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The Emotional Intelligence and Resilience of School Leaders: An Investigation into Leadership Behaviors

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by

Aileen Thompson Bumphus

A Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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ABSTRACT

THE EMOTIONAL INTELLIGENCE AND RESILIENCE OF SCHOOL LEADERS: AN INVESTIGATION INTO LEADERSHIP BEHAVIORS

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Recent research suggests that leadership in schools and emotional intelligence are related. Furthermore, resiliency has been researched and found to be linked to successful leadership. As a result of these findings and the researcher's own professional experiences, it is speculated that emotional intelligence, resilience, and school leadership may be highly related factors in how one leads a school. The study of this three-factor relationship has been virtually overlooked in the research on school leadership and might prove useful in the recruitment, identification, development, and retention of effective school leaders.

A study of the emotional intelligence, resilience, and leadership of public school principals was conducted. The sample participants consisted of 63 public school principals and their respective professional colleagues who were from five states—Florida, Georgia, Louisiana, Mississippi, and Texas. A statistical analysis and findings of this study examining the relationships among emotional intelligence, resilience, and school leadership are presented. There was a significant positive relationship found between self-reported emotional intelligence and resilience among school principals. When school leadership was entered into this model of significance, the relationship became stronger, thus indicating that school leadership played a significantly positive

role in the relationship between emotional intelligence and resilience among school principals in this sample. In addition, a principal's general mood, as measured by the Bar-On Emotional Quotient Inventory (EQ-i) was a significant predictor of resilience. Finally, further investigation confirmed past studies which indicated a strong positive relationship between a school principal's emotional intelligence and leadership. Specifically, the strong relationship was found to be between the principal's self perception of leadership and the Intrapersonal and Interpersonal Emotional Quotient (EQ) subscales on the EQ-i.

DEDICATION

This journey began with two individuals who gave meaning to my purpose in life, my parents, John Wesley and Sarah Josephine Kimbrough Thompson. Both, who had received a formal education through third and fifth grades respectively, instilled in me the importance of "continuing my schooling." It is in your loving memory that I dedicate this work. I love you dearly for your sacrifices and all that you did for us--your nine children. Herman has truly stepped in as a big brother and carried on your legacy of encouragement not only to me but to all members of the Thompson family and beyond.

Secondly, I dedicate this effort to Dr.Wallace Mills, who was the first person who sat me down and boldly encouraged me to continue my educational journey beyond my Master's Degree and Specialist Mid-management coursework.

Finally, and most importantly, to my husband Walter and son Brian who went without many home-cooked meals and other family traditions and never complained. Brian, you were always there in my corner encouraging and assisting me in so many ways during the long and late hours. To Michael, Fran, and Monique, who often called me long-distance and encouraged me. I love you all dearly for that. Most notably, Walter, your unwavering support has been felt in so many ways, from setting an extraordinary example of professional growth and leadership to making sure that I did not have to worry about anything but finishing my doctorate. Your numerous words of encouragement, advice and reassurance are what carried me through my most challenging times. I love you so dearly for that. Daddy and mom would be so proud of us.

To our grandchildren, I dedicate this work to each of you. You are the ones to carry on our family's legacy of working hard, doing your best at all things, and taking care of those around you. "...to whom much has been given, much will be required..."Luke 12:48. "Continue your schooling"...as it will serve you well.

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Special thanks are extended to: Jon Duffy and Dr. Rich Handley who provided me with the insight and technical support in choosing my emotional intelligence instrument; Kari Matusiak for being available on numerous occasions to assist in sorting out the logistics of my study; and to Dr. Eleanor Shores and Dr. Howard Stone, a special thanks to you for allowing me to use your instruments for measuring resilience in adults and school leadership respectively. To the state and district superintendents, commissioners and their administrative teams, thank you for providing me permission and support in conducting my study in your state and local public school systems. A special thank you

goes to my colleagues and friends in PISD, especially Patty Meyer, West Cluster Area Assistant Superintendent.

Finally, thank you to all of the principals and your professional colleagues who took the time to respond to my requests to participate in this study. Without you, this study would not have been possible and such results would not exist.

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CHAPTER I

INTRODUCTION

The general focus of this study was to investigate the relationships among (a) emotional intelligence—as measured by the Bar-On Emotional Quotient Inventory (EQ-i) (Bar-On, 1997); (b) resilience—as measured by the Assessment of Core Resilience (ACR) (Shores, 2004); and (c) school leadership—as measured by the School Leadership Questionnaire (SLQ) (Stone, Parker, & Wood, 2005). The data were compiled using the results of volunteer participants' responses to online questionnaires. The volunteers were principals from five states—Florida, Georgia, Louisiana, Mississippi, and Texas. All evaluation tools were self-reports. Supervisors and subordinates of these volunteer principals were also asked to complete parallel school leadership questionnaires for comparison.

This chapter presents a broad perspective of school leadership; specifically the numerous issues facing school leaders and the role emotional intelligence and resilience can play in effectively managing all facets of educational support within a school setting.

Context for the Study

The nation is recognizing the increasingly numerous issues facing school leaders. Contemporary school leaders are challenged in a different manner than in past generations. As accountability standards are being increased and resources are being reduced, school leaders are turning their focus to the task of meeting these challenges (Adams, 1999; Leithwood & Riehl, 2003; Hoffman, 2004).

Academically, school districts are embarking on creative ways to fund their programming initiatives (Larson, 2001). In addition, such challenges as the demands of

high-stakes testing coupled with the expanding roles of schools to provide a safe and orderly environment, compel school administrators to improve skills centered on data analysis, school safety, and crisis management (Kantrowitz, Matthews, & Bondy, 2007). These challenges require a multi-faceted type of leadership style to address these challenges (Grubb & Flessa, 2006).

Academic challenges, global changes in the environment, and dynamic social and political systems cause school leaders to investigate and address further the effect these phenomena have on day-to-day school operations. Ninety-five percent of all organizations are unprepared for a crisis (Bernstein, 1996). The rate at which one responds impacts the extent of the damage in a crisis situation, quality of communication with the stakeholders (internal and external), and the level of confusion and chaos. Galvanizing strategic teams increases the effectiveness of managing a potentially catastrophic situation (Bernstein, 1996).

Students' needs are changing in the schools. Students often see school as a place where they must get an education in order to pursue other matters of larger importance, such as saving the world from war crimes, solving the global warming issue, and ensuring that connecting with friends and family around the globe is an effortless process—all this while indulging in their personal pursuits of entertainment, financial self sufficiency, and future access to technology (Whelan, 2004). This suggests that the students' agenda and the agenda of the schools may not be synchronized. These students' teachers are constantly working on ways to reach this generation of tech-savvy customers while ensuring that students are equipped with the basic knowledge and skills to be successful in school. These teaching strategies may consist of reachable moments where

schools are capitalizing on the video gaming interests of students to capture their interest in learning (Vogel, 2007). However, a dilemma is posed when educators must balance the social, educational, and emotional needs of students (Roeser & Eccles, 2000).

Thus, school leaders are charged with the responsibility of providing a framework within which students and teachers can operate successfully. This dynamic educational climate is a multifaceted environment where social beings work closely together for the common purpose of successfully educating youth (DeCecco & Richards, 1974). Strong school leaders are able to put the right people in the right positions (Collins, 2001) in order to make school a place not only a place where students are educated, but are made to feel welcome, supported, and valued.

Emotional Intelligence in School Leadership

The research literature is saturated with models of effective leadership in organizations undergoing change (Harvard Business School Press, 2006). A constant that impacts a leader's success is personality. How a leader engages staff and outside stakeholders depends on how the leader can seamlessly move in and out of various leadership styles. Goleman, Boyatzis, and McKee (2004) have introduced six common leadership styles: visionary, coaching, democratic, affiliative, pacesetting, and commanding. In order to create a positive climate that allows the members of the organization to feel energized and motivated to do their best, four of these leadership styles—visionary, coaching, democratic, and affiliative—are suggested (Goleman, 2006).

Effective leaders possess the skills to engage students, parents, teachers, and stakeholders in a positive way. Recent research in emotional intelligence has brought attention to this construct in leadership and compels school leaders to consider emotional

intelligence as a construct to operate a successful educational system effectively and efficiently (Barent, 2005). New findings reveal that the social nature of the brain allows individuals to create positive interactions with others while positively impacting learning (Goleman, 2006).

Resiliency in School Leadership

The world, nation, and local environments are becoming more attuned to the unpredictability of world events. Problems such as international unrest, catastrophic natural disasters, and unsafe communities are re-directing the attention of school districts to the need to remain in a state of preparedness while operating daily as a learning institution (Kano, Ramirez, Ybarra, Frias, & Bourque, 2007). Schools are spending more time on safety plans, emergency protocols, and communication strategies in an effort to ensure that schools are safe places in which to learn. However, educators cannot let such issues totally consume their attention because such daily tasks as monitoring student arrival and dismissal, appeasing disgruntled parents, disciplining students, managing cafeteria supervision, overseeing special education and other student programs, and just moderating "the stuff that walks in the door" (Grubb & Flessa, 2006, p. 509) can envelope the school administrator's attention. The need to adapt to this type of environment without letting it overshadow regular day-to-day operations requires school leaders to be resilient and to provide emotional support for the instructional staff, as well (Pearman, 1998). This construct of resiliency has been studied in terms of how a learning environment fosters resilience among children. In comparison, not as much research has been completed on fostering this same support structure for school leaders and educators in order to build resilience.

School districts and universities are planning, developing, and implementing support programs designed to increase resilience among school administrators. One such example is the development of effective leadership teams that focus on coaching and weekly leadership team meetings (Harvey, Drolet & Wehmeyer, 2004). These meetings include sharing of successes, celebrations, humor, and icebreakers: and developing solutions in small groups to address challenges. Other models, such as the effective team model (Harvey, Drolet, & Wehmeyer, 2004), are used to assist the teams in assessing their effectiveness. Several other attempts are being made (Hoffman, 2004) and are designed to share other professional learning opportunities (DuFour, 2002) in hopes of providing an enriched atmosphere of support for school administrators where ongoing, creative professional development can serve as the catalyst for building resilience in school leaders (Hoffman, 2004). "Further leadership study in the areas of organizational theory, organizational development and the politics of education might contribute to additional insights on the part of educational leaders" (Hoffman, 2004, p. 38).

In summary, effective school leadership performance is based on a number of dynamic and purposeful factors. There is a considerable body of research suggesting that how a person perceives, identifies, and manages emotion can provide the foundation for the types of competencies (both social and emotional) that are critical for success in the workplace (Cherniss, 2000). In addition, the rate of change in the world makes for a strong case that school leaders are in a position where the demands on one's cognitive, emotional, and physical resources are great. Resilient leaders possessing strong levels of emotional intelligence are becoming increasingly important, thus worthy of further

investigation. "Support for and retention of these leaders is essential if organizations are to function at the highest possible level" (Hoffman, 2004, p. 38).

Purpose for the Study

The purpose of this study was to identify whether the construct of emotional intelligence is related to the construct of resilience among effective school leaders and to add to research on the role these two constructs play in developing effective and strong school leaders capable of guiding schools through constant change.

Justification for the Study

Investigating the relationship between emotional intelligence and resilience and effective school leadership is warranted because these skills have been associated with effective school leadership in separate arenas, but not in a combined model. Therefore, a closer investigation into emotional intelligence, along with how it relates to resilience among school leaders, is worthy of further study. Corporations have long recognized the importance of strong leadership in engaging employees (Shore, Sy, & Strauss, 2006). School systems are being challenged to look at various transformational leadership models as districts are led through change while competing for the respect of local constituents.

Principals who lead high achieving schools work to develop a school culture that promotes risk taking, is caring and open, and provides support (Waters, Marzano, & McNulty, 2003). In order for a school leader to provide this type of educational climate for teachers, students, and the community, educational researchers must explore how emotional intelligence and resilience impact leaders as they do their jobs daily.

By adding to the research, this study will assist school district policymakers in recruiting, selecting, and developing emotionally intelligent and resilient school leaders using a model designed to develop these competencies in one framework.

Statement of the Problem

There is growing acceptance within the field of educational administration that emotional intelligence is an important framework worthy of investigation (Cherniss, 1998, 2000; Fullan, 2001). Research in how expert and non-expert principals solve problems (Leithwood & Steinbach, 1995) highlights the differences in analytical competencies among school leaders. These sets of personal and social competencies were established by Goleman (1998). Studies in the area of effective school leadership, which examine the roles played by personal and social competencies, are emerging in social science research (Stone, Parker, & Wood, 2005).

There appears to be a growing concern that principals' roles are becoming more complex and less manageable (Heibert & Mendaglio, 1988; Holt, Fine, & Tollefson, 1987; Savery & Detiuk, 1986). Stress is an overriding concern in this population of school leaders (Barker, 1996; Clarke, 1985; Hipps & Malpin, 1991).

With the continued demands of raising student achievement, effectively engaging staff and outside stakeholders, and providing effective leadership through changing times, this study sought to add to the body of research on effective school leadership, emotional intelligence, and resilience.

Research Questions

This investigation seeks to answer the following questions:

1. Is there a relationship among emotional intelligence, resilience, and school leadership?
2. How is resilience affected by the relationship between emotional intelligence and school leadership?

Research Design

This study focused on a correlational analysis between the factors of reported emotional intelligence, adult resilience, and school leadership responses among a sample of school principals in a five state area.

Limitations and Delimitations

The focus of this study was limited to the emotional intelligence, resilience, and perceived leadership behaviors of a sample of 63 school principals in public education systems in Florida, Georgia, Louisiana, Mississippi, and Texas. The sample included rural, suburban, and urban schools. The generalizability of these results was limited because of the small sample size obtained.

Other participants were limited to a random sample of teachers and supervisors who were drawn from a list provided by the principal participants. In addition, since participation in this study was contingent on state and district administrative approval, principals who agreed to participate were chosen to participate based on this process. Some participants may have felt obligated to participate due to the request being issued by their supervisor or superintendent. There may have been some pertinent characteristics

of those individuals who chose to participate in this study that may not be apparent as they would be by those who did not choose to participate (i.e., individuals who choose to participate may have higher emotional intelligence or resilience than those who choose not to participate). This may also have some influence on the generalizability of this study. Self-report data are the individual's perception of their knowledge, skills, abilities, and effectiveness; therefore, this also may have impacted the results of this study. Because there is a lack of consensus among the researchers in the fields of emotional intelligence and resilience regarding their respective definitions, this may present some problems in how the respondents interpreted the questions.

Study Assumptions

It is assumed that the sample used in this study was representative of public school principals in Florida, Georgia, Louisiana, Mississippi, and Texas. The researcher assumes that each individual participant demonstrated honesty and sincerity while participating in this research.

Organization of the Study

Chapter I presents the introduction, context for the study, emotional intelligence in school leadership, resilience in school leadership, purpose for the study, justification for the study, statement of the problem, research questions, research design, limitations and delimitations, study assumptions, and definitions of terms. Chapter II presents the review of the literature and research associated with the problem under investigation. Chapter III addresses the research design, subjects, instrumentation, and procedures. Chapter IV presents the results of the analyses and findings that emerged from the study. Chapter V includes a summary of the procedures, major findings, conclusions drawn

from the analyses, a discussion of the study's significance and implications, and recommendations for future study.

Definition of Terms

Although several definitions for emotional intelligence are referenced below, the common theme is how an individual processes and responds to internal and external feelings and emotions.

a) Amydgala—an almond shaped portion of the brain responsible for generating emotions

b) Emotional intelligence is an indication of the way in which one perceives, understands, and regulates feelings. "The ability to monitor one's own and others' feelings and emotions, discriminate among them and to use this information to guide one's own thinking and actions" (Salovey & Mayer, 1990, p. 189). Emotional intelligence develops as one matures and can be learned. It is marked in two competencies—social and emotional (Salovey & Mayer, 1990).

c) Emotional intelligence may also be defined as "the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in self and others" (Mayer, Salovey, & Caruso, 2000, p. 396).

d) Emotional Intelligence—a mixed model (Caruso, Mayer, & Salovey, 2002).

e) Mayer, Salovey, and Caruso (2004) classify emotional intelligence as "hot intelligences" which is a class of intelligences that includes social intelligence, practical intelligence, and personal intelligence. This designation refers to the

manner in which they operate on hot cognitions or cognitions that deal with matters of personal, emotional importance (Abelson, 1963; Zajonc, 1980).

f) Emotional and social competencies—"The personal and interpersonal skills that help people adapt to the demands of everyday life" (Cherniss, 2002, p. 3).

g) G-Factor—signifies general intelligence which is generated by a single unitary quality within the brain. It was derived by Spearman (1927) through his development of a statistical technique that analyzed correlations among a set of variables. It is also known as g.

h) Resiliency—(a) the ability to bounce back, recover, or rebound (Garmezy, 1985); (b) the ability to adapt successfully following a stressful life event (Werner & Smith, 1982); (c) ability to be flexible and to adjust or cope with change, challenges, adversities, or stress (Werner & Smith, 1992); (d) "the process of coping with stressors, adversity, change, or opportunity" (Richardson, 2002, p. 308); (e) the ability to recover from adversity (Patterson, 1991); (f) ability to respond flexibly rather than rigidly to change that is particularly stressful; and (g) the ability to meet the expectations of society despite large obstacles (Fine, 1991). Richardson (2002) refers to this as a process of disruption and reintegration which leads to the development of resilient assets or traits. Finally, Shores (2004) identifies "core resilience" as a driving force which can be categorized into three primary domains—(a) love of self, (b) love of others, and (c) love of a higher power (2005).

i) Resonance—A natural occurrence in an organization where an effective leader is sensitive to other people's feelings and moves them in a positive

emotional direction which leads to an environment of mutual respect and comfort (Goleman, Boyatzis & McKee, 2002)

j) Dissonance—The opposite of resonance where negative emotions and feelings prevail within the organizational atmosphere (Goleman, Boyatzis & McKee, 2002).

