes the organization of data analysis, descriptive statistics, Cronbach's reliability of the Self-Regulation Inventory (Casler, 2005a), statistical analyses of all hypotheses, and a brief summary of the results.

#### Organization of Data Analysis

The beginning section lists descriptive statistics explaining the participants of the study: gender, National Board certification status, ethnicity, age range, highest degree earned, years of teaching experience, current grade level, and past grade levels taught. Additionally, there will be a breakdown of data describing the Self-Regulation Inventory (Casler, 2005a) including the Cronbach alpha scores from the current research sample. Afterwards, there will be information describing the range of EQT averages in the current sample in Grades K-3. Once these descriptives have been explained and summarized, the research questions and hypotheses will be explained individually according to their relationship with one another.



The first two research questions explored reference the Self-Regulation Inventory and their sub-constructs (Casler, 2005a). The first four hypotheses are related to the first two research questions in the study. A bivariate analysis was performed to identify the relationship between teachers' self-regulation patterns and students' reading achievement. The third research question correlated with the last four hypotheses and will be explained in the results section accordingly. A simultaneous multiple regression was executed to predict the relationship between specific teacher characteristics and students' reading achievement scores. Lastly, the summary of results will explain the significance of each analysis and the effect on future research.

#### Analysis of Data

The analysis of data begins with the descriptive characteristics of participants, the Self-Regulation Inventory reliability statistics, reading EQT means and standard deviations, and the description of the Pearson product-moment correlation and the simultaneous multiple regression analyses in relation to the research questions and hypotheses.

#### *Descriptive Characteristics of Respondents*

The population surveyed in the research included 1,039 teachers in K-3. A total of 276 surveys and data sets were returned, which is a return rate of 26.5%. Of the 276 participants in the study, 270 (97.8%) were female and four (1.4%) were male, with only 22 (8.0%) being nationally board certified. The participants' ethnicities included 55 (19.9%) African Americans, 211 (76.4) Caucasians, four (1.4%) Native Americans, and one (.4%) Hispanic. The age of the K-3 teachers ranged from 20 to > 60 years of age, with the majority being between the ages of 26 and 45 years. Less than 4% were 20 to 25 years old while only 8% were 56 years and older. Almost half of the sample

held a masters degree, and only eight participants had a specialist or doctorate degree. Eighty (28.9%) participants of the population have been teaching from 6 to 10 years, while only 27 (9.9%) have > 26 years of teaching experience (see Table 1). Third-grade teachers had the highest return rate, with second grade following, then first grade, and finally kindergarten. However, all participants returned 63 to 74 data sets. Of the 276 participants, only 58 (21%) have not taught another grade level except for their current teaching assignment. Other information identified by the participants included the number of special, general, and gifted students enrolled in their respective classrooms. The majority of teachers reported from 0 to 4 special education students, with 11 to 22 general education students and no gifted students, representing 201 or (74.7%) of the sample. The descriptive statistics for the Self-Regulation Inventory (Casler, 2005a), including Cronbach alpha scores for the current study, can be found in Table 2.

Table 1

*Demographics of Participants According to Classification (N=276)*

Classification	<i>n</i>	%
<b>Gender</b>		
Female	270	97.8
Male	4	1.4
No response	2	.8
<b>National Board Certification</b>		
Yes	22	8.3
No	244	88.4
No response	10	3.6
<b>Ethnicity</b>		
African American	55	19.9
Caucasian	211	76.4
Native American	4	1.4
Hispanic	1	.4
No response	5	1.9

Table 1 (continued).

Classification	<i>n</i>	%
Age range (years)		
20-25	9	3.3
26-30	50	18.1
31-35	58	21.0
36-40	42	15.2
41-45	38	13.8
46-50	28	10.1
51-55	25	9.1
56-60+	22	8.0
No response	4	1.4
Highest degree earned		
Bachelor's	130	47.1
Master's	135	48.9
Specialist	6	2.2
Years of experience		
1-5	53	19.2
6-10	80	28.9
11-15	48	17.3
16-20	42	15.3
21-25	24	8.7
26-30	13	4.7
31-35	12	4.4
36-40	2	.8
No response	2	.7
Current grade level		
Kindergarten	63	22.8
First	65	23.6
Second	70	25.4
Third	74	26.8
No response	3	1.4
Past grade levels taught		
0-3	255	94.4
4-6	13	4.9
11-12	2	.7
No response	6	2.2

Table 2

*Self-Regulation Inventory Reliability Scores*

Instrument	Original Study $\alpha$	Current Study $\alpha$
Self-Regulation Inventory Total	.83	.89
Goal-setting	.60	.74
Self-monitoring	.75	.70
Self-awareness	.74	.60
Self-evaluation	.79	.79

*Note.* Casler (2005a, 2005b)

Table 3 outlines the means and standard deviations for each of the questions on the Self-Regulation Inventory (Casler, 2005a). The questions with the highest mean and the smallest amount of variance were 1, 2, 4, 5, 6, and 12. These questions were in reference to all questions on goal-setting, two questions on self-monitoring, and one question on self-evaluation. The mean of each of these questions was 4.19 or above, while the questions with the smallest mean and largest variance were 3, 7, and 10 which are in reference to self-awareness (two questions) and self-evaluation (one question). More teachers claimed to set goals than become aware and evaluate their own behaviors. The lowest mean represented question 7 which stated that, “I track my progress toward reaching my instructional goals by keeping a journal or log,” ( $M = 3.01$ ,  $SD = 1.12$ ) and represents the subtest area of self-evaluation. Due to the high means and low standard deviations on many of the questions, there was a ceiling effect. These results will be further explained in Chapter V.

Table 3

*Self-Regulation Inventory Statistics (N = 276)*

Question	Area	<i>M</i>	<i>SD</i>
1 I have the goal of researching what kinds of new strategies will help my students learn to become more responsible for their own learning.	Goal-setting	4.19	.754
2 I seek out professional opportunities that will influence my instructional practices as a way to reach my goal of continuously improving my practices.	Goal-setting	4.29	.657
3 My goals for this school year are to find other teachers who can coach or mentor me in more effective strategies for enhancing student learning outcomes.	Self-awareness	3.57	1.021
4 To meet my goals of helping students reach higher levels of learning, I seek to find and use new strategies/hands-on activities during my lessons.	Goal-setting	4.63	.601
5 When I implement new strategies, I take time to reflect on changes that might possibly need to be made for next time when using the strategy.	Self-monitoring	4.46	.689
6 I monitor how students react to new approaches and strategies I try out in the classroom.	Self-monitoring	4.47	.650
7 I track my progress toward reaching my instructional goals by keeping a journal or log.	Self-evaluation	3.00	1.126
8 I keep notes on lessons to remind myself of changes to make for the next time.	Self-monitoring	3.85	.890

Table 3 (continued).

9	When I am having difficulty reaching some students, I examine how my own beliefs and attitudes may be getting in the way.	Self-awareness	3.93	.873
10	I engage my students in discussions of my practices so that I can become more aware of what students need and what changes I should make.	Self-awareness	3.72	1.075
11	If a student did not remember information from a previous lesson, I would know how to increase his/her retention in the next lesson.	Self-awareness	3.97	.775
12	I alter my method of instruction after poor test results.	Self-evaluation	4.52	.639
13	I tailor my lessons based on follow-up I've had with students and/or their parents.	Self-evaluation	3.98	.875
14	After becoming more aware of changes I need to make in my instructional practices, I set up assessment strategies to measure the impact of these changes on student performance.	Self-evaluation	3.86	.854
15	I make it a point to compare my own and my students' assessments of my instructional practices as a way to evaluate how well I am doing.	Self-evaluation	3.91	.898
16	The feedback (nonverbal and verbal cues) I receive from students helps me determine the direction of my instruction.	Self-monitoring	4.39	.719

*Note.* Scale: 1 = low, 5 = high.

Table 4 outlines the self-regulation data reported by K-3 teachers in a southeastern United States school district. The descriptive statistics reported that most teachers practice goal-setting and self-monitoring more often than self-awareness and

self-evaluation of their instructional practices. A mean of 4.36 was reported for goal-setting and a mean of 4.29 was reported for self-monitoring. Teachers were more aware of their students' progress when monitoring test scores and setting goals. However, they were less likely to evaluate their instructional practices and the effect on students' academic success.

Table 4

*Teachers' Self-Regulation Statistics*

Subtest area	Minimum	Maximum	<i>M</i>	<i>SD</i>
Goal-setting	1.00	5.00	4.36	.55
Self-monitoring	1.00	5.00	4.29	.54
Self-awareness	1.00	5.00	3.80	.63
Self-evaluation	1.00	5.00	3.85	.67

*Note.* Scale: 1 = Low, 5 = High.

*Reading EQT*

The Reading EQT achievement means and standard deviations are recorded below according to each grade level and overall (see Table 5). The kindergarten EQT had a mean of 89.39 with a *SD* of 5.98, representing grade-level average. First grade EQT had a mean of 86.87 with a *SD* of 6.64. Second grade had a mean of 83.61 with a *SD* of 6.18. The third grade EQT had a mean of 80.17 and a *SD* of 7.23. Kindergarten had the highest mean overall, with third grade indicative of the lowest mean of 80.17. Other vital information to be noted is the EQT reading achievement scores ranged from 63.69 to 98.66 with a total mean of 85.01 and a *SD* of 6.50.

Table 5

*Teachers' Range of Reading End-of-the-Quarter Test Scores According to Grade Level*

Grade Level	Minimum	Maximum	<i>M</i>	<i>SD</i>
Kindergarten	72.22	98.66	89.39	5.98
Grade 1	70.73	97.86	86.87	6.64
Grade 2	69.31	95.40	83.61	6.18
Grade 3	63.69	95.05	80.17	7.23
Total score	63.99	98.66	84.78	6.50

*Note.* Scale: 1 = Low, 100 = High.

### Statistical Procedures

Once all data were collected and entered, descriptive statistics, frequencies, and statistical analyses were utilized to measure the correlation between the dependent and independent variables. In addition, a Pearson product-moment correlation and a simultaneous multiple regression were exercised in analyzing the data. The data analysis of each research question and hypothesis were grouped according to their relationship. Research Questions 1 and 2 dealt with the relationship between teachers' self-regulation patterns and specific subtest areas of self-regulation. The goal of Research Question 3 was to determine the relationship between specific teacher characteristics and their effect on students' reading achievement.

The first and foremost research question explored was as follows: Is there a relationship between students' reading achievement and teachers' self-regulation



patterns in K-3? H<sub>1</sub> stated that there is a significant relationship between teachers who are self-regulated and students' reading achievement scores. Hypothesis 1 was rejected; there is no significant relationship between a student's reading achievement score and the teacher's self-regulation patterns ( $r = -.061, p = .321$ ). Research Question 2 explored the subtest areas of self-regulation in relation to students' reading achievement scores and the matching hypotheses (H<sub>2</sub> to H<sub>4</sub>). Hypotheses subtest areas analyzed self-monitoring, self-awareness, and self-evaluation. H<sub>2</sub> stated that there is a significant relationship between teachers' self-monitoring abilities and students' reading achievement scores. H<sub>2</sub> was rejected ( $r = -.038, p = .531$ ) stating there is no significant relationship between students' reading achievement scores and a teacher's self-monitoring practices. H<sub>3</sub> stated that there is a significant relationship between teachers' self-evaluation and students' reading achievement scores. H<sub>3</sub> was rejected ( $r = -.058, p = .345$ ), stating there is no significant relationship. H<sub>4</sub> stated that there is a significant relationship between teachers' self-awareness and students' reading achievement scores. H<sub>4</sub> was rejected ( $r = -.057, p = .349$ ), stating there is no significant relationship between students' reading achievement scores and teacher's self-monitoring skills, self-awareness, and self-evaluation. The results indicated no significant relationships between students' reading achievements scores and teachers' self-regulation patterns.

The third and last research question investigated the relationship between the dependent variable of teachers' self-regulation patterns and the various independent variables of specific teacher characteristics. To analyze data concerning these independent and dependent variables, a simultaneous multiple regression analysis was conducted to predict their relationship. The simultaneous multiple regression produced correlations measuring the relationship between teachers' self-regulation patterns and

National Board certification, highest degree earned, years of experience, and current grade level. The amount explained in the model is 1.4%, while the overall significance of the model is  $F(9, 256) = .391, p = .939, R^2 = .014$ .