CHAPTER II

A REVIEW OF THE LITERATURE

Introduction

The literature review begins with an historical development of the research in emotional intelligence and how it has evolved through the decades from the traditional thought of intellectual processing through standard, mechanical, creative, practical, and social intelligences. Multiple ways of measuring intelligences are presented along with the cultural shift from IQ to EQ in determining success. Theoretical models of emotional intelligence along with controversies among the researchers are discussed in order to provide a broad understanding of the complex evolution of this branch of intelligence. The research is replete with current models of how social and emotional intelligence in leaders impacted job performance and an organization's effectiveness. Some of those models are included. The association of emotional intelligence to personality has been researched. Widely used measures of emotional intelligence are presented.

Since this study was limited to resiliency in education, the major focus of the literature review was in the historical perspective of research in schools. Theoretical frameworks that impact education are presented with some attention given to the research on spiritual competence. This area of study as it relates to leadership in education has not been as fully developed as that of emotional intelligence. However, with the changing roles of school principals, this researcher is of the opinion that more research will begin to evolve.

Emotional Intelligence—Historical Development

In Chapter I, reference was given to the varied meanings of emotional intelligence. An emphasis on emotional intelligence began as early as the 1920s when Thorndike, a well known psychologist, advanced the premise that cognitive intelligence had another dimension. Much of his research was rooted in the behavior of animals, most of which he applied to human behavior. His development of an intelligence test during that period was the foundation of intelligence tests today. He characterized intellectual functioning among three broad classes—standard or abstract intelligence, mechanical intelligence, and social intelligence. This led him to reject any notions that a measure of intelligence was independent of cultural background (Sternberg, 1994).

Weschler, a more commonly known psychologist, was influenced by Thorndike's early works (Edwards, 1994). He also affirmed that intelligence was an effect and not a cause. Such non-intellective factors as one's personality were seen as components of one's intelligence. Furthermore, he defined intelligence as "the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment" (Weschler, 1940, p. 444).

During a Stanford University study in the 1960's, Professor Walter Mischel engaged a group of four-year olds in a study of delayed gratification. These "marshmallow studies" sought to evaluate the role that delayed gratification played in improving cognitive functioning. Each child was presented with a marshmallow on the table where they sat. The examiner asked each four-year old to remain in the room with the marshmallow alone while the researcher stepped out for a moment. Before leaving, the subject was told that if she/he could wait to eat the marshmallow until after the

examiner returned, a second marshmallow would be earned. Ten years later, the SAT results of these participants were examined. The scores of the subjects who were able to delay gratification of the marshmallows scored 210 points higher than their counterparts. This evidence suggested that the youngsters' ability to delay gratification was related to their future cognitive functioning.

Also occurring during this period was the beginning of empirical research on social intelligence as it related to social skills, social anxiety, and emotionality or sensitivity. In the early 1970s, David McClelland, a Harvard professor, led a team of researchers in exploring the concept of competence rather than intelligence. He found that traditional academic aptitude, school grades, and advanced credentials did little to predict how well people perform on the job or how well they would succeed in life. In this study, McClelland interviewed high achievers who were characterized as brilliant and effective and compared them to peers whose performances were judged as mediocre (McClelland, 1975). The most obvious difference was in a set of basic human abilities that IQ tests did not measure.

During the 1980's, Howard Gardner's Theory of Multiple Intelligences gained much recognition, especially in light of the numerous discussions on whether true intelligence can be crystallized into a single IQ score (Gardner, 1983/2003). The seven intelligences are linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal. Just recently, an eighth intelligence, naturalist, was added to Gardner's theoretical model.

The two intelligences that support this discussion are interpersonal and intrapersonal intelligence. Interpersonal intelligence guides such social skills as empathy

and intuition which center around what motivates others. Intrapersonal intelligence is somewhat similar, except these abilities are related to one's self-understanding and are often used to solve problems (Gardner, 1993). Gardner's findings further support the "affective qualities" of intelligence posed by Weschler.

Cognitive ability is highly relevant in achieving success; however, researchers in the field of emotional intelligence are postulating that while both are critical factors in identifying success in obtaining positions of leadership, emotional intelligence represents a strong influence in the leader's ability to excel once in the position (Cherniss, 2000). Although IQ has been seen as a predictor of success, Hunter and Hunter (1984) discovered that other factors can lead to one's success. These researchers estimated that IQ accounts for approximately 24 percent of the variance. Secondly, it has been reported that due to variation, 10 percent may be a more realistic estimate of the variance accounted for in explaining the role IQ plays in predicting success (Sternberg, 1997).

An example of the research on the low predictability of success, using IQ as a measure, is found in the Cambridge-Sommerville Youth Study (which began in 1935). In Sommerville, Massachusetts, 450 boys were included in a longitudinal study of how they got along with others as they grew up. Later, the findings indicated that in their work performance and other areas of their lives, their emotional control and other affective qualities were better predictors of their performance and success than was their IQ. Factors that made the largest difference were their childhood abilities of getting along with others, handling frustration, and exercising self control (Cherniss, 2000).

This shift from IQ to EQ began an investigation into specific emotional competencies, including empathy, self-discipline, and initiative. The first formal

definition of emotional intelligence was proposed by Yale psychologist Peter Salovey and the University of New Hampshire's John Mayer. They characterized emotional intelligence as "the ability to monitor one's own and others' feelings, to discriminate among them, and to use this information to guide one's thinking and action" (Salovey & Mayer, 1990, p.18). Goleman (1995) expanded on Salovey and Mayer's work in regards to how cognitive intelligence differed from emotional intelligence. In addition, further studies indicated that cognitive intelligence, or IQ, was found to be a weak predictor of job performance (Hunter & Hunter, 1984; Sternberg, 1995).

The oldest instrument designed specifically to measure emotional intelligence in the traditional format used to test IQ was Bar-On's Emotional Quotient Inventory, first published in 1997. The instrument was designed to quantify a group of interrelated emotional and social competencies and skills that impact intelligent behavior. The first empirical test specifically designed to test emotional intelligence (EI) was developed by Mayer, DiPaolo, and Salovey in 1990. Later, a new scale of emotional intelligence, the Multi-Factor Emotional Intelligence Scale (MEIS) was presented (Mayer, Caruso, & Salovey, 1999). The instrument was based on ten years of theoretical and empirical research. At that time, the authors asserted that EI resembled a traditional intelligence test. It was measurable, and the construct of EI was large enough and allowed for 12 diverse tasks that were positively correlated. In these published findings, it was argued that emotional intelligence was a basic, but overlooked, intelligence that called for further investigation. In Mayer, DiPaolo, and Salovey's (1990) description, emotional intelligence is "a form of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this

information to guide one's thinking and action" (p. 17). This period was considered one of the major demarcation points in the emergence of emotional intelligence. Further investigation into the foundations of the brain sciences occurred following this study, including Mayer and Salovey's (1997) definition of four distinct, but related abilities. Their model is intended to provide a framework for researchers exploring differences among individuals in "the processing of emotion-relevant information" (Salovey & Grewal, 2005, p. 282).

The first ability is perceiving emotions, or Branch 1 (Mayer, Salovey & Caruso, 2004). Perceiving emotions refers to one's ability to analyze facial expressions as they relate to expressing emotion. This ability is described as the most basic of the four and provides the basis for making all the other abilities possible.

Branch 2 of emotional intelligence is using emotions, which refers to one's ability to capture emotions in order to process other cognitive activities such as problem solving. To further illustrate Branch 2, Isen, Johnson, Mertz, and Robinson (1985) were able to verify that as one's mood changes, so does the ability to solve problems effectively. Being in a slightly sad mood stimulates a more productive ability to solve problems because it places one in a state of careful conduct, thus promoting methodical planning. Furthermore, a happy mood would stimulate creative and innovative thinking. Therefore, an individual who is emotionally intelligent could take advantage of personal moods to complete a task or activity.

The third branch, understanding emotions, refers to one's ability to understand emotion language and appreciate complicated relationships that surround emotions.

Being able to discriminate slight variations between emotions (i.e., happy-ecstatic) could serve as an example of this type of ability.

The fourth and final branch, managing emotions, includes one's ability to manage personal emotions while also being able to manage others' emotions. Thus, an emotionally intelligent person can capture personal emotions and use them to achieve an intended goal (i.e., an orator using personal anger to excite a crowd). Inherent in these four branches of emotional intelligence is one's awareness of what constitutes appropriate behavior.

Mayer's and Salovey's four-branch model has been recommended as a very useful framework for evaluating the differences among individuals and their ability to process emotional information (Salovey & Grewal, 2005). Moreover, it has been used in developing capacity within organizations.

In *Emotional Intelligence*, Daniel Goleman (1995) theorized that there is no single unitary quantification of intelligence, such as that posed by g-based theories. He maintained that there are many different kinds of intelligence and mental energy that allow individuals to problem solve or create. Accordingly, Mayer (2001), Goleman (1995) and others seized this opportunity to further the research and impact public policy. Goleman and others postulated that Emotional Intelligence (EI) could quite possibly be the best predictor of success in life. As a result, popular press became intrigued with this model and popular magazines began publishing works on EI.

In October 1995, *Time Magazine* used the term EQ (Emotional Quotient) on its cover (Gibbs, 1995). The publicizing of EI in a widely distributed news magazine began a massive public interest in EI that went beyond the confines of academia. Numerous

personality scales were published; consultants proliferated; and businesses began to measure prospective candidates based on a performance scale of emotional intelligence. Several trade books saturated the market, including such short reads as Kravitz and Schubert's (2000) *Crisp: Emotional Intelligence Works: Developing "People Smart" Strategies (Crisp Fifty-Minute Book)*, which addresses five emotional areas and provides strategies for interactions with individuals at work and during leisure activities. Many other popular books were published based on the popularity of Goleman's work (Mayer, 2001).

However, in *Emotional Intelligence: Science and Myth,* Matthews, Zeidner, and Roberts (2003) challenged Goleman's claims by proposing that much of the publicized information on EI centers on a plethora of trade texts dealing with self-help and management practices, assessment, and other practical applications. The authors assert that the claims that EI (a) plays an important role in determining real-life outcomes, (b) positively relates to academic achievement, occupational success and satisfaction, and emotional health and adjustment; and (c) is even more important than intellectual intelligence are rather absurd. One claim—that of comparing EI to IQ is worth noting here. Rather than seeing the two as antagonistic, Matthews, Zeidner, and Roberts proposed that those individuals with high IQ and high EQ are worthy of study as this may lead to a confirmation that a person who demonstrates high IQ will be a stronger candidate for high EI. In addition, they hypothesize that many of those with high IQ in Western society are often the victims of mockery through various media and referred to as nerds and socially inept. Although they recognize that EI plays a critical role in occupational success, they contend that much of the research used unpublished

commissioned surveys which are conducted by the authors. Little descriptive, correlational or experimental research exists that further supports the importance of EI in occupational success or general well-being. However, additional empirical studies are being developed and such companies as the Hay Group are working with other researchers to further the studies into the construct of EI.

In summary, emotional intelligence has brought about a major flurry of discussion, controversy, and many opportunities for further investigation. Within the last ten years, an enormous amount of interest has been generated. In addition to the proliferation of literature in the academic world, the same level of interest exists outside the field of psychology. Numerous magazine articles and books have been written on emotional intelligence, and this increased attention has raised the level of media interest, especially as it relates to leadership (Salovey & Grewal, 2005). In addition, this attention brought about a popularization of emotional intelligence that crosses several domains—professional, personal, and social. Mayer, Salovey, and Caruso (2004) postulated that the marked divide among the experts in the field of intelligence is due, in part, to the various opinions about emotional intelligence. While emotional intelligence is being labeled as an "elusive concept" (Davies, Stankov, & Roberts, 1998, p. 989), it is said to matter twice as much as IQ (Goleman, 1998). With current research findings, emotional intelligence can now be linked to such work-related outcomes as individual and organizational performance (Cherniss, 2000).

Theoretical Definitions of Emotional Intelligence

Emotional Intelligence models abound in the research; thus, there are many definitions of this construct. A typical definition would include a person's ability to adapt

to the environment he inhabits and learn from experiences (Sternberg & Detterman, 1986). In the *Encyclopedia of Applied Psychology*, Spielberg (2004) suggests there are three major conceptual models of emotional intelligence:

1. Salovey-Mayer Model (1997)—The construct of EI is the ability to perceive, understand, manage, and use emotions to facilitate thinking, and is measured by an ability-based measure (Mayer, Salovey, & Caruso, 2002).
2. The Goleman Model (1998)—The construct includes a wide variety of competencies and skills that drive leadership performance (Boyatzis, Goleman, & Hay Group, 2001).
3. The Bar-On Model (1997, 2000)—This construct describes emotional and social competencies, skills, and facilitators that impact intelligent behavior (Bar-On & Handley, 2003a, 2003b).

In comparison, Sternberg refers to these as a triarchic of successful intelligences, which is a balance between one's analytic, creative, and practical abilities. Sternberg (1985) presented a model theory, Triarchic Theory of Human Intelligence, which he later expanded. Three aspects—analytical, creative, and practical thinking—comprise what he referred to as successful intelligence (Sternberg, 1998). He argued that through practical intelligence, one successfully evaluates and makes a determination on how to achieve individual goals. He further argued that this type of reasoning is the underlying component in abstract analytical intelligence. This theory of successful intelligence allows one to adapt internally and externally to the social/cultural contexts of the environment (Cianciolo & Sternberg, 2004).

There remains a growing body of empirical research that suggests that the distinction between academic and practical intelligence does exist (Sternberg et al., 2002; Wagner, 2000). Although many in the world of academia regard intelligence as a single entity, there are several aspects to this construct, including intelligence demonstrated in an academic setting and during daily life routines. Experimental psychologist Thorndike asserted that social intelligence is a distinct type of intelligence not measured by conventional measures of intelligence. Sternberg et al. (2000) and Wagner and Sternberg (1986) later supported his claims. This claim was further argued through other research which sought to validate that interpersonal and intrapersonal intelligences were distinct from those measured by conventional intelligence tests, which measure such abilities as linguistic and logical-mathematical (Gardner, 1983/2003; Gardner, 1999). In addition, Salovey and Mayer (1990), Mayer, Caruso, and Salovey (1999), and Mayer, Salovey, and Caruso (2000) stressed that intelligence is a multidimensional human ability that cannot be limited to strict intellect as measured by traditional intelligence tests. This was furthered by the separateness of emotional intelligence (Goleman, 1995). Neisser (1976) referred to these as conventional wisdom that reflects academic and practical intelligence. Academic or analytical intelligence refers to a person's ability to solve problems in an academic setting; and practical intelligence refers to a person's ability to solve problems in everyday situations (practical life challenges).

Emotional Intelligence Theory

The theory of emotional intelligence has been grounded in numerous claims, with Mayer, DiPaolo, and Salovey (1990) being one of the first to coin the phrase. At that time it was described as a form of social intelligence involving the ability to monitor the

feelings of oneself and that of others. More recently, it has been labeled as one of the *hot* intelligences (Mayer, Salovey, & Caruso, 2004).

Clustered with social, practical, and personal intelligence—emotional intelligence operates on hot cognitions, which simply are matters of personal and emotional importance. The model in Table 1 illustrates the framework used most often to describe the relationship between the individual's personal and social competence.

Table 1

Personal and Social Competence

	Self Personal Competence	**Other** Social competence
	Self-Awareness	**Social Awareness**
Recognition	- Emotional self-awareness - Accurate self-assessment - Self-confidence	- Empathy - Service orientation - Organizational awareness
	Self-Management	**Relationship Management**
Regulation	· Self-control · Trustworthiness · Conscientiousness · Adaptability · Achievement drive · Initiative	· Developing others · Influence · Communication · Conflict management · Leadership · Change catalyst · Building bonds · Teamwork & collaboration

The Theory of Multiple Intelligences

Howard Gardner (1983/2003) identified seven components of intelligence (Table 2). He noted that each of these intelligences is separate and distinct and varies from one

person to the other. According to Gardner, an individual possesses some level of each of these intelligences. Recently, he developed an eighth intelligence—naturalist. Naturalist intelligence encompasses the abilities to sense patterns and make connections to the element of nature. More research will be forthcoming on this newly added dimension in the multiple intelligence theory. Table 2 represents Gardner's intelligences with examples of professions associated to each.

This multiple intelligence model has received worldwide acceptance, mainly due to the correlation of each described intelligence to specific parts of the brain. The neurophysiology studies Gardner referenced in his work were the result of extensive investigations in pathology and brain injury (Gardner, 1983/2003).

Although most areas of intelligence can be associated with effective leadership, the subscales most closely associated with success as a leader are (a) interpersonal—the ability to sense the feelings and be in tune with others; (b) intrapersonal—an awareness of one's own feelings; (c) linguistic—the ability to communicate effectively with those in one's environment; and (d) logical-mathematical—the ability to understand and use complex logical cognates (Shearer, 1997).

Leadership teams with a collective intelligence (i.e., multiple intelligences) are key to successful leadership. This multidimensional approach in organizations allows for a complex system of operation where leadership teams collectively pool their talents and assess their effectiveness (Reeves, 2005). Through the efforts of a combined force, multiple perspectives and intelligences are working towards the same common goal. A framework addressing this dimension in leadership is offered by Douglas Reeves (2004).

This multidimensional model provides for frequent opportunities of self reflection and adjustment.

Table 2

Gardner's Intelligences with Examples

Intelligence	Examples	Discussion
Bodily-kinesthetic	Dancers, athletes, surgeons, crafts people	The ability to use one's physical body well.
Interpersonal	Sales people, teachers, clinicians, politicians, religious leaders	The ability to sense other's feelings and be in tune with others.
Intrapersonal	People who have good insight into themselves and make effective use of their other intelligences	Self-awareness. The ability to know your own body and mind.
Linguistic	Poets, writers, orators, communicators	The ability to communicate well, perhaps both orally and in writing, perhaps in several languages.
Logical-mathematical	Mathematicians, logicians	The ability to learn higher mathematics. The ability to handle complex logical arguments.
Musical	Musicians, composers	The ability to learn, perform, and compose music.
Naturalistic	Biologists, naturalists	The ability to understand different species, recognize patterns in nature, classify natural objects.
Spatial	Sailors navigating without modern navigational aids, surgeons, sculptors, painters	The ability to know where you are relative to fixed locations. The ability to accomplish tasks requiring three-dimensional visualization and placement of your hands or other parts of your body.