H<sub>5</sub> through H<sub>8</sub> coincide with the third research question predicting the relationship between teachers' self-regulation patterns and specific teacher characteristics. The regression coefficients explain the predictions of each of the independent variables. In this research study, there is no significance found in any of the independent variables with an alpha level of  $< .05$ . The predicted value was 4.162 when all independent variables have a value of zero. A one-unit increase in National Board certification status results in a .115 increase in a teacher's self-regulation score, thereby controlling for all other variables. H<sub>5</sub> stated that there is a significant relationship between the teacher's self-regulation score and National Board certification. Therefore, H<sub>5</sub> was rejected: There is no significant relationship between a teacher's self-regulation patterns and national certification status. H<sub>6</sub> stated that there is a significant relationship between a teacher's years of experience and self-regulation score. The results are that every one standard deviation unit increase in a teacher's years of experience resulted in a -.005 decrease in a teacher's self-regulation score, thereby controlling for all other variables. This finding verifies that H<sub>6</sub> was rejected: There is no significant relationship between a teacher's self-regulation score and a teacher's years of experience. H<sub>7</sub> stated that there is a significant relationship between specific grade levels and teachers' self-regulation score. This hypothesis measured the relationship between a teacher's self-regulation score and the current grade level one is teaching. The results found there is no significance between a teacher's self-regulation score and current grade level. A one-unit increase in kindergarten resulted in a .006

increase in a teacher's self-regulation score, controlling for all other variables. Therefore, a kindergarten teacher's self-regulation score is .006 units higher than non-kindergarten teachers. Every one unit increase in first grade resulted in a .016 increase in a teacher's self-regulation score, thereby controlling for all other variables. In addition, every first-grade teacher's self-regulation score is .016 units higher than non-first-grade teachers' scores. Every one unit increase in second grade resulted in a -.044 decrease in a teacher's self-regulation score, thereby controlling for all other variables. Second-grade teachers' self-regulation scores were -.044 units lower than non-second-grade teachers' scores. Finally, every one unit increase in third grade resulted in a .017 increase in a teacher's self-regulation score, controlling for all other variables. Third grade teachers' self-regulation scores were .017 units higher than non-third-grade teachers' scores. The correlation coefficients indicated there is no significant relationship between a teacher's self-regulation score and current grade level. As a result, H<sub>7</sub> was rejected, stating there is no significant relationship between a teacher's self-regulation score and the current grade level one is teaching.

Lastly, H<sub>8</sub> measured the relationship between a teacher's self-regulation score and highest degree earned. H<sub>8</sub> stated that there is a significant relationship between highest degree earned and teachers' self-regulation score. The standardized coefficients explained there is no significant relationship between a teacher's self-regulation score and highest degree earned. The results predicted a teacher's self-regulation score who holds a bachelor's degree is -.285 less than those who do not hold a bachelor's degree. Teacher's self-regulation scores with master's degree students' scores were -.259 less than those without a master's degree, while teachers' self-regulation scores with a specialist and doctorate proved to be -.232 below non-specialist or doctorate degree

holders. The variable with the smallest impact were those with a specialist and a doctorate; however, it was not significant. In accordance with the findings, H<sub>8</sub> was rejected, explaining there is no significant relationship between teachers' self-regulation patterns and highest degree earned. Furthermore, all eight hypotheses were not statistically significant, recognizing that the null was retained in all cases and stating there is no significant relationship between the independent and dependent variables in this quantitative research study.

### Summary

This qualitative study utilized the Pearson product-moment correlation and a simultaneous multiple regression to measure teachers' self-regulation patterns and students' reading achievement scores. The sample consisted of 276 teachers in K-3 in a large school district with 1,039 K-3 teachers. There were a total of three research questions and eight hypotheses. The first two research questions measured the subtest areas and total instrument of teachers' self-regulation patterns. The Pearson product-moment correlation illustrated that there is no significant relationship between each subtest area of self-monitoring, self-awareness, and self-evaluation. Therefore, the first four hypotheses stating there was a significant relationship were all rejected, retaining the null hypotheses. The simultaneous multiple regression predicted the relationship between teachers' self-regulation scores and specific teacher characteristics. The results indicated National Board certification status, teachers' years of experience, current grade level, and highest degree earned are not statistically significant in relation to a teacher's self-regulation score. Therefore, H<sub>5</sub> through H<sub>8</sub> were rejected, stating there is no significant relationship between teachers' self-regulation scores and each independent variable. These findings will be explained in Chapter V including a

summary of the study, the findings and conclusions, and implications for further research.

## CHAPTER V

### FINDINGS, CONCLUSIONS, AND IMPLICATIONS

Research in the field of education has focused on variables that affect students' achievement and support academic growth (Wayne & Youngs, 2003). Within this mass of literature there are substantial findings on the importance of student self-regulation and the overall impact it can have on students' academic achievement. However, at this time only one study investigated the relationship between a teacher's self-regulation patterns and instructional practices (Casler, 2005b). Therefore, the goal of this study was to determine what specific teacher factors contribute to a teacher's self-regulation score and a student's reading achievement. Previous findings on student self-regulation support that students who are self-regulated achieve greater in their academics (Ommundsen et al., 2005 ), including those students who have been taught self-regulation interventions (Fuchs et al., 2003; Glaser & Brunstein, 2007; Lizarraga et al., 2003; Orange, 1999; Perels et al., 2009). Additional research also concludes that students with parental support and modeling of self-regulation behaviors are much more likely to develop self-regulation behaviors (Martinez-Pons, 1996; Wong, 2008).

This literature informs readers to recognize the value of self-regulation which includes self-awareness, self-monitoring, self-evaluation, and goal-setting (Bandura, 1986). Research also indicates the importance of the teacher's role in the classroom and the significance of the affective domain on student learning (Good & Brophy, 1995; Ruddell & Unrau, 2004). These studies help define the value of the classroom teacher and the importance of the relationship the teacher builds with students and the effect on student achievement. Specifically, this study was conducted to examine teacher factors that improved teachers' self-regulation skills and the importance of teacher self-

regulation on students' reading achievement scores. Due to the importance of student self-regulation, there was a belief that the same would hold true for teacher self-regulation; however, the results of this study proved to be statistically insignificant.

Chapter V will include a summary of the study, findings from the research, conclusions, implications, suggestions for future research, and a final summary. Specifically, the findings of the study will discuss the results and the implications for future research, including conclusions by the researcher and the next steps in the research project. Therefore, the goal of this chapter is to inform the reader of the varied possibilities and findings that may help explain the relationship between teacher self-regulation patterns and student reading achievement scores.

#### Summary of the Study

This quantitative research study was designed to measure the relationship between a teacher's self-regulation patterns and a student's reading achievement. The sample consisted of 276 respondents with a return rate of 26.5%. The study consisted of a Self-Regulation Inventory by Casler (2005a) and reading achievement tests (EQT) given to K-3 students in a large district to measure the rate of growth over the course of an entire school year. There were a total of three research questions with eight hypotheses.

The first two research questions investigated were as follows: Is there a relationship between students' reading achievement and teachers' self-regulation patterns in Grades K-3 and are a teacher's self-awareness, self-monitoring, and self-evaluation related to a student's reading achievement? Both of these research questions dealt with the measurement of the teacher's self-regulation scores in relation to a student's reading achievement that was measured using the Self-Regulation Inventory

(Casler, 2005a). A Pearson product-moment correlation was conducted to measure the relationship between these two dependent variables (teacher self-regulation and student reading achievement). Similarly, a Pearson product-moment correlation was performed to identify the relationship between each subtest area of self-regulation (self-awareness, self-monitoring, goal-setting, and self-evaluation) and students' reading achievement. Once these statistical analyses had been conducted to determine whether to reject or retain  $H_1$  through  $H_4$  a simultaneous multiple regression was performed.

The multiple regression predicted a relationship between a teacher's self-regulation score and specific teacher characteristics (e.g., National Board status, years of experience, current grade level, and highest degree earned). Research Question 3 was as follows: Is there a relationship between specific teachers' characteristics and their self-regulation patterns? In addition, there were four hypotheses that coincided with the third research question. Once all the analyses had been performed, the results were compiled and analyzed.

### Findings of the Study

The findings of this research study which investigated the relationship between teachers' self-regulation and students' reading achievement were statistically insignificant. The goal was to determine if there was a relationship between the independent (specific teacher characteristics) and dependent variables (teacher's self-regulation scores and students' reading achievement). The Pearson product-moment correlation and the simultaneous multiple regression conducted proved to have no significance; therefore, all eight hypotheses were rejected. Based on these findings, the current researcher cannot claim there is any significant relationship between a teacher's self-regulation score and students' reading achievement. The reading achievement



mean scores ranged from 63.99 to 98.66 and a total EQT mean of 84.78 with a *SD* of 7.38. These findings represent an array of scores from K-3 grade levels. Despite these scores, most teachers answered a 3, 4, and 5 on the Likert scale on the Self-Regulation Inventory (Casler, 2005a), noting that most reported practicing self-regulation to some extent. These results will be discussed extensively in the following three sections of this chapter. To conclude this discussion, a final summary will state the key points and necessary conversation that needs to take place in the near future concerning teacher self-regulation.

### Conclusions

According to this study, students' reading achievement and teachers' self-regulation scores in Grades K-3 are not correlated at a statistically significant level. These findings may indicate that the instruments used may be ineffective in measuring a teacher's self-regulation and a student's reading achievement; however, there were Cronbach alpha scores representing the reliability of the Self-Regulation Inventory (Casler, 2005a) in the areas of goal-setting, self-evaluation, and self-monitoring. Cronbach reliabilities suggest that the instrument should produce reliable scores of teacher's self-regulation. However, due to the lack of research and instruments measuring teacher self-regulation, perhaps the inventory could be restructured with somewhat more success.

Furthermore, participants who chose to participate in the study were Caucasian females between the ages of 26 and 45 years with more than 6 years of teaching experience. Past research emphasized the importance of experience in the field of education and how this impacts student achievement (Darling-Hammond, 2000; Ferguson & Ladd, 1996) except in the current study no significance was found between

the teachers' self-regulation scores and years of experience. Perhaps, these findings indicate there is a relationship with students' reading achievement and a teacher's years of experience. There may have been a wider gap in the Self-Regulation Inventory scores if the participating group was not as homogeneous and there had been a larger return rate in the research study. In addition, the participants who responded to the study may have been those individuals who are more self-regulated overall.

Another explanation of teacher self-regulation scores may be the availability of professional development in the state implemented with the Reading Initiative in Grades K-3. Sustained and embedded professional development (Joyce & Showers, 2000) has been offered in all elementary schools in the state since 2005. This professional development consists of a reading coach in each elementary school in the state, along with sustained and embedded professional development on all five components of reading (phonemic awareness, phonics, vocabulary, fluency, and comprehension) and the reading series currently in use. The reading coaches provide the professional development along with state department representatives and participate in the coaching cycle which allows teachers to grow into more effective reading instructors. This practice has enhanced many teachers' level of instruction and impacted their scores and self-regulation factors due to the amount of reflection required in the professional development sessions and coaching cycle. Reflection is a true indicator of an individual's self-regulation patterns and practices (Bandura, 1986; Zimmerman, 2001b).

The NCLB Act (2001) mandated states use rigorous assessments to assess students' knowledge and growth throughout their years of schooling. This requirement was in response to the National Reading Panel Report (2000), which stated schools

were performing below their expected measures. Then the federal government became more involved in the education of students and required standardized testing. For this reason, each state began developing rigorous assessments to measure students' growth on a quarterly system. The assessment now being given by the district in this study is the Reading EQT in Grades K-5. These assessments were developed by K-5 educators and aligned with the Alabama course of study for each grade level. Therefore, the assessments may not have been as rigorous as one would hope; however, the findings suggest that the EQT assessment gradually gets more difficult as the students progress through the grade levels (ACOS, 2010). This result may be due to the fact that the EQT means decrease a small amount in each grade level with the highest score of 89.39 in kindergarten and a mean score of 80.16 in third grade. This decrease in test scores is consistent with research as the difficulty in the objectives and standards increases. But what may be difficult to understand is that these scores come from a variety of school settings with varied student backgrounds who receive free or reduced lunch and their means are all above 80%. Yet, the range of scores seems to represent low economic students. However, if mean scores were plotted from the K-3 EQT on the bell curve, one would find they are all on the right side of the curve, indicating they were all above average. This finding could mean data were tainted and the scores were fixed by the participants which is very unlikely.

Other reasons for rejection of  $H_1$  and the insignificant findings of Research Question 1, which stated, "Is there a relationship between students' reading achievement and teachers' self-regulation patterns in Grades K-3?" may be due to the fact that the teachers did not follow the standardized directions for the test and gave students further explanation during the testing period. This action on the part of the

teacher could taint the reading EQT scores and cause the scores to be less diverse if the teacher had completed the test as required. Also it could mean that the teachers did exactly as they were required (i.e., taught the objectives and standards to a rigorous level and in return the students performed). Therefore, the findings can be interpreted in many ways but further statistical testing would be required.