Social Intelligence Theory

Highly linked to interpersonal intelligence (Gardner, 1983/2003), social intelligence is one's ability to understand other people within the environment—i.e., what motivates people into action, how people approach their work, and how people work cooperatively

within groups or teams. Successful individuals in the workforce (salespeople, religious leaders, politicians, teachers, corporate executives, etc.) are likely to possess high degrees of interpersonal intelligence (Garrigan & Plucker, 2001, as cited in Plucker, 2003).

Successful Intelligence Theory

Successful intelligence is based on Sternberg's model (1997, 1998, 1999b) and is comprised of four components: (a) the ability to reach one's life goals within the socioculture context; (b) the ability to capitalize on one's strengths and use those strengths to correct or compensate for weaknesses; (c) the ability to adapt to, shape, or select environments; and (d) the ability to use a combination of practical, creative, or analytical abilities to meet such challenges. Fundamentally, Sternberg's theory of intelligence advances the belief that one develops intelligence throughout life (Sternberg, 1998). It is further argued that intelligence not only develops throughout life, but that traditional methods of measuring intelligence (i.e., IQ tests) captures only a part of what it means to be intelligent, which he defined as being able to adapt effectively and flexibly to one's environment.

The three intelligences, or abilities as Sternberg (1998) called them, make up successful intelligence are:

1. Analytical intelligence is the ability to analyze and evaluate ideas, solve problems, and make decisions.
2. Creative intelligence is the ability to go beyond what is given and generate novel and interesting ideas.
3. Practical intelligence is the ability to find the best fit between oneself and the demands of the environment.

Analytic Intelligence Theory

Analytic intelligence theory is associated with the information process components of intelligence and how the components are used to analyze, compare/contrast, evaluate, or judge a fairly abstract situation. Analogies or syllogisms are examples of the types of analytic problems where this ability is called upon (Guyote & Sternberg, 1981; Sternberg & Gardner, 1983).

In one of Guyote and Sternberg's (1981) findings on the analytical skill of reasoning, the better reasoners invested more of their time solving problems by engaging in more global and multi-component planning, whereas poorer planners tended to focus more of their time on local, immediate planning. Therefore, better reasoners recognized the need to invest more upfront time so as to make way for more efficient ways to process problems later on. Effective leaders who engage in strategic long-term planning are able to develop an organizational climate that operates in a seamless manner of solving day-to-day challenges.

Another finding worth noting in Sternberg's study, as it relates to leadership, falls within the studies on inductive reasoning (Sternberg & Gardner, 1982, 1983). Although it was not the original intent in his analysis, the preparation-response component was found to be highly correlated to the metacomponents of higher order processing than to the items on the test related to inductive reasoning. Therefore, these higher order skills (inference, mapping, application, comparison, and justification) formed the newly established concept for planning, monitoring, and evaluating task performance.

This evidence suggests that school leaders with strong analytical intelligence are more likely to engage in long-term strategic planning rather than in developing short-term solutions for potentially long-term problems.

Creative Intelligence Theory

Creative intelligence describes how individuals understand the world, guided by basic beliefs and personality. It focuses on how individuals think and the strong desire to achieve something new and different (Rowe, 2004, p. 2). There are certain aspects that guide an individual's creativity intelligence—intuition, innovation, imagination, and inspiration. Rowe advocates that creatively intelligent leaders are critical in finding solutions to difficult problems. These leaders are capable of navigating an organization into the future by possessing the competency to read and understand the environment, developing allies, encouraging social responsibility, managing complexity, and using technology. This proactive stance is what can take an organization into the future. A leader willing to take risks, think outside of the box, and recognize the importance of empowerment is more likely to gain wider acceptance from the stakeholders as the organization is taken through change (Rowe, 2004).

The term, "contrarian leader," was developed by Steven P. Sample, president of the University of Southern California, in his book *The Contrarian's Guide to Leadership* (2002b). Sample described leadership as being "elusive and tricky" (p. 1). Similar to Rowe (2004), Sample (2002b) believed that creative leaders must be willing to take risks and think outside of the box. In describing a contrarian style of leadership, Sample quickly dispelled the notion that this newly coined term counters all conventional wisdom associated with leadership. Full leadership cannot be obtained by imitating other leaders,

but through the process of developing one's own leadership potential. Sample encourages those contemplating leadership to break free, thus allowing for natural creativity and intellectual independence to occur. This counterintuitive approach offers encouragement to a leader with high creative intelligence.

Finally, Sample offers nine counterintuitive lessons:

1. Never make a decision today that can reasonably be put off to tomorrow.
2. Think gray. Don't form opinions if you don't have to.
3. Think free. Move several steps beyond traditional brainstorming.
4. Listen first, talk later. And when you listen, do so artfully.
5. Shoot your own horse. Don't force others to do your dirty work.
6. The best leaders don't keep up with the popular media and the trades.
7. Know what hill you are willing to die on—and keep its exact location to yourself.
8. Know the all-important difference between being leader and doing leader.
9. You can't copy your way to the top. (Sample, 2002a)

Practical Intelligence Theory

Practical intelligence is the ability to apply personal abilities when addressing daily problems. An individual with high practical intelligence is able to adapt to, shape, and select environments. Adaptation is seen as how one changes in order to suit the environment. Shaping occurs when one changes the environment to suit one's needs, abilities, or desires. Selection occurs when one makes the choice to seek out another environment that is better suited to one's abilities, skills, or desires (Sternberg et al., 2000). Quite often, how one works within the environment is heavily dependent on tacit knowledge (Sternberg & Wagner, 1993; Sternberg, Wagner, & Okagaki, 1993; Sternberg, Wagner, Williams, & Horvath, 1995; Wagner, 1987; Wagner & Sternberg, 1986). Tacit knowledge, which is often not verbalized, is a construct that describes what one needs to know to work successfully in an environment that is unfamiliar. Tacit knowledge is relied

on as a way to measure practical intelligence (Sternberg et al., 2000). Although difficult to express in words, there are three characteristics of tacit knowledge.

1. It is procedural—not factual (how-to versus knowledge)
2. It is usually learned without help
3. It is about things that are personally important

Sternberg et al. (2000) posit that tacit knowledge tests are better predictors of a successful career than other tests that measure general intelligence. Therefore, those persons who have acquired strong tacit knowledge will do well in a multitude of employment fields.

Social Cognitive Theory

Miller and Dollard (1941) proposed a theory related to how humans are impacted by social cues and interactions. Bandura and Walters (1963) expanded this theory of social learning to include two principles—observational learning and vicarious reinforcement. Bandura (1977) furthered the concept of self-efficacy, which refuted the traditional learning theory. Social cognitive theory addresses cognitive, emotional aspects and the aspects of behavior for understanding these interactions. This theory provides avenues for additional research and for new ideas concerning other theoretical areas such as emotional intelligence and resilience.

Core Assumptions of Social Cognitive Theory

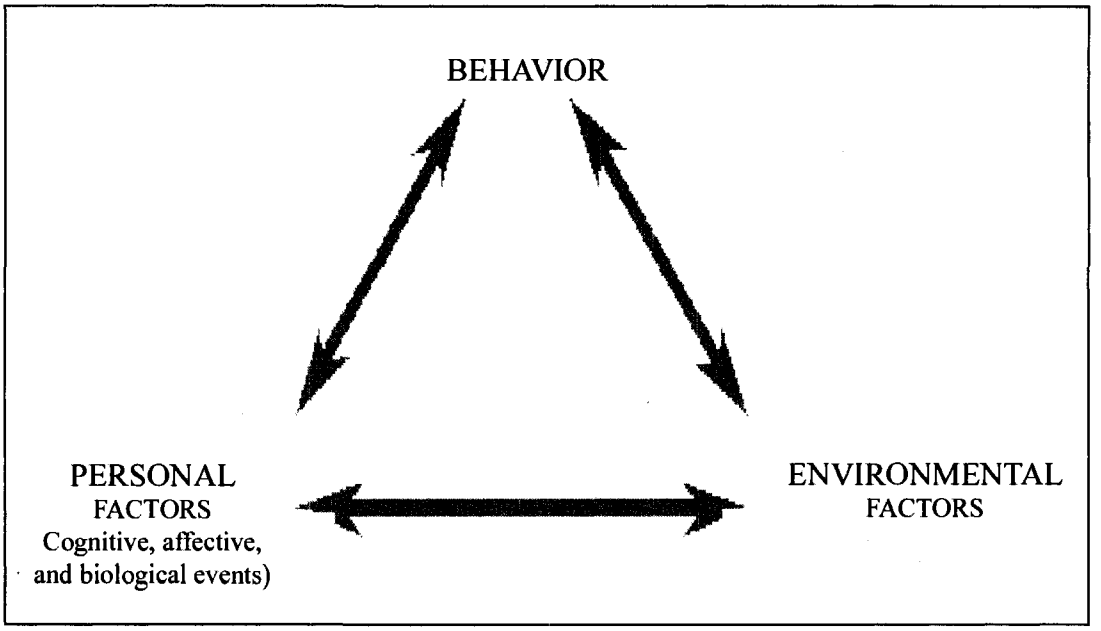
Social cognitive theory explains how individuals develop certain behavioral patterns along with setting the foundation for intervention strategies (Bandura, 1997). It provides a framework for developing, implementing, and evaluating such intervention strategies to address behavior.

The environments (those factors that can affect one's behavior) include both social—family, friends, and colleagues—and physical—room size, atmosphere, temperature, and the availability of resources. Situation refers to the cognitive and mental symbols of the environment that impact a person's behavior and is how a person perceives place, time, and physical features and activity (Glanz, Ramer, & Lewis, 2002). The two combined (environment and situation) provide the framework for understanding behavior (Parraga, 1990).

These three factors (people, environment, and behavior) are constantly interacting and influencing each other (Glanz, Ramer, & Lewis, 2002, as cited in Pajares, 2002). The models for the behavior are simply provided by the environment; therefore, a person observes the behavior of another and reinforces it—this is observational behavior (Bandura, 1997). Behavior capability is a person's skill in performing based on the premise that they must know the behavior. This dynamic reaction is illustrated below.

Figure 1

Social Cognitive Theory Conceptual Model



(Glanz, Ramer, & Lewis, 2002, as cited in Pajares, 2002)

In this model, behavior is impacting and impacted by personal and environmental factors as listed below.

Concepts of the Social Cognitive Theory

1. Environment: Factors physically external to the person; Provides opportunities and social support
2. Situation: Perception of the environment; correct misperceptions and promote healthful forms
3. Behavioral capability: Knowledge and skill to perform a given behavior; promote mastery learning through skills training
4. Expectations: Anticipatory outcomes of a behavior; Model positive outcomes of healthful behavior
5. Expectancies: The values that the person places on a given outcome, incentives; Present outcomes of change that have functional meaning

6. Self-control: Personal regulation of goal-directed behavior or performance; Provide opportunities for self-monitoring, goal setting, problem solving, and self-reward

7. Observational learning: Behavioral acquisition that occurs by watching the actions and outcomes of others' behavior; Include credible role models of the targeted behavior

8. Reinforcements: Responses to a person's behavior that increase or decrease the likelihood of reoccurrence; Promote self-initiated rewards and incentives

9. Self-efficacy: The person's confidence in performing a particular behavior; Approach behavioral change in small steps to ensure success

10. Emotional coping responses: Strategies or tactics that are used by a person to deal with emotional stimuli. Provide training in problem solving and stress management

11. Reciprocal determinism: The dynamic interaction of the person, the behavior, and the environment in which the behavior is performed. Consider multiple avenues to behavioral change, including environmental, skill, and personal change. (Glanz, et al., 2002, p. 169)

Assessing Emotional Intelligence in Leadership

In 1998, a paper published by Davies, Stankov, and Roberts reported that no conclusive statements could be drawn about the research on measurements of emotional intelligence. The report was based on assessments that were available at that time. Due to the fact that most of those assessments were fairly new at that time, not much was known about their psychometric properties. New research suggests that EI and those instruments that measure it are distinct entities. Unfortunately, not much research on the predictive validity of EI measures is available (Cherniss, 2000). Longitudinal studies, which are time bound will offer other future possibilities

Bar-On's (1997) EQ-i (Emotional Quotient Inventory) is the oldest instrument that measures emotional intelligence. It is a self-report instrument designed to evaluate the personal qualities that help individuals achieve and possess better emotional well-

being. The instrument was used to evaluate thousands of individuals to determine their likelihood of success as United States Air Force recruiters. The study's results indicated that EQ-i was a predictor of success for the group of recruiters. However, the EQ-i did not indicate any significant differences based on ethnic or racial identity.

Unlike Bar-On's EQ-i, the MEIS (Multifactor Emotional Intelligence Scale) evaluates ability rather than acting as a self-report to measure ability. The initial assessment, developed in 1997, was later replaced in 2002 by the MSCEIT (Mayer-Salovey-Caruso Emotional Intelligence Test). Using this assessment, subjects are asked to perform a series of tasks designed to evaluate their ability to perceive, identify, understand, and work with emotion. It evaluates four branches of emotional competency:

1. Perceiving Emotions: The ability to perceive emotions in oneself and others as well as in objects, art, stories, music, and other stimuli.
2. Facilitating Thought: The ability to generate, use, and feel emotion as necessary to communicate feelings or employ them in other cognitive processes.
3. Understanding Emotions: The ability to understand emotional information, to understand how emotions combine and progress through relationship transitions, and to appreciate such emotional meanings.
4. Managing Emotions: The ability to be open to feelings, and to modulate them in oneself and others so as to promote personal understanding and growth.

There are data that indicate evidence of construct, convergent, and discriminant validity; however, no predictive validity has been established.

The ECI (Emotional Competence Inventory) is designated as a 360-degree instrument, which means that those individuals who know the subject are asked to rate the person on 20 competencies based on Goleman's (1995) research. Currently, the instrument is in the early years of development, with approximately 40 percent of its test items coming from a more dated instrument (the Self-Assessment Questionnaire). This instrument, developed by Boyatzis in 1994, has been validated against the performance of hundreds of competency studies involving managers, executives, and leaders from North America, Italy, and Brazil. This instrument, like the previous ones discussed, has no research to support predictive validity.

Schutte's et al. (1998) developed and validated a 33-item self-report which was based on Salovey and Mayer's (1990) earlier work. EI scores on this measure were positively correlated with first-year grades and supervisor ratings of students seeking a counseling degree and employed at various mental health agencies. In addition, the therapists' scores ranged higher than those of the clients.

Seligman Attributional Style Questionnaire (SASQ) is a strong test that measures learned optimism (Schulman, 1995). It appears effective in identifying high performing individuals (i.e., students, salespeople, athletes).

Leadership—Theoretical Models

Intelligence models abound in the research; thus, there are many definitions of this construct. A typical definition would include a person's ability to adapt to the environment they inhabit and to learn from experiences (Sternberg & Detterman, 1986). In the *Encyclopedia of Applied Psychology*, Spielberger (2004) suggested there are three

major conceptual models of emotional intelligence: a) Salovey-Mayer Model (1997); b)The Goleman Model (1998); and c) The Bar-On Model (1997, 2000).

General Intelligence and Leadership

General intelligence is known as the g-Factor or g. It is also referred to as general cognitive ability and is a valid predictor of performance and learning across all job categories (Schmidt & Hunter, 1998). This traditional view of intelligence requires strong memory and analytical abilities (Carroll, 1993; Catell, 1971; Jensen, 1998). This theoretical model is the most widely studied predictor in determining personnel decisions. In addition, some investigators have suggested that g may be the most valuable tool for identifying staff who can engage in continued professional growth and who can learn to adapt to unpredictable, changing environments (Snow & Snell, 1993).

In examining g and job performance, it is necessary to address other factors that may be important to job success. When reviewing validity estimates for general cognitive intelligence, it was determined that g was not the only predictor of performance; in fact (after correction for error), g accounted for only 20-25% of the explained variance, thus leaving 75-80% unexplained (Jensen, 1998). Secondly, the types of problems employees face in their daily lives are not assessed through general intelligence tests. Therefore, the types of skills one needs to do the job cannot be assessed totally with general intelligence tests. Finally, intelligence is seen as being a relatively stable trait for predicting performance across several domains over time. Sternberg et al. (2000) provided a strong case for the following:

1. Performance varies across certain contexts (Ceci & Roazzi, 1994; Serpell, 2000)

2. Abilities are, in some instances, modifiable (Feuerstein, 1980; Grotzer & Perkins, 2000; Nickerson, Perkins, & Smith, 1985; Perkins & Grotzer, 1997)
3. Standard IQ does not measure all the dynamics associated with intelligent performance (Sternberg, 1985; Sternberg, Conway, Ketron, & Bernstein, 1981; Sternberg & Kaufman, 1998; Yang & Sternberg, 1997)
4. There are broader conceptualizations of intelligence which impact job performance—(a) interpersonal intelligence (Gardner, 1983/2003, 1999); (b) emotional intelligence (Goleman, 1995; Mayer, Salovey, & Caruso, 2000); and (c) creative and practical intelligence (Sternberg, 1985, 1997, 1999a, Sample, 2002)

Emotional Intelligence and Leadership

Emotional intelligence has been linked to effective leadership (George, 2000; Goleman, 1998). Through recent breakthroughs in neurology and research, there is evidence that supports that leaders' moods greatly impact others within the organization. Emotional intelligence is connected to the limbic pathways that bridge the amygdala to those areas in the prefrontal cortex—the brain's executive center (Goleman, 1995). This further substantiates the power of emotionally intelligent leadership that inspires, motivates, and arouses passion and commitment from the individuals within the organization (Goleman, Boyatzis, & McKee, 2002). Goleman et al. (2002) believe that the primal role of leaders is emotional.

Primal Leadership: Realizing the Power of Emotional Intelligence (Goleman, Boyatzis, & McKee, 2002) attempts to link outstanding leaders, their emotional intelligence, and their success in leading an organization. It was based on decades of

research and consultation with executives within organizations. It framed three major propositions: (a) great leaders create resonance rather than dissonance; (b) individuals can significantly improve their emotional intelligence; and (c) resonant teams can be created by leaders at all levels by developing a culture that breeds emotional intelligence. With respect to leadership, emotional intelligence is defined as how leaders handle their emotions and respond to the emotions of others. This relationship with members in the organization may involve applying one's personal intellect in order to acknowledge the emotions of others.

The framework provided by the work of Goleman, Boyatzis, and McKee (2002) links the influence of emotional intelligence to both leadership and school climate. Table 3 illustrates this framework, which is regularly used in high-performing organizations.

Table 3

Framework Linking the Influence of Emotional Intelligence to Leadership and School Climate

Leadership Style	EI Competencies	Impact on Climate	Objective	When Appropriate
Coercive	Drive to achieve, initiative, emotional self control	Strongly negative	Influence immediate compliance	In a crisis, to kick-start a turnaround, or with problem employees
Visionary (Authoritative)	Self-confidence, empathy, change catalyst	Most strongly positive	Mobilize others to follow a vision	When change requires a new vision, or when a clear direction is needed
Affiliative	Empathy, building bonds, conflict management	Highly positive	Create harmony	To heal rifts in a team or to motivate during stressful times
Democratic	Collaboration, team leadership, communication	Highly positive	Build commitment through participation	To build buy-in or consensus, or to get valuable input from employees
Pacesetting	Conscientiousness, drive to achieve, initiative	Highly negative	Perform tasks to a high standard	To get quick results from a highly motivated and competent team
Coaching	Development of others, empathy, emotional self-awareness	Highly positive	Build strengths for the future	To help an employee improve performance or develop long-term strengths

(Goleman, et al., 2002)

Table 3 is illustrated in studies that indicate that the most effective principals integrate four or more of these six styles on a regular basis and will switch to the leadership style that is most effective for any given situation (Forde, Hobby, & Lees, 2000).

Recent literature connecting emotional intelligence to school leadership has gradually increased (Barent, 2005; Beavers, 2005; Calderin, 2005; Cook, 2006; Crawford, 2003; Dominguez-Cruz, 2001; Harrison, 2006; Stone, Parker, & Wood, 2005) within the last five years. These studies focus on effective school leadership that impacts such dynamics as school climate, employee relations, and school performance.

Personality Theories and Leadership

Personality psychology began with Gordon Allport (1937) who postulated that personality traits are commonly shared by everyone; however, the dimensions of personality are what make individuals differ. Allport's research was later supplemented by that of Raymond Cattell (1957), who used factor analysis to describe these traits further. According to Cattell, surface traits are clusters of behaviors that go together. A more contemporary perspective of viewing personality as a five-factor model (i.e., the Big Five) was advanced. These five factors are extroversion, agreeableness, conscientiousness (predicts self control and dependability), emotional stability (neuroticism), and openness to experience. This research, dormant for a period, later made a resurgence with the Goldberg lexical project in 1981, which reconfirmed Allport's findings. Later, widespread acceptance of the subset of five common factors led to a system of categorizing personality traits.

Markers of extroversion are (a) pronounced engagement with others, (b) enthusiasm, (c) action-oriented personalities, and (d) positive emotions. Agreeableness is marked by concern with cooperation and social harmony. An optimistic view of human nature is coupled with a belief in people as being honest, decent, and trustworthy. Emotional stability describes a person who is calm and not prone to irritation or stress.

Finally, openness to experience allows one to distinguish various other personalities among individuals, to be creative, and to be imaginative. Openness is the only trait linked to neuropsychological tests measuring the prefrontal cortical functions. This same area of the brain is also linked to the stimulation of emotional intelligence (Goleman, Boyatzis, & McKee, 2002).

Barrick and Mount (1991) reviewed over 100 studies and found that in the area of job performance, conscientiousness proved to be consistent in all performance criteria for all occupational groups where social interaction was involved. In addition, extraversion and openness to experience served as valid predictors of the criteria associated with proficiency.

Resiliency

Research on resiliency in education began in the late 1970s with the notable studies of Rutter, Maughan, Martimore, and Ouston (1979). These early investigations centered on the study of why some children experienced positive outcomes in spite of circumstances that would typically lead to failure. Resiliency was initially described as the capacity to overcome adversity (Bosworth & Earthman, 2002). Another body of research investigated individual and family factors that were thought to contribute to resiliency (Best & Hauser, 1997). However, very little research looked at community and environmental factors. Broad statements were used to categorize resiliency and very few empirical studies were initiated. Usually some pre-existing risk condition (Powell, 1995) or family conditions (Fergusson & Lynskey, 1996) were the models incorporated into the resilience research. The sample subjects were often homogeneous and small (Gonzalez, 1997).

Resiliency in Education

In elementary and secondary schools during the mid-1990s, an extensive body of research examined the influence of the educational environment in promoting or impeding resiliency in children (Bearman, Jones, & Udry, 2003; Bush & Wilson, 1997; Embry, 1997; Morrison, Furlong, & Morrison, 1997; Rutter, 1980; Sagor, 1996). The most commonly used model of promoting resiliency in children, proposed by Henderson and Milstein (1996), outlined six models for promoting resiliency in schools—high expectations, a caring and supportive school environment, pro-social bonding, setting boundaries, providing opportunities for meaningful participation, and teaching life skills (Bearman et al., 2003; Ketchel & Bieger, 1989; Rutter, 1979, 1980; Sagor, 1996; Werner & Smith, 1992). This model was borne out of the research of Rutter (1980), Gottfredsen (1986), Rak and Patterson (1996), and later Catterall (1998). As commonly reported, students engaged in meaningful relationships with their educators, fostered their resilience, and lowered their risks of poor attendance, poor achievement and low academic performance.

Historical Development and Theoretical Frameworks of Resiliency

Historically, the inquiry into resiliency has been described as a three-wave process (Richardson, 2002). According to Richardson (2002), the first wave involves phenomenological descriptions of individuals thriving in spite of risk factors or adversity. Werner and Smith (1982) conducted a longitudinal 30-year study of 200 students out of 700 that were classified as at risk due to perinatal stress, poverty, daily instability, and serious parental mental health problems. The researchers found that 72 of those 200 students, in spite of their conditions, did very well and shared some commonalities such

as being female, robust, socially responsible, adaptable, tolerant, and achievement oriented. The students were also identified as good communicators along with having good self-esteem. Rutter (1979, 1985) had similar findings among inner-city youth in London and the island of White, which is rural. Other commonalities included easy temperament, a positive school climate, self-mastery, self-efficacy, planning skills, and a warm, close, and personal relationship with an adult. Garmezy, Masten, and Tellegen (1984) added to the research with their study of children of schizophrenic parents. These children, who grew up to be warm and competent people, displayed such characteristics as an internal locus of control, self-discipline, good problem-solving skills, critical-thinking skills, and humor. All of this was complemented with a supportive extended family environment and an external support system. These resilient qualities helped the subjects recover from adversity.

The second wave of resiliency inquiry pursued the discovery of a process of attaining these resilient qualities and was based on Richardson's (2002) model. Richardson discussed the process of acquiring resilient qualities that occur when life is disrupted. Coping strategies are the result of growth, knowledge, and self-understanding when individuals are faced with a set of adverse circumstances. Thus, individuals gain insight into these coping strategies. They either progress through steps of reintegration or become stagnant due to holding on to homeostasis and not getting past the experience and growing from it.

Werner and Smith (1992) describe the third wave of resiliency research as focusing on a capacity referred to as "self-righting" (p. 202). Lifton (1993) characterized this resilience as a capacity to transform and change. The research around this construct,

according to Richardson (2002), is the oldest wave and may have centuries-old foundations. He postulated that the driving force in this third wave is towards self-actualization. He further stated that energy units, which come from various forms of living and nonliving things, produce an exchange of interdependent systems. Thus, he believed that physicists will play an important role in further development of this theory.

There are other models of resiliency described in the literature that characterize resilient adults. Research studies conducted by Conner (1993), Wolin and Wolin (1994), Henderson and Milstein (1996), and Flach (1988) addressed how adults adapt to life stressors. Conner's (1993) model seems to be the most comprehensive and has a measurement component.

More recently, Wolin and Wolin have developed a resiliency model of seven core resiliency concepts. Furthermore, in their work with teenagers, Wolin, Desetta, and Hefner have identified key strategies of engaging young teens in multi-sensory activities using the vocabulary of the seven core resiliency concepts—insight, independence, relationships, initiative, creativity, humor, and morality (2000). Through exercises which utilize analytic skills, reading, writing, and discussions, teens recognize and build their own strength. This strengths-building program operates on a relationship driven path in which leaders provide the support and context for building gratifying and constructive lives (Wolin, Desetta, & Hefner, 2000).

Adult core resilience was investigated by Shores (2004) proposed a three principle domains of resilience in adults. The first domain—Love of Self, involves one's direction and purpose in life. The second domain—Love of Others, addresses supportive

and meaningful relationships with others. Finally, the third domain—Love of a Higher Power—focuses on connecting with a source of inner strength.

Spiritual Competence

In a discussion of basic trust, Erikson (1963) advocates the importance of finding meaning in one's life and conveying this meaning to others. Werner's (1996) research in the development of resilient traits addresses an individual's faith in something beyond oneself and using this faith to overcome adversity. It was not about church attendance, but rather was more a belief that life, despite its challenges, made sense and eventually led to a sense of mission (Werner, 1996). Wolin and Wolin (1994) describe this spiritual component as morality. While researching this resiliency in children, morality develops through our judging and expands outwardly to other values such as decency, honesty, compassion, and fair play. Later, as individuals mature into adulthood, this stage of morality develops into a servitude trait where one devotes time and energy towards serving the community and the world through such efforts as spreading around one's "emotional and material wealth" (Wolin & Wolin, 1994, p. 198). Through serving, an individual's sense of emotionally connecting to others is reinforced.

Servant leadership was recently examined (Taylor, Martin, Hutchinson, & Jinks, 2007). The results of the findings indicated that the principals who were identified as servant leaders were rated significantly higher by their staff on the Leadership Practices Inventory which identifies 5 practices of exemplary leadership: a) Modeling the way; b) Inspiring a shared vision; c) Challenging the process; d) Enabling others to act; and e) Encouraging the heart. Earlier focus was placed on servant leadership by its originator, Roger Greenleaf in 1970. A servant leader puts the needs of the others in the organization

first. This concept was further developed by Bolman and Deal (2001) in their book on searching for the true meaning of leading with a spirit-filled purpose. Each of these represents the dimension of leadership which highlights a leader's emotional connection to leadership.

Resiliency and Leadership

Each leader brings a set of skills, values, and behaviors into the organization. Trait theories give emphasis to these differences. These traits are seen as the antecedent risks and assets that help shape the leader's successes or failures (Fleishman, Zaccaro, & Mumford, 1991). Leaders approach the challenge of leading in a mindful manner. Mistakes are identified early so as to avoid, as much as possible, any crises that may arise. While evaluating the seriousness of a crisis, leaders resist the temptation to oversimplify the situation. Leaders also exhibit resiliency in the face of challenges (Weick, Sutcliffe, & Obstfeld, 1999). Additionally, Mitroff (2005) advocates that organizations seek proactive leaders who think out of the box and utilize their creative thinking , emotional intelligence, and resilience to prepare for a crisis before one occurs.

Effective leadership maintains that the success lies in one's ability to promote a mindful organization through a commitment to resilience (Hoy, Gage, & Tarter, 2006). Although resilience is seen as a favorable end product which enriches people's lives and gives each a chance to experience fulfillment, it is also a life-long journey, and an elaborate process of developing skills over a lifetime, even in the face of adversity (Egeland, Carlson, & Stroufe, 1993).

Issues and Controversies

Researchers have raised criticisms of the Big Five. One criticism of the Big Five centers on the need to compile the research in a collated form (Block, 1995). However, Block's critique was countered by Costa and McCrae (1992), who advocated the use of longitudinal studies. In addition, the variations in the Five Factors are not viewed as independent, which researchers prefer as it minimizes the redundancy between the various dimensions (McAdams, 1995). A criticism in the methodology focuses on the reliance on self-report questionnaires, which are often viewed as biased. This is especially critical when comparing the scores between and among individuals and groups (Block, 1995).

Leaders pass through various periods of change and sometimes turbulence when facing the challenges associated with continuous improvement. This produces various levels of stress, which may lead to exhaustion—emotional, cognitive, and physical (Smith-Stevenson & Saul, 1994). Since the 1980's numerous educational research studies have been conducted on the stress associated with the principalship (Hipps & Malpin, 1991; Holt, Fine, & Tollefson, 1987; Katz, 1988).

Friedman (1995) researched the personal and environmental factors that lead to burnout in 821 public school principals and confirmed that feelings of emotional and cognitive exhaustion were one of the major factors. This was also found in Friedman's (1995, 1997) study of principals. The changing roles of school principals have been positively associated to the level of stress. Williamson and Campbell (1987) stated that "Today's...principals are under considerable stress, most of which is caused by demands

on their time. If such stress is chronic, it will inevitably have an adverse effect on the principals' job performance as well as their mental and physical health" (p. 112).

In summary, the research on emotional intelligence and resilience in school leadership has been growing from an historical development of theoretical foundations. In the area of emotional intelligence, many links to leadership have found their original focus to be on organizational structure in corporate America. Resiliency in children and adolescents has been widely studied. However, research interests in adult resiliency have begun to surface recently, especially as it relates to leadership. School crises demand clear and concise actions from the school leader; however, these actions must be tempered with diplomacy and reassurance. In addition, leaders who lead in a mindful manner, identify matters early so as to avoid or reduce the seriousness of a crisis. Mindful organizations are more resilient.

Understanding and managing one's own emotions while meeting the immediate needs of an entire school population require the school leader to call upon a unique combination of personal skills. The question to be answered is whether a combination of emotional intelligence and resilience will make a positive difference in effective school leadership.

CHAPTER III

METHODOLOGY

This section presents information on the research questions, design, methods, and procedures used to collect and analyze the data in this study. Specifically, information regarding the variables, instrumentation, sample participants, the data collection process, and methods of analysis are also discussed.

Research Questions

1. Is there a relationship among emotional intelligence, resilience, and school leadership?
2. How is resilience affected by the relationship between emotional intelligence and school leadership?

Variables

Three factors were identified for this study—emotional intelligence, adult core resilience, and school leadership. These three constructs, (emotional intelligence, adult core resilience, and school leadership) were the focus of this study. The participants' individual scores on the five component areas of the EQ-i were the independent variables for both research questions. The dependent variable was the total resilience score of the ACR. For the second research question, school leadership scores, in the form of leadership ratings, were also entered into the regression analysis as predictors.

Instrumentation

Three instruments were selected for use in this research to study the three variables of interest. Variable one, emotional intelligence was evaluated using the Bar-On

Emotional Quotient Inventory. Variable two, resilience, was evaluated using the Assessment of Core Resilience. Variable three was evaluated using the OPC 21-Item Leadership Questionnaire. Resilience served as the dependent variable, while emotional intelligence and school leadership served as the independent variables.

Emotional Intelligence

The principals completed the online version of the EQ-i, which is designed to measure an individual's social and emotional skills (Bar-On, 1997). Respondents completed a 125-item self-report. A five point horizontal numeric scale, which ranged from a 1 ("very seldom true of me") to a 5 ("very often true of me"), was used. For security purposes, respondents used a numerical login ID and password given by the researcher. The EQ-i yields a total EQ score, five composite scale scores and 15 subscale scores. A high score on each composite can be characterized as follows:

1. Intrapersonal EQ—the individual tends to understand one's own emotions (inner self); is in touch with inner feelings; is independent, strong, and confident; has a positive outlook on one's own life; and is able to express and communicate personal feelings, ideas, beliefs, and needs.
2. Interpersonal EQ—the individual is responsible and dependable with good social skills; interacts and relates well with others; and can understand and appreciate the feelings of others.
3. Adaptability EQ—the individual can effectively evaluate and handle problematic situations. Other characteristics include one who is generally flexible, realistic and effective in arriving at an adequate solution.

4. Stress Management EQ—the individual can handle stress without losing control; is generally calm, can work effectively under pressure; and can handle tasks which are anxiety provoking or considered dangerous.
5. General Mood EQ—the individual is generally optimistic, cheerful, and hopeful; knows and understands how to enjoy life in a positive manner.

The Total EQ score was determined by totaling the scores for all of the subscale items. Although an option, Positive Impression and Negative Impression items were not included in the total score. These items were designed to detect whether respondents are giving an exaggerated impression of themselves.

A breakdown of the subscales and composite scores are listed in Table 4. All raw scores were converted into scaled scores based on a mean of "100" and a standard deviation of "15"which is similar to IQ scores. Based on suggestion of the author of the instrument, scores 100 and above are indicative of one who is emotionally intelligent while scores lower than 100 indicate a need to improve emotional skills in a particular area.

Internal consistency (reliability) of the EQ-i was determined by the authors, using the Chronbach alpha. The average Chronbach alpha coefficient for all of the subscales is .76, thus indicating very reliable internal consistency. Content and face validity was evaluated systematically using an item analysis and the final form of factor analysis and confirmatory factory analysis. All met the standards set for construct validity.

Table 4

The Composites of Emotional Intelligence as Measured by EQ-i

Intrapersonal Composite (RAeq)	**Interpersonal Composite (EReq)**	**Adaptability Composite (ADeq)**	**Stress Management Composite (SMeq)**	**General Mood Composite (GMeq)**
Self Regard (SR)	Empathy (EM)	Reality Testing (RT)	Stress Tolerance (ST)	Optimism (OP)
Emotional Self-Awareness (ES)	Social Responsibility (RE)	Flexibility (FL)	Impulse Control (IC)	Happiness (HA)
Assertiveness (AS)	Interpersonal Relationship (IR)	Problem Solving (PS)		
Independence (IN				
Self Actualization (SA)				

Adapted from *EQ-i Bar-On Emotional Quotient Inventory Technical Manual* by R. Bar-On, 2007, Toronto, ON: Multi-Health Systems.

Resilience

All 63 principals in the sample completed the 29-item Assessment of Core Resilience (ACR) questionnaire. The assessment is separated into three subscales—Love of Self (LVOS), Love of Others (LVOO), Love of a Higher Power (LVOHP); and a Total Resilience Score. The instrument utilizes a 6-point horizontal scale (Ranging from "No Need" to "The Need is Completely Fulfilled"). It was designed to measure an individual's core resilience or driving force that leads one towards self-actualization.