This assumption leads us to the second research question, Are a teacher's self-awareness, self-monitoring, and self-evaluation related to a student's reading achievement? Research Question 2 includes H<sub>2</sub> through H<sub>4</sub> stating there is a significant relationship between teachers' self-monitoring abilities, self-evaluation, self-awareness, and students' reading achievement scores. The findings resulted in all four hypotheses being rejected and the null hypotheses being retained, which infers that a teacher's self-monitoring, self-evaluation, and self-awareness are not related to students' reading achievement scores. As a result of these analyses, goal-setting and self-monitoring questions had the highest means with self-evaluation and self-awareness holding the lowest means. Self-awareness had the lowest alpha level and was found unreliable in the current study. Self-evaluation was found reliable, with a low mean which means teachers are less likely to evaluate their own behaviors and make the necessary changes to reach the desired results.

The researcher's findings suggest that teachers set goals, monitor their students' learning, but often do not take the time to reflect on their own instructional practices and compare them to their students' achievement scores. Question 7 on the Self-Regulation Inventory (Casler, 2005a) investigated teachers' use of journals to track progress of students and instructional goals. Only 85 of the 276 participants claim to use this practice, which is less than 50%. As a result, it may be inferred that teachers

are not reflecting on their practices and the way their students interact in the classroom. Reasoning for this may be the lack of time available to the teacher during the day, extracurricular activities, or the number of classes they are personally responsible for on a daily basis. Other reasons teachers may not be self-regulated and reflecting on their instructional practices is no personally modeled these behaviors for them. Due to the ceiling effect of the Self-Regulation Inventory (Casler, 2005a), it is believed the teachers who participated in the survey were more self-regulated than those teachers who did not respond. In the meantime, Ruddell and Unrau (2004) discussed the importance of the relationship between the students and teachers in their Interactive Reading Model. Ruddell and Unrau (2004) believed this plays an integral part in the learning process that takes place in the classroom environment, which can also determine a student's academic success. The Center for Social and Emotional Education (CSEE) (2010) conducted a research investigation on the importance of school climate. The CSEE found research studies over the last two decades strongly suggest the importance of school climate. Perhaps, this finding could prove to be the missing link to student achievement. Research Question 2 may have proved to be nonsignificant due to the fact that research supports that students' self-regulation skills are perhaps more important to their academic achievement (Ommundsen et al., 2005) than the self-regulation skills of their teacher. However, research states teachers who modeled self-regulation strategies in their classroom were found to improve student self-regulation skills (Fuchs et al., 2003; Glaser & Brunstein, 2007; Howse et al., 2003; Lizarraga et al., 2003; Orange, 1999; Perels et al., 2009). Therefore, the question remains: must a teacher be self-regulated to model self-regulation?

Finally, the third and last research question measured the relationship between specific teacher characteristics and their self-regulation patterns. The hypotheses measured National Board certification status, years of experience, current grade level, and highest degree earned. Each of these hypotheses was found to be insignificant; therefore, the null hypotheses were retained stating there was no significance. Consequently, this could be that teachers do their absolute best regardless of the category in which they fall. However, it could be that a small portion of the sample (8%) was National Board certified. This leads one to think about the motivation of becoming nationally board certified. Is it the increase in pay and retirement or the passion to help students become more successful in their academics and become a more effective teacher? This raises the question of how many are motivated to increase their level of knowledge to enhance student learning and increase test scores. Other factors in need of observation are the make-up of students in the National Board certified classroom (number of inclusion students or ELL learners), which could possibly decrease a teacher's overall reading EQT mean. These findings are inconsistent with the research by Cantrell et al. (2008) proving more research on teacher self-regulation in relation to student achievement needs to be in place to clear up any inconsistencies.

Often there is a disconnect between what teachers practice and their knowledge which could also be the case for some of the National Board certified participants in the current study. Teachers proceed through a grueling process to gain this certification status and seem to learn a tremendous amount, but without the ability to make the connections between the knowledge they have learned and what the skills and strategies look like in an effective classroom, one is at a deep loss. The self-regulation process requires one to evaluate their behaviors and make the necessary adjustments to reach

the desired results (Bandura, 1986; Zimmerman, 2001). Without this step in the self-regulation process, teachers are unable to implement and monitor their classroom practices which in return affect students' achievement.

Consistently, research supports that a teacher's years of experience is correlated to student achievement (Darling-Hammond, 2000; Ferguson & Ladd, 1996). However, as a result of the multiple regression there is no statistical significance in H<sub>6</sub>. This result could be due to the fact that most of the teachers participating in the study had > 6 years of experience and supports the fact that teachers who hold a higher degree or National Board certification status do not always have the highest achievement scores and those teachers are not necessarily more self-regulated. Passion for the job and things that are immeasurable but observable, such as heart, classroom management, and tenacity, truly contribute to the teacher's self-regulation score.

The researcher's belief was that lower grade level teachers would possess more self-regulation practices than upper grade teachers. These findings were nonsignificant but may be due to the small number of teachers (N = 276) who completed the survey and demographic information. However, a similar number of participants in each grade level: 23% in kindergarten, 24% in first grade, 25% in second grade, and 27% in third grade. These findings suggest that all teachers view their practices as self-regulatory and ranged from 3.01 to 4.52, which is at the higher end of the Likert scale. Perhaps, these results reveal that all teachers possess some self-regulation behaviors depending on the amount of modeling they have received or viewed. For that reason, it may help explain the variability of self-regulation skills possessed by teachers. Orange (1999) found peer modeling can be an effective tool for teaching self-regulation to students, but would this hold true for teachers as well? Teachers who use tools effectively in the

classroom and plan instruction according to the needs of their students are much more likely to see student growth. It is imperative that universities and colleges prepare these individuals using realistic life experiences with supervised visitation and reflection. Specifically, one idea is planting webcams in classrooms and compensating teachers for being able to observe them at any time. This would allow professors to view real-time classroom video, discuss major components of classroom effectiveness, and discuss specific categories related to each visit with student teachers. This discussion and reflection would allow for a visitation without disturbing classroom students and teachers. However, many ethical considerations are definitely worth exploring which is exactly what the National Council for Accreditation of Teacher Education (NCATE) (2010) is asking teacher preparation programs to implement. Despite the insignificant correlation with teachers' self-regulation behaviors and current grade level, researchers need to continue to explore the regulations practiced by teachers by surveying a larger number of teachers in K-12 grade levels nationwide and observing teaching behaviors in real time to make qualitative assessments.

This finding leads us to the next hypothesis which states that there is a significant relationship between the highest degree earned and students' reading achievement. The findings suggest there were only a few teachers with a specialist degree or higher and their achievement scores were lower than those without a specialist or doctorate degree. These facts are disappointing and cause one to truly consider how teachers should be trained in their teacher candidate years. This dilemma may support the fact that teachers cannot be taught the necessary skills to become an effective teacher but are born with a gift to teach. Another consideration is that some teachers possess the gift of teaching but need grooming to enhance those gifts.