In a previous study, the three domains of core resilience were tested to verify their correlation (Shores, 2004). The three domains—Love of Self, Love of Others, and Love of a Higher Power were entered into a model of correlational significance. As

demonstrated by Shores, these three domains were evaluated and found to show significant positive correlations with three other gold standard measures of resilience (SCORE—Scale of Resilience, INSPIRIT—Index of Spiritual Experience, and IPPA—Index of Positive Psychological Attitudes). The validity of the ACR to measure core resilience was supported through content validity, criterion-related validity and construct validity.

The ACR has been determined to be valid and reliable instrument. The instrument has been positively validated by a panel of experts and a group of students taking a resilience course. In addition a rational-direct ranking method was incorporated to further support content validity. Two construct validity procedures were conducted (exploratory factor analysis and discriminant analysis).

The Chronbach alpha reliability coefficient indicate that the ACR has high reliability of α =.940. Further, each subscale also has acceptable to high alpha correlations: love of self (α =.881), love of others (α = .805), and love of a higher power (α = .961). Therefore, the final ACR has been determined to be internally consistent.

The ACR can be self-scored; however, this was not a necessary step in this study as scoring was conducted by the researcher. The assessment was first scored by summing up the value of each item within each domain or subsection. The scores of all three subsections were added together for a final score. A higher score on this instrument indicated a stronger driving force or core resilience. The subsection with the highest score indicated the area of highest driving force whereas the subsections with the lower scores pointed toward areas where the driving force can be strengthened.

Each domain consists of a different number of response items. Love of Self has 12 items, Love of Others has 9 items and the domain, Love of a Higher Power, has 8. Therefore, each domain has a different number of maximum possible points (Table 5).

Table 5

Resiliency Domains

Love of Self Domain	Love Of Others Domain	Love of a Higher Power Domain	Total Resilience Score
12 items	9 items	8 items	29 items
72 maximum points	54 maximum points	48 maximum points	174 points

School Leadership

School leadership was measured by a leadership questionnaire (Stone, Parker & Wood, 2005). It is a 21-item, two dimensional model that distinguishes leadership into two types of abilities: task-oriented leadership and relationship-oriented leadership. Task-oriented leadership relates to such skills as managing resources, delegating tasks, and planning for the future. Relationship-oriented leadership relates to such skills as motivating others, communicating one-on-one and communicating in a small group (Humphrey, 2002).

Through the use of exploratory factor analysis, the factor structure of each questionnaire has been analyzed. The results yield a very interpretable two-factor structure—1) Task-oriented leadership and 2) Relationship-oriented leadership. Internal reliability coefficients for the two factors were 0.83 and 0.75 for the self report

questionnaire, and 0.89 and 0.87 for the supervisor=rated questionnaire, and 0.89 and 0.87 for the staff rated questionnaire. The total leadership score is derived from adding the two factors together. The 21-item instrument was completed by the principal participants as a self-report and by the principals' supervisor and staff members as raters. Each principal, supervisor, and staff member was asked to rate the principal on a 10-point rating scale—ranging from "0" (No Leadership Ability" to "9" (Highest Possible Level of Leadership Ability). Secondly, each was asked to rate the principal on 21 specific leadership skills using a five point modified verbal frequency scale –ranging from "1" (Very Seldom True of the Principal) to "5" (Very Often True of the Principal). The instrument was designed to measure relationship-oriented leadership (ROL) and task-oriented leadership (TOL) which, when added together, provided a total leadership score along with an overall rating of the principal's leadership ability. The authors of this instrument developed a factor structure for each questionnaire using factor analysis. Factor 1 has eight items related to TOL and includes such statements as "responds to others in a timely manner." Factor 2 has six items related to ROL and includes such statements as "seeks consensus from staff members."

Participants

A protocol of gathering principal volunteers was established and included a multi-stage approach. The following steps were implemented.

1. Application for Institutional Review Board approval was submitted to the University of Southern Mississippi Institutional Review Board for approval. The Institutional Review Board granted permission to conduct the study (Appendix 1).

2. Permission was secured from state superintendents or commissioners of schools in Florida, Georgia, Louisiana, Mississippi, and Texas to contact all school district superintendents in these states (Appendix 2)
3. Permission was secured from each school district superintendent to contact all the school principals in their respective districts (Appendix 3).
4. Principals, from districts where permission was granted by the superintendent, were invited to participate in the study (Appendix 4).
5. Permission was secured from principal volunteers to contact designated professional colleagues for their participation in the study (Appendix 5).

All five state superintendents and commissioners of education granted permission to contact their respective district superintendents. Efforts were made to recruit participation from among the 1,722 public school districts in these five states by way of electronic correspondence. (Table 6). Superintendents of 138 school districts responded. Of these school districts, 89 granted permission to contact their principals, and 49 superintendents denied permission. Sixty-seven principals, from the districts where permission was granted, responded representing a return rate of 6.3%. However, 4 principal respondents were eliminated due to incomplete questionnaires or data.

Table 6

Total School Districts and Principal Participants

	Florida	Georgia	Louisiana	Mississippi	Texas	Grand Totals
Total Districts Contacted	67	181	68	152	1,254	1,722
Districts Granting Approval	4	14	13	20	38	89
Total Principals Contacted	120	66	283	139	463	1,071
Principal Respondents	6	5	18	9	29	67

Texas respondents made up the largest percentage of the participants (44.4%). Georgia and Florida were represented by the smallest group of participating principals (7.9% and 9.5%, respectively). Louisiana (27%) and Mississippi (11.1%) made up the remaining 38.1% of the principal participants. The total number of principals who volunteered to participate in this study began at 67. With the elimination of the four cases noted previously, the final sample size was 63 (Table 7).

Table 7

Principal Participants by State

State	Frequency	Percent
Florida	6	9.5
Georgia	5	7.9
Louisiana	17	27.0
Mississippi	7	11.1
Texas	28	44.4
Total	63	100.0

Each participant was asked to submit the names of professional colleagues (both supervisors and subordinates) who would be willing to rate the leadership skills of the principal. Three colleagues of each principal participant were randomly selected from the list and asked to complete the questionnaire. It should be noted that the majority of the principals worked under the supervision of one individual; therefore, that individual was always selected to participate in the study.

Data Collection Procedures

Following permission from district superintendents to contact their respective principals, e-mail invitations were sent to each. As principals responded, indicating their desire to be included in this study, confirmation e-mails were sent to provide a detailed summary of the study outlining the goals of the study, protocol, benefits, risks, informed consent, and procedures of participation (Appendix 6). Each principal was asked to send

e-mail addresses of professional colleagues willing to complete a short online questionnaire regarding the principal's leadership skills. Participation in the study was voluntary and the participants' responses were anonymous (Appendix 7).

All participants, including the principals and their professional colleagues, were provided with website addresses where each participant completed the questionnaires. All of the questionnaires were self-reported measures used for this study and were made available via the online services of Survey Monkey and Multi-Health Systems Online Assessments. Each participant was given specific coded information to access appropriate questionnaires. Principal participants logged into Survey Monkey to complete both leadership and resilience questionnaires. At the end of the questionnaires on Survey Monkey, each principal participant was directed to the Multi-Health Systems Online Assessment website to complete the *Emotional Quotient Inventory* (EQ-i). Professional Colleagues were given a separate website address in Survey Monkey to complete the short leadership questionnaire on their respective principals. At the beginning of every questionnaire, each participant was instructed to indicate his/her consent for participating in this study.

Methods of Analysis

A descriptive analysis of the data was conducted on each variable as well as the demographic groupings of the subjects (gender, ethnicity, age, and years of experience, etc.). Research question one, which asked whether there was a relationship between emotional intelligence and resilience was analyzed using a correlational multiple linear regression model. Research question two, which asked if resilience was affected by the

relationship between emotional intelligence and leadership, was analyzed using a multiple linear regression.

CHAPTER IV

RESULTS

Introduction

This chapter reports and summarizes the results of a correlational study of emotional intelligence, resilience, and school leadership. The purpose of the study, data on the participants, instrumentation, research questions, and data analysis are presented. Findings reported as significant are those which have met the level of statistical significance ($p \leq .001$ or $p, < .05$). All other findings are presented as ancillary findings.

Purpose of the Study

A study of practicing school principals was conducted for the purpose of determining if a relationship existed between their emotional intelligence and resilience. In addition, a second analysis was conducted to determine whether leadership of the principals added significantly to the relationship between emotional intelligence and resilience.

Participants

Each principal and a select group of his/her professional colleagues (supervisor and school staff members) were asked to complete online web-based questionnaires for each of these factors (emotional intelligence, resilience, and school leadership). These factors were entered into a correlational study to determine if statistically significant relationships existed among them. SPSS 15.0 was used for all data analyses.

The majority of the 63 principals' schools were located in rural and suburban areas. Only 28% of the schools were located in urban areas (Table 8).

Table 8

Principal Participants by School Location

Setting	Number of Schools	Percentage
Rural	24	38.1
Suburban	24	38.1
Urban	15	23.8
Total	63	100.0

When classifying the school levels, 65% were elementary schools, which included one Pre-K through 8th grade campus. Secondary schools (middle and high) made up 32% of the sample, and special/alternative schools made up 3% of the participating schools in the sample (Table 9)

Table 9

Principal Participants by School Level

School Levels	Frequency	Percent
Pre-K/Early Childhood	6	9.5
Pre-K thru 6th Grade	7	11.1
Pre-K thru 8th Grade	1	1.6
Lower Elementary	5	7.9
Elementary	22	34.9
Middle School	10	15.9
High School	10	15.9
Special Populations	2	3.2
Total	63	100.0

Of the 63 principal participants, 44 were female (70%) and 19 were male (30%). Ethnicity of the principals was divided into six categories: African American/Black (13%), Caucasian/White (79%), and Hispanic/Latino (8%). Pacific Islander (0%), Asian (0%), and American Indian/Alaskan (0%). The average years of administrative experience among the principals were seven years, with the majority having been a principal for five years. When comparing the demographics of this sample group to that of the national average of public and private schools in the last 15 years, the sample group contained a higher percent of female principals when compared to males; a larger percent of administrators under the age of 40; a smaller percent of school administrators between the ages of 45-49; a larger percent of African American/Black and

Hispanic/Latino principals and a smaller percent of white principals. In addition, the sample group had the lowest percent of principals with the least years of experience (Table 10).

Table 10

Demographic Comparisons by Percent

	Sample	Public and Private Schools		
Year	2007-2008	1993-94	1999-2000	2003-2004
Total # Principals	63	104,000	110,000	115,000
GENDER				
Males	30	60.9	53.7	50.3
Females	70	39.1	46.4	49.7
AGE				
under 40	19	10.3	11.1	15
40-44	20.5	18.1	12.7	10.9
45-49	10.3	29.2	22.6	17.5
50-54	24.7	22	30	26
55 and over	25.7	20.4	23.7	30.7
ETHNICITY				
White	79	86.2	83.9	84.2
Black	13	8.7	9.8	9.3
Hispanic	8	3.6	4.7	4.8
Asian	---	0.8	0.9	0.7
Pacific Islander	---	----	---	0.1
American Indian/Alaskan	---	0.7	0.7	0.7
EXPERIENCE				
3 or Fewer Years of Experience	23.8	81.7	29.7	34.2
4-9 Years of Experience	53.8	9	29.9	31.2
10-19 Years of Experience	17.6	6.4	27.8	24.8
20 or more	4.8	2.9	12.7	9.8

Note: Adapted from NCES.gov

The principals' staff size ranged from under 25 to over 100 and their student enrollment ranged from under 500 to over 1200 (Table 11).

Table 11

Student Enrollment of Participating Schools

Enrollment	Frequency	Percent
Under 500 students	23	36.5
500–800 students	25	39.7
800–1000 students	10	15.9
1000–1200 students	1	1.6
Over 1200 students	4	6.3
Total	63	100.0

The average amount of time the professional colleagues had worked with the principal was four years, with the majority having worked one year with the principal participants (Table 12).

Table 12

Years of Experience and Association with Principal Participants

	School District	State	Principals' years of experience	Raters' number of years working with principal
Mean			6.96	4.15
Median			5.00	3.00
Std. Deviation			5.374	4.354
Minimum			1	1
Maximum			25	30

Instrumentation

The measures used in this research study included the Bar-On EQ-i which is designed as a self-report measure of emotional intelligence; the Assessment of Core Resilience which is designed as a self-rating questionnaire of the fulfillment level of the respondents' needs; and a 21-item leadership questionnaire which was used as a self-rating report and a supervisor/staff rating-leadership questionnaire. Research on the reliability and validity of these instruments has been conducted. Each has been found to be an effective instrument for measuring the constructs of emotional intelligence, adult resilience, and school leadership.

Emotional Intelligence

Of the 63 principal participants, 61 completed the EQ-i. The validity of the results was evaluated for these 61 respondents on the EQ-i. Four validity measures are used to examine the input from each respondent. First, the Omission Rate (OR) indicates the number of incomplete or missing items. For the 61 respondents, the OR was 0%, which indicated that no items were omitted by the participants. Secondly, the Inconsistency Index (II) measures any contradictions or random responses. Any scores above 12 on the Inconsistency Index would indicate an invalid result. The highest Inconsistency Index for the 61 respondents was 8.9 (found in only 8% of the cases) which indicates valid results for response consistency. Finally, the Positive Impression (PI) and Negative Impression (NI) scaled scores are designed to detect any respondents who may be giving an exaggerated positive or negative impression of themselves.

Upon review of the individual responses, no respondent had scores which fell more than two standard deviations (30 points) above or below the mean of 100. There were 43 respondents (70%) whose scores fell within one standard deviation of the mean. Twelve respondents (20%) scored more than one standard deviation above the mean and 6 respondents (10%) scored more than one standard deviation below the mean (Table 13). All results from the respondents appeared to be valid.

Table 13

Total EQ-i Scores by Standard Deviations

Number of Principals	Range of Total EQ-i Scores	Percent Scoring within Total EQ-i Range
6	79-84	9.7
43	85-115	70.3
12	115-123	19.6

For the research purposes of this study, the total EQ scores were used in some of the analyses. However, with the exception of some general impressions, it is advised by the authors not to place too much emphasis on the interpretation of the total EQ score (Bar-On, 2007); two-thirds of the respondents are expected to score between 85-115. This held true for this sample of school principals. The mean performance of the group fell into the average range (M = 104.36). The distribution of scores mirrored that of a normal distribution with a slightly negative skew. Also, high kurtosis in the distribution likely resulted from the small sample size. Upon examination of the mean composite scale scores of EQ, all fell within the average range, indicating adequate emotional capacity.

Each of the five composite scale scores make up the total EQ-i and measures a particular aspect of one's emotional capacity. The mean performance of the sample on the Intrapersonal EQ Composite was 103.82, which indicated average skills in expressing one's own feelings, ideas, and beliefs. The mean performance of the sample on the Interpersonal EQ Composite was 105.39, which also indicated good average social skills in understanding, interacting, and relating with others. The third composite score for this group, Stress Management EQ, fell within the average range as well (M = 105.31). This

performance indicates normal ability to withstand stress without falling apart or losing control. On the fourth composite, Adaptability EQ, the subjects' mean performance of 102.95 also fell within the average range, indicating solid ability to cope with environmental demands as well as being able to evaluate and solve problematic situations. Lastly, the mean performance of the principals on the General Mood EQ (M = 103.10 composite also indicated an average ability to enjoy life and see one's outlook on life with contentment. No areas or composites stood out as either being significantly strong or weak for this sample of principals (Table 14).

Table 14

Descriptive Data on Principal Participants' EQ-i Total Score and EQ Composite Scale Scores

	Total EQ	Intrapersonal EQ	Interpersonal EQ	Stress Management EQ	Adaptability EQ	General Mood EQ
N 61						
Mean	104.36	103.82	105.39	105.31	102.95	103.10
Median	107.00	105.00	107.00	107.00	103.00	105.00
Std. Deviation	11.863	13.443	11.543	11.369	12.416	11.849
Minimum	79	71	77	79	76	75
Maximum	123	126	124	125	123	122

As mentioned previously, EQ has been linked to leadership in several studies. In one of the most recent studies (Stone, Parker & Wood, 2005), the leadership evaluation measure used in that study was adopted for inclusion in this study as well. To verify that EQ is linked to leadership among this sample of principals, a simple correlation was conducted to determine if the same significant relationship existed between leadership and total EQ score as reported by the principals.

A correlation coefficient was computed between the two variables to determine if there is a statistically significant relationship between the principals' self-reported leadership ratings and their total EQ scores. The results of the correlational analyses presented in Table 15 show that the correlation was statistically significant, r (60) = .426, $p < .001$, suggesting the principals' self-reported leadership ratings are strongly associated with their total EQ scores.

Table 15

Correlations of Total EQ and Principal Leadership Rating

		Principal Leadership Rating	Total EQ
Principal Leadership Rating	Pearson Correlation	1	.426(**)
			.001
	N	63	61

** Correlation is significant at the 0.01 level (2-tailed).

Furthermore, a deeper analysis of this relationship was conducted to determine if any of the EQ subscales were significantly correlated with the principals' self-reported leadership ratings. Correlation coefficients were computed . The results, presented in Appendix 8 indicated that there was a significant correlation between the principals' self-reported leadership ratings and their Intrapersonal EQ, r(60) = .449, $p \leq .001$; and their Interpersonal EQ, r(60) = .458, $p \leq .001$. These results indicate statistically significant relationships. Both Adaptability EQ, r(60) =.309, p =.015 and General Mood EQ r(60) = .311, p =.015 , showed a statistically significant association, however, not as strong as Intrapersonal and Interpersonal EQ.

Resilience

In determining the validity of the respondents' scores, each of the items in the domains (Love of Self, Love of Others, and Love of a Higher Power) had a positive correlation to the items in the other domains as demonstrated previously (Shores, 2004). Therefore, the results of these responses would appear as valid estimates of the respondents' resilience.

Upon examination of the data, scores of the respondents ranged from zero to 72 for the subscales and 3 to 171 for the Total Resilience scores (Table 16).