Other possibilities are that teacher preparation programs need to be enhanced with more clinical experiences similar to teaching hospitals and grand rounds practiced by doctors (NCATE, 2010). Ideas expressed in the Blue Ribbon Report commissioned by NCATE recommended that teacher education programs need to (a) become more accountable, (b) strengthen candidate selection and placement in clinical experiences, (c) revamp the curricula, staff, and offer incentives, (d) develop partnerships with local schools and districts, and (e) research what makes a clinical experience effective and how to provide on-going and continuous support once teacher candidates enter the teaching field. These recommendations require one to reflect on the dispositions of effective teachers and the support they were offered during their clinical experiences. The overall push for consistency and stability in the education system ranges from kindergarten to grade 20. Many improvements are needed in all aspects of education, but willing individuals must begin this transformation process.

Overall, the findings in the current study were insignificant and cause one to think about what contributes to a teacher's self-regulation score if each of the independent variables in the current study is not correlated. Some individuals may hold the belief that National Board certification status, years of experience, highest degree earned, and current grade level are not key factors in a teacher's self-regulation score, but it is more about the classroom atmosphere, risk taking, and the motivation teachers exhibit in their classroom. However, this finding will continue to be a question in the field of education and studied by many educators.

## Implications

Marzano (2003) suggests there are three levels of factors that impact academic achievement: school level, teacher level, and student level. Therefore, it is important to recognize that perhaps within this research project there are extraneous variables affecting the overall teachers' self-regulation scores and students' reading achievement. Teachers scored highest on the components of goal-setting and self-monitoring, but were less confident in their ability to evaluate and become aware of the impacts their instructional practices were having on student achievement. Therefore, teachers need to use more research-based strategies to impact their instruction and reflect on the students making connections and learning the curriculum. Once teachers have reflected on these data, they need to make informed decisions when planning for instruction, such as engaging students in conversation to determine how they learn best. These approaches can be accomplished by using a script of questions and giving interest/learning style inventories. A risk-taking environment allows learners to grow in the classroom and has a positive impact on the student-teacher relationship.

Suggestions made to improve the practice of teacher self-regulation and students' achievement scores include, but are not limited to, the following: (a) providing opportunities for dialogue with other teachers, (b) building relationships with universities and colleges to better prepare teachers entering the profession, (c) allow teachers time to reflect with colleagues, (d) teach teachers how to ask students questions that will guide their instruction, and (e) use this information to plan for the future. Oftentimes the student is completely left out of the planning phase; therefore, instruction is ineffective. Districts need to train teachers to effectively use the gradual release model (Pearson & Gallagher, 1983) when modeling strategies and allow

students time for ample practice. This model builds on students' strengths and current status. Pretests and inventories also can determine students' interests and learning styles. These procedures take time away from instruction but lend themselves to more productive teaching and planning. Teachers then can compare their results and teach information the students need to learn rather than what they already know. In return, the productivity will increase during instructional time in the classroom.

These alterations also may emphasize to teachers the importance of the student-teacher relationships and guide teachers in changing their teaching philosophy and create more effective instructors. For example, offering self-regulation workshops that address the value of the student-teacher relationships and the impact they can have on a student's reading achievement, especially when correctly modeling, can facilitate learning in the classroom. This environment should include more autonomy in the classroom with students given an opportunity to select the type of product or the process they will utilize to learn the objectives planned, also known as differentiated instruction or a learner-centered classroom.

Suggestions for student-level factors is allowing students to make more decisions concerning their educational process and give them more responsibility in the classroom, which could include setting classroom rules, rewards, and consequences. In return, the students will have more ownership in the classroom setting and, perhaps, may have a positive effect on students' reading achievement. However, offering students workshops on how to improve their self-regulation skills may be another option to reinforce these skills. These workshops could include role-playing and kinesthetic games to help reinforce self-regulation strategies of students. Offering self-regulation workshops off-campus may motivate students to attend.

The last area known to affect academic achievement are school level factors. These factors can be evaluated using a school climate survey which can be distributed to parents, teachers, and students. Parents and students will offer schools information to determine why parental support has not been as successful in the past. This information will help guide future relationships between parents and schools and determine teacher and student morale, which can often be a reflection of school administration. Schools that take time to build teacher and student morale also build parent morale as an effect. If teachers are rewarded for their hard work and dedication, such as scholarships and tuition waivers for completing master's degrees or National Board certification, they are much more likely to perform their daily tasks at an optimal level, tend to their daily tasks with a positive attitude, and build strong working relationships with their students. Teachers who take ownership are more in control and are willing to contribute to the overall school program.

Other propositions would be to improve parental involvement affecting the total school program which may include a strategic plan to include parents in more activities, offer more parent meetings, or even require parents to make three school visits in each semester. This parenting connection has the opportunity to improve communication between the parent and teacher and build a positive relationship. Other suggestions would be to assign mentors to first-year teachers and build collaboration cohorts across county schools. In conclusion, it is important to recognize there are many variables that contribute to a school community; without the proper balance and a strong academic leader, school-wide success is unachievable.

### Future Research

Several findings suggest there are some alterations that can be made to the research study to further understanding a teacher's self-regulation in relation to students' reading achievement. For example, these findings suggest that most of the respondents in the current study were found to be more self-regulated than not self-regulated; however, the study only consisted of one large school district. To enhance this study, the researcher would implement this study nationwide by networking with a number of states in various regions of the United States. After networking, the researcher would obtain permission to collect self-regulation inventories and standardized reading tests scores from a number of teachers from a range of regions. Once these data were collected, the researcher would conduct a Pearson product-moment correlation to determine if there is a relationship between a teacher's self-regulation score and students' reading achievement scores on the national level. Conducting a study of this enormity would also help to determine the reliability of the survey in measuring teachers' self-regulation patterns.

The conclusive findings of this study suggest that there needs to be other means of determining if a teacher is self-regulated, such as having teachers document their practices over the course of a school year (reflecting), adding observations of researchers, and having principals complete self-regulation instruments on their teachers. Furthermore, there are numerous variables that can also be explored to expand the study such as those teachers who had parents who were educators, if teaching is their first career, their place of study, high school and college performance, and their variability of experiences. Although these variables are not continuous

variables and are much harder to measure, they need to be measured by qualitative means.