Table 16

Descriptive Data on Principal Participants' Resilience Scores

		Love of Self	Love of Others	Love of Higher Power	Total Resilience Score
N	Valid	63	63	63	63
	Missing	0	0	0	0
Mean		57.7619	43.4921	38.0000	139.2540
Median		60.0000	45.0000	40.0000	146.0000
Std. Deviation		12.90251	8.41441	9.99193	27.91691
Minimum		.00	3.00	.00	3.00
Maximum		72.00	53.00	48.00	171.00

All subscales and the Total Resilience scores were negatively skewed indicating the majority of respondents having somewhat high ratings of their perceptions of level of personal fulfillment (Figure 2), relationships with others (Figure 3), relationship with a higher power (Figure 4), and an overall feeling of resilience (Figure 5).

Figure 2

Distribution of Resilience Score—Love of Self

Figure 3

Distribution of Resilience Score Subscale—Love of Others

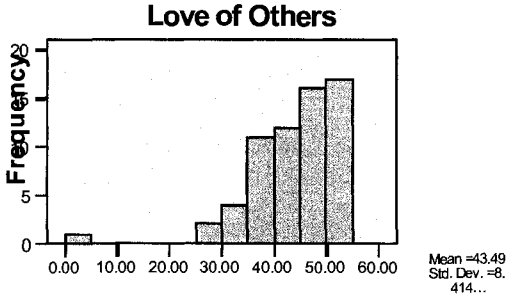


Figure 4

Distribution of Resilience Score Subscale—Love of a Higher Power

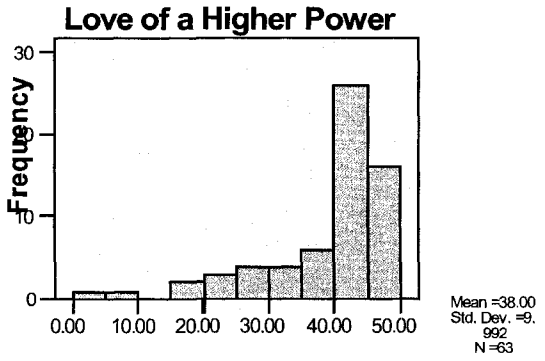
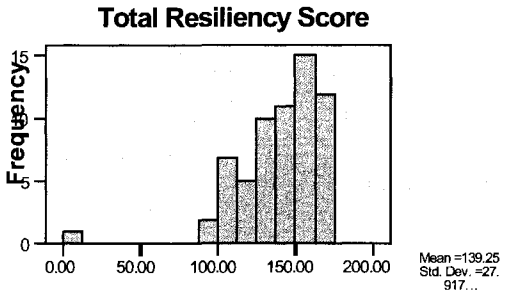


Figure 5

Distribution of Total Resilience Score



Leadership

As noted previously, the leadership of the principals was measured using an instrument developed by the Ontario Principals' Council (2005). It is a 360-type measure that provides for the principal, the principal's supervisor, and staff members supervised by the principal to rate the principal's leadership ability.

Leadership Ratings

All principals completed the instrument, however, the response rate of their professional colleagues was relatively low. Of the 63 principals, 57% of their supervisors responded and 71% of their staff members responded. All three groups (supervisors, principals, principal's staff members) rated the principal's leadership ability utilizing a 10-point scale from 1 (no leadership ability) to 10 (highest possible level of leadership ability). On the 10 point scale, no principal received a rating lower than 4.5 (Table 17).

In viewing the overall leadership rating, the principals' staff members rated the principal highest ($M = 8.71$, $SD = 1.10$), followed by their supervisors ($M = 8.33$, $SD = 1.62$). Principals rated themselves the lowest on this scale ($M = 7.87$, $SD = 1.17$). These results can be found in Table 17.

Table 17

Leadership Ratings by Participants

Leadership Ratings	Principal n = 63		Supervisor n =36		Staff n = 45	
	Total	%	Total	%	Total	%
4.5	---	---	---	---	1	2.2
5	2	3.2	3	8.3	---	---
6	4	6.3	2	5.6	---	---
6.5	---	---	---	---	1	2.2
7	16	25.4	6	16.7	4	8.9
8	26	41.3	6	16.7	4	8.9
8.5	---	---	---	---	7	15.6
9	8	12.7	7	19.4	17	37.8
9.5	---	---	---	---	3	6.7
10	7	11.1	12	33.3	8	17.8

Leadership Dimensions

The responses of the participants on this measure were distributed into the two dimensions of leadership. The first dimension, Task-Oriented Leadership, which includes 8 items, involves such tasks as managing, delegating and planning. The second dimension, Relationship-Oriented Leadership which includes 6 items, involves such tasks as seeking consensus, communication, and motivation. The ratings ranged from "1" (very seldom true of me/the principal) to "5" (very often true of me/the principal) for each item such that, when combined yield a total possible score of 6 to 40 . Means and standard deviations were obtained (Table 18).

Task-Oriented Leadership—Scores ranged from 24.5 to 40. The group which rated the principal highest on this dimension was the principal's staff ($M = 37.33$, $SD = 3.47$), followed by the principal's self rating ($M = 34.94$, $SD = 3.48$). The principals' supervisors rated the principal lowest (slight difference) ($M = 34.50$, $SD = 4.02$). When the scores of all the principals' professional colleagues (supervisor and staff members) were combined and averaged, their rating of the principal's task-oriented leadership was higher ($M = 36.27$, $SD = 3.21$) indicating a stronger influence from the ratings of the principals' staff members.

Relationship-Oriented Leadership—Scores ranged from 11.5 to 30.The principals' staff members also rated the principals highest in this dimension ($M = 27.28$, $SD = 3.43$), followed by the principal's self rating ($M = 26.49$, $SD = 2.45$). As with the task-oriented leadership dimension, the supervisors' rating was lowest ($M = 24.97$, $SD = 4.83$) and the combined ratings of the professional colleagues increased over that of the supervisors ($M = 26.27$, $SD = 3.66$).

Table 18

Descriptive Data of Leadership Scores

	N	Minimum	Maximum	Mean	Std. Deviation
Principal Leadership Rating	63	5.00	10.00	7.8730	1.17077
Leadership Rating--Supervisor Average	36	5.00	10.00	8.3333	1.62129
Leadership Rating--Staff Average	45	4.50	10.00	8.7111	1.10005
Task-Oriented Leadership (Principal)	63	26.00	40.00	34.9365	3.48209
Task-Oriented Leadership-Supervisor Average	36	25.00	40.00	34.5000	4.01782
Task-Oriented Leadership (Staff Average)	46	24.50	40.00	37.3333	3.46570
Task-Oriented Leadership (Professional Colleagues)	53	28.00	40.00	36.2736	3.20458
Relationship-Oriented Leadership-Supervisor Average	36	13.00	30.00	24.9722	4.83136
Relationship-Oriented Leadership (Principal)	63	21.00	30.00	26.4921	2.44865
Relationship-Oriented Leadership-Staff Average	46	11.50	30.00	27.2826	3.43293
Relationship-Oriented Leadership (Professional Colleagues)	53	14.00	30.00	26.2720	3.65683
Valid N	28				

Analysis of Individual Research Questions

Research Question 1

Is there a relationship among emotional intelligence, resilience, and school leadership?

A multiple regression analysis was conducted to assess if emotional intelligence was statistically significantly related to resilience. All subscales of emotional intelligence (Intrapersonal EQ, Interpersonal EQ, Stress Management EQ, Adaptability EQ, and General Mood EQ) were entered into the model as predictors. The total resilience score,

classified as the dependent variable, was regressed on the five EQ subscales, the independent variables. The scatterplot for the regression indicated that the variables were linearly related such that higher values on the resilience variable tended to be associated with higher values on the emotional intelligence subscale variables. The correlation between the variables of total resilience and the EQ subscales indicated that the weighted combination of the EQ variables can predict the total resilience scores to a statistically significant degree (Table 19). The regression equation for predicting resilience from the EQ subscales is:

Resilience = 14.920 + .281IntrapersonalEQ + .434Interpersonal EQ + .117Stress Management EQ + -.405Adaptability EQ + .784 General Mood EQ

The overall multiple regression was statistically significant ($R^2 = .390$, $F(5,55) = 7.024$, $p<001$). The correlation between the EQ subscales and total resilience was .624, indicating a moderate relationship between EQ and resilience. The EQ subscales (taken as a set of predictors) accounted therefore, for 39% of the variance in total resilience (Table 19).

Table 19

Correlation Between EQ Subscales and Resilience

Model	R Square Change	F Change	df1	df2	Sig. F Change	R Square Change	F Change	df1	df2
1	.624(a)	.390	.334	18.02164	.390	7.024	5	55	.000

Only one EQ subscale, General Mood EQ, significantly predicted the total resilience score ($b = .784$, $t(55) = 2.259$, $p = .028$). This is considered a strong effect (Table 20).

Table 20

Coefficients(a) for Model Variables of EQ and Resilience

	B	β	t	Sig	Partial r
Intrapersonal EQ	.281	.171	.839	.405	.112
Interpersonal EQ	.434	.227	1.521	.134	.201
Stress Management EQ	.117	.060	.406	.686	.055
Adaptability EQ	.405	-.228	-1.206	.233	-.160
General Mood EQ	.784	.420	2.259	.028	.291

Dependent Variable: Total Resilience Score

Research Question 2

How is resilience affected by the relationship between emotional intelligence and school leadership?

The leadership variables were separated by respondents—principals, supervisors of the principals, and staff members working under the supervision of the principal. The leadership questionnaire provided for total leadership ratings, task-oriented leadership scores, and relationship-oriented leadership scores.

A multiple regression analysis was conducted to determine how well the model of EQ and school leadership predicted total resilience. Regression results indicated that EQ and school leadership significantly predict total resilience. The predictors were the five subscales of EQ and the leadership ratings of the principals and professional colleagues. This analysis produced a two model summary. The first model, which included the EQ subscales as the predictor variables and total resilience as the dependent variable, demonstrated the linear combination was significantly related to resilience ($R^2 = .598$, $F(5, 22) = 6.555$ $p < .001$). The correlation between the EQ subscales and total resilience was .774 which identifies a strong association. The EQ subscales (taken as a set of

predictors) accounted for 59.8% of the variance in total resilience (Appendix 9). Thus, the weighted combination of the EQ variables in this model can predict resilience to a statistically significant degree (Appendix 9).

In the second model, the predictors added included the leadership ratings of the principals, supervisors and school staff. The dependent variable remained the total resilience score. The linear combination of the addition of the leadership ratings (taken as a group) was significantly related to resilience ($F(8, 19) = 4.82, p = .002$). The correlation between EQ, the leadership ratings and total resilience was .819, indicating a strong relationship. The ratings (taken as a set of predictors) accounted for 67% of the variance in total resilience for this model (Appendix 9). Therefore the weighted combination of the leadership ratings in this model can predict resilience to a statistically significant degree and to a greater extent than using EQ alone.

Ancillary Findings

Given the substantial increase in the variance accounted for in resilience by the addition of leadership ratings to the regression model (from 39% to 67%), a third model was tested with the predictors added to include the task-oriented leadership variables of the same respondents. The dependent variable of total resilience remained. The linear combination of the addition of these task-oriented leadership variables to the model was also significant $F(11,16) = 3.48, p = .012$). The correlation between EQ, the leadership ratings, task-oriented leadership was .840, again, another strong association (Appendix 9). This model accounted for approximately 71% of the variance in total resilience for the third model (Appendix 9).

In a final model, the last set of leadership predictor variables was added, which included the relationship-oriented leadership. The linear combination of this addition to the model was also significant $F(14, 13) = 5.09, p \leq .003$). The correlation coefficient was .920 indicating that the model which included the relationship-oriented leadership variables accounted for 84.6% of the variance in total resilience, thus the strongest model of the four (Appendix 9).

In summary, the statistical analysis and findings of this study examining the relationships among emotional intelligence, resilience and school leadership are presented in this chapter. There was a significant positive relationship between self-reported emotional intelligence and resilience among school principals. When school leadership is entered into this model of significance, the relationship becomes stronger, thus indicating that leadership plays a significantly positive role in the relationship between emotional intelligence and resilience among school principals in this sample. In addition, a principal's general mood, as measured by the EQ-i is a significant predictor of resilience.

CHAPTER V

SUMMARY

Introduction

This final chapter of the dissertation provides a discussion of the study which includes a restatement of the research questions and reviews the key methods used in the study. A summary of the findings and their implications are presented. Limitations of the study are addressed. Finally, recommendations for future research are presented.

Problem Statement

The purpose of this study was to examine the relationship between emotional intelligence, resilience and school leadership among public school principals in a five state area of the southeast region of the United States—Florida, Georgia, Louisiana, Mississippi, and Texas. Demographic data was also collected to further describe the sample.

Numerous leadership studies have shown that the emotional intelligence theory has gained momentum in the business world (Barling, Slater, & Kelloway, 2000; George, 2000; Goleman, 1995, 1997). Emotional intelligence has become an important construct in how successfully a school leader operates an effective educational system (Barent, 2005). As unexpected events and crises arise, effective leaders match the appropriate leadership style with the situation at hand (Hoffman, 2004). Resilience, although seen as a favorable skill which enhances one's life and leads to fulfillment, is an elaborate process which develops over a lifetime and is especially helpful in the face of adversity (Egeland, Carlson, & Stroufe, 1993). Very little research has been completed that is focused on examining the relationship between emotional intelligence, resilience and

school leadership. Therefore, this study sought to determine whether a relationship exists among these three variables.

Other issues related to the planning, development, and implementation of research-based programming for school leadership training programs will be addressed in this chapter. There remains a disconnect in school districts around the country which are still searching for the right combination of leadership experiences and opportunities to attract the best and brightest potential leaders, grow them from within the educational school system, and retain them in the profession. This challenge can begin with some possible answers to some very significant questions.

Research Questions

1. Is there a relationship among emotional intelligence, resilience, and school leadership?
2. How is resilience affected by the relationship between emotional intelligence and school leadership?

These research questions were developed as a result of the personal experiences of the researcher and a guided review of the literature on effective school leadership related to emotional intelligence and adult resilience. More research is being done on each construct; however, very little has been published to date which investigates the relationship among the three constructs.

Review of the Methodology

Data for this quantitative study was secured through the results of an administration of three online questionnaires to 63 principals and their respective

supervisors (*n=36)* and staff (*n=46).* The data were gathered from these three groups based on their responses to the instruments.

The principal participants in this study were self-selected. All were volunteers who responded to an electronic invitation to participate in the study. Each principal also provided the pool of professional colleagues from which the sample of participants in this group was drawn.

Demographic data were gathered on the sample group to ascertain certain descriptive information. The demographics of the sample are slightly different from those of professional educators in other school settings, based on national averages. Therefore, caution should be taken when interpreting these results beyond the demographics of the principals this sample group represents.

Summary of Results

Key Findings and Implications

From the results of the analysis (using SPSS 15.0) of the research questions the following was found:

The emotional intelligence of the sample group of principals, as measured by the Bar-On EQ-i, did not differ significantly from the general population. The school principals in this sample, like most leaders, possess the emotional capacity to effectively lead organizations which are open social systems. This requires an individual who is self-aware, demonstrates self control, displays enormous empathy and optimism, is highly adaptable and can lead the organization smoothly through critical moments and events—all of which are emotional intelligence competencies. How well a leader manages and directs the emotions within an organization can bring about a working environment that

is positive, supportive and in synch (Goleman, Boyatzis, & McKee, 2004). When a leader connects with the emotions of the staff in the organization, individuals are uplifted and invest deeper into the organization's goals and mission. This synchrony or resonance diminishes the static or confusion within the organization. Thus, members of the organization see themselves all pulling in the same direction. "Resonance comes naturally to emotionally intelligent (EI) leaders" (Goleman, Boyatzis, & McKee, 2004, p. 20).

In one finding of this study, principals tended to rate themselves high in all aspects of resilience, indicating a high level of personal fulfillment in their love of self, love of others, and love of a higher power. Knowing that core resilience is a multifaceted combination of how one values fulfillment on all levels, personally, socially, and holistically, principals who perceive themselves as highly resilient may be valuable resources in changing organizations. Hoffman (2004) has long promoted the importance of resilient leaders and advocates how essential these leaders are to the effectiveness of high functioning organizations. Therefore, school leaders who possess the capacity to handle the cognitive, emotional, and physical demands of the job are invaluable to the sustained success of schools.

When comparing how principals and their professional colleagues rate their level of general leadership ability, principals rated themselves lower than their supervisors and the staff members in their buildings. The strong relationship between the principals' EQ and their perceived leadership ratings may suggest that those with either high or low EQ scores see their performance directly linked to their emotional state. This perception of their leadership ability is attached to how successful they feel in the roles as school

leaders. Likewise with their sense of resilience. The significant relationship found between the principals' EQ and resilience bears this out as well. Thus the higher a principal's EQ, the stronger the sense of resilience and confidence as a school leader.

There is a growing concern over the numbers of school leaders who have chosen to leave the profession. Many cite the reasons for leaving center around the demands of the job, feelings of not doing the job well, and the struggles with managing change, (Abrahamson, 2004; Friedman, 1995; Knox, 2005). In the United States, the attrition rates of principals and teachers are higher than any other profession (Knox, 2005). Similarly, in England, nearly a quarter of the school leaders are expected to retire within the next five years (Olson, 2007) with one reason being balancing work with family life. These feelings of inadequacy may impact how principals rate their effectiveness as a school leader. A deeper investigation of the EQ subscale and principal rating results reveal that the Intrapersonal EQ and Interpersonal EQ were significantly related to the principal's perceived leadership ability and moderately related to their Adaptability EQ and General Mood EQ.

Quite possibly, low EQ scores may have a powerful impact on the performance and overall welfare of the principal who is struggling to do a good job. Thus, a principal who demonstrates low Intrapersonal skills may not: a) feel positive about who they are; b) be in touch with their feelings and emotions or understand why they feel the way they do; c) express or defend their thoughts, ideas or convictions; effectively; or d) over depend on the advice of others. Additionally, there is a feeling that they are not in the right profession.