Furthermore, this study needs to have a larger range of grade levels to decipher if lower-level teachers are more self-regulated than middle- and upper-level teachers which would allow the researcher to classify the group of teachers into three distinct groups (K-5, 6-8, and 9-12). The information collected may predict the relationship between each level of teachers and their self-regulation practices. When analyzing these data, the researcher could break the data down into self-contained and departmentalized classrooms, as well as classifying teachers into subject areas. Furthermore, school climate could also become a variable (e.g., a school climate survey).

Other suggestions would be to create a survey that asked the teachers questions about different areas in their lives to determine if they are not only self-regulated as a classroom teacher but also as a mother, musician, or in other areas. Another approach would be asking the teachers to write a narrative about themselves and their practices. Then the researcher would code the data while looking for specific factors that suggest the teachers are self-regulated.

Overall, the researcher was disappointed to find there is no relationship between a teacher's self-regulation score and a student's reading achievement. Furthermore, there was no evidence suggesting that National Board certification, the teacher's years of experience, highest degree earned, and current grade level had an effect on a teacher's self-regulation score. Most teachers gave socially desirable answers while answering the inventory; therefore, it is necessary to find a way to measure a teacher's self-regulation without letting a teacher know what the researcher is looking for during

implementation of the study. This approach would be quite difficult due to ethical and research standards. Perhaps, one way this may possibly be accomplished by asking the students to fill out surveys about their classroom teachers and averaging those scores together. Then the students could give specific comments stating why and how their teachers conduct their classroom without any dishonesty or running the risk of getting socially desirable answers. In spite of this, there still is a possibility students would not be honest due to a fear about the teacher viewing or seeing their comments or answers.

Research suggests there is more to a teacher's self-regulation than just the answers they put on a survey and that "something" is immeasurable or unknown. So the question remains what contributes to a teacher's self-regulation and impacts student achievement? No real answer has been identified and still remains unknown. Further investigation into the current research is being published at the present time and continuous conversation between educators and researchers. These implications can be put into place to further this study, but still have the possibility of not answering the research questions.

According to Wayne and Youngs (2003), teacher characteristics are being studied in comparison to student achievement gains to inform policymaking decisions. However, the gaping hole in the research is the study of teacher self-regulation—not teacher characteristics. Although many teachers report to be self-regulated, their achievement scores are not correlated with these findings despite the fact that the average score on the reading achievement tests measured in the current study was 84.78% and somewhat above average. Another valid question is how rigorous are the assessments used for measuring student achievement? Most of these assessments are paper-pencil assessments with lower-level basic recall questions and only a small

amount of explaining required. Therefore, higher-level questions are not being asked on these assessments and allow students to score above average, which implies they can analyze and evaluate the objectives and standards being taught in the classrooms and on their grade level. With the current status of the United States compared to other nations, a set of National CORE standards and assessments has been developed. Forty-two states have recently adopted these standards with Alabama being the last state (Long, 2010).

Other research needed to improve teacher education is understanding premier teacher education programs and the process of implementation (Darling-Hammond & Youngs, 2002). With ways and means to measure teacher self-regulation, such as building a larger library of research on teacher characteristics due to the conflicting information presented, does the desire of a teacher wanting to succeed cause them to be more successful in the classroom or perhaps the backgrounds of effective teachers are more fundamental to student success (Lawson, 1992; Zeichner & Gore, 1990)? However, Maggioni and Parkinson (2008) discussed the role of a teacher's cognition on learning which also could include the investigation of teachers' reflective practices, measuring the number of times on a weekly basis one is able to sit and reflect on instruction and assessment taking place in the classroom, and how this affects the student achievement in the classroom. Other gaps in the literature are comparison of the way content teachers are compared to teacher candidates in the elementary and special education settings as well as the college rankings. Murnane and Phillips (1981) found college rankings were not significant, but Summers and Wolfe (1975, 1977) found them to be significant.



Other areas of interest include the investigation of the relationship between the two theoretical frameworks supporting this research study. Perhaps, overlapping of these theories could be combined to create a more complete and complex framework exploring the dynamics of the relationship between self-regulation (Bandura, 1986) in relation to the affective domain of Ruddell and Unrua's (2004) Interactive Reading Model. This exploration should prove to be significant to the field of research and explore the impact one's affective domain has on teacher and student self-regulation practices, stating the relevance of building a positive rapport with students and the effect it can have on student achievement in the process of building self-regulated learners.

#### Summary

The purpose of this quantitative research study was to investigate the importance of teachers' self-regulation patterns on students' reading achievement. This study investigated the theoretical frameworks of self-regulation and subareas of self-regulation: self-monitoring, self-awareness, self-evaluation, and goal-setting. Ruddell and Unrau's (2004) Interactive Reading Model helped explain the value of the relationship between the teacher and the student. Furthermore, four independent variables were researched to determine the relationship between teachers' characteristics and self-regulation scores. This study supports the growing evidence that teachers play a major role in developing the students as learners and increases the likelihood of students being successful in life.

This quantitative correlational study measured the relationship between teachers' self-regulation patterns and students' reading achievement in Grades K-3. The study included two dependent variables (Self-Regulation Inventory and Reading

EQTs) along with four independent variables (National Board certification status, years of experience, highest degree earned, and current grade level). Over 1,000 participants in a large school district were surveyed, and 276 responded by returning the packets of data consisting of the demographic sheet, Self-Regulation Inventory, and data collection sheet. There were a total of three research questions with eight hypotheses concerning the dependent and independent variables. To predict and measure the correlations between the variables, a Pearson product-moment correlation and simultaneous multiple regression were conducted to analyze data. Even with such a large sample size, the return rate was 26.5%.

The findings suggested there is no statistical significant relationship between a teacher's self-regulation score and the students' reading achievement, including the different subtest areas of self-regulation recognized by Bandura (1986) and Zimmerman (2001a). The subtest areas of self-monitoring, self-awareness, self-evaluation, and goal-setting were all insignificant. These findings inferred that teachers were found to practice goal-setting and self-monitoring more than self-evaluation and self-awareness. Many teachers recognized the fact that they did not alter their behaviors based on feedback from students via journals or reflections, but they observed their students' behaviors more than their own behaviors.

Furthermore, no independent variable measuring specific teacher characteristics was significant. Years of experience, National Board certification status, current grade level, and highest degree earned were in no way correlated to a teacher's self-regulation score. Therefore, there is no relationship or correlation between any of the independent and dependent variables. In conclusion, maybe the wrong variables were explored in

the study or further observations are needed to determine if these teachers are as self-regulated as they reported.