A principal who demonstrates low Interpersonal EQ subscale scores may : a) show insensitivity to the feelings of others; b) be perceived as being irresponsible and undpendable; or c) appear unapproachable, indifferent and unfriendly. Thirdly, a principal demonstrating low Adaptability EQ could be perceived as: a) constantly overwhelmed, aloof, out of touch with what is really going on in the school, and not being able to assess a situation realistically; b) not being able to adjust to unexpected situations or events; or c) not being effective in recognizing or diffusing potential problems and finding workable solutions. Finally, a principal with low scores in the General Mood EQ subscale may: a)appear unhappy in the role of principal; b)present with a poor disposition, negative attitude, and dismal outlook on life in general; or c) view most situations in a pessimistic manner.

These behaviors may be precursors to a principal's exit from the profession, thus a school district with well established systems and programs for recruiting, hiring, evaluating, developing and transitioning school principals based on emotional intelligence and resilience factors would better serve all involved. By incorporating these constructs into district-wide strategic planning, the school district's commitment of entering into successful professional relationships with potential school leaders would evolve into a seamless process of strengthening school leadership. This could include such processes as recruitment, pre-employment interviewing and assessment, school placement, professional development, reassignment, and exit strategies which can be seen as a win-win for all.

Another comparison was conducted to determine how principals and their professional colleagues rate such task-oriented leadership skills of the principal as

planning, managing, and delegating. The principals' supervisors' rating was the lowest (only slightly) while the school staff rated the principal the highest. Secondly, when comparing how principals and their professional colleagues rate such relationship-oriented leadership skills of the principal such as communicating and motivating—the principals' supervisors' rating was also the lowest, followed by the principals with the principals' staff again offering the highest rating.

Both task-oriented and relationship-oriented leadership are best viewed (or not) by those who are in daily contact with the leader. Supervisors, whose interactions with school principals tend to be related to many central office demands which include such items as state reporting requirements, budgets, personnel matters, meetings, and service on district committees, may have an unbalanced view of the principal's leadership abilities. Thus, the opportunity for the supervisor to work closely with the principal on instructional leadership may be limited. On the other hand, school staff members have ample opportunities to observe and interact with the principal in a collaborative manner daily. Team planning and school-wide planning are part of the daily tasks which provide for more supportive relationships between the princpal and the school staff. Therefore, more opportunities which allow for less central office demands and focus on developing a supportive relationship with the principal will best benefit the students (Bloom, 2004).

One significant finding was the strong relationship between the emotional intelligence and core resilience of school principals. Both emotional intelligence and resilience can be developed and improved (Goleman, Boyatzis, & McKee, 2002, 2004). Emotional intelligence in leaders can be developed over time through the use of accurate self-assessment, reflective thinking, and real-life experiences. Furthermore, principals

who proactively lead their schools are viewed as successful, especially in the wake of pending crises. As schools are expected to be safe places for children to learn, principals who lead with a proactive approach provide the staff, students, and parents with a sense of security as they go about the business of teaching and learning. Effective crisis management, another critical skill set, requires the leader to be able to foresee the possibilities and plan accordingly. Preparing for a crisis requires imagination and emotional resilience (Mitroff, 2005). In addition, Sternberg (1997) identifies this as creative intelligence. Leaders who display strength in this area are capable of moving the organization into the future using such strategies as developing allies, encouraging social respnsibility, managing complexity, and effective using technology. Thus, one who leads in this proactive manner and is willing to take moderate risks, think outside of the box and utilize empowerment to gain support from the stakeholders would be of benefit to educational systems which are undergoing change. Therefore, school districts are best served by ensuring the leaders of their schools possess this acumen. This leadership behavior can positively impact the climate of an organization (Goleman, 1998). Such outcomes as colleagiality and trust lead to a highly efficient and effective organization (Hoy & Tarter, 1997; Goleman, Boyatzis, & McKee, 2002). Individuals wishing to assess their level of resilience can begin by assessing their level of fulfillment (Maslow, 1968). The mind/body/spirit connection has proven to be successful in many arenas. Principals interested in strengthening their core capacity of resilience and emotional intelligence may consider this combination of abilities. School districts, professional development organizations, and educational leadership training programs are fertile grounds for developing these abilities.

The development of the emotional intelligence and resilience relationship found in this research may serve as a predictive model for identifying and developing potential school leaders capable of maneuvering through the challenges of principalship can be quite promising.

Of the EQ-i composites, the General Mood EQ was found to have a statistically significant effect on the principals' total resilience. It is of no surprise that happy and optimistic individuals are more open to imagining the possibilities when presented with a challenge. The notion of utilizing different approaches to similar circumstances indicates that one can be resourceful when it comes to addressing a challenge. One's outlook on life and overall contentment can be easily connected to the three dimensions of core resilience—love of self, love of others, and love of a higher power. This can be an instrumental component to effective problem solving.

Although not significant, the Stress Management EQ had a negative effect on the principals' total resilience. Managing stress does little to strengthen one's inner core. It merely provides ways of coexisting with those stressors as they rise and fall. A resilience intervention model, such as that proposed by Steinhardt & Dolbier (2008) allows one to "transform stress into resilience" (p. 447). Such a program may focus on understanding resilience and its role in managing stress, taking on responsibilities, addressing personal and professional challengies, developing and nurturing meaningful connections, and strengthening one's sense of empowerment.

Professional development learning opportunities for principals in the area of stress management need not be a one-size-fits-all model, but rather one which is more personalized based on the individual's level of resilience. Thus, a principal who learns to

build on a each level of resilience—love of self, love of others, and love of a higher power, becomes more capable of transforming personal stressors into a more positive outcome. This may provide for a professional coaching and colleagial mentoring opportunity rather than group encounters and approaches.

Another significant finding was in the relatonship among each of the areas of study. Emotional intelligence and school leadership significantly predicted the school leaders' total resilience. Specifically Intrapersonal, Interpersonal, and General Mood EQ along with how the staff perceives the principals' task oriented leadership and overall leadership skills were strongly associated. These findings indicate that those principals who possess this combination of skills sets are more likely to be stronger leaders. Emotionally intelligent leaders are more equipped to operate successfully within an organization that is multi-faceted. This requires one to possess the ability to be introspective while interacting positively with members of the organization; display a positive, cheerful and optimistic attitude; and remain hopeful about the future of the organization. The manner in which the leader motivates and invigorates the staff is highly dependent upon the ability to focus on the task at hand. Because these skills can be enhanced or learned, a staff development module which focuses on the building and development of these skills could aid in producing stronger and highly effective school principals. In addition, such a model may aid in addressing the high attrition rates of principals. Once equipped with such skill sets, principals may be less likely to leave the profession because they begin to feel confident about their ability to manage the numerous demands of the job.

School leaders who are able to capture the passion of the workforce and use it to bring about positive change and success will not only be highly sought after, but will also experience a sense of personal fulfilment and self actualization.

Statewide initiatives which support local school districts in their efforts to attract and retain leaders may prove to be the incubation point at which an EQ-Resilience Framework develops. Due to the changing needs within each state, a framework designed to address the unique needs and cultural mores of local school communities would prove beneficial when it comes to gaining support and buy-in from those businesses, agencies, and corporations who rely heavily on the potential workforce springing up from the public schools.

Limitations

Studies on a small sample are less generalizeable than those on a larger sample size. However, if it can be shown that the sample was randomly drawn or is similar to the larger population on critical variables, the study has implications (Gall, 1996). The sample of school principals in this study did not meet this test for generalizability. External validity is limited due to the small sample size.

Internal validity of this study was compromised due to the fact that random selection of the principals for the study was not achieved at the level anticipated. Due to the low response rate, all principals who responded with interest to participate were included.

The sample size limits both the appropriateness and the power of the statistical analyses. All three assessment measures incorporated self reports which are an additional limitation. Of further note, principals were responsible for selecting three staff members

to complete individual ratings of the principal's leadership abilities. This selection is a limitation as the researcher could not guarantee that the opinions of these selected individuals were representative of a cross-section of the school staff.

The author of the resilience instrument, ACR, recommends that the individuals not complete the instrument when they are in a crisis situation or major disruptive event (Shores, 2004). However, it could not be verified that the participants in this study were not in either of these states while completing the items of the resilience questionnaire. This may have had a negative impact on the results.

Participants were given a deadline for responding and completing their online questionnaires. In addition, the study was limited to those principal participants who had at least two professional colleagues who participated by completing a questionnaire on the principal's leadership skills. The reasons why some principal participants chose not to participate may have some influence on the generalizability of this study. Those principals who chose not to participate may have greater or lesser skills in emotional intelligence, resilience, and school leadership. All responses from the participants were self-reported; thus, the responses were under the influences of individual honesty and self-perception which may impact the results.

Recommendations for Future Research

This study should be considered as exploratory. These tentative findings should be viewed as a first step in examining the relationship of emotional intelligence and resilience among school leaders. Although this study was constrained by a small sample size and other limitations, the findings should not be completely discounted. Replication of this study with a larger sample size is recommended. Future research should provide

safeguards against low response rates and time constraints. Adding to this study will continue to strengthen the ability to generalize the results over a larger group of practicing school principals.

Additionally, research is needed which investigates the role of resilience and emotional intelligence in addressing perceived failure experienced by so many principals who are on the verge of leaving the profession, but still have the desire to make a difference in the lives of students. Perhaps, delving deeper into the mind/body/spirit connection as a factor in reducing the large principal turnover is warranted. This might lead to empirical studies on health and wellness of principals, teachers and other educators as related to their ability to remain effective in their chosen professions.

Consideration should be given to identifying future school leaders from within the organization, whether it is a budding new teacher; a master teacher who has lost the desire to stay in the classroom; a support staff member who has the passion for making a difference in the lives of students and has demonstrated the potential to lead; or a parent who volunteers regularly and has demonstrated success in working with small groups of students and the staff. In addition, alternative certification programs may benefit from this type of research which identifies possible candidates for these accelerated programs. Close consideration should be given to examining the EQ and resilience of all potential leadership candidates in a school district prior to admission into a school leadership program. Such measures could prove invaluable in those school districts committed to hiring future school leaders who are capable of leading the school through change while developing its human capital.

Further opportunities could be afforded such candidates for developing skills in identified areas of need prior to placing them into positions of leadership. Special efforts should be taken to carefully match potential leaders with schools along with matching potential leaders with professional mentors (those who take mentoring seriously and provide strong support to new school administrators). The value added in such a model of professional development which incorporates both skill development and matched mentoring based on EQ and resilience profiles may offer one more layer of support for potential and current school principals.

Partnerships with other school districts can be investigated. These could involve an exchange program which promotes mentoring and professional growth. A sharing of EI-Resilience training systems and frameworks which require no additional drain on current district resources is suggested. This allows for a consolidation of efforts to meet commonly shared goals of recruiting, developing and retaining quality school leaders. Research into best practices of grooming emotionally intelligent and resilient leaders through true action research would aid in developing a climate of professional support for aspiring school administrators.

Furthermore, school districts are encouraged to investigate research-based programs that are proven to enhance resilience, resonant leadership, collegial collaboration, and problem solving among the stakeholders within the school community.

Finally, school district leaders and community supporters, at the very least, should begin to engage in open conversations about the importance relationship building has on the success of a school. This could begin with the development of an understanding and awareness of the relationship between one's emotional intelligence and resilience

followed by the building of suitable long and short term goals and strategies focused on building strong, effective school leaders.

The outcome of such research could hold numerous implications for solving practical problems as recruiting, evaluating, developing, and retaining effective school administrators. In addition, implications for district-based program evaluation, implementation and development of school leaders could also prove worthy of further investigation.

In summary, the possibilities abound when considering the impact of a model which utilizes the combination of EQ and resilience to develop strong school leaders who are equipped to lead a school through change while engaging the support of the local community. Various programs focused on recruiting, evaluating, and developing school principals using this EQ/resilience connection may prove beneficial.

APPENDIX 1

THE USE OF HUMAN SUBJECTS IN RESEARCH

(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: **27121401**
PROJECT TITLE: **The Emotional Intelligence and Resilience of School Leaders: An Investigation into School Leadership**
PROPOSED PROJECT DATES: **12/12/07 to 11/12/08**
PROJECT TYPE: **Dissertation or Thesis**
PRINCIPAL INVESTIGATORS: **Aileen Bumphus**
COLLEGE/DIVISION: **College of Education & Psychology**
DEPARTMENT: **Educational Leadership & Research**
FUNDING AGENCY: **N/A**
HSPRC COMMITTEE ACTION: **Expedited Review Approval**
PERIOD OF APPROVAL: **12/14/07 to 12/13/08**

Lawrence A. Hosman — 1-09-08

Lawrence A. Hosman, Ph.D.
HSPRC Chair

Date

APPENDIX 2

PERMISSION REQUEST TO STATE SUPERINTENDENTS AND COMMISSIONERS

August 29, 2007

Commissioner/Superintendent
_____ State Public Schools
Street Address
City, State ZIP

Dear Commissioner/Superintendent _____

Examining school leadership effectiveness as it relates to resilience and emotional intelligence is compelling. As a doctoral student at the University of Southern Mississippi, I am conducting an independent study seeking to investigate "The Emotional Intelligence and Resilience of School Leaders".

I will be proposing a five-state study of school administrators in Florida, Georgia, Louisiana, Mississippi, and Texas. I am seeking your endorsement of my proposed study in your state of_____.

Dr. Wanda Maulding, Dean of the College of Education and Psychology, has endorsed this study and is serving as the Chairperson of my Dissertation Committee. In addition, Dr._____ is serving on my committee and supports this study.

Letters will be sent to the school superintendents in your state. Appropriate information and consent forms will be sent along with participant expectations for school principals agreeing to participate in this study. Each participant will be asked to complete a questionnaire online which should take no more than 30 minutes. Two subordinates and one supervisor of each principal will be asked to complete an online questionnaire.

The purpose of the study is to seek to identify whether the construct of emotional intelligence (EI) is related to the construct of resilience among school leaders. I plan to research two questions:

1. Among school leaders, is there a relationship between one's emotional intelligence and individual resilience?
2. Does resilience moderate the relationship between EI and effective school leadership?

I am of the opinion that this study will benefit school districts in the development of school leaders; the recruitment, evaluation and retention of school administrators; and in making research-based decisions regarding the placement of school administrators.

You can indicate your endorsement by replying to this e-mail. If you have any questions, please do not hesitate to contact me at Aleen.Bumphus@usm.edu or Dr. Wanda Maulding, the chairperson of my dissertation committee, at Wanda.Maulding@usm.edu.

Thank you in advance for supporting this research.

Sincerely,

Aileen Bumphus
Doctoral Candidate
The University of Southern Mississippi

CC: Research and Development Office

APPENDIX 3

PERMISSION REQUEST TO SCHOOL DISTRICT SUPERINTENDENTS

January 29, 2008

Dear Superintendent,

Examining school leadership effectiveness as it relates to resilience and emotional intelligence is compelling. As a doctoral student at the University of Southern Mississippi, I am conducting an independent study among school principals, seeking to investigate "The Emotional Intelligence and Resilience of School Leaders". Dr. Wanda Maulding, Dean of the College of Education and Psychology, has endorsed this study and is serving as the chairperson of my dissertation committee. In addition, Dr. Hank Bounds has granted permission to conduct this study among the Mississippi schools.

I am seeking your permission to conduct this research in your district. There will be no cost to the schools participating in this study.

Appropriate information and consent forms will be sent along with participant expectations for school principals agreeing to participate in this study. This is a voluntary study. Each participant will be asked to complete online questionnaires which should take no more than 30 minutes. Two subordinates and one supervisor of each principal will be asked to complete an online questionnaire. All information is kept confidential.

The purpose of our study is to seek to identify whether the construct of emotional intelligence (EI) is related to the construct of resilience among effective school leaders. I plan to research two questions:

1. Among school leaders, is there a relationship between one's emotional intelligence and individual resilience?
2. Does resilience moderate the relationship between EI and effective school leadership?

I am of the opinion that this study will benefit school districts in the development of school leaders; recruiting, evaluating and retaining school administrators; and making research-based decisions in the placement of school administrators.

If you have any questions, please do not hesitate to contact me at Aileen.Bumphus@usm.edu or the chairperson of my dissertation committee, Dr. Wanda Maulding, at Wanda.Maulding@usm.edu .

Please respond to this e-mail no later than Monday, February 4, 2008, indicating your permission to contact your school principals.

Thank you in advance for supporting this research.

Sincerely,

Aileen Bumphus
Doctoral Candidate
The University of Southern Mississippi

CC: Research and Development Office

APPENDIX 4

PERMISSION REQUEST TO PRINCIPAL PARTICIPANTS

A Dissertation Study ***The Emotional Intelligence and Resilience of School Leaders: An Investigation into Leadership Behaviors***	**2008**

Dear Principal Colleague:

You are invited to become a participant in a dissertation study of emotional intelligence, resiliency, and school leadership. This will involve your completing two online questionnaires along with three of your professional colleagues who will be asked to individually complete a short online questionnaire. My goal is to learn whether or not there are any relationships among these three areas of study. You were selected as a possible participant because you hold the position of a school leader and your district has agreed to participate in this study. Further information regarding my study is attached.

Participation is strictly voluntary. If you decide to participate, no names of principals, teachers, district employees, or schools will be used in my dissertation. Any and all information obtained from you and your professional colleagues will be used for the purpose of gathering research. No copies will be kept at any school district site. The coding, emotional intelligence scores, and results of the questionnaires will be kept in a secure site away from your school district site until this dissertation is successfully defended. Upon completion of the defense of the dissertation, all scoring codes will be destroyed.

Completing all online instruments will take less than 30 minutes for you and less than 15 minutes for your professional colleagues.

The principals who participate in this study will learn about emotional intelligence using the BarOn Emotional Quotient Inventory which is recognized worldwide as a self assessment to pinpoint those traits which allow a person to succeed and those which stand in the way of progress. In addition, the personal results, which include a 15 subscale report of social and emotional areas of strength and areas for improvements will be made available to any principal participant (wanting this information) for a nominal charge from the testing company. Upon request, I will gladly share the overall results of this study with all of participants.

I cannot guarantee or promise that you will receive any other benefits from this study.

Any and all information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, except as required by law. By agreeing to this study, you give your permission to use this information for the purposes of this study. The results will be published in a dissertation at the University of Southern Mississippi as part of the requirements for my doctoral degree. The information provided in the publication of my dissertation will not personally identify you in any way.