Other key elements could possibly be that the participating teachers were self-regulated and felt it was more important to report the facts, hence the need for further research between the connection of students' reading achievement and teachers' self-regulation patterns. The second point is that most teachers enter the profession of teaching to make a difference in students' lives. Teachers are generally caring individuals who want to see their students excel to their potential. In today's culture students lack the necessary support system to be successful in the educational environment without the support of a strong instructional coach. Teachers must be self-regulated individuals who model effective strategies that will create lifelong learners who will have a significant impact in diverse disciplines throughout the world.

## APPENDIX A

## TRIADIC FORM OF SELF-REGULATION

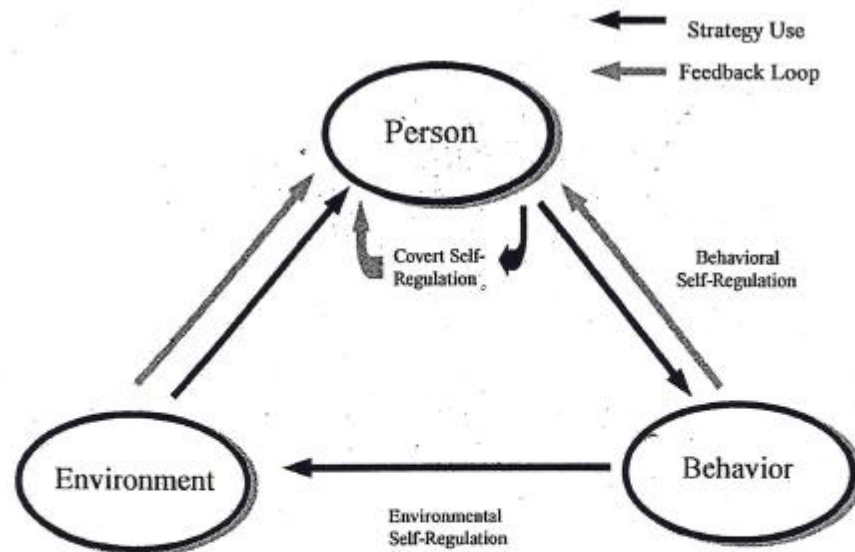


FIGURE 1 Triadic forms of self-regulation: *Note.* From "A social cognitive view of self-regulated academic learning," by B. J. Zimmerman, 1989, *Journal of Educational Psychology*, 81, p. 330. Copyright 1989 by the American Psychological Association. Adapted with permission.

## APPENDIX B

## CASLER PERMISSION TO USE TOOL

Pamela Allen  
The University of Southern Mississippi  
118 College Drive #4781  
Hattiesburg, MS 39406  
251-656-5656

August 23, 2010

At the current time I am on sabbatical. For this reason, I am sending a letter from my home address. Ms. Pamela R. Allen has permission to use and modify *The Self-Regulation Inventory* created and piloted in 2005. At the completion of the study, I understand, I will receive a copy of the findings.

Sincerely,



Dr. Erin Casler

MidAmerica Nazarene University

Adjunct Professor

## APPENDIX C

## PERMISSION LETTERS TO CONDUCT STUDY

June 8, 2010

University of Southern Mississippi  
118 College Dr. #4781  
Hattiesburg, MS 39406

To Whom It May Concern:

Ms. Pamela R. Allen has permission to administer a self-regulation survey to kindergarten through third grades elementary teachers and collect the End of the Quarter (EQT) reading achievement scores in the [redacted] Public School System for her dissertation. Ms. Allen's study is titled *Understanding the Relationship between Students' Reading achievement and Teachers' Self-Regulation Patterns*.

The purpose of this study is to promote and guide future research in the area of teachers' self-regulation, professional development, and pre-service teacher programs. Ms. Allen has agreed to maintain the confidentiality of all participants in the research.

Upon completion of the study, a copy of the findings and the results will be provided to the [redacted] Public School System.

If further information is needed, please contact me at [redacted].

Sincerely,



Roy D. Nichols, Ed.D.  
Superintendent

RDN/cp

APPENDIX D  
 APPROVAL OF THE UNIVERSITY OF  
 SOUTHERN MISSISSIPPI INSTITUTIONAL REVIEW BOARD



**THE UNIVERSITY OF SOUTHERN MISSISSIPPI**

Institutional Review Board

118 College Drive #5147  
 Hattiesburg, MS 39406-0001  
 Tel: 601.266.6820  
 Fax: 601.266.5509  
 www.usm.edu/irb

**HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE  
 NOTICE OF COMMITTEE ACTION**

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 10090901

PROJECT TITLE: **Understanding the Relationship Between Students' Reading Achievement and Teachers' Self-Regulation Patterns in Grades K-3**

PROPOSED PROJECT DATES: 09/01/2010 to 09/01/2011

PROJECT TYPE: **Dissertation**

PRINCIPAL INVESTIGATORS: **Pamela R. Allen**

COLLEGE/DIVISION: **College of Education & Psychology**

DEPARTMENT: **Curriculum, Instruction, & Special Education**

FUNDING AGENCY: **N/A**

HSPRC COMMITTEE ACTION: **Exempt Approval**

PERIOD OF APPROVAL: **09/14/2010 to 09/13/2011**

*Lawrence A. Hosman*  
 \_\_\_\_\_  
 Lawrence A. Hosman, Ph.D.  
 HSPRC Chair

*9-15-2010*  
 \_\_\_\_\_  
 Date

APPENDIX E  
DEMOGRAPHIC SHEET

<b>Demographic Information</b>		
<i>Directions: Please circle or fill in the following information about yourself at the present time.</i>		
<b>Gender:</b> Male      Female  <b>National Board Certification:</b> Yes      No      Currently Pursuing	<b>Race/Ethnicity:</b> African American/Black      Asian/Pacific Islander Caucasian/ White      Hispanic Native American/American Indian Other, please specify _____	
<b>Age:</b> (20-25)   (26-30)   (31-35)   (36-40)   (41-45)   (46 -50)   (51-55)   (56-60+)		
<b>Highest Degree Earned:</b> Bachelors      Masters   Specialist (Ed.S)      Doctorate Other, please specify _____		
<b>Total teaching experience in years</b> <b>(including this one):</b> _____	<b>Current teaching assignment:</b>  K            1            2            3	
<b>Previous Grades Taught:</b>  K    1    2    3    4    5    6    7    8    9    10    11    12    College		
<b>Classroom Make-up:</b> <i>Please report the number of students in your current class that are included in each of these categories.</i>		
# of special education student's	# of general education student's	# of gifted student's
# of males	# of females	





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