Your decision to participate or not will, in no way, prejudice your future relations with me as the researcher. If you decide not to participate, you are free to withdraw your consent and participation at any time without any prejudice.

If you have any questions, please feel free to contact me. I will be happy to answer any concerns or questions you may have. You can contact me at Aileen.Bumphus@usm.edu .

Please reply to this e-mail no later than Thursday, March 6, 2008 if you decide to participate in this study so that further information and online access codes can be sent. In your reply, please list the e-mail addresses of 4 of your school staff members (two will be randomly selected) who are willing to complete a short online questionnaire along with the e-mail address of your immediate supervisor. They will each receive further instructions on completing their online questionnaire.

In summary:
If you choose to participate in this study, do the following:

1. Please reply to this e-mail no later than Thursday March 6, 2008 indicating you will participate in this study.
2. Include the e-mail addresses of 4 of your school staff members who are willing to participate along with the e-mail address of your immediate supervisor.
3. Once you receive the response to your e-mail with your PPN (Principal Participant Number) and the online access codes, follow the directions and complete the questionnaires.

Thank you again for considering this request and best wishes for a successful school year.

Aileen Bumphus, Doctoral Candidate,
The University of Southern Mississippi

APPENDIX 5

PERMISSION REQUEST TO PROFESSIONAL COLLEAGUES

A Dissertation Study ***The Emotional Intelligence and Resilience of School Leaders: An Investigation into Leadership Behaviors***	**2008**

Dear Professional Colleague:

You are invited to become a participant in a dissertation study of emotional intelligence, resiliency, and school leadership. This will involve your completing an online questionnaire. My goal is to learn whether or not there are any relationships among these three areas of study. You were selected from a pool of professional colleagues submitted by your principal. Further information regarding my study is attached.

Participation is strictly voluntary. If you decide to participate, no names of principals, teachers, district employees, or schools will be used in my dissertation. Any and all information obtained from you will be used for the purpose of gathering research. No copies will be kept at any school district site. The coding, emotional intelligence scores, and results of the questionnaires will be kept in a secure site away from your school district site until this dissertation is successfully defended. Upon completion of the defense of the dissertation, all scoring codes will be destroyed.

Completing this online instrument will take less than 15 minutes.

Upon request, I will gladly share the overall results of this study with all participants.

I cannot guarantee or promise that you will receive any benefits from this study.

Any and all information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, except as required by law. By agreeing participate in this study, you give your permission to use this information for the purposes of this study. The results will be published in a dissertation at the University of Southern Mississippi as part of the requirements for my doctoral degree. The information provided in the publication of my dissertation will not personally identify you in any way.

Your decision to participate or not will, in no way, prejudice your future relations with me as the researcher. If you decide not to participate, you are free to withdraw your consent and participation at any time without any prejudice.

If you have any questions, please feel free to contact me. I will be happy to answer any concerns or questions you may have. You can contact me at Aileen.Bumphus@usm.edu .

If you choose not to participate in this study, please respond to this e-mail so that another professional colleague may be selected.

Thank you again for considering this request and best wishes for a successful school year.

Aileen Bumphus, Doctoral Candidate,
The University of Southern Mississippi

APPENDIX 6

EMAIL LETTER TO PRINCIPAL PARTICIPANTS

A Dissertation Study ***The Emotional Intelligence and Resilience of School Leaders: An Investigation into Leadership Behaviors***	**2008**

1. Brief Statement of Project Goals:

   The goal of this dissertation is to determine if emotional intelligence and resiliency among school leaders are related to their ability to be effective leaders; and secondly, to determine whether resiliency moderates the relationship between emotional intelligence and school leadership behaviors.

2. Protocol
   a. School principals will be surveyed using the BarOn EQ-I (emotional intelligence instrument); the Shores Adult Resilience Questionnaire, and the Principal Leadership Questionnaire developed by the Ontario Principals' Council Leadership Study. In addition, individuals who work with these school leaders will be asked to complete a perception instrument based on their working relationship with the respondents. The instrument to be used for this purpose is the Supervisor Rater and Staff Rater Principal Leadership Questionnaire.
   b. A sample of school principals in prek-12 schools in the states of Florida, Georgia, Louisiana, Mississippi and Texas will be surveyed. This may include as many as 1,541 school districts.
   c. Their selection will be based on the willingness of their school district's superintendents to allow them to participate in this study as well as the principals' agreement to be a part of the study. Once permission is granted, each participant will be sent a letter of invitation to participate in the study via e-mail. Principal participants will be asked to submit contact information of a cross-sampling of their staff members along with contact information of their supervisor(s). Of these individuals, two staff members will be randomly selected and sent a letter of invitation to participate. The immediate principal's immediate supervisor will also be sent a letter of invitation to participate. All volunteers will be given a specific website address to participate in the online survey. In addition, special efforts will be made to recruit minority principals for participation in this study. This includes making a special presentation to the superintendent strand at the National Alliance of Black School Educators conference to recruit school administrators from these five states.
   d. The questionnaires will be made available online and should take no more than 30-40 minutes per principal participant and no more than 15 minutes each for their professional colleagues.
   e. Each participant will be given a secure website in which to log in to complete the questionnaire.
   f. The data will be gathered through SPSS (Statistical Package for the Social Sciences) and it will be used to analyze the responses.
   g. There are no anticipated special situations at this time.

3. Benefits
   The principals who participate in this study will learn about emotional intelligence using the BarOn Emotional Quotient Inventory which is recognized worldwide as a self assessment to pinpoint those traits which allow a person to succeed and those which stand in the way of progress. In addition, the personal results, which include a 15 subscale report of social and emotional areas of strength and areas for improvements will be made available to any principal participant (wanting this information) for a nominal charge from the testing company. Upon request, I will gladly share the overall results of this study with all of participants.

4. Risks
   a. Possible risks to the participants may be in the form of obligation to participate based on their superintendent's recommendation that they participate in this study.
   b. Subjects may be terminated from the study if they do not complete all questions in the survey.
   c. Confidentiality will be maintained through the assigning of random numeric codes to each respondent. These codes will be matched with their respective professional colleagues who will be responding to the questions about their perceptions of the leader on the Leadership Style Questionnaire. No other identifiable information will be used to connect the participants to their respective questionnaires.
   d. Confidentiality of the data will be maintained through the database of the MHS (Multi-Health Systems) for the principal participants. Those having access to this information will be the data specialists and this researcher.

e. Data on emotional intelligence may be maintained by MHS for future use in other possible research. This disclosure will be included on the website when the participants log in to complete the questionnaire. Data on the leader's resiliency and leadership behaviors will be stored for one year and later destroyed by the researcher.

5. Informed Consent
(See attached)

A Dissertation Study
The Emotional Intelligence and Resilience of School Leaders: An Investigation into Leadership Behaviors

2008

PARTICIPANT INFORMATION AND INFORMED CONSENT
(To be sent to all participants and placed on the website when participants log in)

You are invited to become a participant in a dissertation study of emotional intelligence, resiliency, and school leadership. This will involve your completing two online questionnaires along with three of your professional colleagues who will be asked to individually complete a short online questionnaire. My goal is to learn whether or not there are any relationships among these three areas of study. You were selected as a possible participant because you hold the position of a school leader and your district has agreed to participate in this study.

Participation is strictly voluntary. If you decide to participate, no names of principals, teachers, district employees, or schools will be used in my dissertation. Any and all information obtained from you and your professional colleagues will be used for the purpose of gathering research. No copies will be kept at any school district site. The coding, emotional intelligence scores, and results of the questionnaires will be kept in a secure site away from your school district site until this dissertation is successfully defended. Upon completion of the defense of the dissertation, all scoring codes will be destroyed.

Completing all online instruments will take less than 45 minutes for you and less than 15 minutes for your professional colleagues.

The principals who participate in this study will learn about emotional intelligence using the BarOn Emotional Quotient Inventory which is recognized worldwide as a self assessment to pinpoint those traits which allow a person to succeed and those which stand in the way of progress. In addition, the personal results, which include a 15 subscale report of social and emotional areas of strength and areas for improvements will be made available to any principal participant (wanting this information) for a nominal charge from the testing company. Upon request, I will gladly share the overall results of this study with all of participants.

I cannot guarantee or promise that you will receive any other benefits from this study.

Any and all information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, except as required by law. By agreeing to this study, you give your permission to use this information for the purposes of this study. The results will be published in a dissertation at the University of Southern Mississippi as part of the requirements for my doctoral degree. The information provided in the publication of my dissertation will not personally identify you in any way.

Your decision to participate or not will, in no way, prejudice your future relations with me as the researcher. If you decide not to participate, you are free to withdraw your consent and participation at any time without any prejudice.

If you have any questions, please feel free to contact me. I will be happy to answer any concerns or questions you may have. You can contact me at Aileen.Humphus@usm.edu .

Please reply to this e-mail no later than Tuesday, February 19, 2008 if you decide to participate in this study so that further information and online access codes can be sent. In your reply, please list the e-mail addresses of 4 of your school staff members (of which two will be randomly selected) who are willing to complete a short online questionnaire along with the e-mail address of your immediate supervisor.

A Dissertation Study ***The Emotional Intelligence and Resilience of School Leaders: An Investigation into Leadership Behaviors***	**2008**

In summary:
If you choose to participate in this study, do the following:

1. Reply to this e-mail no later than Tuesday, February 19, 2008 indicating you will participate in this study.
2. Include the e-mail addresses of 4 of your school staff members who are willing to participate along with the e-mail address of your immediate supervisor.
3. Once you receive the response to your e-mail with your PPN (Principal Participant Number) and the online access codes, follow the directions and complete the questionnaires.

If you choose not to participate in this study, do not respond to this e-mail.

Thank you.

Aileen Bumphus, Doctoral Candidate,
The University of Southern Mississippi

APPENDIX 7

REQUEST FOR EMAIL ADDRESSES OF PROFESSIONAL COLLEAGUES

You are invited to become a participant in a dissertation study of emotional intelligence, resilience, and school leadership. This will involve your completing two online questionnaires along with three of your professional colleagues who will be asked to individually complete a short online questionnaire. My goal is to learn whether or not there are any relationships among these three areas of study. You were selected as a possible participant because you hold the position of a school leader and your district has agreed to participate in this study. Further information regarding my study is attached.

Participation is strictly voluntary. If you decide to participate, no names of principals, teachers, district employees, or schools will be used in my dissertation. Any and all information obtained from you and your professional colleagues will be used for the purpose of gathering research. No copies will be kept at any school district site. The coding, emotional intelligence scores, and results of the questionnaires will be kept in a secure site away from your school district site until this dissertation is successfully defended. Upon completion of the defense of the dissertation, all scoring codes will be destroyed.

Completing all online instruments will take less than 45 minutes for you and less than 15 minutes for your professional colleagues.

The personal benefits of participating in this study for principals are: You will learn about emotional intelligence using the Bar-On Emotional Quotient Inventory which is recognized worldwide as a self assessment to pinpoint those traits which allow a person to succeed and those which stand in the way of progress. In addition, the results, which include a 15 subscale report of social and emotional areas of strength and areas for improvements will be made available along with an explanation to the principal participants for a nominal charge from the testing company. Upon request, I will gladly share the overall results of this study with all participants.

I cannot guarantee or promise that you will receive any other benefits from this study.

Any and all information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, except as required by law. By agreeing to this study, you give your permission to use this information for the purposes of this

study. The results will be published in a dissertation at the University of Southern Mississippi as part of the requirements for my doctoral degree. The information provided in the publication of my dissertation will not personally identify you in any way.

Your decision to participate or not will, in no way, prejudice your future relations with me as the researcher. If you decide not to participate, you are free to withdraw your consent and participation at any time without any prejudice.

If you have any questions, please feel free to contact me. I will be happy to answer any concerns or questions you may have. You can contact me at Aileen.Bumphus@usm.edu.

Please reply to this e-mail within the next 2 days if you decide to participate in this study so that further information and online access codes can be sent. In your reply, please list the e-mail addresses of 4 of your school staff members (two will be randomly selected) who are willing to complete a short online questionnaire along with the e-mail address of your immediate supervisor. They will each receive further instructions on completing their online questionnaire.

In summary:
If you choose to participate in this study, do the following:

1. Reply to this e-mail within the next 2 days indicating you will participate in this study.
2. Include the e-mail addresses of 4 of your school staff members who are willing to participate along with the e-mail address of your immediate supervisor.
3. Once you receive the response to your e-mail with your PPN (Principal Participant Number) and the online access codes, follow the directions and complete the questionnaires.

If you choose not to participate in this study, do not respond to this e-mail.

Thank you again for considering this request and best wishes for a successful school year!

Aileen Bumphus, Doctoral Candidate,
The University of Southern Mississippi

APPENDIX 8

CORRELATIONS OF EQ SUBSCALES AND PRINCIPAL LEADERSHIP RATINGS

		Principal Leadership Rating	Intrapersonal EQ	Interpersonal EQ	Stress Management EQ	Adaptability EQ	General Mood EQ
Principal Leadership Rating	Pearson Correlation	1	.449(**)	.458(**)	.099	.309(*)	.311(*)
	Sig. (2-tailed)		.000	.000	.447	.015	.015
	N	63	61	61	61	61	61
Intrapersonal EQ	Pearson Correlation	.449(**)	1	.648(**)	.471(**)	.743(**)	.787(**)
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	61	61	61	61	61	61
Interpersonal EQ	Pearson Correlation	.458(**)	.648(**)	1	.216	.486(**)	.653(**)
	Sig. (2-tailed)	.000	.000		.094	.000	.000
	N	61	61	61	61	61	61
Stress Management EQ	Pearson Correlation	.099	.471(**)	.216	1	.673(**)	.486(**)
	Sig. (2-tailed)	.447	.000	.094		.000	.000
	N	61	61	61	61	61	61
Adaptability EQ	Pearson Correlation	.309(*)	.743(**)	.486(**)	.673(**)	1	.652(**)
	Sig. (2-tailed)	.015	.000	.000	.000		.000
	N	61	61	61	61	61	61
General Mood EQ	Pearson Correlation	.311(*)	.787(**)	.653(**)	.486(**)	.652(**)	1
	Sig. (2-tailed)	.015	.000	.000	.000	.000	
	N	61	61	61	61	61	61

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Correlation Coefficients for EQ subscale Variables and Principal Leadership Ratings

	B	β	t	Sig	Partial r
Intrapersonal EQ	.037	.418	1.878	.449	.066
Interpersonal EQ	.033	.326	2.006	.458	.050
Stress Management EQ	-.010	-.092	-.569	.099	.572
Adaptability EQ	.004	.040	.194	.309	.847
General Mood EQ	-.021	-.213	-1.049	.311	.299

APPENDIX 9

MULTIPLE REGRESSION (RESEARCH QUESTION 2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.774(a)	.598	.507	15.42639
2	.819(b)	.670	.531	15.04752
3	.840(c)	.705	.503	15.49427
4	.920(d)	.846	.679	12.44119

a Predictors: (Constant), General Mood EQ, Interpersonal EQ, Stress Management EQ, Adaptability EQ, Intrapersonal EQ
b Predictors: (Constant), General Mood EQ, Interpersonal EQ, Stress Management EQ, Adaptability EQ, Intrapersonal EQ, Leadership Rating--Supervisor Average, Leadership Rating--Staff Average, Principal Leadership Rating
c Predictors: (Constant), General Mood EQ, Interpersonal EQ, Stress Management EQ, Adaptability EQ, Intrapersonal EQ, Leadership Rating--Supervisor Average, Leadership Rating--Staff Average, Principal Leadership Rating, Task-Oriented Leadership (Principal), Task-Oriented Leadership (Staff Average), Task-Oriented Leadership-Supervisor Average
d Predictors: (Constant), General Mood EQ, Interpersonal EQ, Stress Management EQ, Adaptability EQ, Intrapersonal EQ, Leadership Rating--Supervisor Average, Leadership Rating--Staff Average, Principal Leadership Rating, Task-Oriented Leadership (Principal), Task-Oriented Leadership (Staff Average), Task-Oriented Leadership-Supervisor Average, Relationship-Oriented Leadership (Principal), Relationship-Oriented Leadership-Supervisor Average, Relationship-Oriented Leadership-Staff Average

ANOVA(e)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7799.550	5	1559.910	6.555	.001(a)
	Residual	5235.414	22	237.973		
	Total	13034.964	27			
2	Regression	8732.832	8	1091.604	4.821	.002(b)
	Residual	4302.132	19	226.428		
	Total	13034.964	27			
3	Regression	9193.807	11	835.801	3.481	.012(c)
	Residual	3841.157	16	240.072		
	Total	13034.964	27			
4	Regression	11022.781	14	787.342	5.087	.003(d)
	Residual	2012.183	13	154.783		
	Total	13034.964	27			

a Predictors: (Constant), General Mood EQ, Interpersonal EQ, Stress Management EQ, Adaptability EQ, Intrapersonal EQ
b Predictors: (Constant), General Mood EQ, Interpersonal EQ, Stress Management EQ, Adaptability EQ, Intrapersonal EQ, Leadership Rating--Supervisor Average, Leadership Rating--Staff Average, Principal Leadership Rating
c Predictors: (Constant), General Mood EQ, Interpersonal EQ, Stress Management EQ, Adaptability EQ, Intrapersonal EQ, Leadership Rating--Supervisor Average, Leadership Rating--Staff Average, Principal Leadership Rating, Task-Oriented Leadership (Principal), Task-Oriented Leadership (Staff Average), Task-Oriented Leadership-Supervisor Average
d Predictors: (Constant), General Mood EQ, Interpersonal EQ, Stress Management EQ, Adaptability EQ, Intrapersonal EQ, Leadership Rating--Supervisor Average, Leadership Rating--Staff Average, Principal Leadership Rating, Task-Oriented Leadership (Principal), Task-Oriented Leadership (Staff Average), Task-Oriented Leadership-Supervisor Average, Relationship-Oriented Leadership (Principal), Relationship-Oriented Leadership-Supervisor Average, Relationship-Oriented Leadership-Staff Average
e Dependent Variable: Total Score

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